

VDESK^{version 7}

Integrated PTZ and PTX Production System

USER GUIDE 2022

- Studio & Remote Switching
- PTZ & PTX Camera Control
- Programmable Motion Presets
- Integrated RUSHDOLLY Control
- Recording & Streaming
- Remote Meeting Integration



PREVIEW



PROGRAM



cool technology for

- PRODUCTION
- PLAYBACK
- STREAMING

VDESK Touch Screen Camera Control Production Systems






USER GUIDE Version 7

*Features and functions are being added continually, and this Guide will be updated frequently.
As a result, the content herein may not reflect the current feature set and behavior of the application*

Your **VDESK Integrated Television Production System** is designed specifically to enable a single operator to produce highly professional, multi-camera shows ... with **NO CAMERA OPERATORS REQUIRED**. Name and save PTZ presets; create and display graphics and playlists; use multiple layers of crawls, logos and animation; use Chroma-key for virtual sets and backgrounds; encode to internal storage, stream LIVE, and much more. This Guide covers all the components and controls included with your **VDESK** system.

VDESK Hardware Overview

Your **VDESK** Touch Screen Production System is available in FIVE CHASSIS CONFIGURATIONS:

	COMPACT	Dell OEM 3240 Compact Form Factor NVMe 1TB / 2TB i9-10900 CPU / 16GB RAM Windows 10 PRO / KBD / MOUSE 15.6" or 24" 1920x1080 Touch Screen 1 x PCIe Low Profile Slot	Network connections, including NDI and URL SDI & HDMI outputs
	LTD	Dell OEM 7090 Small Form Factor 1TB / 2TB / 4TB SSD i9-10900 CPU / 16GB RAM Windows 10 PRO / KBD / MOUSE 15.6" or 24" 1920x1080 Touch Screen 2 x PCIe Low Profile Slots	Network connections, including NDI and URL 4 x SDI or 2 x HDMI inputs SDI & HDMI outputs
	MAX	Dell OEM 7090 Tower Form Factor 1TB / 2TB / 4TB SSD i9-10900 CPU / 16GB RAM Windows 10 PRO / KBD / MOUSE 15.6" or 24" 1920x1080 Touch Screen 4 x PCIe Slots	Network connections, including NDI and URL 8 x SDI inputs or 8 x HDMI inputs or 4 x SDI + 4 x HDMI inputs SDI & HDMI outputs
	PRO 4/8	Dell OEM 3930 Precision Rackmount 256GB NVMe + 2 x 1TB/2TB/4TB SSD i9-10900 CPU / 16GB RAM Redundant Power Supplies Windows 10 PRO / KBD / MOUSE 24" (1/2) 1920x1080 Touch Screen 3 x PCIe Slots	Network connections, including NDI and URL Up to 8 SDI and/or HDMI inputs SDI & HDMI outputs
	PRO 12	Dell OEM 5820 Precision Workstation 256GB SSD + 2 x 1TB/2TB/4TB SSD i9-10900 CPU / 16GB RAM Windows 10 PRO / KBD / MOUSE 24" (1/2) 1920x1080 Touch Screen 6 x PCIe Slots	Network connections, including NDI and URL Up to 12 SDI and/or HDMI inputs SDI & HDMI outputs

ALL configurations include a custom keyboard with shortcut keys, mouse and 6 button Hall effect joystick.

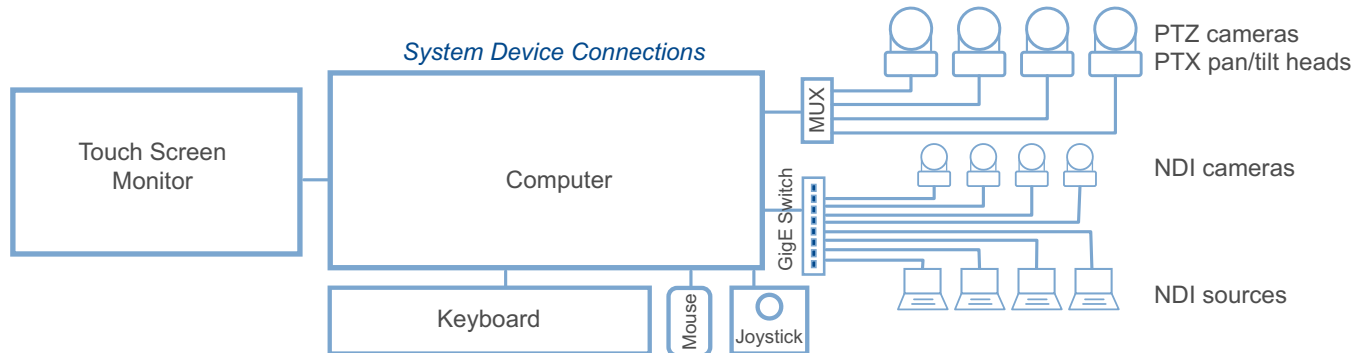
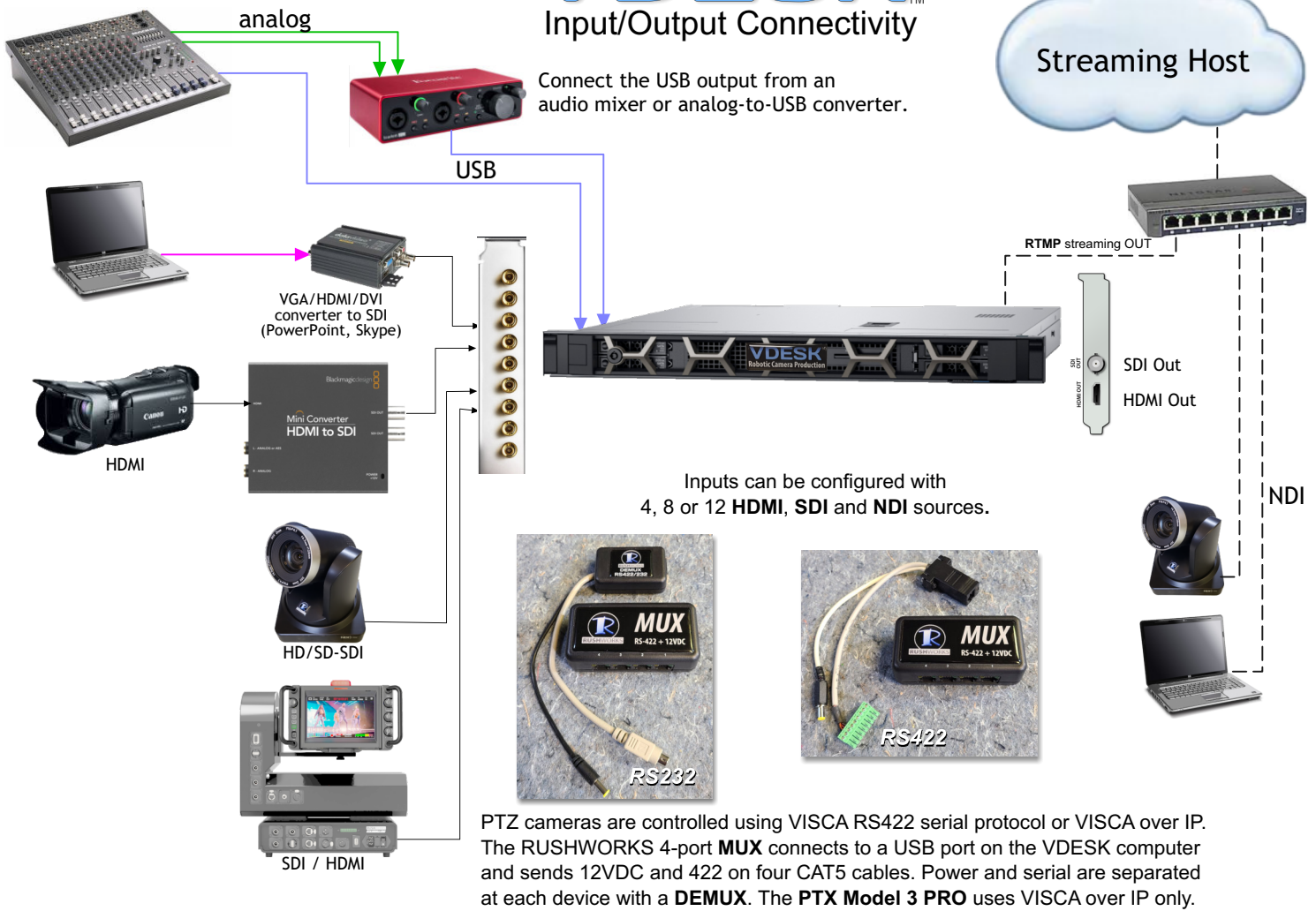
If you specify serial control for your VDESK configuration you'll receive one or more 4-port MUX units which provide (RS422+12VDC) to the cameras, and a DEMUX for splitting power and serial at each destination. For NDI operability you can specify an 8-port GigE router.

Using Multiple Monitors

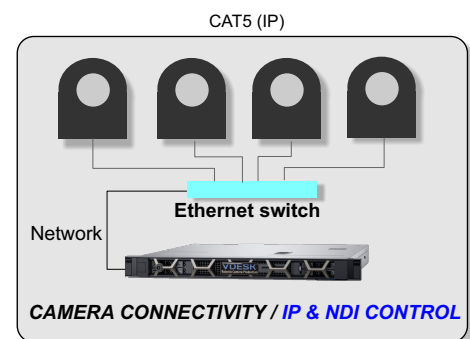
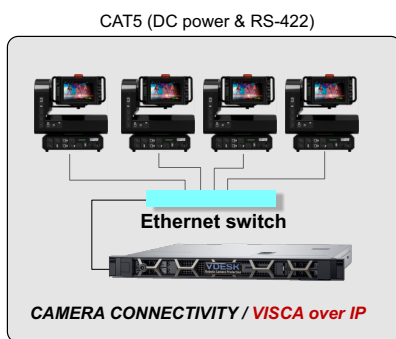
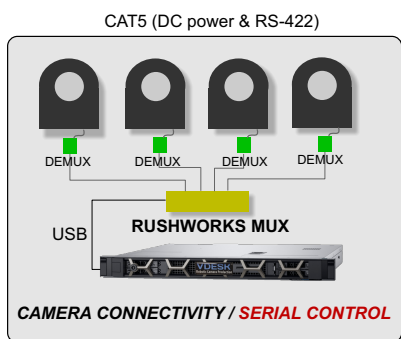
You can connect a second monitor to display additional camera controls or for working with parallel applications like **Adobe Photoshop Elements and Premiere Elements** for creation or editing of on-screen graphics, and for editing your productions after they're recorded.

VDESK™

Input/Output Connectivity



VDESK PRO systems can be configured with 4 inputs, 8 inputs, or 12 inputs (SDI or HDMI), NDI inputs and output, and HDMI / SDI outputs.



Custom Keyboard Shortcuts



A **custom keyboard** with color-coded shortcuts is provided with your VDESK system. For an overview we'll start at the top left and move down the main keyboard, then over to the arrow keys and number pad.

KEYBOARD

RED PGM1 – PGM12: Click these to select the corresponding switcher input to the PROGRAM window/output

GREEN PVW1 – PVW12: Click these to select the corresponding switcher input to the PREVIEW window

RED PROGRAM TAKE: Cuts to the current selection on the Preview panel. This action reverses the PGM/PVW selections on the switcher

GREEN SELECT CAM 5-8 on KEYPAD: Hold the Shift key and click any of the four green camera selection buttons on the keypad to select Cameras 5-8 instead of 1-4.

ORANGE TILT UP (Home): Tilt PTZ/PTX camera UP

ORANGE TILT DN (End): Tilt PTZ/PTX camera DOWN

ORANGE PAN L (Delete): Pan PTZ/PTX camera LEFT

ORANGE PAN R (PgDn): Pan PTZ/PTX camera RIGHT

ORANGE ZOOM IN (PgUp): Zoom PTZ/PTX camera IN (+)

ORANGE ZOOM OUT (Insert): Zoom PTZ/PTX camera OUT (-)

KEYBOARD CAMERA PRESET SELECTIONS

Q = Preset 1
W = Preset 2
E = Preset 3
R = Preset 4
A = Preset 5
S = Preset 6
D = Preset 7
F = Preset 8



KEYPAD

GREEN CAM 1/5 – 4/8: Click once to select inputs 104 on the Preview panel. Hold Shift and press keys to select inputs 5-8

ORANGE Number Pad (1-9): Select the corresponding Preset for the currently selected Preview camera

RED PGM AUTO (+): Dissolves from the PGM input to the PVW input

RED PGM TAKE (Enter): Cuts from the PGM input to the PVW input

BLUE File Brower (Insert): Selects File Browser window

BLUE Playlist (Insert): Selects Playlist window



BLUE LIST (Up arrow): Select previous item (Playlist or File Browser)

BLUE LIST (Down arrow): Select next item (Playlist or File Browser)

BLUE DSK AUTO (Left arrow): DSK AUTO (fade ON or OFF)

BLUE DSK TAKE (Right arrow): DSK TAKE (cut ON or OFF)

Software Overview – the User Interface

After powering up the system, run the VDESK software by double-clicking the VDESK launch icon on the desktop. After a few seconds the User Interface will appear. It will display the DEFAULT single screen layout.

The user interface has different panels and windows for controlling and monitoring most system functions.



Initial Setup:

If it is the first time you have run the application you'll need to open the **Configure** panel and use the **SWITCHER INPUT MAP** to add your PTZ cameras, NDI sources and other input devices. Adding input devices and names will be discussed in detail in the following pages.

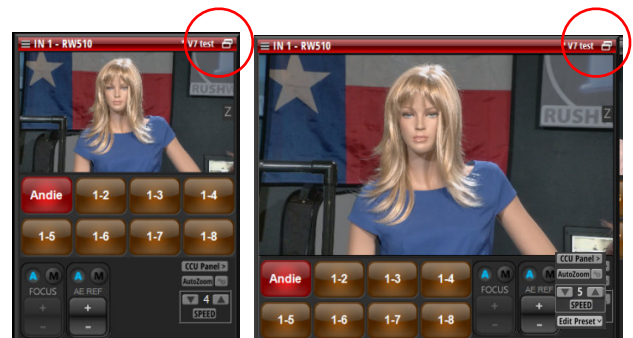
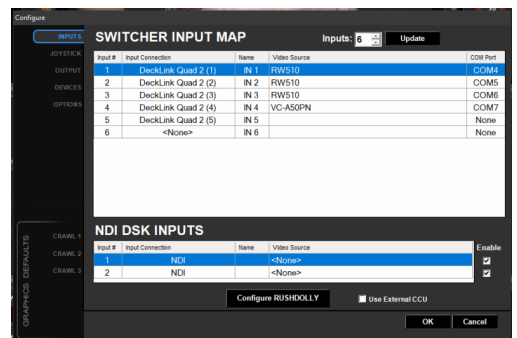
1 - Camera Input & Control Windows

On the left side of the screen are the **CAMERA CONTROL** windows. The default number of camera windows displayed is **four** (Layout Template 1-1) but can be customized by an entry in the Config panel. The maximum number of inputs (PTZ or standalone cameras or other devices) supported by the system is **twelve** (12). The camera inputs can be configured for **SDI**, **HDMI** and **NDI**. Non-camera inputs are used for network sources such as NDI, Facebook, YouTube, etc. TWO window display sizes are available.

All camera windows function the same, but each controls a different camera. The camera output image displays in the window above the presets. There are eight (8) presets available per camera when using the CLASSIC interface. (The *PRODUCER* interface supports unlimited presets.) A larger camera panel can also be displayed by clicking the expand icon on the top right.

2 - Preview Window

Beneath the PROGRAM window is the **PREVIEW** window. This displays which **camera**, **clip** or **picture** is currently on the Preview bus of the switcher. Use the motion controls and scrub bar to preview and cue up clips. A larger preview panel is displayed by clicking the expand icon on the top right.



click on icons to switch between display sizes



3 - DSK Window

To the left of the **Preview** window is the **DSK** window, which displays and controls images with transparency – usually **PNG** files.

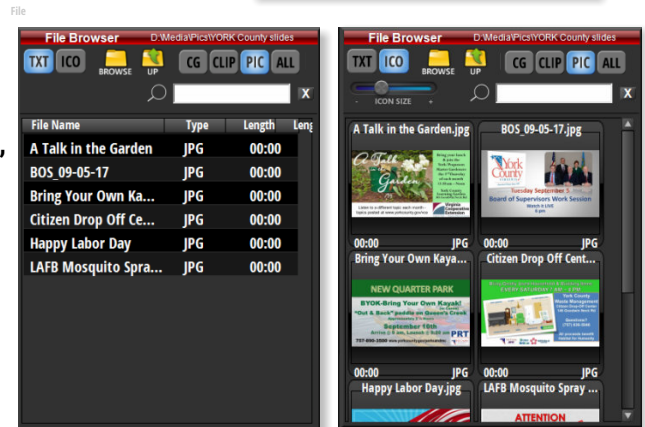
This window has two sections, the **DSK PREVIEW** and **DSK PROGRAM**. This allows you to preview images while displaying another image keyed over the Program window. When the DSK Program is illuminated ("**ON AIR**") the image in that monitor will display on the main **Program** output monitor.



4 - File Browser Window

Below the Playlist window is the **File Browser** window. This window allows you to browse for media on your system and select it for display. Quick access shortcuts are included for preset folders - **CG**, **CLIP**, **PIC**, and **ALL**- to help keep your media organized. CLIP and PIC images display in the PREVIEW window. CG images (typically 'lower thirds' with transparency, i.e. PNG files) display in the DSK window. The File Browser window can also be sized vertically and horizontally.

You can locate files in a currently open folder using the **Find** entry field with the magnifying glass icon on the left.



5 - Playlist Window

To the left of the PROGRAM window is the **PLAYLIST** window. This is where you save an ordered list of files for playback. Just drag and drop files from the File Browser to create and Save as many lists as you wish. Select and drag any item anywhere within a list to reorder the contents. Buttons are provided to change from **Text View (TXT)** to **Icon View (ICO)**.

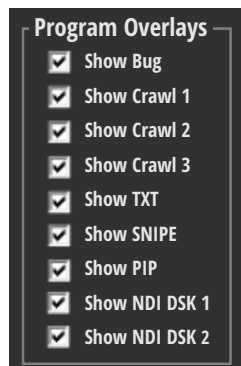
Click the **PLAY ALL** button to play all the files currently in a Playlist Window in the order they display. You can also launch the **AUTO-LOOP** folder that repeats clips and graphics in standalone automation mode.



This window can be sized vertically and horizontally, and moved anywhere on the primary (or secondary) screen to accommodate your preferences.

6 - Program Window

On the upper right of the screen is the **Program** window. This displays the main video output of your system. On the left side of the video display is an icon bar where you can display (or hide) up to nine touch/toggle buttons, which are activated when selected with checkboxes in the **Configuration/Options** setup window.



Other functions on the Program Window include:

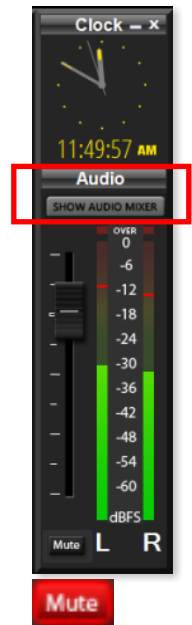
- **CONFIGURE** button
- **RECORD** setup and On/Off
- **STREAM** setup and On/Off
- **HOT SHOT AUTO** toggle rocker
- **HOT SHOT TAKE** toggle rocker
- **AUTO KEY** toggle rocker
- Currently loaded **FILE** name
- Currently loaded **CLIP** location and duration
- **MASTER FADE** button

7- Clock and Audio Windows

To the right of the Program window are the CLOCK and AUDIO windows. They display the current time, a counter, and the level of the system's audio output. The slider is used to adjust the master volume. There is also a mute button which will completely silence the Program Audio output.

Click the **SHOW AUDIO MIXER** to open the full mixer panel overlay. Click again to **HIDE** the mixer panel.

Note: Since all the windows can be positioned and many of them sized, it's often useful to have a second monitor to support overlay windows and keep your primary workspace uncluttered. **You can name and save any number of these screen 'layouts' and recall them at any time.**

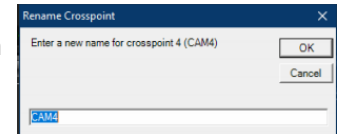


8 - Switcher Panel



Below the PREVIEW Monitor and DSK windows is the **Switcher** panel, displaying up to twelve inputs based on your system configuration. This controls which INPUT source is viewed on the Preview monitor, and/or sent to the Program OUTPUT.

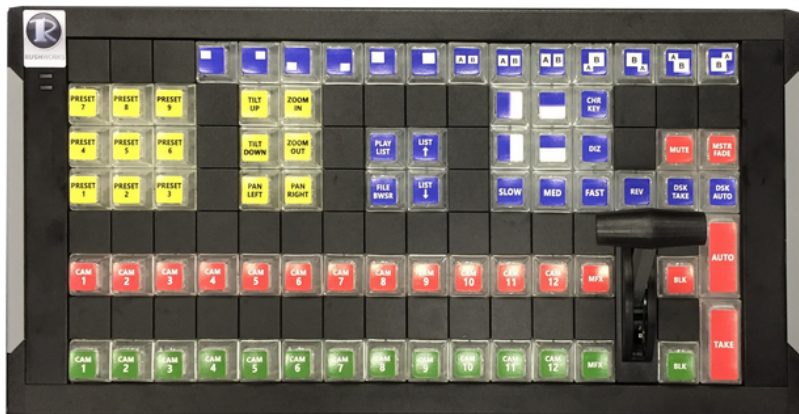
The inputs can be a combination of PTZ cameras, video inputs, NDI sources, etc., and can be named/renamed by right-clicking the button and entering the text.



The panel also has menu selections for **Transitions** and **Effects**. There are two file/clip players used to display video clips and graphics files. When active, the internal player number and status are displayed on the PGM (red) and PVW (green) buses.

Click the **AUTO** button to make a transition between the PREVIEW and PROGRAM bus. Choose from three transition speeds: **Slow** = ½ second; **Medium** = 1 second; **Fast** = 2 seconds. Use the **T-Bar** for manual transition control.

The optional **VDX T-Bar Control Surface** provides many of the integrated production functions in one versatile USB hardware companion.



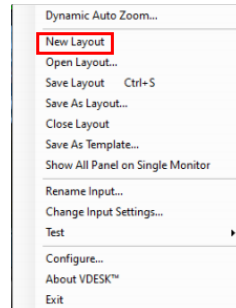
VDX

- PTZ Camera & Preset Selection
- Pan, Tilt and Zoom Keys
- 13 PiP and Double-Box Preset Selections
- Wipe Transition Selections
- Chroma-key Selection
- Audio Mute Button
- Master Fade Button
- TAKE/AUTO Buttons
- T-Bar Transition Control

Creating and Managing Layouts

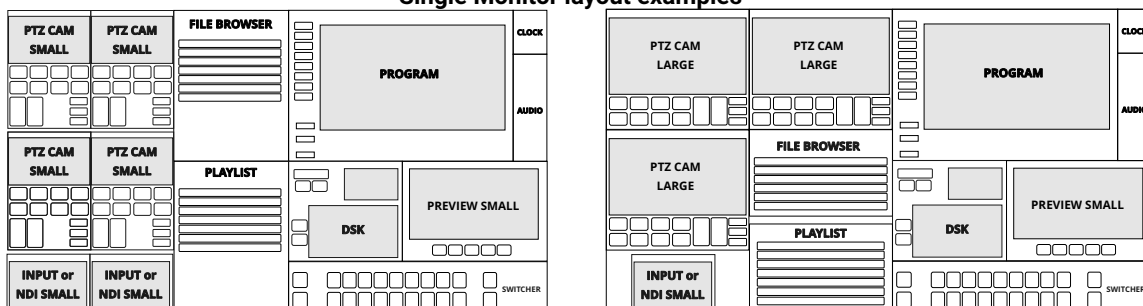
The **Layout Template folder** (D:\Layouts) contains read-only Layout templates for single, dual and super wide-screen monitor configurations for both the CLASSIC and PRODUCER interfaces. In these folders there is a PDF showing the Layout Template proxies and their corresponding Layout Template number, e.g. DEFAULT, 1-3 or 2-5, where the first number is 1 or 2 indicating the number of monitors. Dual Monitor layouts are also appropriate for use with super-wide screen (3840x1080) single monitors.

There are several **Layout Templates** available to help you get started. Just click **New Layout** and the **Layout Templates** folder will open where you can review and select your layout preference. When the desired Layout Template is opened (using File Open or double-click), the corresponding Configure file is also created, matching the number and type of inputs in the Layout. When you click **Configure...** you can click on any of the input sources and change any items accordingly, as well as configure PTZ cameras and NDI sources. When complete you click **Save** or **Save As** to name and save the Layout in the **Layouts/Classic** or **Layouts/Producer** folders. An Untitled Layout or unsaved layout is indicated by an asterisk (*) in the **Input 1** title bar.



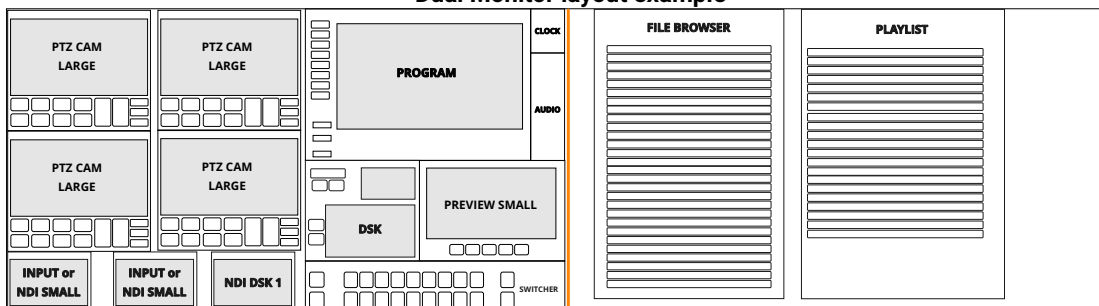
Single Monitor layout examples

CLASSIC



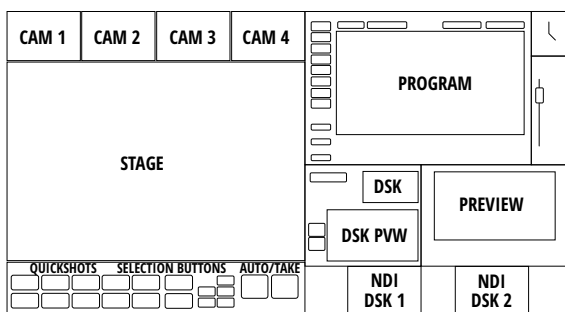
Dual Monitor layout example

CLASSIC



Single Monitor layout example

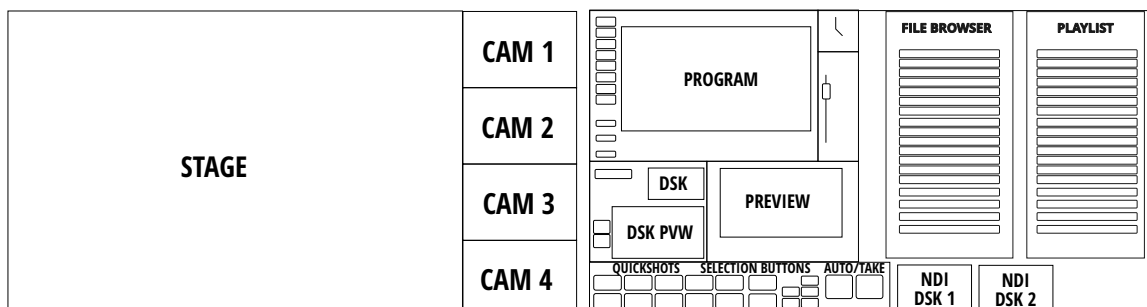
PRODUCER



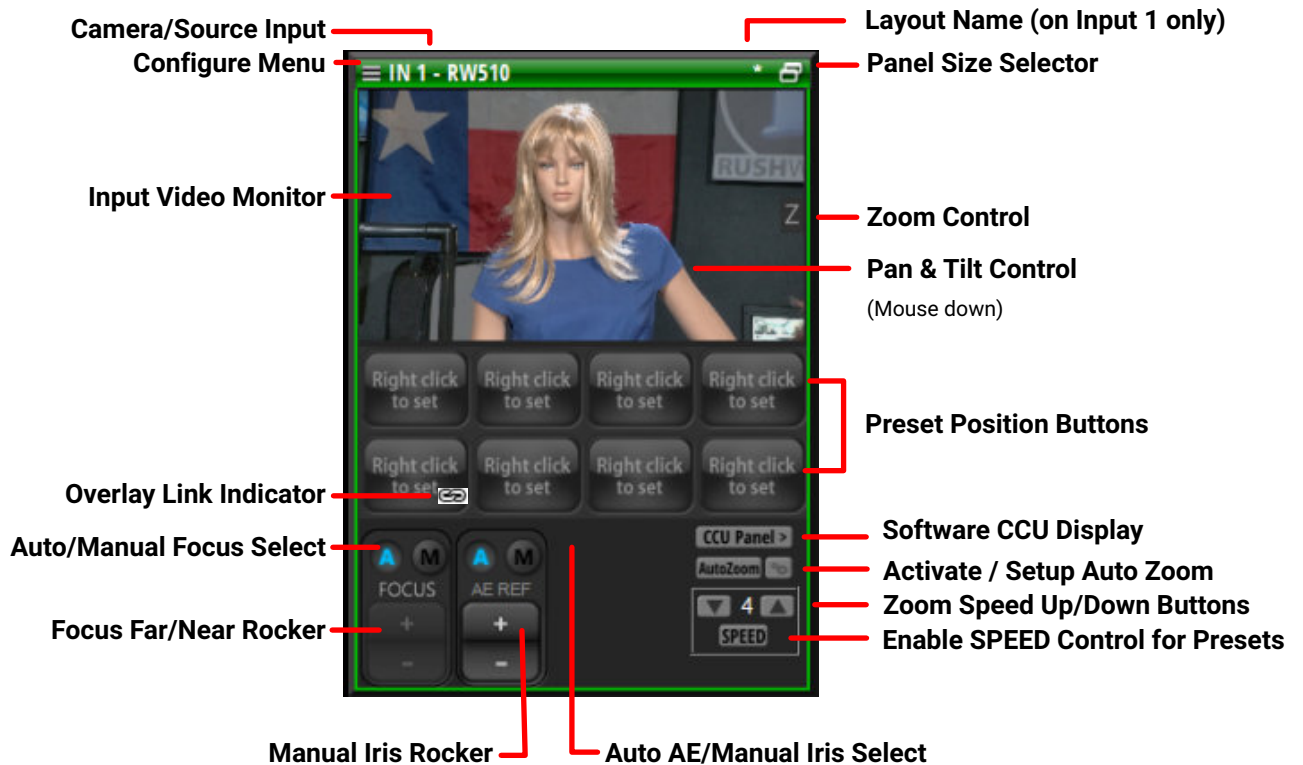
If touch screen operation isn't important to you, a 49" curved wide screen monitor with a resolution of 3840 x 1080 provides unlimited layout possibilities without having to deal with two separate 1920 x 1080 monitors. Here's an example of a dual monitor layout on a Dell 49" monitor.

Dual/Wide Screen Monitor layout example

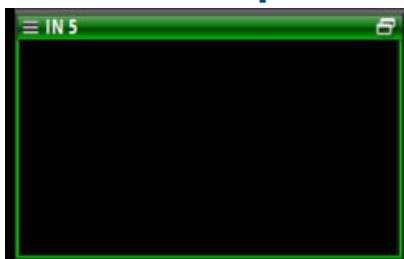
PRODUCER



1 - PTZ Camera and Video Input Windows (Standard and Large)



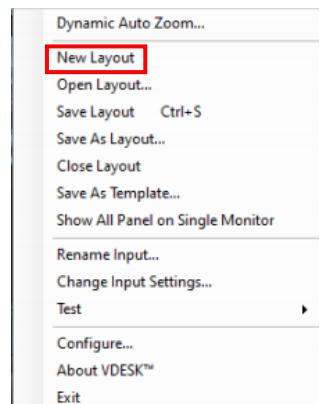
Video Input



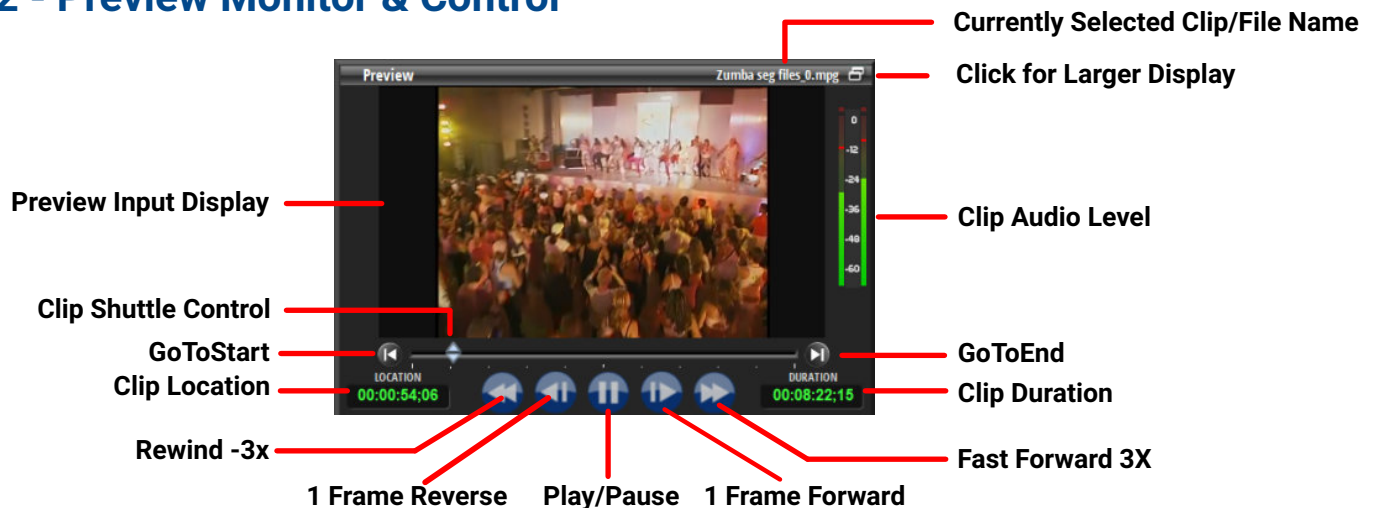
NDI DSK Input

Toggle the button in the upper right to switch between STANDARD and LARGE Input Display windows. You can position these windows anywhere on one or multiple monitors, then customize, name and save multiple layouts if you wish.

With TWO monitors configured you can size and position windows to maximize your efficiency and productivity in a session. Experiment with your Layouts to see what works best for you.



2 - Preview Monitor & Control

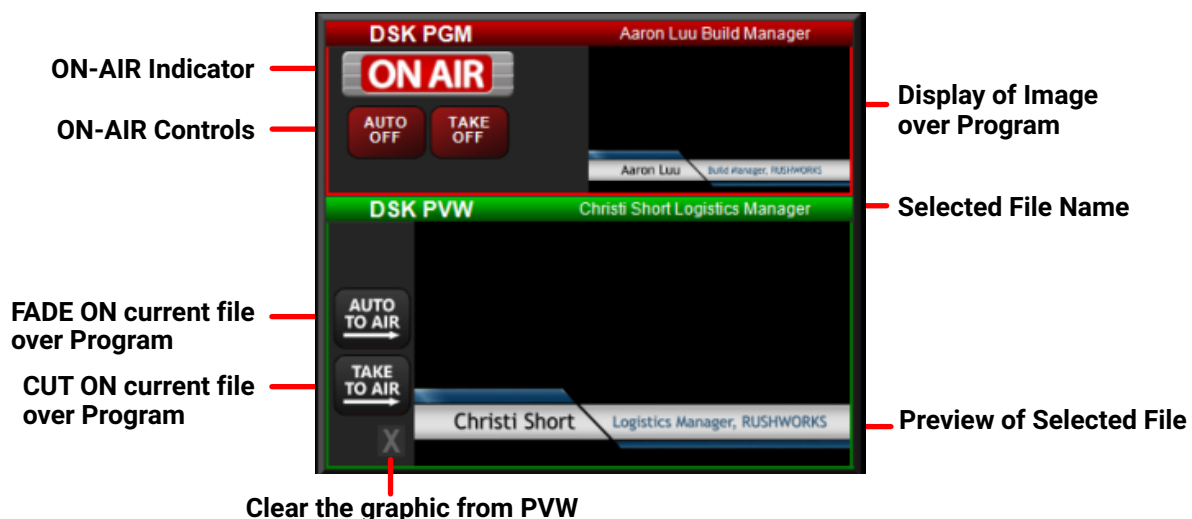


The **Switcher Preview** window shows a video preview of the source selected on the **Preview** output of the switcher. This may be one of the PTZ cameras, another video input, or a preview of your clip playback or selected still graphic, if that graphic has no transparency. Typically **BMP** and **JPG** files do not support transparency. **PNG** files are most commonly used with transparency for 'lower third' titles and other instances where graphics are superimposed over a video source. These files display in the DSK window only, and are used for graphic overlays on the Program output.

When a clip is selected in the Playlist or File Browser it automatically appears in the Preview window and the appropriate **transport controls** become active.

The transport controls allow you to preview the clip, and cue the desired spot from which to start playback when the clip is selected for display on the PROGRAM output by clicking **TAKE** or **AUTO** on the Switcher. When a "LIVE" input or graphic file is selected the motion controls are disabled.

3 - DSK Preview & Program



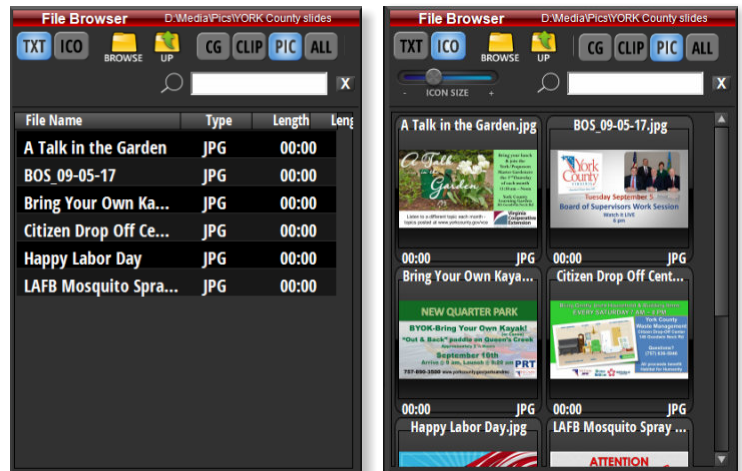
The DSK window has controls for putting your graphics and video files on air. The monitor lets you preview graphics, and then fade or cut them over the PROGRAM video. When you click a graphic to display it in the DSK PROGRAM section, you can preview other graphics while the original is still on-the-air. Clicking "**AUTO TO AIR**" or "**TAKE TO AIR**" will fade or cut the graphic from the PROGRAM window then fade or cut in the second graphic from PREVIEW. Whenever a graphic is being displayed in the ON AIR DSK PGM window, or you can **FADE** it off (AUTO OFF) or **TAKE** it off (TAKE OFF) using the respective buttons below the ON AIR light in the PROGRAM section.

Files can be displayed as a simple text list (click the **TXT** button) or as thumbnails (click the **ICO** button). Use the **ICON SIZE** slider to customize your **ICON** display.

4 - File Browser Window

The **File Browser** window can be used for searching your hard drive to locate files to add to your playlist. There are four category buttons to take you to the default file types: **CG**, **CLIP**, **PIC**, and **ALL**, which shows all files at the root of your D: drive.

You can play and display files (**CLIP • PIC • CG**) directly from the File Browser simply by clicking on them and then clicking the **TAKE** or **AUTO** buttons on the Program switcher (for CLIP and PIC files) or **TAKE TO AIR** or **AUTO TO AIR** buttons in the DSK Preview window.

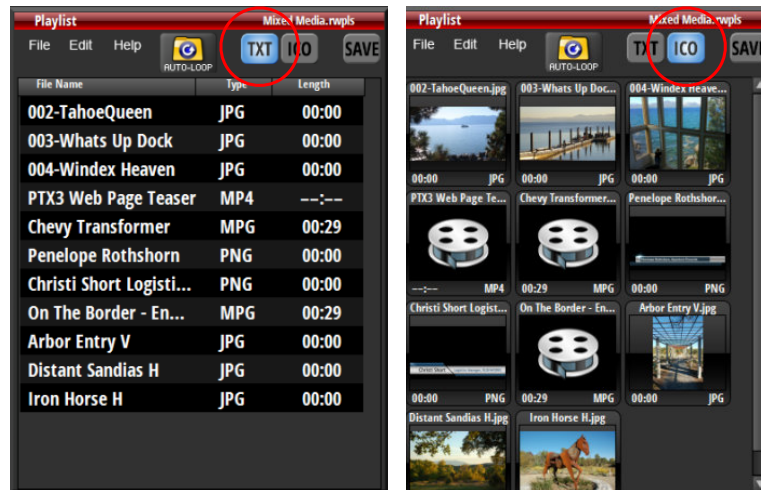


5 - Playlist Window

The **Playlist** window is used to create an ordered list of files for playback during your production. You can add files to the Playlist by dragging them from the File Browser.

When you select a CLIP it will load into the **Preview Window**. Click **TAKE** or **AUTO** on the switcher panel to load and play the clip in the Program window.

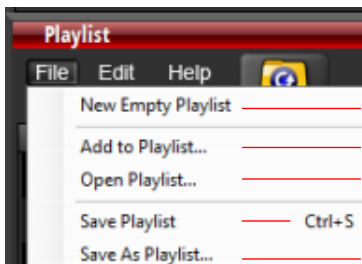
When you select a PIC it will also load into the **Preview Window**. Click **TAKE** or **AUTO** on the switcher panel to load and display the static the clip in the Program window.



Resize the display from the bottom or from the right and place it anywhere on your monitor.

When you select a transparent CG it will load into the **DSK Preview Window**, which is where files with transparency are previewed (PNG). Click **TAKE TO AIR** or **AUTO TO AIR** in the DSK Preview panel to load and display the overlay on the Program window.

Files can be displayed as a simple text list (click the **TXT** button) or as thumbnails (click the **ICO** button).



Click the File Menu to view your Playlist choices

Click to open a New Empty Playlist

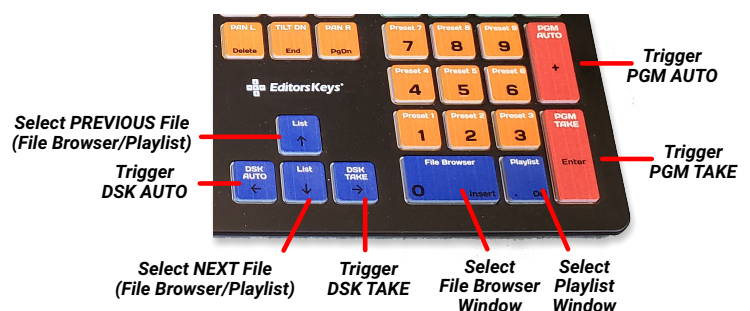
Click to open the **D:/Media** folder to select a file to add to the end of the list

Click to open the **D:/Playlists** folder to choose a previously saved Playlist

Click to **Save** the current Playlist, or use the **Ctrl+S** shortcut

Click to open the D:/Playlists folder into which you'll name and save the Playlist.

You can also use the custom keyboard shortcut functions to perform many of the program functions.



6 - Program Window

When clicked, the **RECORD** and **STREAM** buttons will highlight **RED**, indicating the processes are active. The titles will change to **RECORDING** and **STREAMING**. You'll also see the running duration of the recording in progress. Click to **STOP** either function.



The **Program** Window shows the video output of the system. It is the final composited video signal that the system is producing. This is also what will be captured when you activate the **RECORD** and/or **STREAM** functions.

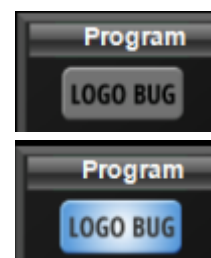
Audio Monitoring On/Off (Program or Preview)

Click the **GREEN** **PVW** button to monitor **PREVIEW** through the computer audio jack output ... and click the **RED** **PGM** button to monitor **PROGRAM** audio output – the same that is being output on the HDMI and SDI connectors of your system. Click the **AUDIO MONITOR** button to allow or mute the selected audio source (PVW, PGM) you're monitoring.



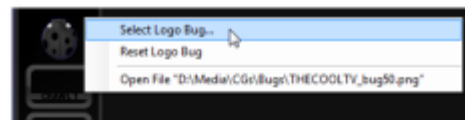
Bug On/Off

You can display a **LOGO BUG** (usually a 'branding graphic') at any time by clicking once on the button. It will illuminate and the currently selected graphic, a PNG file, will fade on. Click again to turn off the **LOGO BUG**. The button returns to its inactive state and the currently displayed graphic will fade off.

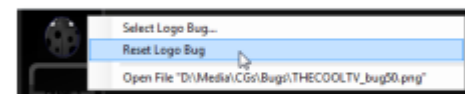


Bug Selection

To select the graphic associated with the **LOGO BUG**, right-click on the **LOGO BUG** icon. Choose **Select Logo Bug ...**. A browser window will open, revealing the contents of the **CG** folder. Select the desired graphic and click **OK**. When you next left-click the Bug icon to activate it, the attached graphic will fade on.

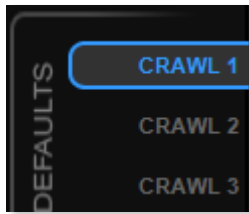


Reset Logo Bug ... removes the current bug file association, so nothing will be displayed with you click the Bug icon.



Open File ... opens the currently associated Bug graphic for verification



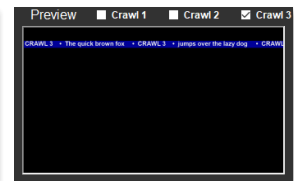
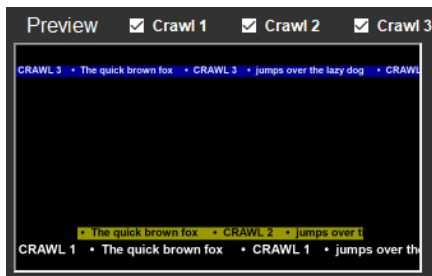
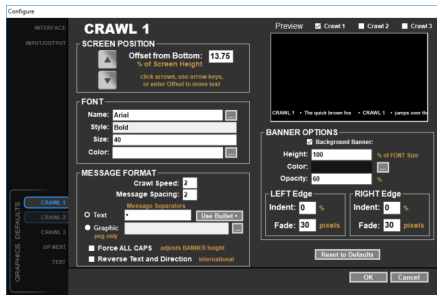


CRAWL Tabs

VDESK supports three independent crawls: **Crawl 1**, **Crawl 2** and **Crawl 3**. Click the associated tab to review/change your preferences for each.

VDESK ships with default parameters for all crawls. But you can change those at any time by clicking any of the three CRAWLS tabs on the Configuration page. Since there are a lot of display options to consider, the following descriptions focus on the four sections you'll work with: **SCREEN POSITION**, **FONT**, **MESSAGE FORMAT**, and **BANNER OPTIONS**.

The currently selected Crawl tab displays the associated Configuration page. As a design aid when creating and positioning the three crawls, you can check the preview boxes above the Crawl Preview screen to confirm all the crawl properties.

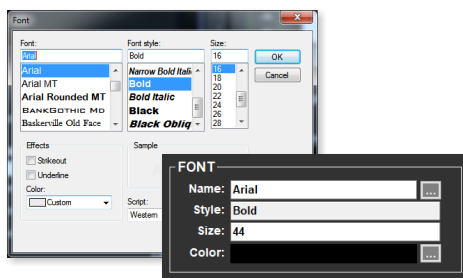


Note: There is an Emergency Crawl (white text on a red banner) that appears only when you enter and save text in the **EmergencyCrawl.txt** file.



SCREEN POSITION

These controls are used to position the crawl (text and banner) vertically on the screen. You can enter/modify the **Offset from Bottom** (default for Crawl 1 is 15%), or you can click the **Up and Down arrows** to move the position. You'll see the result in the Crawl Preview window. You can also use the keyboard Up and Down arrow keys to change the crawl position.



FONT SELECTION

Click the menu button to the right of the Name field. It will open the Windows Font selection panel.

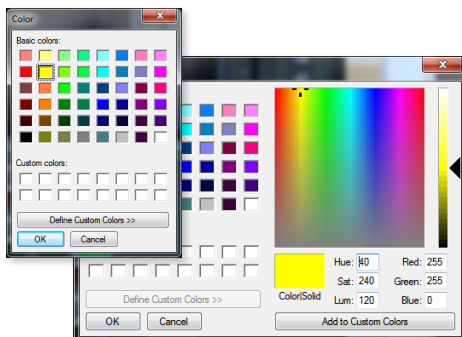
Choose the **Font**, **Font style**, **Size** and **Color** using this menu. When you click OK, you'll see the values appear in the respective fields in the Streamster FONT section.

Custom Color Selection

If you want to work with a wider range of color choices, click the menu to the right of the Color field in the FONT section. This window will appear, and you can pick from these Basic colors or click the Define Custom Colors button.

That expands the window to provide thousands of color choices, or let you enter RGB or HSL values to select a color.

You can Save that color by clicking the Add to Custom Colors button.



MESSAGE FORMAT

Set the **Crawl Speed** according to your preference. **Message Spacing** is the number of blank characters that appear between each line of text you enter in the Text Box when creating a crawl.

You can also add **Text** as a separator. To add a “Bullet” in addition to or instead of the Message Spacing value, click the **Use Bullet •** button to add it to the Text Message Separator. You can also enter any text or character value in that field.

To use a **Graphic** (usually a small branding logo) as a separator, click the Graphic radio button, then click the browse button to the right. Locate and select the PNG file you wish to use. **Force ALL CAPS**, when checked, changes mixed upper/lower case to all uppercase for your crawls. This automatically adjusts the banner height.

REVERSE Text & Direction, when checked, changes the crawl to Left To Right for use with several international character sets.

BANNER OPTIONS

Click the Background Banner checkbox to make it visible.

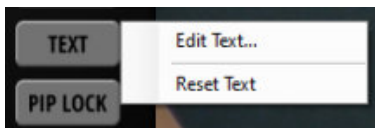
Select the **Height** of the banner, which defaults to the same size as the font you’ve selected (in percentage). To make the banner larger than the font, just enter a value greater than 100.

Click the browse button to the right of the Color display box to open the same Color picker used for the font, and make your selection.

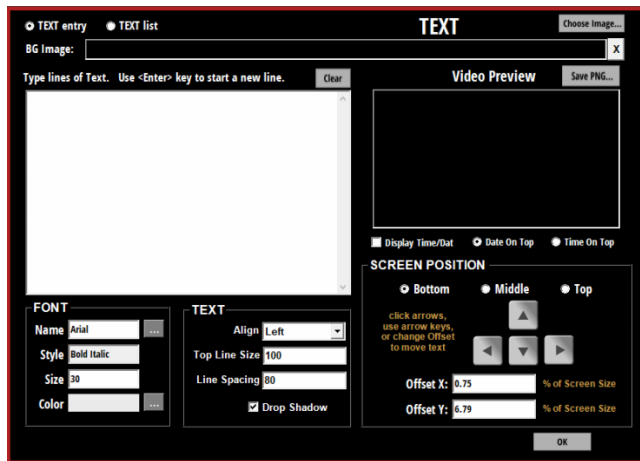
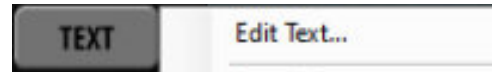
Enter a value for the Opacity of the banner in percent. The higher the value, the less you can see the video behind the banner.

You can **Indent** the Left and Right Edges of the banner by entering a value representing a percent of the total screen width. You can also ‘soften’ the Left and Right Edges of the banner by entering a **Fade** value in pixels.

Configuring and Editing Text - "RUSHWORKS CG"



Edit Text... opens the **TEXT** composition and overlay window where you can customize individual text files by editing the parameters and position. This also makes it easy to align text over background images to create real-time lower-third graphics.

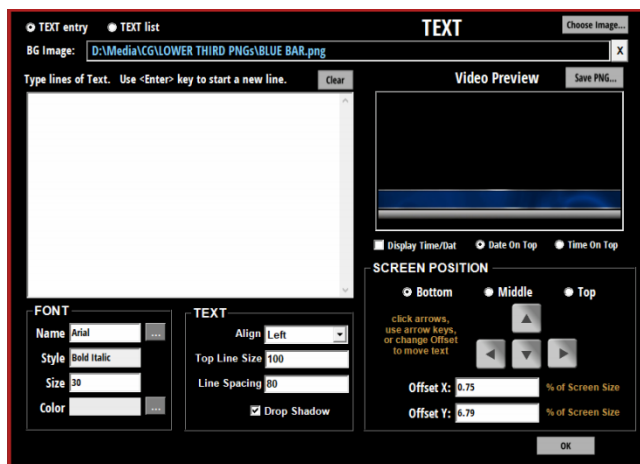


1. Right-click the **TEXT** button on the **Program Monitor** and choose **Edit Text...** The Text Properties window will open.

2. Click the **Display Date/Time** checkbox if you just want to overlay this information. Use the two radio buttons to specify if you prefer the Date or Time as the first line.

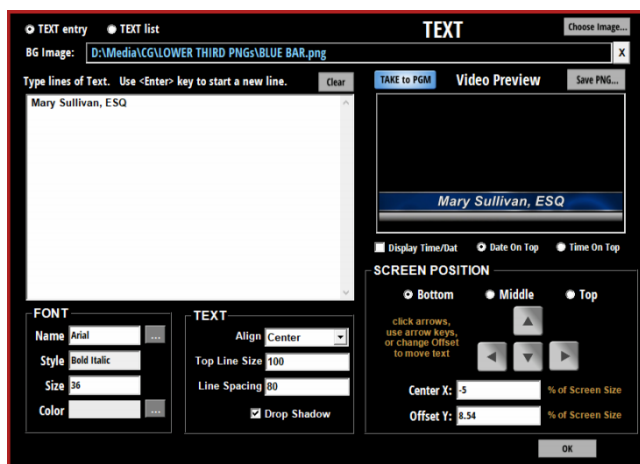
3. If the **TEXT entry** radio button is checked, enter one or more lines of text in the window. Click the **Enter** key whenever you want to start a new line of text. In real-time you'll see the text in the Video Preview box, showing exactly how it will appear on the Program output.

Note: Use the text formatting entry fields in the **FONT** and **TEXT** sections to style the text how you wish. Use the radio buttons and nudge arrows in the **SCREEN POSITION** section to position text exactly where you want it for display.



4. As soon as you create text in the entry window, the **TAKE to PGM** button appears. Click that button and whatever is displaying in the Video Preview window will fade on the Program Monitor, and the Text Properties panel will close.

5. Click **Choose Image** to select a graphic to display behind the text, which is typically a 'lower third' overlay. The selected BG file name displays in **blue**, and the image displays in the Video Preview. Click the X to clear the file name/image.

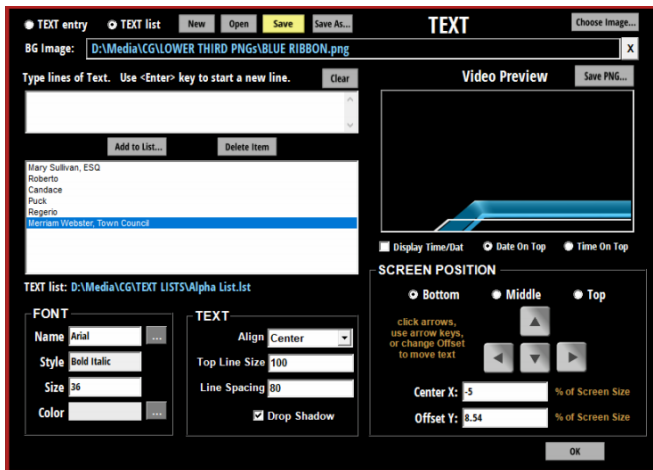


6. To align the text over a background image use the **SCREEN POSITION** radio buttons for general vertical positions. Then use the **nudge arrow buttons** to position the text over the graphic. Click **OK** when you're done. If you want to **Save** the composite graphic as a **png** file with transparency, click the **Save PNG...** button to open the File Name and Save dialog. It will be saved in the **D:/Media/CG** folder.

5. To display the text/graphic overlay, just left-click the **TEXT** button on the **Program Monitor** and the graphic will **FADE ON** the Program screen and the **TEXT** button will illuminate. Click it again to **FADE OFF** the lower third.



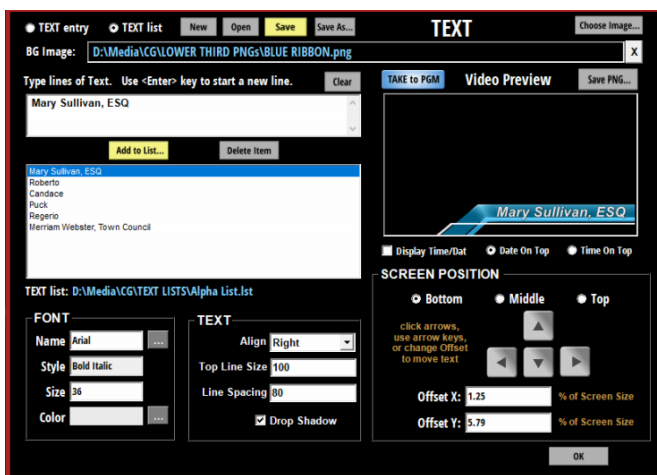
Creating & Using TEXT Lists



If the **TEXT list** radio button is checked, an empty list appears below the text entry field. TEXT lists can be named and saved, and are very convenient for creating a list of names for participants in events such as city council, school board meetings and similar venues. It's also another way to quickly access a list of song titles or scriptures for worship services.

Enter your text in the entry field. The **Add to LIST** button will display in yellow. Click that button to add the text to the List. When a new entry is added to a list, the **Save** button illuminates yellow. It will remain active unless/until you click it.

When you click the **Save** button a dialog will open the **CG/TEXT LISTS** folder where you'll name and save the list. If the **Save** button is highlighted and you click **OK**, **New**, **Open** or the **TEXT entry** radio button, you'll see a warning asking if you want to **Save Changes to List?** before completing the action. Select **OK**, **Don't Save** or **Cancel**.



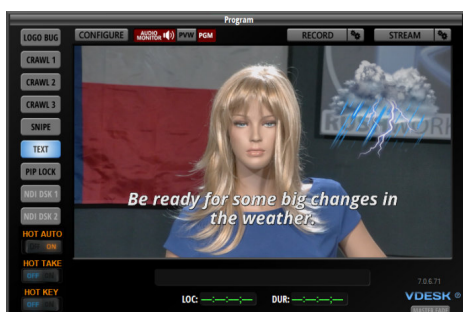
As with the TEXT entry screen you can Choose an Image to use as the background graphic for the items you save in a List. If you want to save the composite graphic and text overlay to use as a single CG item, click **Save PNG...** and the contents of the Video Preview will be saved into a PNG file. The name/save dialog opens the **D:/Media/CG** folder where you'll save to the root of that folder or any subfolder(s) you create.

The currently active **text** is always highlighted in the list - and the currently loaded TEXT list name will also appear in blue under the list window.

When you click the **Open** button the **CG/TEXT LISTS** folder opens where you'll select and load a saved list.

If you have an event with several names you want to use during production, just right-click the TEXT button and select **Edit TEXT** to open the **TEXT** window, click on any name in the currently loaded list, then click the blue **TAKE to PGM** button and it will appear as an overlay on the Program Monitor. The Text Properties panel will remain open so you can place it anywhere on your monitor for immediate access to text. The **FADE to PGM** button works in tandem with the illuminated **TEXT** button on the Program Monitor. Click **OK** to close the **TEXT** panel whenever you wish.

Remember: When you click the **TEXT** button on the Program Monitor the items currently displaying in the Video Preview window on the Text Properties page will fade on.



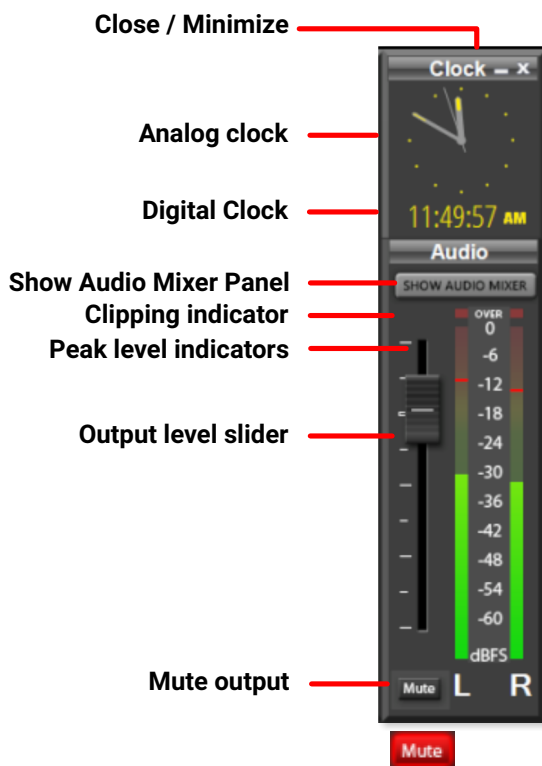
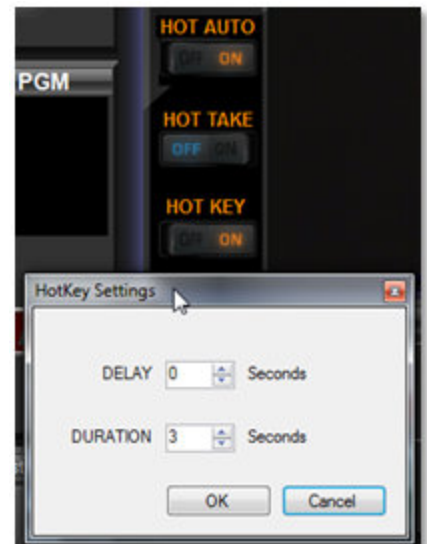
Using HOT AUTO, HOT TAKE and HOT KEY buttons

The three HOT buttons provide enhanced automation of putting your selected preset shots on the Program output ... as well as fading on any graphics associated with PTZ camera preset selection. HOT KEY only applies if you have created **links to graphics** for any of your presets (see "Linking a Graphic to a Camera Preset" on page 15).

Toggle on/off either the **AUTO** or **TAKE** buttons. They will 'illuminate' when active/on. Whenever you select a "linked" camera preset, the system will automatically switch to that shot as soon as the camera reaches the preset destination, "**cutting**" to the shot if **TAKE** is On/illuminated ... or **dissolving** to the shot if **AUTO** is on/illuminated.

With HOT KEY **OFF**, the system will automatically load the associated graphic into the DSK PVW window, where you can manually use the **TAKE TO AIR** or **AUTO TO AIR** to fade on that graphic over the PROGRAM video.

With HOT KEY **ON**, the associated graphic will automatically fade on after the HOT AUTO or HOT TAKE is executed. Right-click the HOT KEY toggle to display user-defined settings for how many seconds it's delayed before it fades on ... and for how long it displays before it fades out.



7 - Clocks & Audio Windows

The clock window has an analog clock showing the current time. It also includes a **digital clock and timer**. To start the timer, simply click the button labeled "Click for Timer" and it will start counting up seconds. To stop the timer, touch the display. To start again, touch the display again. The "Reset" button will reset the display to zero.

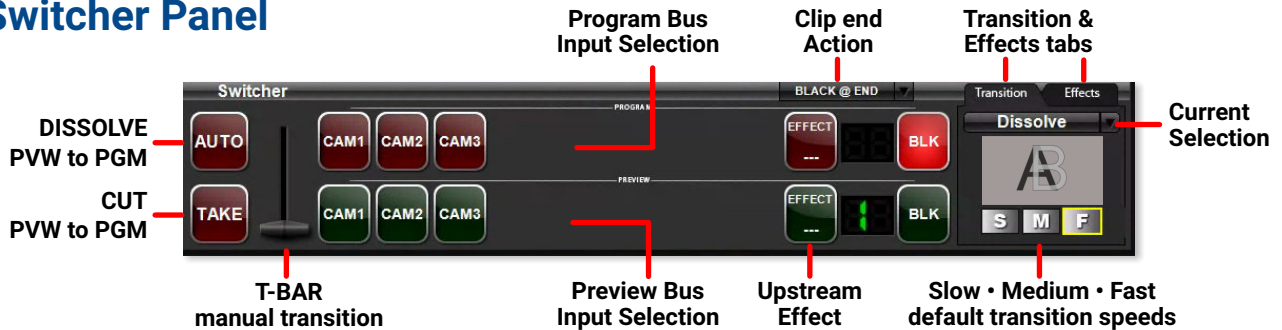
The **Audio Window** shows the real time master levels of your **VDESK** system. These levels reflect what the system is outputting on the master audio output as well as what is being captured by the encode function.

The **Slider** will adjust the mixed output of all the audio sources.

The **Mute** button will mute the audio output of the system.

The **Close** and **Minimize** controls on the clock panel affect the entire program. You can also exit **VDESK** by right-clicking any of the camera window title bars and choosing "Exit".

8 - Switcher Panel



The Switcher Panel displays the configured inputs on the Preview and Program bus. You can change inputs one of 3 ways:

1. Use the **AUTO** button - this will change between the Program input and the Preview input using currently selected transition and duration.
2. Use the **TAKE** button - This will cut from the Program input to the Preview input.
3. Direct selection - Click any of the input buttons on either bus to switch the corresponding bus to that input.

Clip End Actions:

These allow you to control what happens when a clip on program reaches the end. The control is located above the CLIP1 and CLIP2 buttons on the switcher. When you click on the text it will cycle through the four choices, and when you click on the down arrow it will display a menu:



Black at Clip End - Once the clip runs out you will see black until you choose another input on the switcher.

Take at Clip End - Upon reaching the end of the clip the system will perform a TAKE command, switching to the preview input.

Auto at Clip End - At the end of the clip the system will perform a dip to black transition.

Repeat at Clip End - The clip will repeat until another input is selected. This option lights up RED as a reminder - the clip will keep looping endlessly unless you stop it!

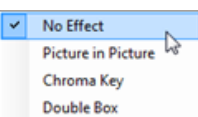
Transitions and Effects tabs:



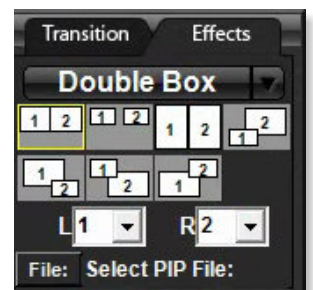
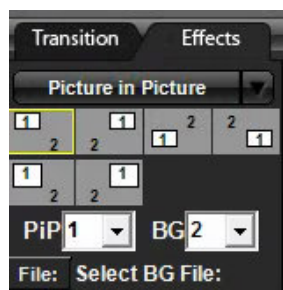
dropdown list of Transitions

The Transitions and Effects tabs are where you select the type of transition, duration of that transition, and effect options. Not all effects and transitions have the same options so each selection will look different.

For more information on how to use these, jump ahead to **Choosing Transitions & Effects**.



dropdown list of Effects



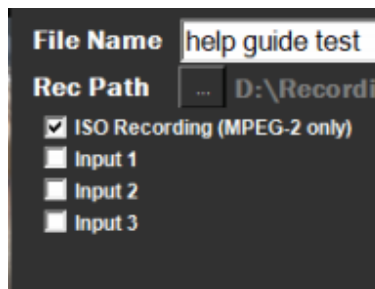
9 - Audio Mixer Panel



Click the **SHOW AUDIO MIXER** button above the Program Audio Monitors to open the **Audio Mixer Panel**. This provides individual level monitoring and adjustment of the INPUT sources you've defined in the Configuration setup. The button label changes to **HIDE AUDIO MIXER** when the panel is open.

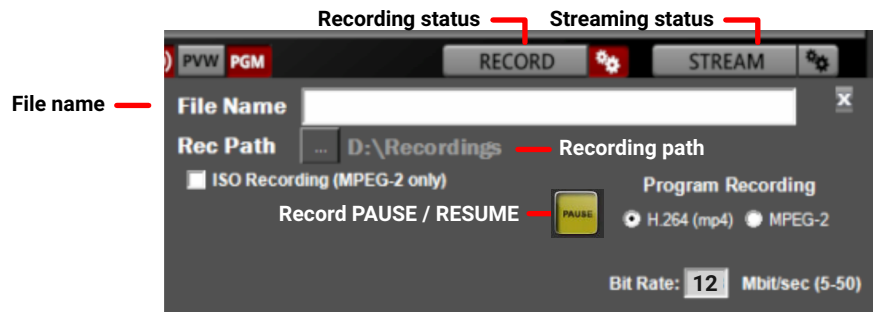
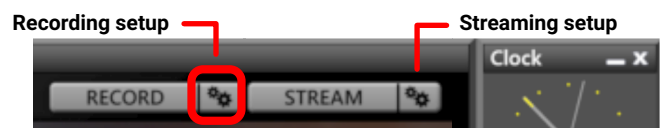
10 - Recording

When you click the **RECORD Setup** icon at the top of the Program Monitor the **Record Settings** panel will appear.



You can record **up to three (3) inputs** as separate files while you are also recording your Program output and streaming.

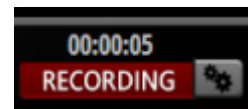
Click the **ISO Recording checkbox** and select which inputs (up to 3) you'd like to ISO Record.



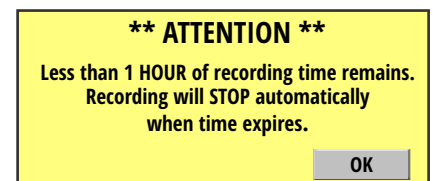
To start recording, click **RECORD**. Whatever you see on the **PROGRAM** display is what you are recording.

You can click the **PAUSE** button at any time, and it will glow bright yellow – with the button label now displaying **RESUME**. Click the **RESUME** button and the file(s) will resume recording, creating a single seamless data file.

The **RECORDING** button above the PGM monitor also turns **RED** and displays the word **RECORDING** while active. The in-progress record timer is displayed above the button. Click the red button and the recording is stopped, with the button text reverting to **RECORD** in black.

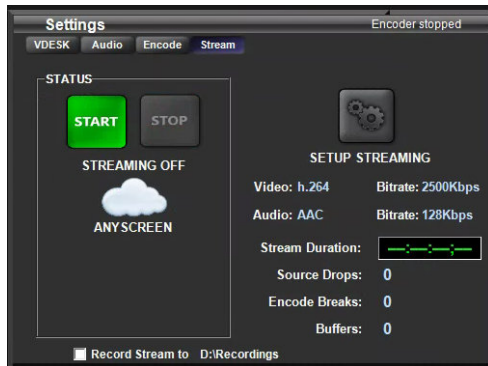


If recording space drops **below one hour** you will see a pop up warning that will display again at **5 minutes remaining**. **Recording will STOP AUTOMATICALLY** when no more space is available. Please keep this in mind when starting a recording, and don't jeopardize your production by losing any of the content.



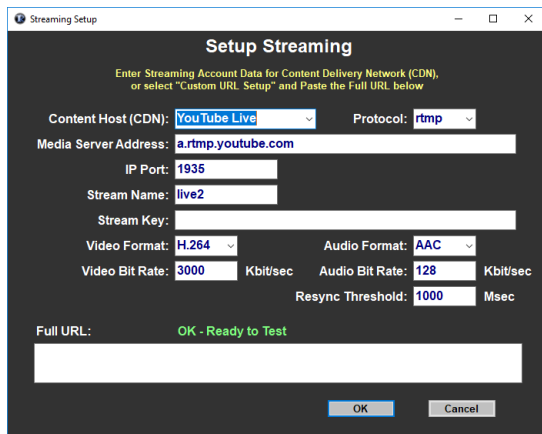
11 - Streaming Settings

Click the **STREAM Settings** icon to open the Settings page.

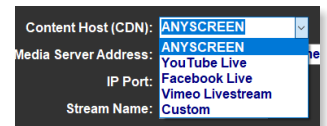


This page displays all the information associated with your streaming setup and output parameters, as well as the status of your current stream when active.

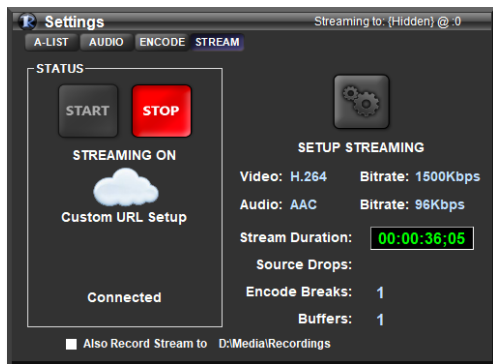
Click the **SETUP STREAMING** button to enter the necessary information to configure your desired stream output.



Although there are several parameters to enter on the Streaming Setup window, they are absolutely required when you're setting up your streaming output. Since you'll likely be delivering your signal to a Content Delivery Network (CDN), first select your provider by clicking the arrow for the dropdown. Your choices are **ANYSCREEN™**, **RUSHWORKS'** subscription hosting service, **YouTube Live**, **Facebook Live**, **Vimeo Livestream** and **Custom**.



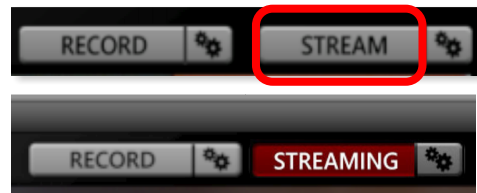
Copy each field from your CDN's detailed settings page and paste into the matching field on the CONFIGURE STREAM window. If Video Bitrate and Audio Bitrate suggestions are not provided, then use the default values. Click **OK** when done.



Click the green **START** button to activate **STREAMING**. The STOP button will turn RED when streaming is in progress.

You can monitor the current **Stream Duration**, as well as a report of how many **Source Drops** and **Encode Breaks** have occurred during the session. The **Buffers** indicate the 'health' of your bandwidth connection. The lower the number the better your performance will be.

Click the **STREAM** button to activate **STREAMING**. It will turn RED when streaming is in progress.



Configuring Your INPUTS, OUTPUT and OPTIONS

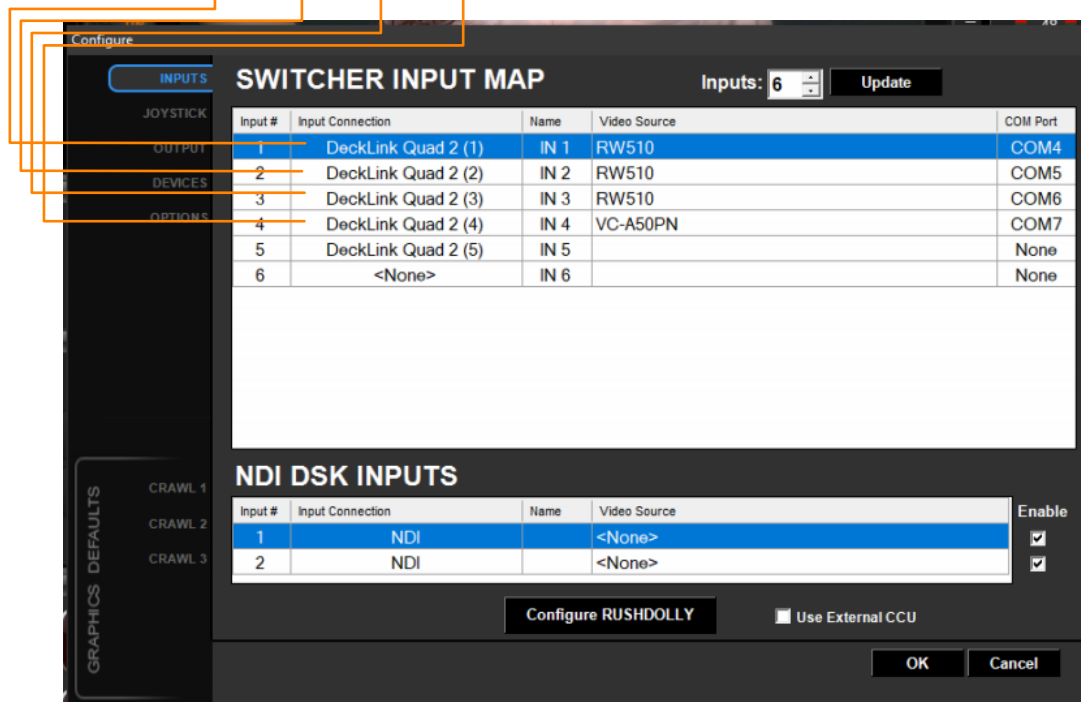
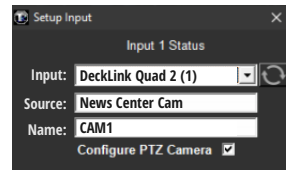
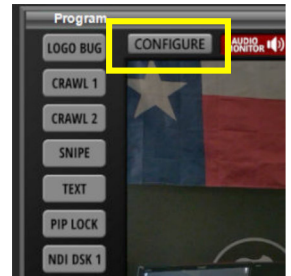
This is the first thing you **MUST** do when you receive your system!

These procedures identify all the devices and connections you'll be using in your productions, so setting it up correctly in the beginning is very important.

Your system hardware configuration is preconfigured at RUSHWORKS prior to shipping. When you open the **Configure** window you'll see the number of hardware card inputs available in your system. For example, if it's a Decklink Duo 2 you'll see FOUR inputs. If it's a Quad 2 you'll see EIGHT inputs. If it's a Duo 2 and a Magewell 4-port HDMI card you'll see FOUR Duo 2 inputs and FOUR Magewell inputs.

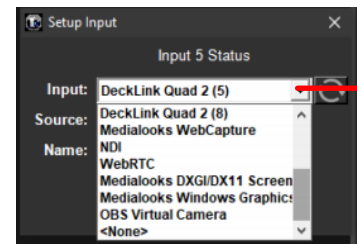
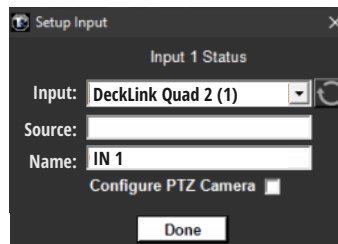
The **Input** matches the input displayed on your switcher panel buttons, left to right. The **Input Connection** defaults to Blackmagic cards and inputs first, followed by Magewell. The **Name** for each is sequential, defaulting to the same as the **Input**.

When you click any Input row in the grid the **Setup Input** window will appear. Here you can select your desired **Input Connection** from the dropdown of available choices, enter a **Video Source** description, and create a **Name** that will replace the input number and display on your switcher panel.



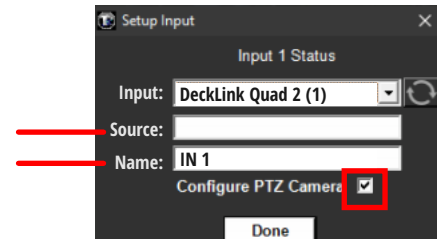
Depending on the VDESK model you've chosen the system will have Blackmagic SDI and/or Magewell HDMI input/output cards. You can identify up to **12** input video sources, which can be a combination of PTZ or non-PTZ cameras, NDI-connected sources (cameras, computers or other devices) or streaming URLs. You can also display **TWO NDI DSK overlays**.

1 Click on any Input row. The **Setup Input** panel will open. It will display the information for the row you've clicked. This example indicates you've clicked on row 1 (Input 1) which has previously been assigned to the DeckLink Quad 2 input 1.



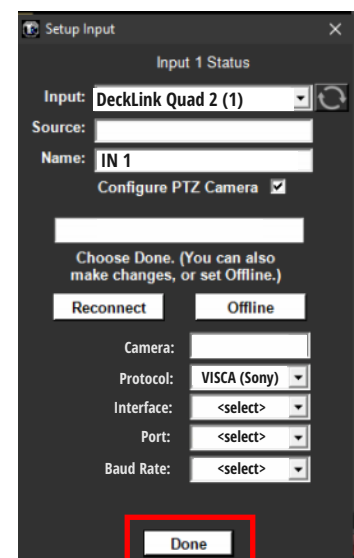
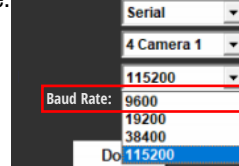
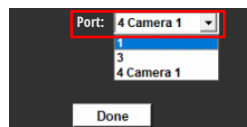
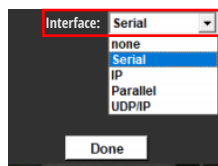
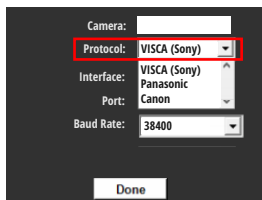
This is a dropdown list from which you can also choose other options that will appear on the selected Input.

2 If you're configuring a PTZ camera on the selected Input, check the **Configure PTZ Camera** checkbox. The Setup Input panel will expand to reveal the setup parameters you'll select using the dropdown lists.



3 Use the dropdown lists for **Protocol**, **Interface**, **Port** and **Baud Rate** to select those that match the PTZ camera you're connecting. **Protocol** defaults to **VISCA (Sony)** since it's the most widely used for PTZ control. Then select the Interface, Port and Baud Rate, if/when applicable.

When **Serial** Interface is selected you'll use your 4-port MUX and connect up to four RS-422 sources by assigning a unique MUX port to each device.



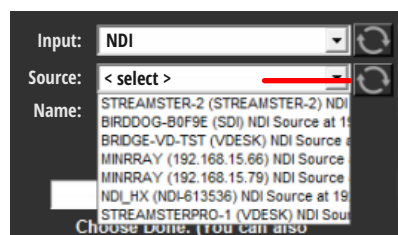
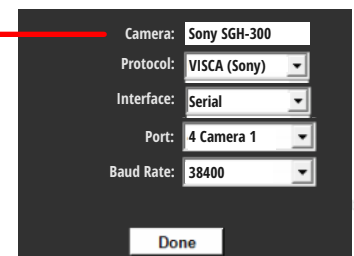
The **Camera** field is a read-only display that will automatically display the camera manufacturer and model after you click the **Done** button.

Configure

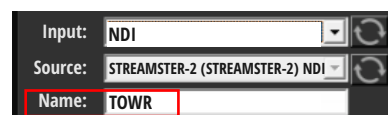
SWITCHER INPUT MAP

Inputs: 8 Update

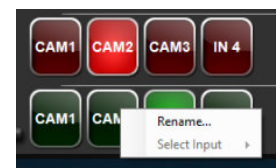
Input	Input Connection	Name	Video Source	Port
1	DeckLink Quad 2 (1)	CAM 1	RW-510	COM 5
2	DeckLink Quad 2 (2)	IN 2		
3	DeckLink Quad 2 (3)	IN 3		



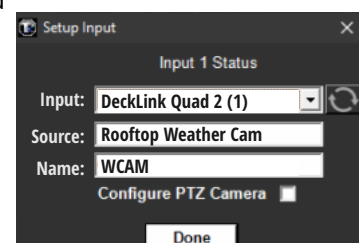
When **NDI** is selected as the Input the refresh button appears right of Source, and the first displayed item in the dropdown list is **<select>**.

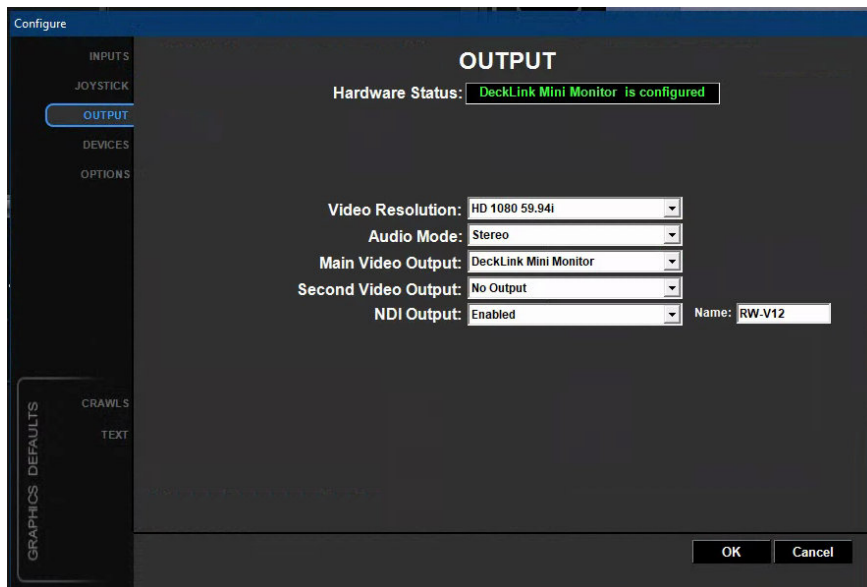


The **Name** field is auto-populated based on the Input number clicked. (IN 1, IN 2, etc.). This can be overwritten here, or by right-clicking the switcher input and Renaming that input. The change is then reflected in this field and on the corresponding switcher button.



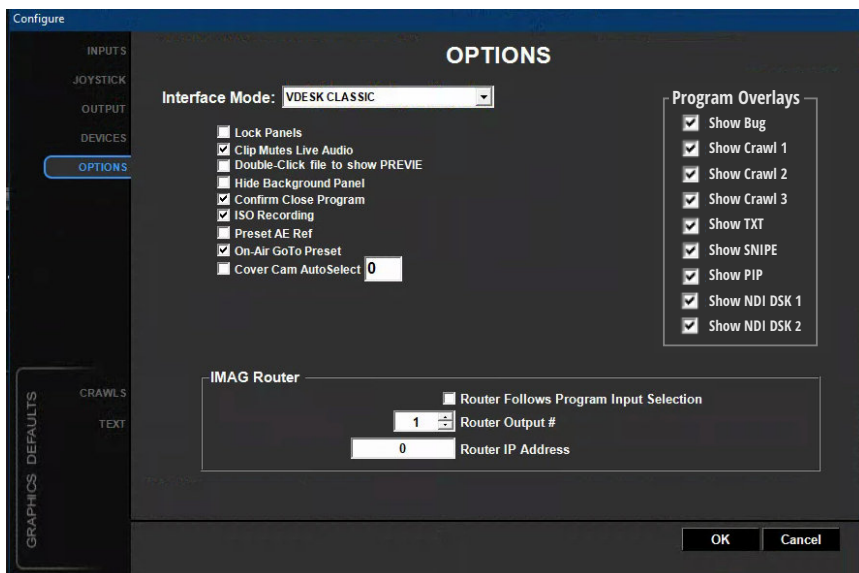
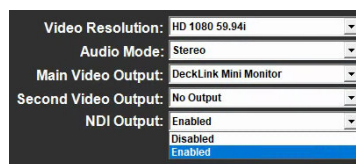
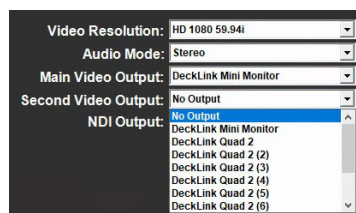
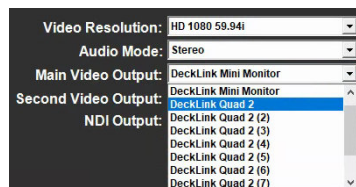
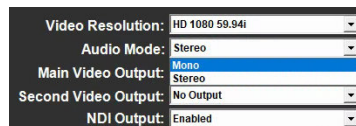
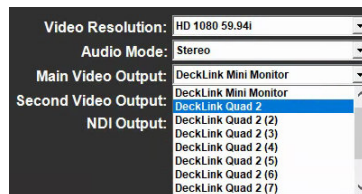
If the video Source on an Input is NOT a PTZ camera, and **NDI** is NOT selected as the Input - enter an **Input Source** description and optionally **change the Name** that appears on the switcher button and SWITCHER INPUT MAP field.





Click on the **OUTPUT** tab of the Configure menu. Here you'll select your desired output parameters from the drop-down lists in each field:

- Video Resolution
- Audio Mode
- Main Video Output
- Second Video Output
- NDI Output



Click on the **OPTIONS** tab of the Configure menu. Check the boxes you'd like active for your VDESK production sessions - including which of the nine (9) Program Overlay buttons you want to display on the Program Window.

- Check **Router Follows Program**
- Select the **Router Output #**
- Enter the **Router IP Address**



IMAG Router Output with Reduced Latency

All digital production systems have latency in the program output signal. VDESK is no different, typically with a 5 or 6 frame delay. This is enough to make in-room display uncomfortable for audience viewing. With VDESK you can control an external video routing switcher with minimal latency, automatically mirroring the VDESK Program input selection on the switcher using IP commands. The output of that switcher feeds the IMAG screen with only a couple of frames of delay. You lose any graphics overlays or transition effects, but the primary camera selection is always displayed on the IMAG screen.



Blackmagic CleanSwitch 12x12

Using VDESK in Production

Now that you have had a brief overview of each window that makes up the user interface, we'll show you how to set up for production

The "How To" steps we will cover are:

1. Configure the system components
2. Create, name and save your camera presets
3. Create graphics for your production
4. Link a camera preset to a graphic
5. Create a playlist
6. Set up a recording

Once these things are done you are ready to start your production.



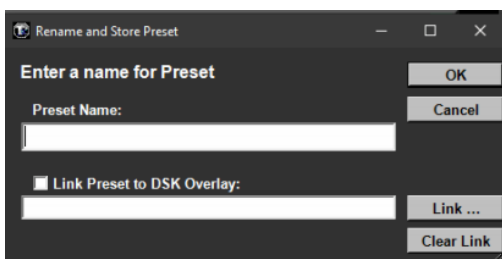
Setting, Naming and Saving PTZ Camera Presets

There are a few different ways to control the PTZ cameras. The joystick and touch pads are the most common, but you can also use these keys to adjust camera positions. The joystick and keyboard controls will always apply to the camera currently selected on **PREVIEW**. This allows you to move the camera to the position or preset you desire without a rapid on-air move.

- Zoom Out
- Zoom In
- Tilt Up
- Tilt Down
- Pan Left
- Pan Right



Use the joystick to position the shot using Pan, Tilt and Zoom - then right-click the desired preset button on the corresponding camera window. This will open a context menu for managing presets



Name and Save Preset...

Opens the Preset creation dialog. Enter a name and click OK to Save the Preset.

Save Preset (position only)

No dialog is opened. It just saves the current position (XYZ) values.

Rename Preset... (name only)

Opens the dialog where you change the name but not the XYZ values.

Link Preset to DSK Overlay

Opens a dialog that allows you to select a graphic (PNG file) to link with the preset. Each time you go to the preset the linked file will be loaded in the DSK window.

Go To Preset

Move the camera quickly to that preset

Copy Preset

Saves all the associated positioning and camera data.

Paste Preset

Pastes the copied positioning and camera data

Copy All Presets

Saves all positioning and camera data for all presets.

Paste All Presets

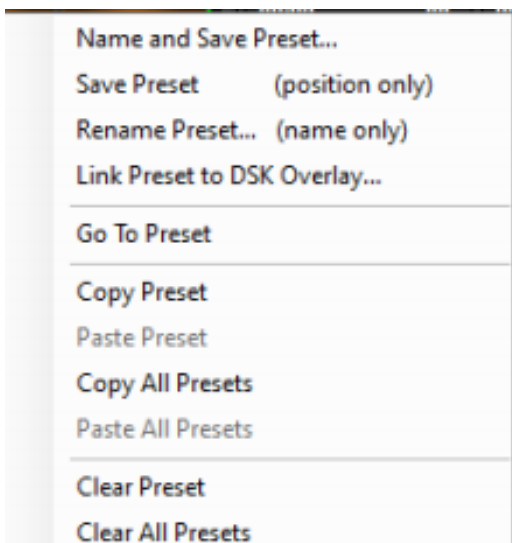
Pastes all the copied positioning and camera data from one camera to those on a different camera.

Clear Preset

Clears all data from the selected preset.

Clear All Presets

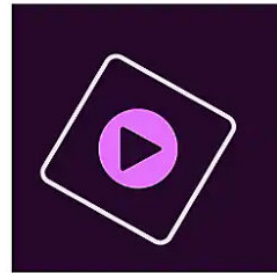
Clears all data from all the presets.



Creating Graphics & Animations using Adobe Elements

For your convenience, **VDESK PRO** systems include Adobe **Photoshop and Premiere Elements**. For extensive guides please refer to each product's manual or to Adobe's website. There are many useful video tutorials to help you through all the different features of each program.

These programs are great for creating graphics of all kinds, including lower-third titles with transparency (PNG). You can also edit your productions, or any other production footage ... so this added functionality provides you with enhanced capabilities on your VDESK system.



Premiere Elements



Photoshop Elements



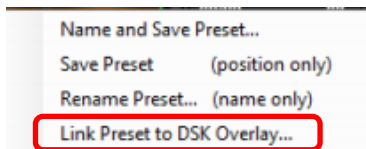
*Note: if you choose to create your own graphics they must be on pages corresponding to your selected output format (480i, 720p, 1080i or 1080p). These are, respectively, **720x480**, **1280x720**, and **1920x1080**.*

Linking a Graphic to a Camera Preset



Once you have a camera position saved to a preset button you have the option to link an overlay to it. These can be created in Photoshop Elements or another graphics program you may have.

Once these files are saved as **PNGs** you can link them. All you have to do is **DRAG** your **PNG** from the **File Browser** onto the preset button you want it linked to and then **DROP** it. The link icon will display on the button. It's that easy! Alternately, you can right-click the desired preset and select **Link Preset to DSK Overlay** from the list.



Check the box next to **Link Preset to DSK Overlay** and then the **Link...** button and browse to the graphic. Select it and click **Open** (or double-click), then click **OK** on the previous window. You will see the **Chain Link** icon. There are 3 states of this icon:



This link icon means that the preset is linked to a PNG and it is enabled. It will be loaded every time the shot is selected.

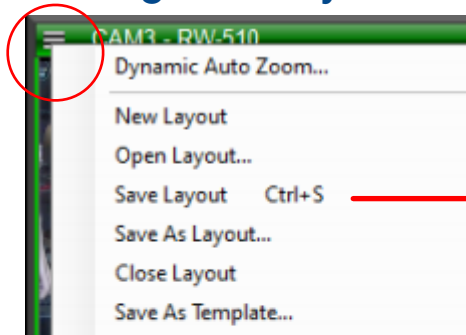


This link icon means that the preset is linked to a PNG and it is disabled. It will **NOT** be loaded when the shot is selected.



This link icon means that the preset is linked to a PNG but the PNG can't be found.

Saving Your Layout

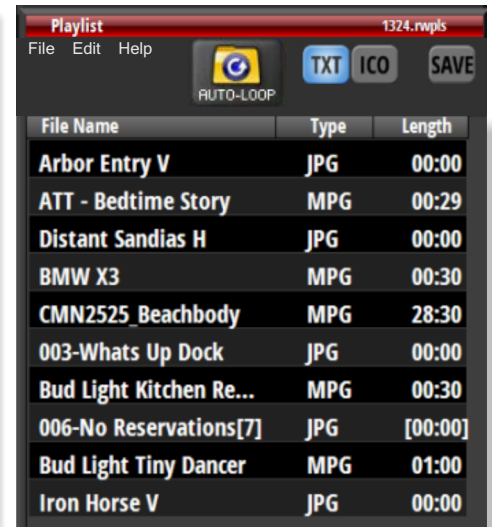
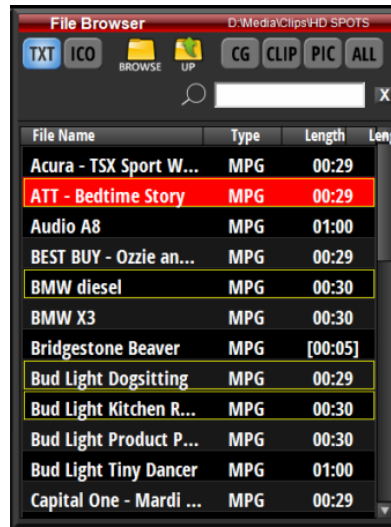


Once you have linked everything you want be sure to **save the layout**. To do this, click on the 'hamburger' menu at the left of the camera title bar, or right-click on the camera title bar and select **Save Layout** (Ctrl+S) from the list.

Creating a Playlist

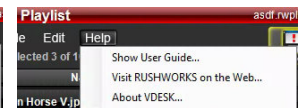
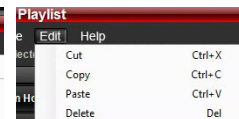
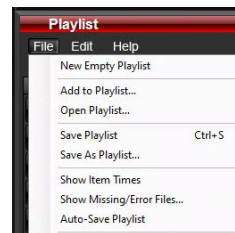
Creating a playlist for use during a production is *drag and drop* simple!

Search for the desired files using the File Browser window and drag them to the Playlist window. You can select then drag and drop one or more files to change the order. If you want to save the playlist for later use, click the **Save As** button at the bottom. Playlists can also be created by importing an agenda from **AgendaPrep**.



Selecting One or More Files in the File Browser or Playlist

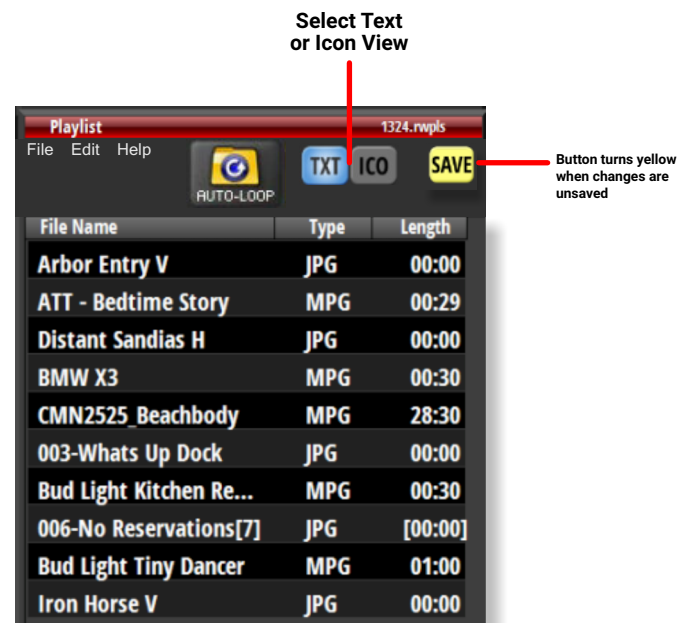
- Select a single file by **left-clicking on the file**.
- Select multiple non-contiguous files by **holding down the Option key while clicking on each**.
- Select multiple contiguous files by clicking one file then **holding down the Shift key while clicking the last file in the desired selection**.



To Play a Selected File, click the **TAKE** or **AUTO** button on the switcher.

You can create and save as many Playlists as you wish. Saved **titles** should be short and descriptive and include the creation date. Here are some examples:

- City Council 071319
- P&Z 2021-07-19
- 7AM Service 07132021
- 11AM Service - July13



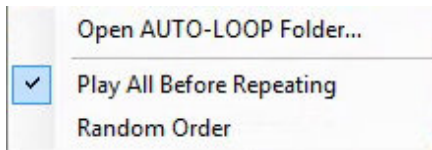
File Playback Automation using AUTO-LOOP

Looping the playback of a folder containing video clips is the easiest, quickest way for your VDESK to play continuous content with NO complicated user interface.

There is a folder called **AUTO-LOOP** at the root of your **D** drive (**D:\AUTO-LOOP**). Just copy **clips** into the **AUTO-LOOP** folder.

SUGGESTION: You may find it helpful to keep a shortcut to the **AUTO-LOOP** folder (**D:\AUTO-LOOP**) on the VDESK desktop so you can add or delete **AUTO-LOOP** files quickly.

AUTO-LOOP Options

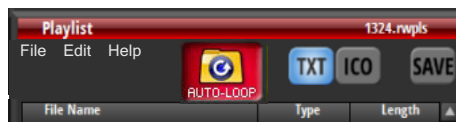
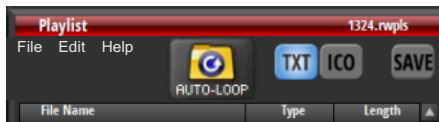


Right click the **AUTO-LOOP** folder to (1) **Open the AUTO-LOOP Folder** to view the contents, (2) check or uncheck the **Play All Before Repeating** function, and (3) check or uncheck the **Random Order** playback function.

Play All Before Repeating means that automation 'remembers' what has played in the **AUTO-LOOP** folder, and the next instance where **AUTO-LOOP** plays, files will resume in the order after the last played file.

If **Random Order** is checked, it will pick another previously unplayed file.

AUTO-LOOP Playlist Display



Click the **AUTO-LOOP** folder button to enable it, and it will turn RED.

An **AUTO-LOOP PLAYLIST** will pop up to the right of the standard playlist. When the contents of the **AUTO-LOOP** folder are playing, the individual files cue and play in order, appearing sequentially as indented playlist items under the **AUTO-LOOP** folder placeholder. The currently playing file is indicated in RED. The next file always cues seven seconds (:07) before it plays, and will be displayed as GREEN while it is cued.

Click the red **AUTO-LOOP** folder button to stop playback. The **AUTO-LOOP** playlist will close, and the switcher will return to the same status before **AUTO-LOOP** was enabled.

AUTO-LOOP File Naming Tips

If you prefer to control the order in which the files and subfolders play, you can use standard Windows file-naming techniques to assign leading numbers to each of the content items.

This example is a hierarchical arrangement for playback of **files** and **sub-folders** in the **AUTO-LOOP** folder, and is based on a user-defined numbering structure.

Note: Placing files in **FOLDERS** and **SUB-FOLDERS** is fine, which also helps you create specific content-based playback file groups. If you don't use leading numbers, the system will use a typical Windows alphanumeric sort order for file/folder playback.

- 01 - Alarm Ordinance - Frisco Cable
- 03 - Basket Ball Goals
- 05 - Contract Postal Unit City Hall
- 07 - FFD
- 09 - Frisco RoughRiders Foundation
- 11 - HOLIDAY CHEER 2022
- 13 - Library
- 15 - museum
- 02 - A-LIST Home Page Video [F].mpg
- 04 - VDESK Home Page Video [F].mpg
- 06 - RADIOTV Home Page Video [F].mpg
- 08 - A-LIST Home Page Video [F].mpg
- 10 - VDESK Home Page Video [F].mpg
- 12 - RADIOTV Home Page Video [F].mpg
- 14 - A-LIST Home Page Video [F].mpg
- 16 - RADIOTV Home Page Video [F].mpg

- 01 - Tree Lighting.mp4
- 02 - Santas Workshop.mp4
- 03 - Reindeer Romp.mp4

Ordered Contents of
11 - HOLIDAY CHEER 2022

Disabled functions when AUTO-LOOP is active

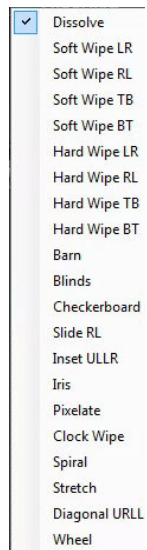
There are certain functions that cannot be used when AUTO-LOOP is active. Others such as LOGO BUG, CRAWLS, SNIPES and TEXT are available at any time and will appear over the playing content.

The following are **disabled and grayed out**:

- all graphics **EFFECTS**, including the **PIP LOCK** button
- Switcher **INPUTS** (PREVIEW inputs remain selectable)
- Switcher **TRANSITIONS (AUTO/TAKE)** including the **T-BAR**
- **HOT** buttons (AUTO, TAKE, KEY)



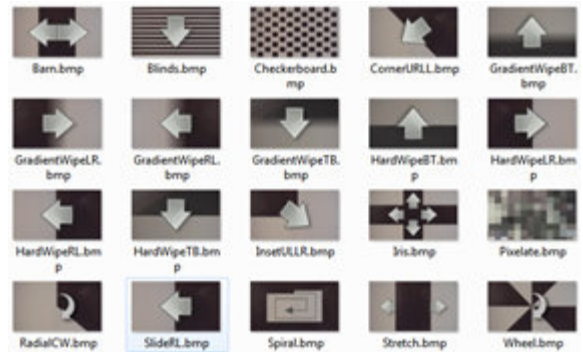
Selecting and using Switcher TRANSITIONS



A video **transition** occurs between the inputs currently selected on the **Preview** and **Program** busses. When you click the **TAKE** or **AUTO** button the image on Preview replaces the one currently on the Program output

To view the available transitions, click the **Transition** tab and click the down arrow to display the dropdown list. There are 21 transition options to choose from. Dissolve is the default (AUTO), and is typically the most often used transition effect along with Cuts – which are accomplished using the TAKE button or by selecting various inputs on the virtual screen Program bus or using the keyboard shortcuts.

The transition icons represent the type and direction of entry of the selected transition.

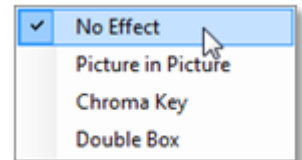


You can also repeatedly click on the transition name button and it will select and display the next transition in the order displayed on the dropdown list.

Selecting and Using Switcher EFFECTS

Because the switcher has only a Program and Preview Bus ... plus a DSK (Down Stream Keyer) ... the two busses are used to set up and display effects as well.

An “effect” is often called a “DVE” ... or Digital Video Effect. This usually suggests the placement and/or manipulation of smaller video windows inside the ‘main’ video window. These types of DVE placements are referred to as “squeeze backs”, “PiP” (Picture-in-Picture), “double box shots”, etc.



Click the **Effects** tab and click the down arrow to display the dropdown list with the three available choices.

The VDX T-BAR Control Surface

The optional **VDX Control Surface** consolidates switcher Program and Preview selection, camera and preset selection, Playlist and File Browser manipulation, TAKE and AUTO Transitions, Effects and T-BAR transitions in one USB device. It's a great way to provide one-button selection of almost any function without the need for a mouse.



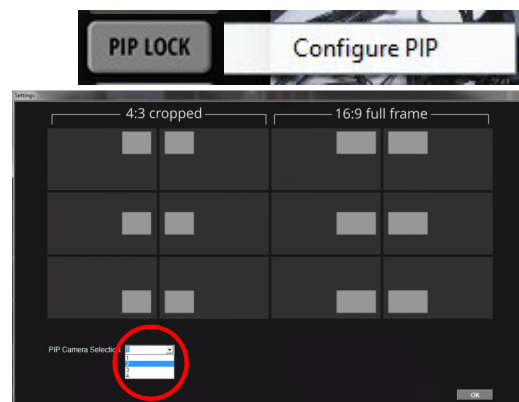
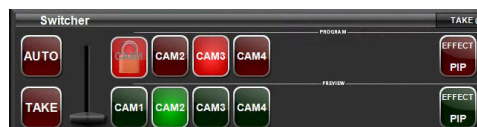
Toggle On/Off a Picture-in-Picture (PiP) from the Program Window

For simple one-touch PiP display of any input over any other input as background, this is a convenient way to operate.



When you open VDESK you'll see **NINE** selection buttons for real-time activation and display. Right-click the PIP LOCK button and you'll see the **Configure PIP** flyout.

This PIP Settings screen appears, providing 12 size, position and crop choices for the PIP. Click the image you want to use, then select the camera/switcher Input to display in the PIP window and **click OK**. When you click the PIP button it illuminates (BLUE = On) and the switcher panel shows a lock on the PIP input source. You can select any other source from the Preview bus and click AUTO or TAKE to display it behind the PIP, or just click an input on the Program bus.

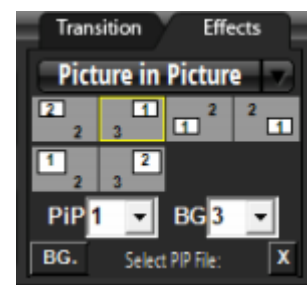
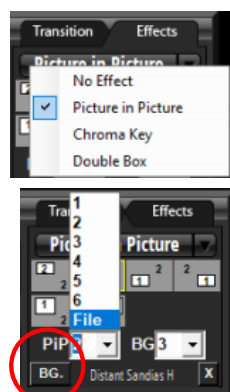


PIP camera/switcher selection dropdown

Display a Picture-in-Picture (PiP) using the Effects Tab

- 1) Select **Picture in Picture** in the **Effects** dropdown list.
- 2) Click the desired size and position from the **six** available choices. The small numbers in each box represent the **input** currently assigned to the PiP window and the background it's displayed over.
- 3) To check or change the current input assignments, use the **PIP** and **BG** dropdowns to select available inputs for each. You'll see your changes happen in the Preview window in real-time.

If you want to display a **graphic** in the PIP window, select **File** on the dropdown. Click the **BG** button to browse the **D:\Media** folder where you can select the graphic you want to display. Click the X to clear the selection.



Note: Each of the six PiP positions stores its own Foreground and Background input settings. Because all transitions and effects are confined to what can be accomplished using inputs on the PGM and PVW buss ... plus the DSK ... it's important to learn how to manage the setup required for optimizing your results when using Effects in VDESK.

- 4) Click **AUTO** or **TAKE** to display the PiP effect on the **Program** screen.

Display a Double Box PiP ...

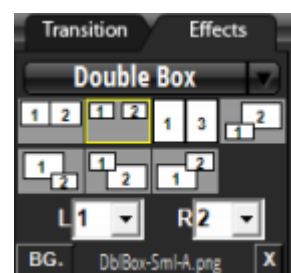
- 1) Select **Double Box** in the **Effects** dropdown list.
- 2) Click the desired size and position from the seven available choices.

You will see the currently assigned inputs in the respective box position icons. To change the current input assignments, use the L and R dropdowns.

- 4) Select the **L** (Left) input, the **R** (Right) input, and click the **BG** button to search for a Background Picture if you want to use one. You'll see your changes happen in the Preview window in real-time. Click the X to clear the current BG selection.

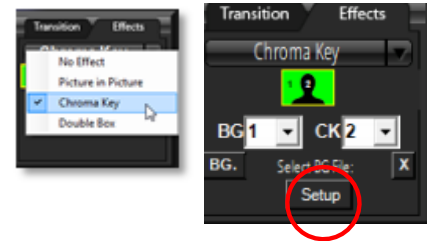
Note: Each of the seven Double Box positions stores its own **Box L** and **Box R** input settings. Because all transitions and effects are confined to what can be accomplished using inputs on the PGM and PVW buss ... plus the DSK ... it's important to learn how to manage the setup required for optimizing your results when using Effects in VDESK.

- 5) Click **AUTO** or **TAKE** to display the **Double Box** effect on the **Program** screen.

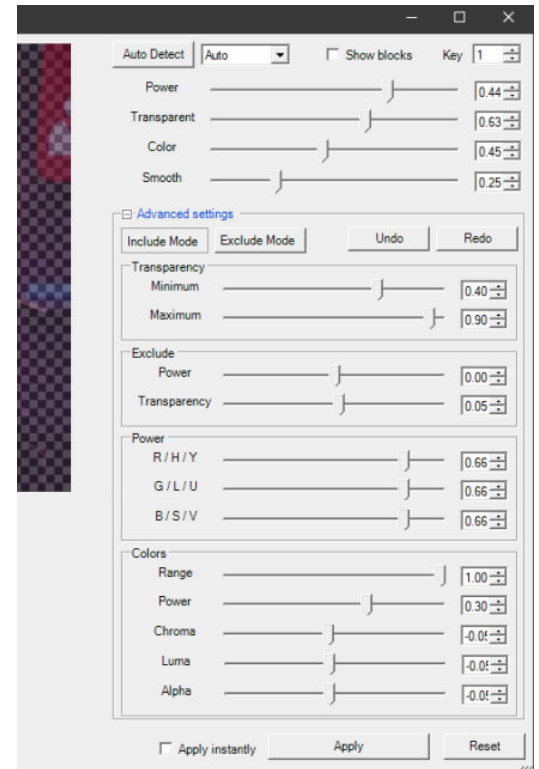
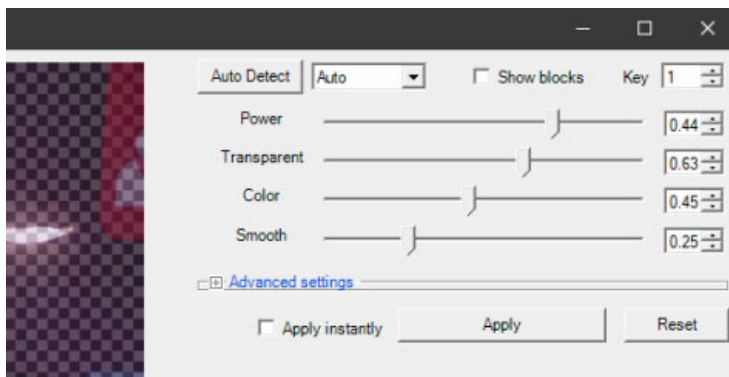


Working with Chroma Key

Creating a good, “clean” Chroma Key depends a lot on the lighting. You should provide “flat” lighting across your green/blue screen, and good fill and back/rim light on your subject for optimal results. But the Chroma Key function in VDESK is extremely ‘forgiving’, meaning you can generally create high quality green screen keying without a lot of lighting ... in some cases getting good results with simple overhead fluorescent lights!



Under the Effects tab select Chroma Key from the Effects dropdown list. The input numbers currently assigned for the background (BG) key subject (CK) are displayed on the icon. Change those in the dropdown lists to use the desired inputs. You can also select a File to use as the background by clicking on the File: icon and locating an image. You’ll see the changes in the Preview window in real-time. If you want to refine the key, **click the Setup button.**

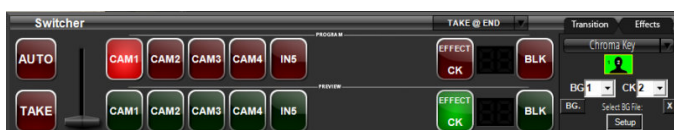


Setting up a Chroma Key follows the same procedures as PIP/DVE effects. Choose your Foreground Input (the object in front of the Chroma Key screen) ... and your **Background Input**, which can be a video input or a selected graphic file.

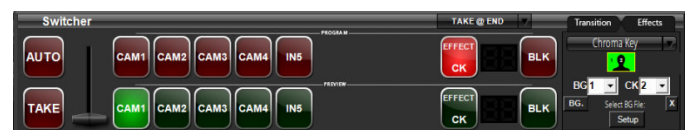
Then click the **Adjust Chroma Key** button. This setup window will appear, with the Foreground Input displayed. These faders control the most important values in creating a good key: Power, Transparent, Color and Smooth.

Press the **Auto Detect** button and the current settings for these controls will be applied to the key, with the crosshatch pattern representing what the selected Background input or graphic will fill. If you check the **Apply Instantly** box, the adjustments you make will appear on this screen AND in the PREVIEW window of VDESK.

Click the **Advanced** settings plus sign to extend the number and levels of control for creating the best key. Click the Apply button to see your changes, or check the Apply instantly checkbox to see the changes as you make adjustments. When you’re satisfied with your key, close this window, and click the **TAKE** or **AUTO** button to display the Chroma Key on the Program output.



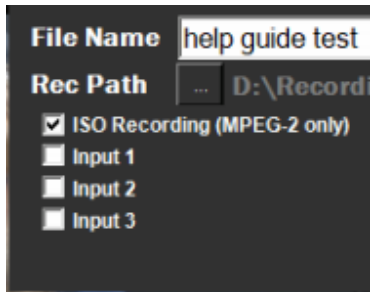
Chroma key in Preview Mode



Chroma key on Program

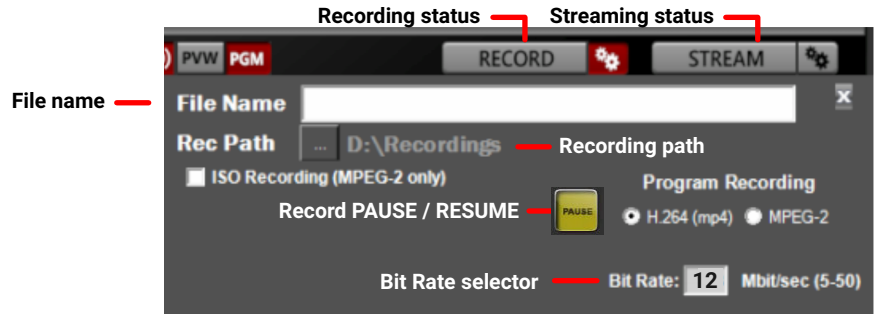
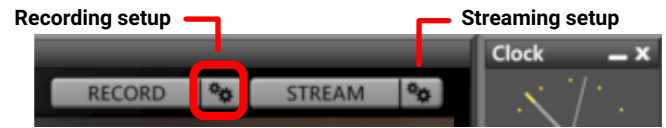
Setting up a Recording

When you click the RECORD Setup icon at the top of the Program Monitor the Record Settings panel will appear.



You can record up to three (3) inputs as separate files while you are also recording your Program output and streaming.

Click the ISO Recording checkbox and select which inputs (up to 4) you'd like to ISO Record.



To start recording, click **RECORD**. Whatever you see on the **PROGRAM** display is what you are recording.

You can click the **PAUSE** button at any time, and it will glow bright yellow – with the button label now displaying **RESUME**. Click the **RESUME** button and the file(s) will resume recording, creating a single seamless data file.

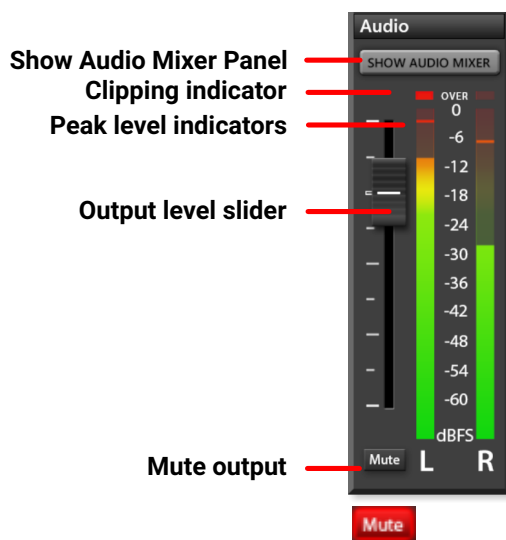
The file path defaults to the "**Recordings**" folder on the **D** drive. If you enter a **File Name** (*optional*), that name will be included at the beginning of the file name. If not, the file name will be a timestamp as shown.

Council Meeting 2020 0415 131912.mp4

2020 0415 131554.mp4

Under Program Recording use the radio buttons to select the format you want to encode. **MPG** is MPEG-2 CBR. **H.264** is mp4. Select the **Bit Rate** you want to use for the recording. **25** is a typical rate for MPEG-2 HD, and **12** is generally appropriate for H.264 HD.

Monitoring & Controlling Audio Levels



To the right of the Program Monitor is a real-time indication of your main audio level which is the level that will be recorded.

Digital systems such as this are designed with -12dBFS as the optimal peak level. You will see the red OVER indicators light up if you go too far over this level. When they light up you will most likely experience audio clipping in your output and recording. If you wish to clear the red indicators simply right-click them.

If your levels are too high or low, all you have to do is move the output slider up or down to compensate. It is a good idea to test your input levels against your CLIP playback levels before your production begins. This can be done on the AUDIO panel after clicking SHOW AUDIO MIXER.



Starting your Production

Once you have prepared your system for the production, review this list to make sure you are ready.

1. Are all your camera presets set for this venue?
2. Are the lower thirds and title screens ready and in your playlist?
3. Are the lower thirds linked to the correct camera presets?
4. Is your playlist saved?
5. Is your layout (which includes camera presets) saved?
6. Did you check your audio levels?
7. Did you specify a file path for your recording?
8. Do you have enough available record time for your program?
9. Did you select the correct recording format?
10. Did you name your file?

Don't forget to start recording!

The first thing to remember when you are ready to start your production is to **CLICK THE RECORD BUTTON!**

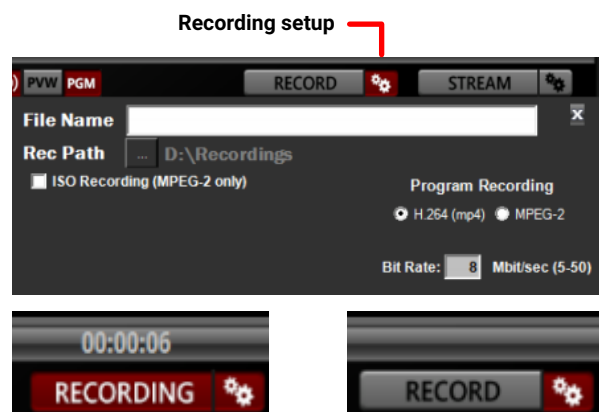
The steps you take from this point on can vary greatly, but let's take a look at a typical city council meeting as an example.

1) Click the Recording Setup gear button. Enter a File Name for the Event you are recording.

2) Select MPEG-2 or H.264 as the recording format.

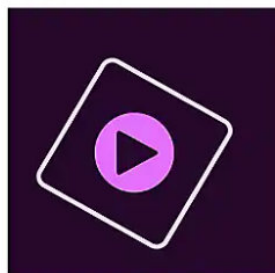
3) Verify the Bit Rate you want to use. The default for HD MPEG-2 is 35Mbit/sec. You can select between 12 and 50 Mbit/sec. The default for H.264 is 12 Mbit/sec. You can select between 3 and 15.

4) Click the RECORD button to start recording. A record time indicator will appear in the bar above the RECORDING button. Click the RECORDING button again to stop recording.



Adobe Elements and VDESK

For your convenience, **VDESK PRO** systems include Adobe **Photoshop** and **Premiere Elements**. For extensive guides please refer to each product's manual, or to Adobe's website. There are many useful video tutorials to help you through all the different features of each program.



Premiere Elements



Photoshop Elements

These programs are great for creating graphics of all kinds, including lower-third titles with transparency (PNG). You can also edit your productions, or any other production footage ... so this added functionality provides you with enhanced capabilities on your VDESK system.



VDESK PRODUCER

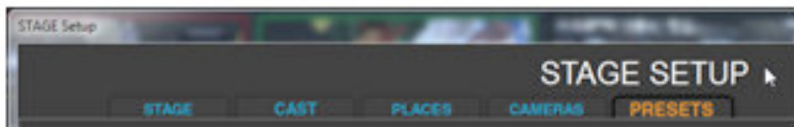
Using the PRODUCER Interface

PRODUCER Overview: Staging an Event

While the CLASSIC user interface is easy to use, the unique design of the PRODUCER touch screen user interface provides the simplest, most intuitive multi-camera production mode available. It's based on creating and producing "Events" using a virtual on-screen 3D simulation of the physical environment where the PTZ cameras are located for each Event.

Example locations include a meeting room, house of worship, radio station control room, indoor theatre, outdoor stage, or any other multi-camera production venue.

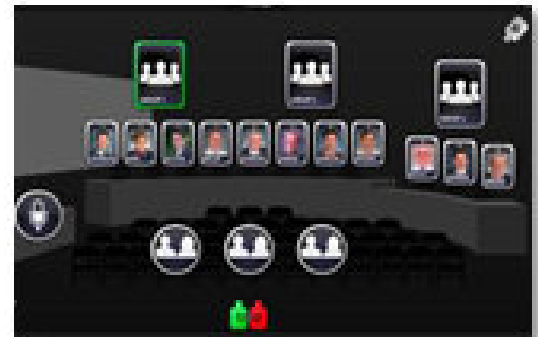
The exclusive **DoubleTake™** function lets you create an unlimited number of presets using a single PTZ camera, automatically assigning those presets – with lens offsets – to a second camera, and go to any preset with either camera for instant coverage of any venue using just TWO PTZ CAMERAS.



You create the Event layout using five setup tabs:

- **STAGE**
- **CAST**
- **PLACES**
- **CAMERAS**
- **PRESETS**

Once the STAGE is set, you select shots by simply touching the picture or icon that represents the person or object at that physical place in the venue. You can then use the **AUTO** or **TAKE** button - or select **HOT AUTO** or **HOT TAKE** so the transition will happen automatically when the Preview camera reaches the preset.



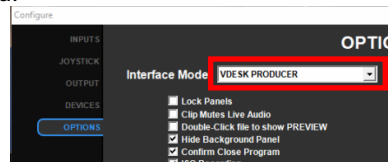
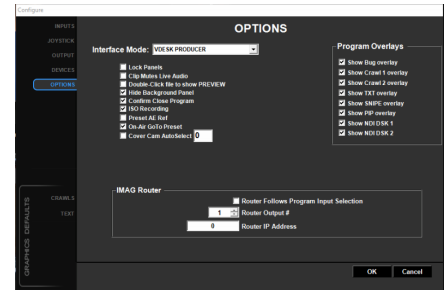
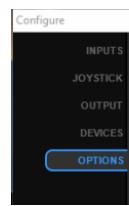
For meetings these are typically pictures of meeting participants (picture icons = picons) in their respective seating positions. For houses of worship and theatrical events these are often a combination of picons and 'musical icons' (musicons™) such as a piano, guitar, drums, singers (tenor, soprano, etc.).





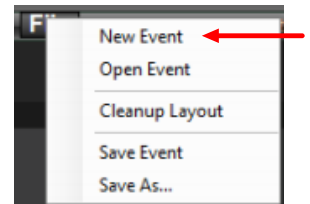
In addition to simple 'touch/take' production, you can display any or all of the NINE effects available for selection on the PROGRAM monitor bezel at any time.

To change from the CLASSIC interface to the PRODUCER interface or the TalkingPoints interface, click the Configuration button, select the OPTIONS tab, and use the drop-down to select the Interface you wish to use. The program will automatically close, then reopen with the interface you've selected.



The STAGE tab

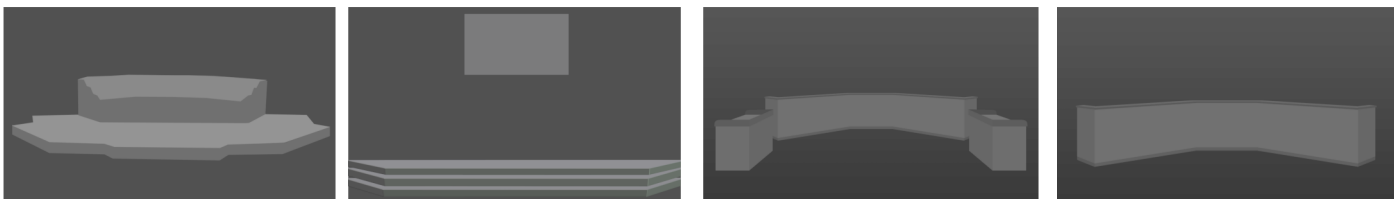
Click the **File** menu and select **New Event**. This opens a **Save** dialog where you will name and save the **Event** into an **Event** sub-folder.



Click the **Stage Setup** button ... then click the **STAGE** tab. There are several STAGE background templates to choose from, including the one(s) customized for your venue(s) prior to delivery of your VDESK/REMO system. Select the one that best represents your production environment.



Select your STAGE file by clicking once on the browse button ... to open the STAGES folder. Here you'll see large icon views of the STAGE background templates, organized into sub-folders for DAIS, HOW (House of Worship) NEWS, THEATRICAL and CUSTOM. There is an EMPTY.png you can use if you don't want to use a graphic for the STAGE.



Some of the included Layout templates for Houses of Worship, municipalities, entertainment and news



Note: if you want to create your own custom background, use any graphics program to design it and save it as a JPG, BMP or PNG file and place it in the STAGE LAYOUTS folder. We've included an empty stage to use as a background for custom designs. If you wish to make a completely custom design the **dimensions MUST be at least 800 x 400 (pixels)**.

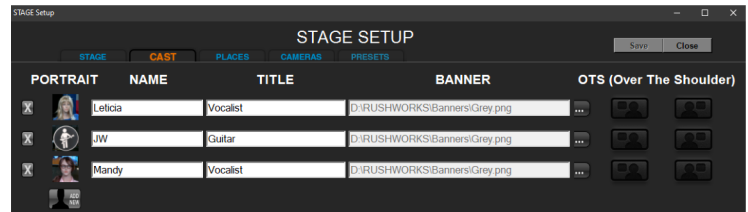
RUSHWORKS prepared this custom Layout for the City of The Colony in Texas.



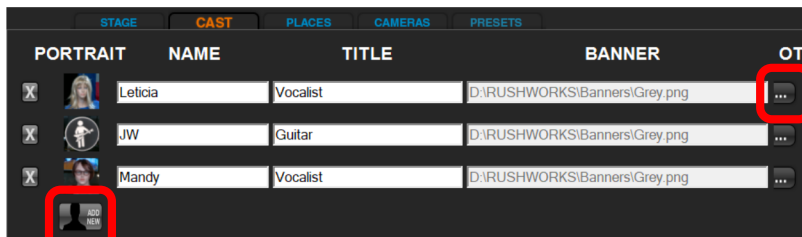
The CAST tab

Next click the CAST tab. Here you will:

- Assign a picture icon (**Portrait**) for each preset
- Enter a **Name** and **Title**
- Select a **graphic banner background** for the name and title
- Enable “**over the shoulder**” (OTS) **presets** for the CAST member. *These are typically used in a news-style presentation where the camera pans slightly left or right to allow for positioning of a graphic on screen with the person in the shot*

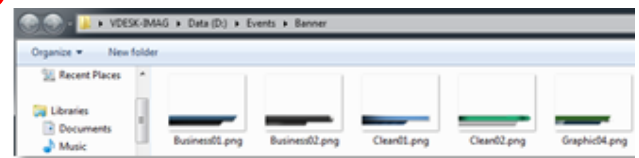


Start by clicking the **Add New** button ... and the associated entry fields will appear. In the **NAME** and **TITLE** fields enter the Name and Title of the CAST member (e.g. **Roger Thomson** and **Council Member** – or **St. Anthony Chancel Choir** and **Sopranos**). **Note:** NAME and TITLE fields are not required. Enter none, one or both.



Click to Browse the **Portraits** folder

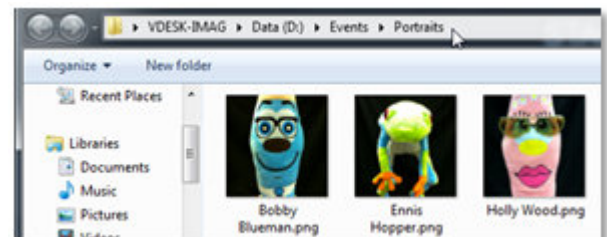
Click to Browse the **Banner** folder



To the right of the BANNER field click the **File browse** button to open the **BANNERS** folder. There are several banner templates to choose from. Select the graphic background you want to use behind the Name and Title display.

NOTE: these will automatically be composited into files that are linked to each CAST member preset for manual or automatic display when the preset is touched/selected.

Under **PORTRAIT**, click the silhouette button of the CAST member. This will open the PORTRAITS folder within your currently open Event where you store pictures of Event participants. Double click on the picture you want to use – or select the picture and click Open. The picture will replace the silhouette. If you work with multiple Events (e.g. COUNCIL, P&Z, etc.) there will be a unique PORTRAITS sub-folder within the saved and named Event sub-folder.



NOTE: The PRODUCER interface allows you to **capture pictures for CAST members** using any of the PTZ cameras configured with the system. If you want to create pictures in that manner, don't click the silhouette under PORTRAITS when you're defining CAST members. When you create your presets on the **PRESETS** tab you can capture a picture with your PTZ camera that will be associated with the already created CAST member. It will place the capture in the PORTRAITS sub-folder with the appropriate name, and also display it in the CAST tab whenever opened



To add another CAST member, just click the **Add New** button beneath the last added member. Follow the procedures described above until all the CAST members are defined, then click the **Save** button to save your information but not close the Stage Setup panel. Click the **Close** button to close the Stage Setup panel if you don't want to do additional entry or modification using the **Stage Setup** tabs.

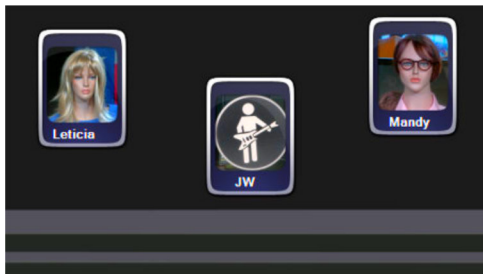
The PLACES tab

Once all the CAST members have been defined, click the PLACES tab.

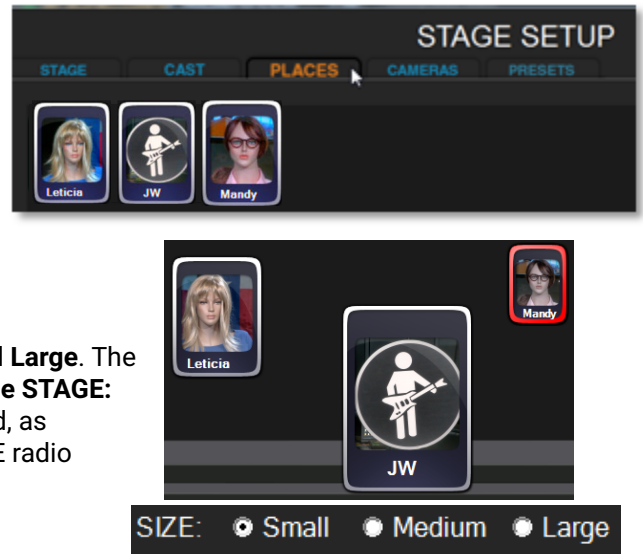
All the defined CAST member picons will be displayed across the top of the STAGE layout in the order in which they were created. Select each picon and drag it to its appropriate place on the STAGE.

Changing the SIZE of display picons

You can choose from three (3) display sizes: **Small**, **Medium** and **Large**. The default size is small. **To change the size of ALL the picons on the STAGE:** double-click anywhere on the STAGE and they will all be selected, as indicated by a red outline on each picon. Then click another SIZE radio button and they will all display in the selected size.



To change the size of individual picons on the STAGE: click once on any picon to select it, as indicated by a red outline. Then click another SIZE radio button and only that picon will display in the selected size.



Adding EXTRAS to the STAGE layout

“EXTRAS” are defined as presets without unique pictures, names, titles or banners. These are typically used in theatrical and/or musical presentations and for houses of worship.

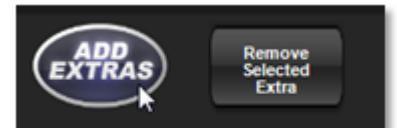
We’ve created a folder with dozens of icons that are representative of these types of presets, including musical instrument and performer icons (musicons) as shown here.

In the **PLACES** tab, click the **Add Extras** button. A folder will open, revealing all the Extras picons. Just double-click a picon to place it on the STAGE ... or select it and click **Open**.

To add multiple EXTRA icons, hold down the CTRL button and right-click on the ones you want to add, then click **Open**.

As you select Extras they will display horizontally across the top of the STAGE layout. You can then drag them to their appropriate position(s) on the STAGE.

To REMOVE an Extra picon, just select it and click the **Remove Selected Extra** button. It will disappear from the STAGE layout.



The CAMERAS tab

The system recognizes how many PTZ cameras are configured (via RS-422 or IP) when the program is started. When you click the CAMERAS tab, you see the STAGE layout with CAST members and extras ... and a row of configured PTZ camera icons at the bottom left of the STAGE layout. Drag each camera to its relative position on the STAGE. This establishes the association of the physical camera location relative to the CAST members and Extras.

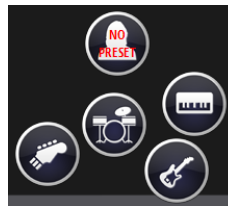
You can mix “manned” cameras (non-PTZ) and PTZ cameras. They will display on video input windows and can be selected on PVW or PGM by using the F keys F1 – F8 (PGM), keyboard number keys 1-8 (PVW) or shortcut keys on the keypad. F9 and key 9 always select BLACK on PGM and PVW, respectively, on the switcher. The joystick will always control a PTZ camera that is currently selected on the PREVIEW bus.



The PRESETS tab

After you've selected your STAGE background, defined the CAST members, dragged the picons to their PLACES, and positioned the configured cameras, you're ready to create PRESETS for each of the CAST members on the stage ... as well as for any EXTRAS you may have placed. Additionally, you can create random presets that are associated with the QUICKSHOT buttons at the bottom of the screen.

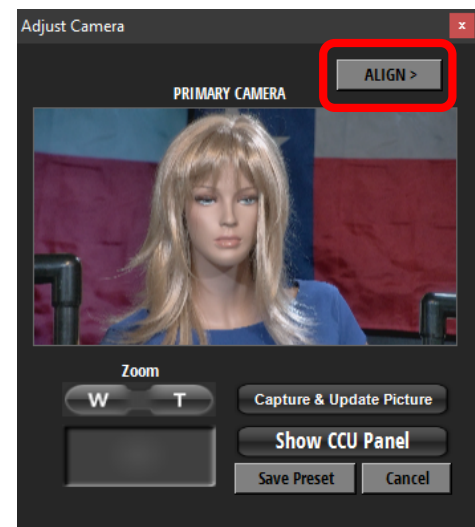
Note: any picons that do not have a PRESET saved will display this overlay warning, reminding you to create that preset:



To create a preset for a CAST member or EXTRA ...

Click once on the camera (icon) you want to associate with the shot. That camera will highlight RED. Then click the CAST member or EXTRA on the STAGE. The **Adjust Camera** window will open and the selected camera's output video will be displayed.

Using the joystick (or the PTZ buttons on the PRESETS camera window), frame the shot the way you want it stored. You can also capture the framed shot as the graphic to use as the Portrait in the CAST tab and for picon screen display.



Click the **Capture and Update Picture** button to save and store the snapshot as the **Portrait** for that CAST member. Or click the **Save Preset** button to store the preset but NO picture. Click the **Close** button at any time to close the PRESET window.

You'll click the **ALIGN>** button to set up the relationship between two cameras in a **DoubleTake setup**, which is discussed in the following section.

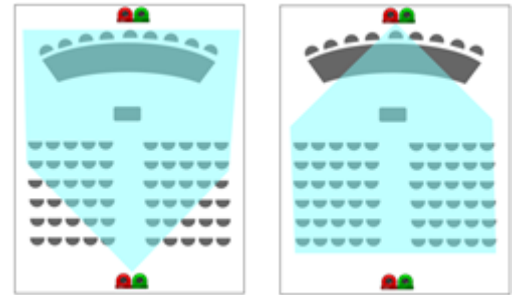
Enabling and Using DoubleTake™

The **DoubleTake** function lets you create an unlimited number of presets that are duplicated between two PTZ cameras which are mounted closely together – either horizontally or vertically mounted – with the minimum distance between the lenses.

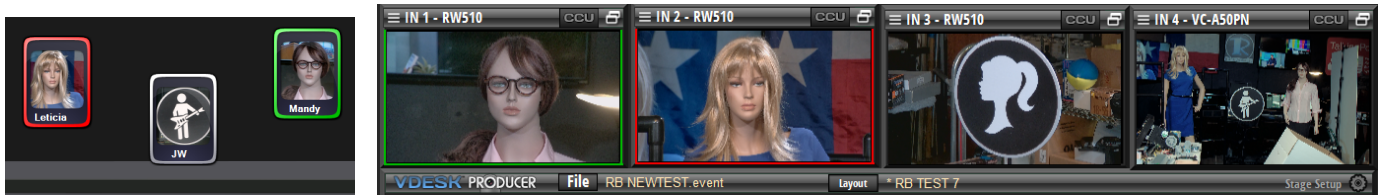


On a 4-input system you can create TWO pairs of DoubleTake cameras (1-2 and 3-4).

The example on the right illustrates the type of ‘blanket’ coverage you can achieve with DoubleTake camera pairs. Typically there would be one pair of DoubleTake cameras at the rear of a room venue, and another pair on the wall behind a dais at the other end of the room for maximum coverage of the venue.



For example, using **Camera 1** to create all your presets for a 1-2 DoubleTake pair, the program automatically saves all the defined presets to **Camera 2** as well, calculating the offset in the X and Y (horizontal and vertical) axes between the two cameras. It also stores the same Z (zoom) value, which means that either camera can go to any preset you've created. There is no limitation on the number of presets you can create for any camera.



This shows the PREVIEW (Green) / PROGRAM (Red) relationship between the DoubleTake camera pair on the STAGE and the camera video monitor windows.

This mode follows standard Preview/Program switcher protocol, with each of the cameras always displaying on either Preview or Program bus of the software switcher. The camera currently on the Program bus is outlined in RED ... while the other camera is outlined in GREEN.

To display the cameras properly and enable this mode, on the CAMERAS tab drag Camera 1 to the position where it and Camera 2 will be located next to each other. Then click the **Enable Camera 1-2 DoubleTake** checkbox. The Camera 2 icon will automatically jump to the immediate right of the Camera 1 icon.

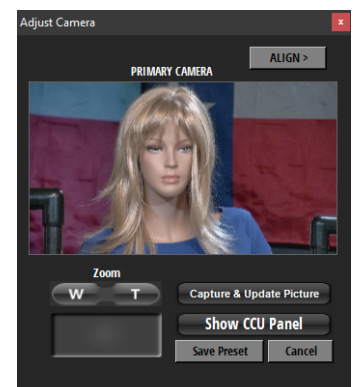


Setting up the DoubleTake™ offset

If you've checked the **Enable Camera 1-2 DoubleTake** checkbox on the **CAMERAS** tab, you'll always use the lowest number in the pair to set your presets for the two cameras. With a single pair of DoubleTake cameras, you'll always use Camera 1.

NOTE: When you click Camera 1 or 2, they will BOTH turn RED, indicating they are a DoubleTake pair. If you enable a second pair of DoubleTake cameras, they will be Camera 3 and 4. So you'll always use Camera 3 to set presets for that pair.

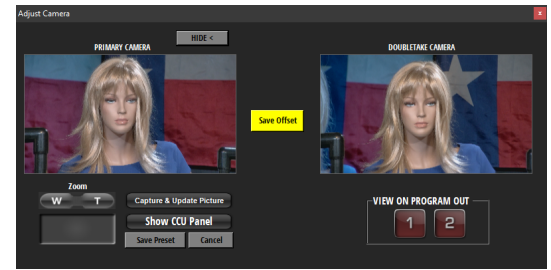
With the DoubleTake checkbox checked, click on Camera 1, and then click on a CAST member or EXTRA. The PRESET camera window will open and the selected camera will move to its "Home" pan-tilt-zoom position (presuming you have not already created any presets).



NOTE: It's best to choose a CAST member or EXTRA in the middle of the STAGE when you're setting up the secondary camera offset. This is generally a one-time-only exercise so you'll want to trim the offset to a single area of the stage. The Horizontal and Vertical offset will be applied to the secondary camera for ALL presets on the STAGE.

Using the joystick (or the PTZ buttons on the PRESETS camera window), frame your shot then click the **ALIGN>** button on the camera window. The window will expand to reveal a second camera window which displays the DOUBLETAKE Camera.

Camera control is immediately assigned to Camera 2. the DOUBLETAKE CAMERA. Using the PRIMARY CAMERA as the reference, match the framing of the DOUBLETAKE CAMERA as closely as possible. You can click on the Camera 1 and Camera 2 buttons in the box called VIEW ON PROGRAM OUT. Watch your PROGRAM monitor as you cut back and forth, and match the shots as closely as possible, making small adjustments on the DOUBLETAKE CAMERA. When complete, click the **Save Offset** button and then the **HIDE>** button to close the alignment panel.



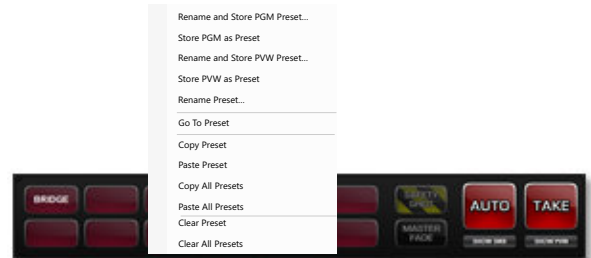
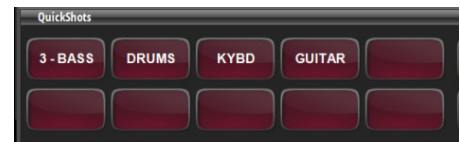
NOTE: These **OFFSET** parameters are **Global** ... meaning that they apply to ALL presets on the STAGE that were created by a set of DoubleTake cameras. Because of different angles relative to the two cameras, some DoubleTake preset offsets will be more accurate than others. In general, if you frame the tightest shots as Medium Close Ups (MCU), you'll be happy with the results. The wider the shot, the less offset you'll see between the two cameras.

Saving PRESETS to the QuickShots Button Bar

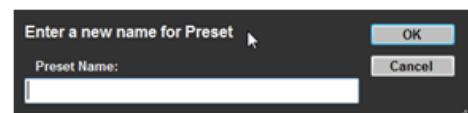
Below the STAGE area are ten (10) large red buttons. These are used for "general purpose" presets that are often convenient to have, but which don't correspond directly to a CAST member or other picons on the STAGE. These are called **QuickShot** buttons.

To name and save a PRESET to a QuickShot button ... select the PTZ camera you want to use for the shot, then use the joystick to position the camera where you wish.

Right-click a **QuickShot** button and a list menu will appear. Choose the option that applies to what you want to accomplish. Typically you will **Name and Save** the shot you currently have framed in either the PREVIEW or PROGRAM window.

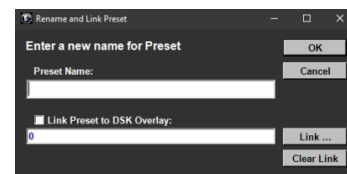


The **Name and Save** dialog box will open where you can enter a name for the preset. When you click **OK**, the window closes, and you'll see that name displayed on the **QuickShot** button.



If you select **Rename and Store ...** the dialog is a bit different, suggesting you **Enter a new name for the Preset**, along with giving you the option to **Link a Preset to the DSK Overlay**.

You can click the **Link...** button to open the CG folder to find the file you want to overlay. Whenever the checkbox is checked and the preset is selected, the selected graphic will load into the DSK window and will automatically fade on and off in the Program window.



Another easy way to Link a graphic to a QuickShot preset is simply to drag the graphic from the CG folder onto the QuickShot preset. The link icon will appear and follow the same rules as described above.

Selecting any of the **QuickShot** buttons follows the same rules as presets associated with picons. You can switch between and among **CAST** picons, **EXTRAS** and **QuickShots** whenever you wish.

User Interface Management on the QUICKSHOT Button Bar



On the right side of the **QuickShots** button bar are additional buttons for controlling select functions on the PRODUCER interface. You can customize the way you work by showing or hiding different windows whenever you wish.

The **SAFETY SHOT** zooms your **DoubleTake PREVIEW camera** full wide as a cover shot. If you have **HOT TAKE** or **HOT AUTO** enabled then the SAFETY SHOT will automatically go to Program.

Click **MASTER FADE** to take all current sources, DSK overlay, graphics overlays and audio to BLACK. While in this state, the button will flash once every second to remind you that you need to click it again to resume your PROGRAM output.

Illuminated toggle buttons are available for the SWITCHER, PREVIEW, DSK, FILE BROWSER and PLAYLIST. The button will glow blue when the window is open/active. Just click any button to display the associated window, and place it anywhere you wish. The location will be saved in your current Layout.

Click **AUTO** or **TAKE** to initiate the currently assigned transition between the PREVIEW and PROGRAM busses.

SHOW/HIDE the AUDIO MIXER

To display and use the AUDIO MIXER, click the **SHOW AUDIO MIXER** button above the Master Audio Fader. The Mixer window will open, where you can control the audio levels of your configured inputs, clip playback and the SNIPE audio level (if the Snipe file contains audio). When it is visible, you can place it anywhere on the screen ... or on a secondary monitor if one is connected. To close the AUDIO MIXER, click the **HIDE AUDIO MIXER** button.



Using the DSK control

The DSK control in PRODUCER is the same as the one in the CLASSIC interface. In either the File Browser or a Playlist, click on any file with transparency (PNG) ... typically a lower-third graphic ... and it will load into the DSK window.

To display the file over the current PROGRAM selection, click the DSK button. The graphic will fade on and the DSK button will glow bright blue, and the ON-AIR sign will illuminate. Click the button again to fade off the image.

Refer to the DSK section of the CLASSIC interface on Page 9 for more information.

Additionally, the following sections are included on pages in the CLASSIC section of the USER GUIDE:

Selecting Transitions

Selecting and Using Effects

To display a Picture in Picture ...

To display a Double Box (PiP) ...

Working with Chroma Key





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