



NewTek

TriCaster™

VIRTUAL SET EDITOR

USER GUIDE

Version 1.5, Revised – May 31, 2011

TriCaster TCXD850, TriCaster TCXD300, TriCaster DUO, TriCaster, TriCaster PRO, TriCaster PRO FX, TriCaster STUDIO, TriCaster BROADCAST, 3Play, SpeedEDIT, DataLink, LiveText, LiveControl, VT, VT[3], VT[4], VT[5], Video Toaster, Toaster, Inspire 3D, 3D Arsenal and Aura are trademarks of NEWTEK. LightWave and LightWave 3D are registered trademarks of NEWTEK. All other brand names, product names, or trademarks belong to their respective holders.



TRICASTER™
VIRTUAL SET EDITOR



TABLE OF CONTENTS

1	About This Manual.....	5
2	Installation and Activation	7
2.1	<i>Welcome.....</i>	<i>7</i>
2.2	<i>System Requirements.....</i>	<i>8</i>
2.3	<i>Installation.....</i>	<i>8</i>
2.3.1	Getting Ready.....	8
2.3.2	Installation Steps.....	8
2.3.3	TriCaster Virtual Set Editor Launch	10
2.3.4	Registration.....	10
3	VSE Walkthrough	13
3.1	<i>First Steps</i>	<i>13</i>
3.2	<i>The Startup Wizard</i>	<i>13</i>
3.3	<i>VSE Desktop Tour</i>	<i>15</i>
4	Features and Controls	29
4.1	<i>Startup Wizard.....</i>	<i>29</i>
4.2	<i>Menus.....</i>	<i>31</i>
4.2.1	File	31
4.2.2	View	32
4.2.3	Help	33
4.3	<i>Angle Bin.....</i>	<i>33</i>
4.4	<i>Control Stack.....</i>	<i>34</i>
4.4.1	Item Headers.....	34
4.4.2	Source Menu	35
4.4.3	Position, Scale, and Rotation	36
4.4.4	Proc Amp & opacity.....	37
4.4.5	Style	38

4.5	<i>Animation Controls</i>	39
4.6	<i>Virtual Set Canvas</i>	39
4.7	<i>Importing Photoshop® Files</i>	41
4.7.1	File Requirements	42
4.7.2	Input Layers	42
A	How Do I ... ?	49
A.1	<i>Virtual Sets</i>	50
A.1.1	Add more virtual set presets?	50
A.1.2	Add a background to my second double-box?	50
A.1.3	Create a completely custom virtual set?	50
A.2	<i>File Management</i>	51
A.2.1	Locate my new virtual sets in TriCaster's Live Desktop?	51
A.2.2	Organize virtual sets in custom locations?	51
A.2.3	Delete unwanted virtual sets?	52
B	Keystroke Shortcuts	53
B.1	<i>Menu Operations</i>	53
B.2	<i>Virtual Set Canvas</i>	53
B.3	<i>Control Stack</i>	53
B.4	<i>Animation Control</i>	53
C	Version Notes	55
D	Index	57
	Credits	60

PART I (GETTING STARTED)

Introducing TriCaster™ Virtual Set Editor – installation and registration, a top-level overview of primary features, and a hands-on tour to get you started.

1 ABOUT THIS MANUAL



Estimates are that between 60 and 97% of the human race hate reading manuals. Most prefer to jump right in, maybe asking a friend for occasional help ... and who can blame them?

This manual attempts to tell you what you need to know in a friendly, concise way, and also provides a comprehensive reference section you can turn to when you need finer detail.

If you do hate reading, please take a moment to peruse at least *this* section, which explains the manual's organization. You may find you can escape with a minimum of reading. (Or, if you are a devout reader, you can be the *hero* others turn to for expert advice.)

Part I – Getting Started: An introduction to TriCaster Virtual Set Editor – a brisk jog through fundamentals, including installation and registration, along with a feature walkthrough. If you're a quick study, Getting Started may provide all you really need.

Part II – Reference: This section covers the finer details of TriCaster Virtual Set Editor – for those who need it, and those who just like to know everything.

Part III – Appendices: Appendix B lists all shortcut keys. Part III is also home to a question and answer section ("How Do I ... ?") and comprehensive keyword index.

2 INSTALLATION AND ACTIVATION



This chapter explains how to properly install your new software for integration and use within TriCaster.

It also reviews registration for warranty, updates and technical support, and product activation. After completing this short section, you'll be all set to continue into the Walkthrough chapter that follows it.

2.1 WELCOME

NewTek TriCaster comes with network broadcast style virtual sets developed using proprietary NewTek LiveSet™ technology. TriCaster Virtual Set Editor (VSE) enables TriCaster TCXD850 and TriCaster TCXD300 users alike to customize their high definition (HD) live virtual sets.

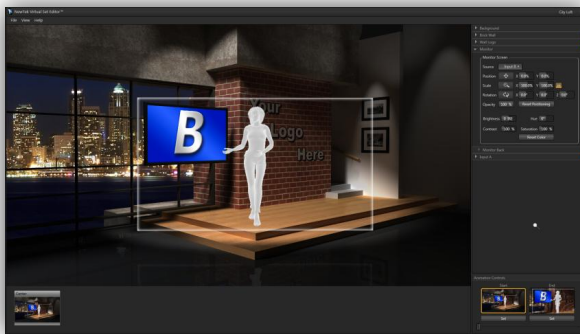


Figure 1

Decorate virtual sets with custom logos, modify color schemes, furniture options, create custom start and end points for zooms, adjust placement and scale for video inputs, and even create brand new sets from custom graphics files.

TriCaster VSE is accessed from the TriCaster Startup control panel, and is really easy to use.

Controls such as position, scale, rotation, color correction (brightness, hue, contrast and saturation), and the Media Browser will be immediately familiar to TriCaster users.

Once a TriCaster virtual set has been customized, you can easily export it for immediate use in live production. NewTek TriCaster Virtual Set Editor permits schools, broadcasters and independent producers to personalize their productions – easily and affordably.

2.2 SYSTEM REQUIREMENTS

TriCaster VSE can be installed on a NewTek TriCaster TCXD300 or TCXD850. (You should always check for TriCaster software updates prior to installing new Add-ons.)

2.3 INSTALLATION

To begin, let's review 'what came in the box':

- USB key
- Installation instruction card (insert).

2.3.1 GETTING READY

1. Power up your TriCaster.
2. Select the **Shut Down** icon on the icon ring in the TriCaster Startup Screen's Home page.
3. Click the **Exit to Windows** link at right.
4. Click the **Exit to Windows** button in the confirmation dialog that opens next.

(At this point, the **TriCaster Startup Screen** exits, and you are taken to the Microsoft Windows™ Desktop.)

5. Insert the **TriCaster VSE** thumb drive into an unused USB port on TriCaster.

2.3.2 INSTALLATION STEPS

6. Click the Windows **Start Menu** icon at lower left on the **Windows Desktop**, and select the **Computer** button (to open a system file explorer).
7. Double-click the icon for the TriCaster VSE USB thumb drive to open a file window.
8. Run the installer application by double-clicking the **TriCaster VSE Setup.exe** icon.

(On launch, the installer presents various dialogs to ask you to accept the end user license agreement, and other information as it proceeds.)

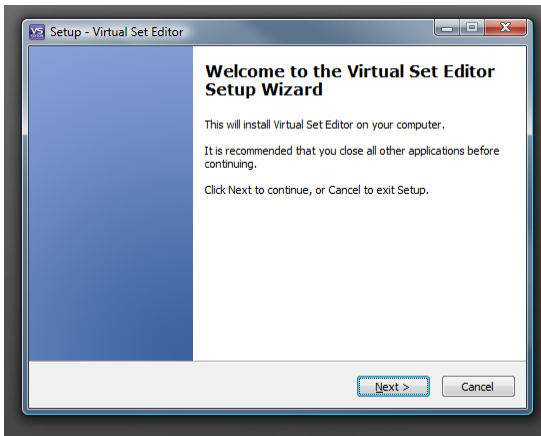


Figure 2

9. Click **Next** in the introductory dialog to begin the installation process (Figure 2).
10. Read the **License Agreement** in the following dialog, and then select **I accept the agreement** and click the **Next** button to continue.
11. The following pane presents the TriCaster VSE readme, which contains version notes for your software. (Some people memorize these to impress their family and friends, but this is not mandatory.) Click **Next** when you are ready to continue.
12. The installer will now set up TriCaster VSE on your system. A progress gauge is shown during installation (Figure 3).

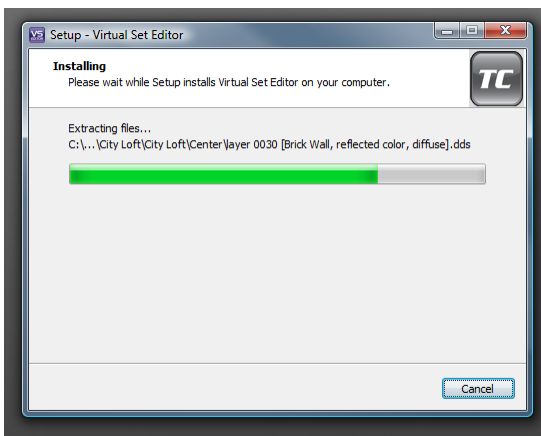


Figure 3

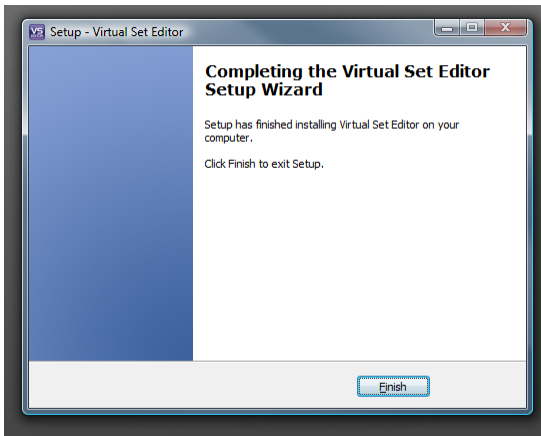


Figure 4

13. A final dialog announces successful completion of the installation process.

2.3.3 TRICASTER VIRTUAL SET EDITOR LAUNCH

14. After installation, the TriCaster **Startup Screen** will automatically appear.

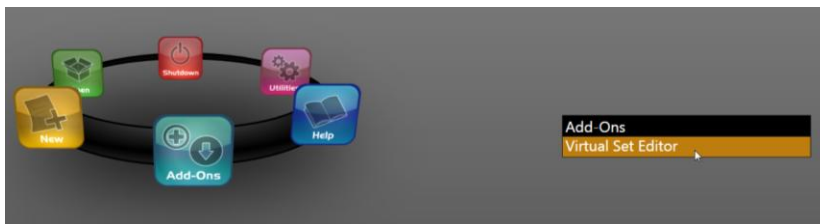


Figure 5

15. The icon ring on the **Home** page now displays an **Add-Ons** icon – select this icon, and click the **Virtual Set Editor** link at right (Figure 5).

2.3.4 REGISTRATION

16. On first launch (and subsequent launches until registration and activation are complete) the registration dialog is shown (Figure 6).

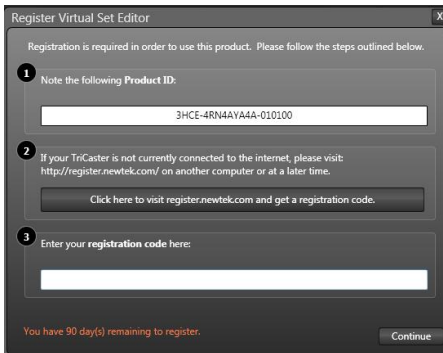


Figure 6

17. If TriCaster is connected to Internet, you can click the “Click here ...” button to perform your TriCaster VSE registration online.
18. Otherwise, note the Product ID shown in this panel, and visit the registration web page (as shown in Step 2) to register your software and receive your unlock code.
19. Click Continue to display the TriCaster VSE desktop.

Note: Virtual sets can be created before registering and activating VSE, but display a watermark. To remove it, simply re-open the project after activating the software, and then re-save.

3 VSE WALKTHROUGH



This chapter provides a quick hands-on tour of the major components and functions of TriCaster Virtual Set Editor. In a very short time, its features and use will be second nature to you.

More detailed reference material on all aspects of TriCaster VSE follows in Part II (Reference).

Having installed TriCaster VSE in the previous chapter, we're ready for a little cruise through its highlights.

3.1 FIRST STEPS

As Chapter 2 closed, TriCaster VSE was installed, registered, and activated. (Even without those last two steps, you can continue to use TriCaster VSE throughout the 14 day registration grace period. Note, though, that virtual sets created before activation display a watermark. To remove it, simply re-open the project after activating the software, and then re-save).

If you're continuing from Chapter 2, you can skip ahead to the next heading, 3.2. Otherwise, please follow these steps:

1. If necessary, power up your TriCaster.
2. When the Startup Screen appears, select **Add-Ons** on the icon ring.
3. Click the **Virtual Set Editor** link at right to launch TriCaster VSE.

3.2 THE STARTUP WIZARD

The first thing you will see on launching TriCaster VSE is the **Startup Wizard** (Figure 7). This convenient panel makes it a breeze to create a new virtual set project, or pick up where you left off on a recent project.

The **Startup Wizard** has two bins. The left-hand one is named **Open Recent**. Eventually, it will display icons for projects you have opened previously. Initially though, it is empty – apart from **Browse** and **Import Photoshop®** folder icons (both discussed later).

The right-hand pane is labeled **New Project from Preset**, and shows thumbnail icons for all installed virtual set presets. Each preset contains numerous modifiable and optional elements.



Figure 7

4. Click the icon for the **City Loft** virtual set preset.

A progress gauge is shown as the various elements constituting the selected preset are loaded. In just a few moments, the default **City Loft** set is shown on the large **Virtual Set Canvas** that consumes the biggest part of the **TriCaster VSE Desktop** (Figure 8).

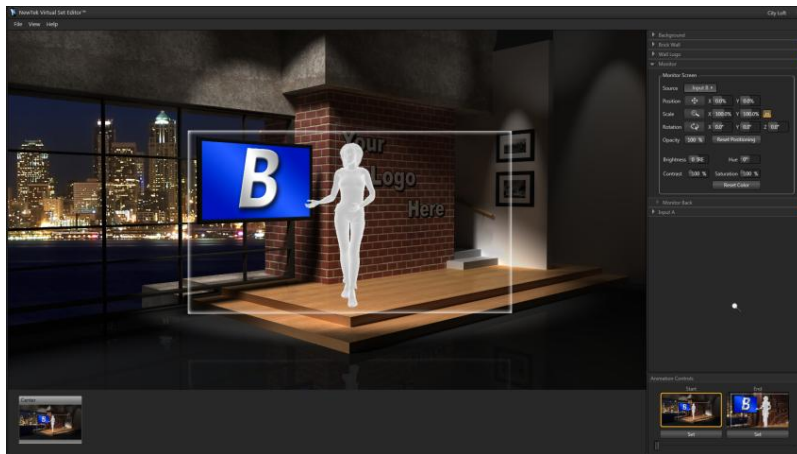


Figure 8

3.3 VSE DESKTOP TOUR

5. Stop and take a look around the **VSE Desktop**. The dominant feature is the **Virtual Set Canvas**, which is a large interactive preview pane – but take note, too, of the following additional details:

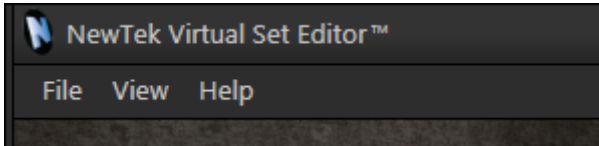


Figure 9

6. You will find the **File**, **View** and **Help** menus (Figure 9) at upper-left on the **VSE Desktop**, just beneath the **titlebar**.



Figure 10

7. The current TriCaster VSE project is identified at the opposite end of the **titlebar**, next to the [x] button (Exit). Initially, this is simply the name of the preset you opened.
8. Clicking **Exit** returns you to the **Home** page of TriCaster's **Startup Screen**, after first prompting you to **Save** your project (when appropriate),.

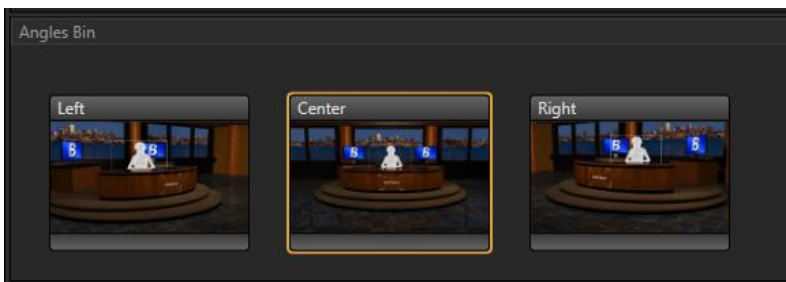


Figure 11

9. Figure 11 shows the **Angles Bin**, located at left in the **VSE Desktop** footer (beneath the large **Virtual Set Canvas**). These icons allow you to select which one of the angles included in the preset (such as **Left**, **Center**, **Right**, and so-on) to edit.

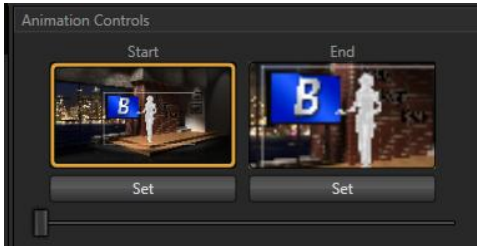


Figure 12

11. The **Control Stack** (Figure 13) occupies the entire right-hand side of the **VSE Desktop**.

This pane shows a labeled header row for each and every editable item in the currently loaded project.

Every header row, in turn, has a triangular gadget at left, which you can click to expand or collapse the controls for each item.

12. Go ahead and click this triangle in the **Monitor** control header. Observe that the control group expands to reveal a bevy of adjustable settings.



Figure 13

13. Click the **Monitor** expand/contract triangle again to close the group.

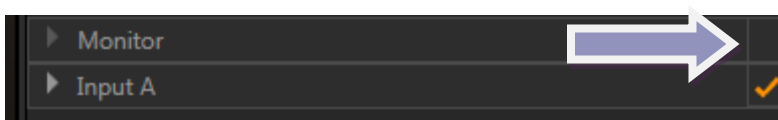


Figure 14

14. In fact, let's remove the virtual monitor from this scene entirely. To do that, click the checkmark at right in the **Monitor** header to remove it (Figure 14).



Figure 15

The monitor vanishes from the scene (as shown by our somewhat anemic but nonetheless lovely and talented *stand-in*) – see Figure 15.

Let's make some additional modifications to the scene. There are endless possibilities, but next let's do something about the placeholder logo on the brick wall, behind our talent stand-in.



Figure 16

15. Turn your attention back to the **Control Stack**, please, and expand the **Wall Logo** control group (Figure 17) by clicking the triangle gadget at left in its header.

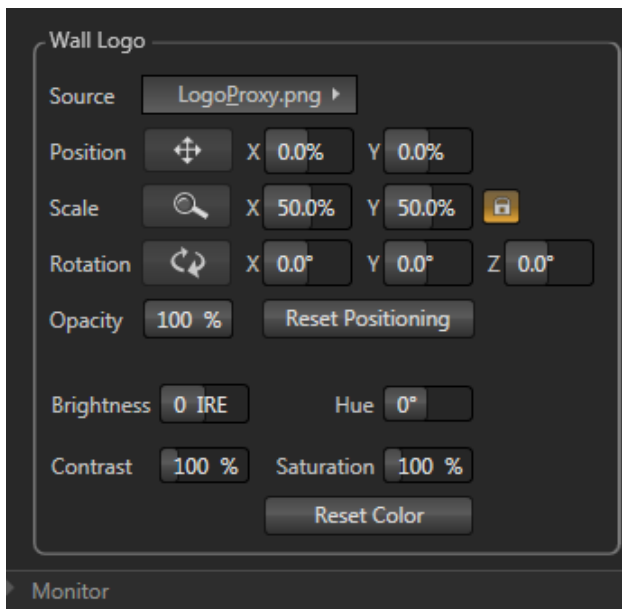


Figure 17

(Now, if your client is named “Your Logo Here Inc.”, you’re done. Most, however, will prefer to supply a different logo. For demonstration purposes, let’s replace the placeholder image with one of the default images that comes with TriCaster.)

- Click the drop-down menu labeled **Source** in the **Wall Logo** control group, and select **Browse**. This opens the familiar TriCaster **Media Browser** (Figure 18).

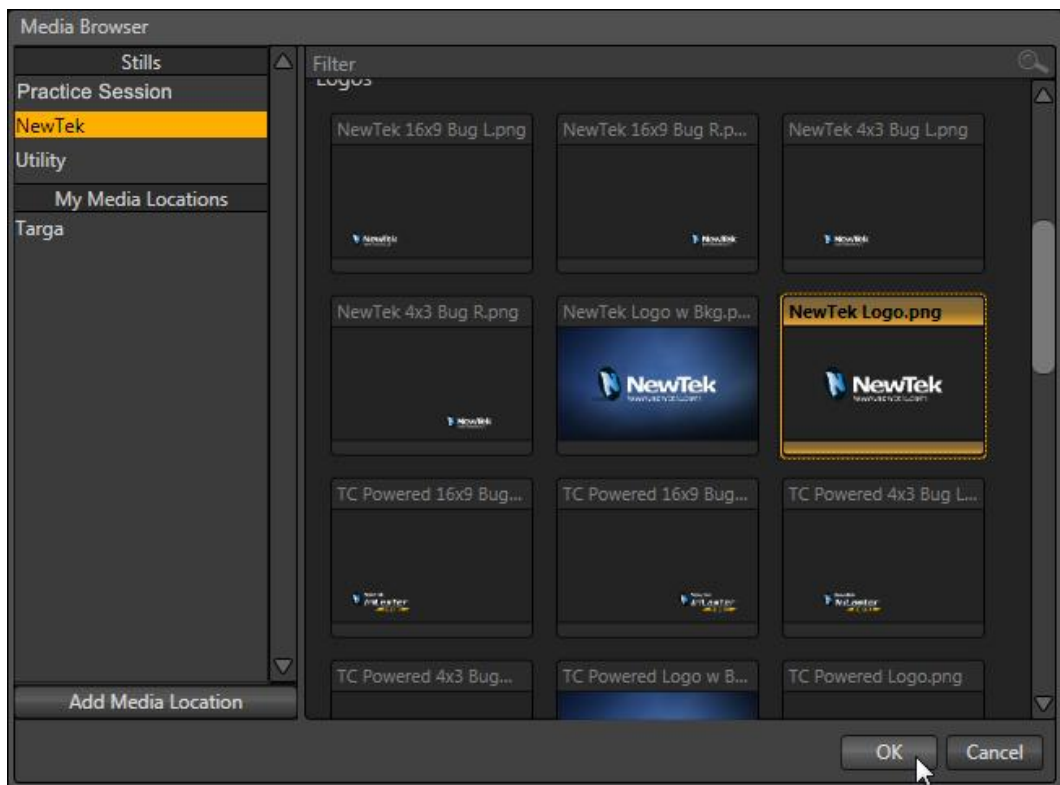


Figure 18

- Select the **NewTek** entry beneath the **Stills** header in the **Locations** column at left.
- In the **File Pane** at right, locate the icon named **NewTek Logo.png** in the **Logos** category, and click the **OK** Button.

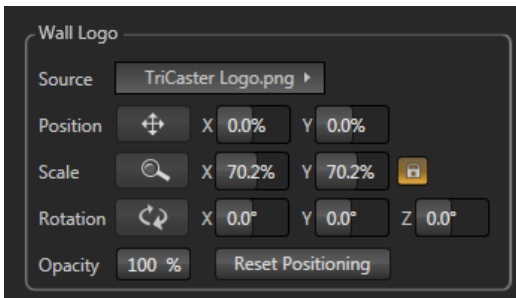


Figure 19

19. Drag the **Scale** numeric slider for X or Y to around 70% (Figure 19), and the result should look much like Figure 20.



Figure 20

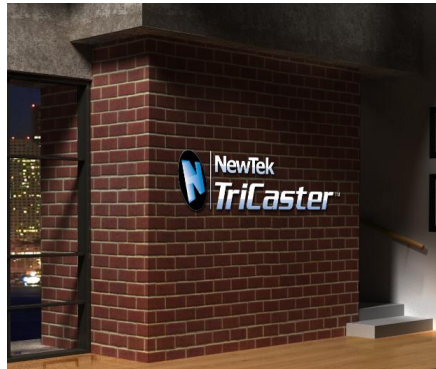


Figure 21

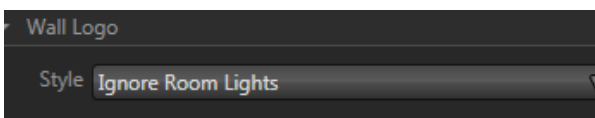


Figure 22

20. Change the **Style** setting to **Ignore Room Lights** (Figure 22), and observe that shadows no longer appear on the logo - Figure 21. (You may well prefer the natural shadows, but we did want to show you what this control does.)

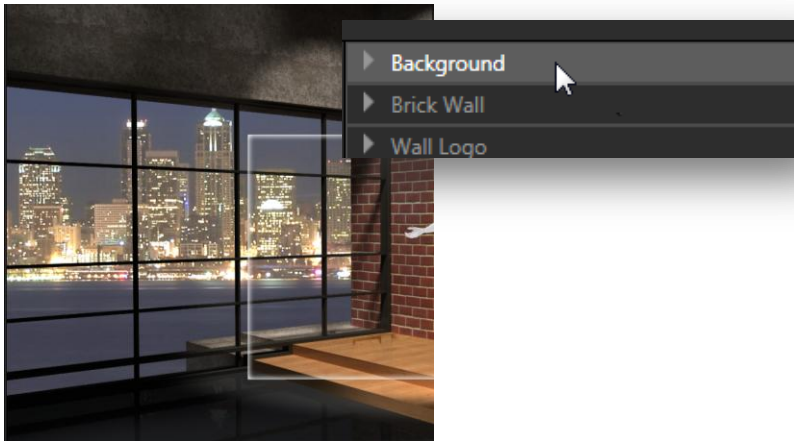


Figure 23

Let's notice another useful TriCaster VSE attribute – item hinting.

21. Roll your cursor over the Background header in the **Control Stack**. The header 'lights up', as it were, even before you click it. As you do so, take notice, too, that the item that is highlighted in the Control Stack is also highlighted in the **Virtual Set Canvas** (Figure 23).
22. Item hinting makes it easy to see what each group in the Control Stack affects, making it a breeze to select the correct item for editing.
23. Expand the Background group now, and (using the same technique as for the logo image), replace the default cityscape image with **Jax Sunset.jpg** file (located in NewTek>Stills).



Figure 24

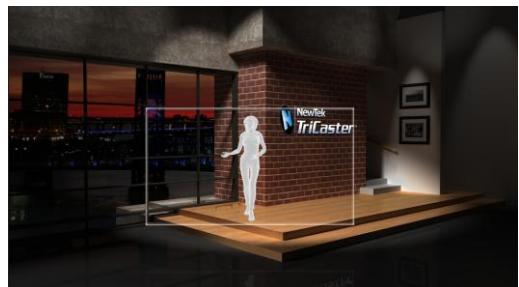


Figure 25

24. That looks great, but we can do a little better yet. Let's adjust the background image placement slightly. Set **Position X** to -13% and **Position Y** to -35% (see Figure 24).
25. We'll work with **Input A** (the talent input) next. Expand the Input A header in the **Control Stack**, and use the **Scale** and **Position** settings to modify the scene roughly as shown in Figure 25.

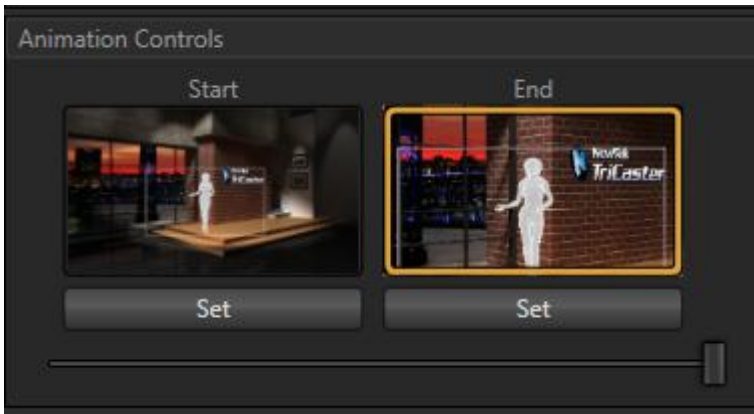


Figure 26

Now that the **Input A** frame is smaller, we should take steps to ensure the maximum Zoom level is still what we want.

26. Until now, we've been viewing the (default) **Start** position for this set. Locate the **Animation Controls** group at right, beneath the main **Control Stack**, and click the thumbnail image beneath the **End** label.

Notice that this permits us to see the animated effect performed on the **Virtual Set Canvas**. With the set now shown at its maximum zoom level, we can see that centering is a little bit off. Let's correct that.

27. First, to help with placement, click the **View** menu at left above the **Canvas**, and turn on the **16:9 Safe Area** overlay (Figure 27).

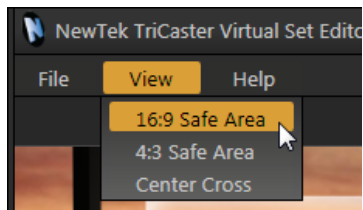


Figure 27

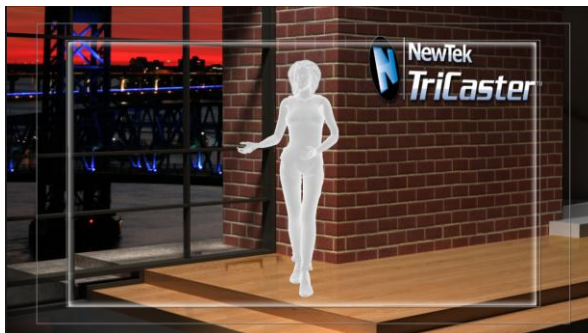


Figure 28

This makes it easy to see that we need to change the ‘virtual camera position’, or – put another way – to ‘move the set’ (relative to the static camera position represented by the **Input A** frame). Unlike the real world, this requires no carpentry skills or heaving lifting.

28. To ‘move the world’, simply drag the cursor over the **Canvas** with the left mouse button held down. Using the **Safe Area** overlay as a reference to center things tastefully.
29. You may feel that the actual zoom level needs to be tweaked, as well. There are several ways to do this – for now, simply drag up or down on the **Canvas** with the *right* mouse button depressed until you’re happy (Figure 28).



Figure 29

30. Finish up by clicking the **Set** button under the **End** thumbnail in the **Animation Control** group (Figure 29) to ‘lock in’ your changes.

31. Click the **Start** thumbnail to zoom out fully, and then click **End** to perform and animated zoom to see the result of all your modifications.

We could continue endlessly, but let's finish up at this juncture by saving our project, and exporting our modified set for direct use in TriCaster.

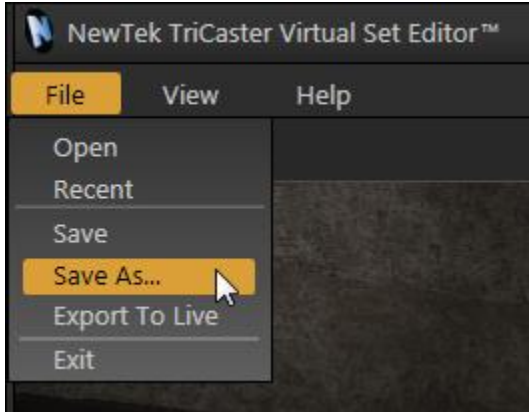


Figure 30

32. Click the **File menu** label above the **Canvas**, and select **Save As** (Figure 30).



Figure 31

33. Accept the suggested name or supply a new one (such as "City Loft Jax", without the quotes) in the **Save As** dialog that appears, and click **Ok**. A brief progress dialog will let you know when saving is complete.
34. Now select **Export to live ...** from the **File menu** (Figure 32). The exported LiveSet will be listed in the LiveSet section of the Live Desktop's **Media Browser** afterward.

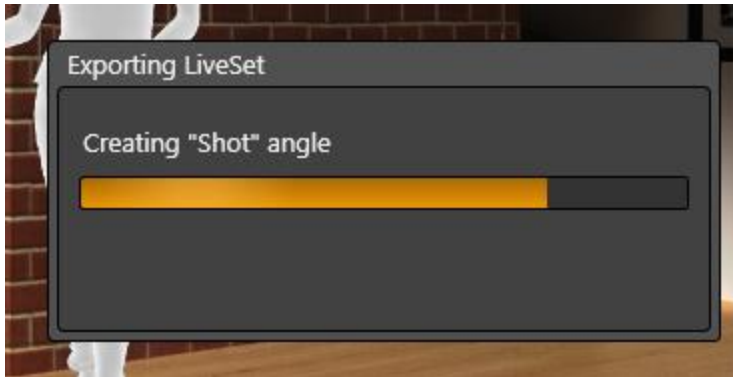


Figure 32

35. Click the **Exit** button in the upper right corner to close **TriCaster Virtual Set Editor**.
36. Select **Open** (or **New**) on the icon ring in TriCaster Startup's **Home** page. Then click **Live** on the **Session** page to launch the **Live Desktop**.

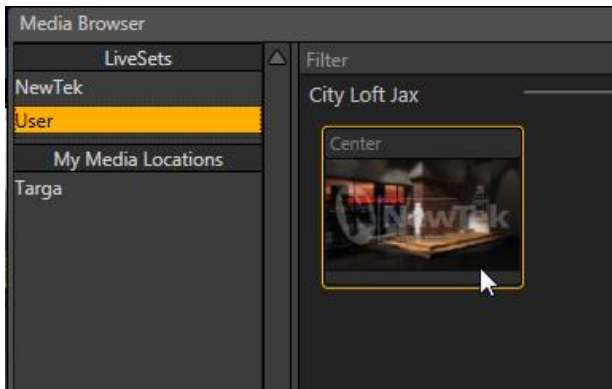


Figure 33

All that remains is to test out your new custom virtual set. You'll find it listed in the Media Browser's **File Pane** when you click the new **User** entry listed under the **LiveSets** header at left.

PART II (REFERENCE)

A thorough examination of TriCaster Virtual Set Editor; every button, menu item, feature and control is considered in this section, so you can take full advantage of your software.

4 FEATURES AND CONTROLS



TriCaster Virtual Set Editor is quite straightforward to use, and this is especially true if you are already familiar with common TriCaster controls and features.

In this chapter, we'll discuss each area of the application, explaining how the various controls operate and what effect they have, and revealing a few little tricks that you may find helpful along the way.

4.1 STARTUP WIZARD



Figure 34

Whenever you launch TriCaster Virtual Set Editor, the **Startup Wizard** provides convenient and quick options. The **Open Recent** pane at left displays icons for projects you have been working on lately.

Initially, the bin is empty, apart from folder icons named **Browse** and **Import Photoshop®**.



Figure 35

- The **Browse** option allows you to navigate to suitable content located elsewhere on your system.
- The ability to **Import** layered Photoshop® files (.PSD) and convert them to LiveSets delivers amazing creative power. Helpful details are provided in Section 4.7 of this manual.

The **New Project from Preset** bin at right shows all of the installed **VSE Presets**, and allows you to open a new project based on your selection with a single click.

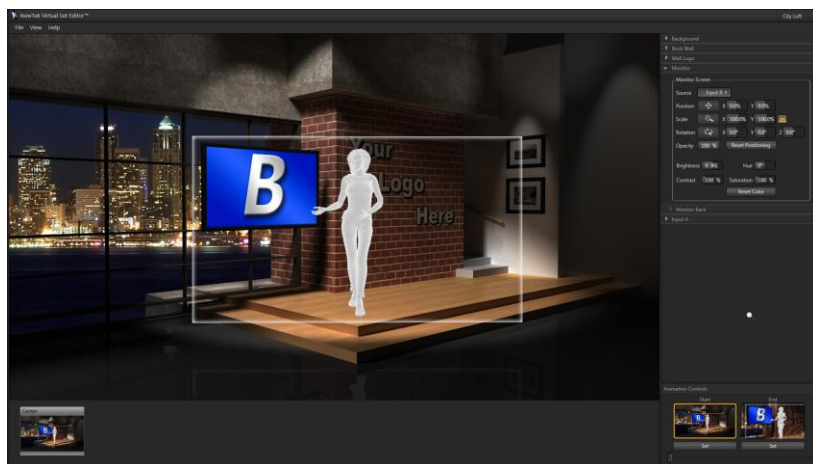


Figure 36

Let's take a closer look at the various components of TriCaster Virtual Set Editor's Desktop.

4.2 MENUS

4.2.1 FILE

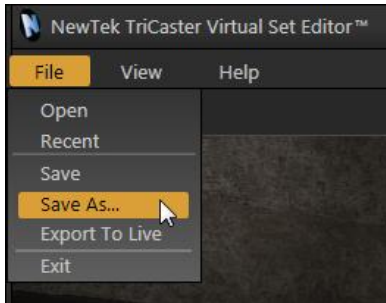


Figure 37

The **File** menu, important as its functions are, hides no mysterious secrets. Let's review each entry it offers in turn.



Figure 38

- The **Open** menu point presents TriCaster VSE's **Recent** and **Preset** panel again, to allow you to open a new project from a preset *or* one of your previously modified projects.

- Selecting **Recent** from the **File** menu shows a list of the five latest projects that you have worked on, making it easy to jump to one of them in its last-saved state.
- **Save** and **Save As** are similar and familiar – use the latter to save the currently open project, or the latter to save it under a new name.
- Selecting **Export to live ...** compiles the shots (angles) of the current TriCaster VSE project, and sends them to the proper location for use in the **Live Desktop**.
- Finally, **Exit** closes **TriCaster VSE**, returning you to the **Startup Screen**.

4.2.2 VIEW

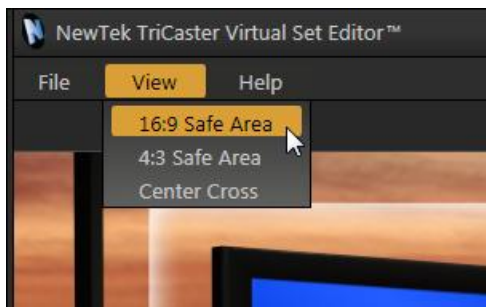


Figure 39

The View menu selections toggle different **Virtual Set Canvas** guides on and off, as described below.

- The **16:9** and **4:3 Safe Area** guides make it easy to see what parts of the overall canvas will appear in the frame on corresponding HD and SD devices. The inner rectangle represents a **Safe Text** guide, while the outer one marks a **Safe Action** area.
- The **Center Cross** divides the screen into quadrants, and makes it easy to ensure you have things properly aligned on the X and Y axes.

4.2.3 HELP

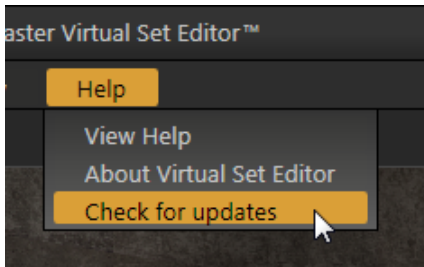


Figure 40

- The **View Help** item in this menu opens this manual for convenient review.
- Select **About Virtual Set Editor** to peruse various details and lore related to TriCaster VSE, including credits.
- Finally, use the **Check for Updates** item (when connected to the Internet) to ensure you are running the latest release of the software.

4.3 ANGLE BIN



Figure 41



Figure 42

Many presets offer more than one camera angle on a virtual set, and you can modify any or all of them at will. To switch to a different angle, simply highlight its icon in the **Angles Bin** by clicking it. The corresponding view will appear on the **Canvas**, ready for you to edit its attributes.

To rename an angle, right-click its icon in the bin, and select **Rename** (Figure 42).

4.4 CONTROL STACK

The **Control Stack** contains nested controls for different set elements that can be modified, or even disabled. Even so, it's quite easy to use, as similar attributes present similar controls in the various sets. We'll consider the way these work, and leave the creativity to you.

Let's take a closer, using a typical example – the **Monitor** group from the **City Loft** set preset.

4.4.1 ITEM HEADERS



Figure 43

Initially, all we see of the **Monitor** control group is its collapsed header (Figure 43). As you know, you can expand this by clicking the triangle gadget at left, which twirls downward and reveals the nested controls when you do so (Figure 44).

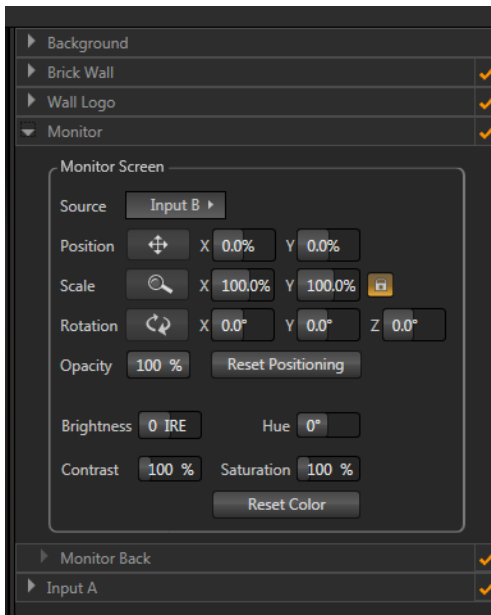


Figure 44

You may find it even faster to simply double-click the group header. Like the triangle gadget, this expands or contracts the group.



Figure 45

Additionally, take note of the bright checkmark at the extreme right end of the group header. As we saw back in the Walkthrough Chapter, clicking the checkmark toggles it on or off, indicating that the feature the group controls is either enabled or disabled.

Hint: You'll recall that group headers highlight as you roll the cursor over them, and that the corresponding feature will also highlight on the Canvas as you do so. Some local items nested within a control group also provide this handy behavior.

4.4.2 SOURCE MENU

When the group is expanded, we see that its first option is labeled Source. Clicking the currently assigned source (in this case, Input B), reveals a drop-down menu that allows you to specify a different source to display on the monitor.

Typically, monitors in virtual sets really are used to display Input, but in some cases you might substitute a fixed corporate logo or station ID graphic. In any case, you'll see **Source** menus like this one in other places, so let's see what it offers (Figure 46).

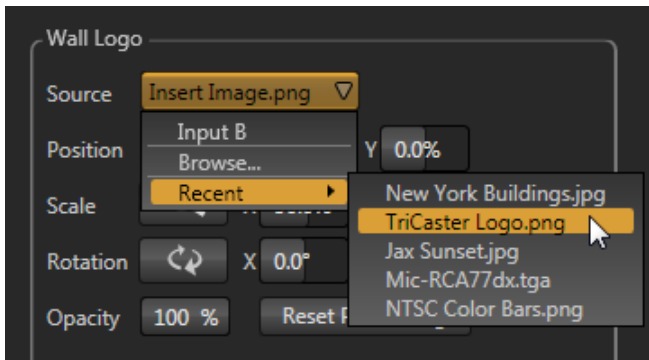


Figure 46

Selecting **Browse** opens TriCaster’s custom **Media Browser**, which allows you to select an image from any existing TriCaster session, including ‘grabs’ from live video, imported images and graphics, user-added Locations, and so on.

The **Recent** menu point allows you to quickly re-locate an image file from among those you have selected recently.

4.4.3 POSITION, SCALE, AND ROTATION

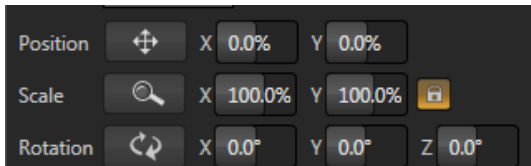


Figure 47

Next we see controls in rows labeled **Position**, **Scale**, and **Rotation**, respectively.

- Click and drag on the **Position** button (identified by a double-headed arrow) to relocate the assigned vertically or horizontally within its frame on the **Canvas**.
- By dragging left or right on the X and Y numeric sliders at right, you can adjust the position on a single axis at a time.
- Alternatively, you can constrain the action to one axis when dragging on the double-headed arrow button by holding down the Ctrl key before dragging.

Hint: If you click a numeric field (or right-click it), you can type a value into the field using the keyboard – press Enter to complete the editing action, or Esc to cancel it).

Dragging the cursor on the **Scale** button (magnifying glass) affects the *scale* of the overlay.

- When the nearby *lock* button is enabled, dragging in any direction affects size equally on both axes.
- Otherwise, dragging vertically changes the height of the overlay, and dragging horizontally affects its width.
- Again, drag just one of the numeric gadgets next to the **Scale** button (with lock *disabled*) or hold down Ctrl when dragging over **Scale** to independently modify just one dimension of the item (width or height).

In similar fashion, drag the pointer over the **Rotation** button with the left mouse button pressed to turn the overlay source in 3D space, as follows:

- Drag left/right to rotate the source about the Y (vertical) axis.
- Drag up/down to rotate the source about the X (horizontal) axis.
- Drag up/down while holding down the right mouse button to rotate about the Z axis.
- Drag on a single numeric slider at right, or hold down Ctrl while dragging to constrain rotation to one axis.

Position, Rotation and Scale can be reset by clicking **Reset Positioning**.

Hint: Reset most controls to their default value by holding down Shift while double-clicking it.

4.4.4 PROC AMP & OPACITY

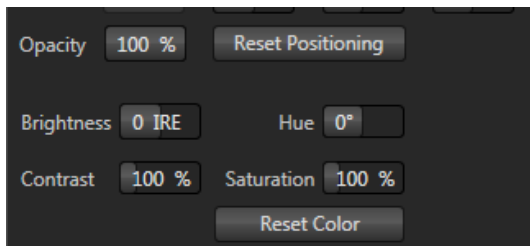


Figure 48

The **Opacity** slider defaults to 100%, or fully opaque. Reducing the value makes the object increasingly transparent.

Brightness, Hue, Contrast and Saturation controls are familiar from TriCaster's **Live Desktop**, where they are located in the **Proc Amp** controls for inputs and output.

- **Brightness:** Adjustment range from -100 to +100 IRE (the default being 0). As reference, the full luminance range of the visible portion of a video signal can be thought of as '100 IRE units' (named for the Institute of Radio Engineers) – ignoring minor regional variations.
- **Contrast** – Adjustment range from 0 - 500% (default 100%).

- **Hue** – Adjustment range from -180° to +180°. Adjusts the master color of the selected **Source**, swinging the entire image through the color wheel's spectrum.
- **Saturation** – Adjustment range from 0-500%. Zero saturation results in a 'black and white' picture; increased saturation results in richer colors.
High saturation values can exaggerate the color portion of the signal. Note that over-saturated colors are considered illegal for broadcast transmission, and may result in display problems on some devices.

(The result of clicking **Reset Color** will come as no great surprise, so perhaps we'll leave that as a student exercise.)

4.4.5 STYLE



Figure 49

A **Style** menu doesn't appear in the **Monitors** group, but we should give it a moment's attention as well. Expand the **Input A** control group to show it.

Style is a bit of a joker, since it may govern different features in various places. One very useful thing it offers in some instances is that it permits you to select between one-person or two-person placeholder images on the **Canvas** for **Input A**.

Elsewhere, it may be used to provide many diverse options, such as enabling or disabling lighting effect. Be sure to check it out wherever it appears.

4.5 ANIMATION CONTROLS

We reviewed the use of the **Animation Controls** (Figure 50) in the Walkthrough Chapter. The thumbnail icons show the currently established **Start** and **End** zoom preset positions.

- When the current view is exactly at either the **Start** or **End** position, the corresponding thumbnail is bordered in gold.



Figure 50

- Clicking either thumbnail begins an animated zoom preview right on the canvas.
- Double-click a thumbnail to bypass the animated zoom, cutting directly to the position represented by the thumbnail.
- Alternatively, drag the zoom slider beneath the thumbnails to manually move through all intermediate zoom levels.

Clicking the **Set** button beneath a thumbnail updates the **Start** or **End** preset to match the 'camera position' and 'zoom level' currently displayed on the **Virtual Set Canvas**.

4.6 VIRTUAL SET CANVAS

The large **Virtual Set Canvas** dominates the screen. It not only provides feedback on your work in progress, but also supports certain editing operations, and even allows you to preview animated zooms. In addition, as previously mentioned, various objects on the **Canvas** may be highlighted when you roll the mouse cursor over their respective headers in the **Control Stack**.



Figure 51

The **Canvas** allows you to interactively adjust the zoom level and center frame point for the **Start** and **End** positions.

When zoomed out to the maximum level for the set, dragging the cursor on the screen has no effect. But as soon as you have zoomed in a bit, you can drag left, right, up or down to re-center the frame, in essence relocating its zoom target.

Hint: Zoom and center adjustments are not stored as the Start or End preset positions until you press their Set button in the Animation Controls. For example, if you click End, adjust the center position, then – without having clicked Set – click End again, the original End position is restored.

There are several ways to zoom in and out on the **Canvas**:

- Hold down the right mouse button, and drag up or down.
- If your mouse has a scroll-wheel, rotate it to zoom in and out.
- Press Ctrl with the + or – keys (top row plus and minus sign).
- Hold down the Alt key, and drag up or down.

4.7 IMPORTING PHOTOSHOP® FILES



Figure 52

As mentioned earlier, TriCaster Virtual Set Editor can also import PSD files, and create **LiveSets** from them. This is extremely useful, since it permits users to prepare layered files for conversion to LiveSets using familiar 2D art software.

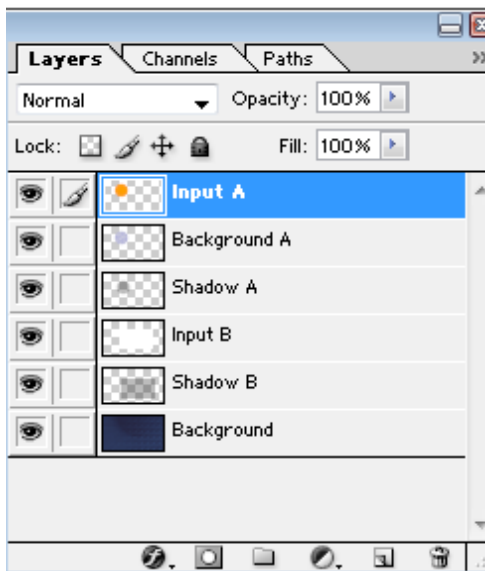


Figure 53

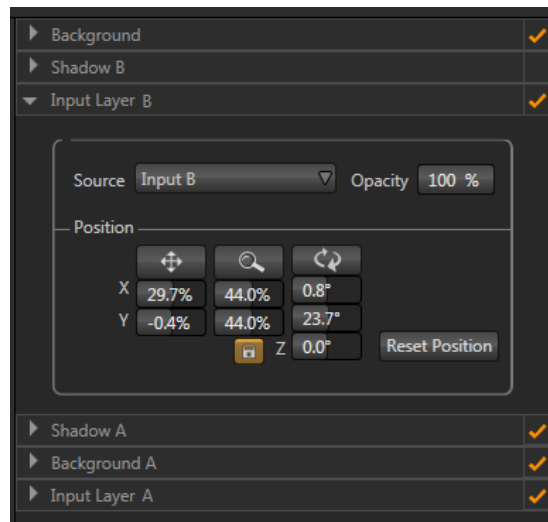


Figure 54

Note that the order of layers in the **Control Stack** for PSD files you import is inverted compared to the original – so, for example, the Background layer is at the bottom of the **Layer Panel** in Figure 53, but appears at the top after import (Figure 54).

4.7.1 FILE REQUIREMENTS

There are a few things to know about working with PSD files in TriCaster VSE. Notably, all layers in the file should be rasterized (i.e., bitmap layers, not dependent on masks, vector graphics, transfer modes, etc). Also, images should be RGB Color Mode (not CMYK, etc).

4.7.2 INPUT LAYERS

For TriCaster VSE purposes, image layers in the file serve one of two purposes. Either a layer contains graphic imagery that will for part of the composite result, or it is an “Input Layer”.

Input layers are replaced by the video sources assigned in TriCaster’s Virtual Input tab in the finished LiveSet. TriCaster VSE identifies “Input layers” in imported PSD files by their layer name. You can use the name to identify the layer as a proxy for either **Input A** or **Input B**.



Figure 55

A layer with any of the following names will be replaced by Input A: "Input A", "InputA", or their lower case equivalents. When the PSD file is imported, input layers are listed in TriCaster VSE’s **Control Stack** as “Input Layer 0”, “Input Layer 1”, and so on.

It’s also possible to assign a *custom* name to a video input layer when creating VSE projects from Photoshop® files. Simply assign the layer a name as shown on the lines below:

Input A name = “Stand-up Talent”

or, as another example: Input B name = “PiP”

LAYER GROUPS

On conversion, Photoshop® image layers that are nested inside groups will be organized into similar groups under headers in TriCaster VSE’s **Control Stack**. This is a useful way to make it easier to manipulate VSE layers.

DISTORTION AND WARPING



Figure 56

If you have a recent version of Photoshop® that supports input and output of high dynamic range imagery, more elaborate transformations or distortions are possible (Figure 56).

You will find a file named “VSE UV Gradient.exr” supplied in your TriCaster VSE installation folder (specifically, in the folder C:\TriCaster\AddOns\Virtual Set Editor\Extras).

This special image is a UV gradient in the form of an OpenEXR file. It is intended to serve as a proxy video input layer proxy in your Photoshop® project when you need more powerful input layer transformations. The Photoshop project must be 16bit color depth (or 32bit) when you load the .exr file (save the final layered PSD in the same color depth to preserve your transformations and distortions accurately).

Remember to use the (.exr) proxy gradient for all video input layers in the project in this case, with one exception: completely empty (transparent) layers will be treated as a full-frame video input layer.

Hint: When you do not require advanced transformations, simply use standard 8bit color depth for both project and file exports. Only the opacity in input layers is recognized by TriCaster VSE in this case; any color information is ignored.

INPUT LAYERS, PROXIES, AND OPACITY

In the assumption that **Input A** is most often used for greenscreen shots, imported Input A layers display the ‘phantom’ **One Person** proxy on the **Canvas** by default (and in the *icon* for the resulting **LiveSet**). You can select a different proxy image for the layer from the **Style** menu if you wish.

Note that if an input layer is completely empty, TriCaster VSE infers a full screen input. On the other hand, if the layer contains a smaller opaque shape on a transparent field, TriCaster VSE attempts to position the live video accordingly in the result.

If a solid color input layer is neither completely empty nor fully opaque, transparency is applied to the video source as appropriate. If the filled shape does not truly correspond to the rectangular aspect of your video sources, you may find it useful to use TriCaster VSE’s **Position** (and **Scale**) tools to tweak the video source within the shape.

Hint: While this means you need to avoid inadvertently leaving just a few stray pixels in a layer, it also means that you are perfectly free to design Picture in Picture effects from all manner of different shapes – circles or ellipses, squares, soft-edged vignettes, and so on.

An additional consideration: input layer conversions work on the basis of opacity in the layer at this time. Distortions (such as warping, rotation, smearing, etc.) in the image layer are not recognized by TriCaster VSE.

Caution: Care must be taken if either video input (A or B) is referenced more than once in the layers of the file. Distortion will occur in the result if ‘same sources’ overlap. This is inevitable, unless the foremost ‘same source’ layer (from the viewers perspective) is fully opaque – i.e., has no transparency at all – where the overlap occurs.

KEYING

It is not really necessary to pre-determine whether or not chromakeying will be applied to **Input A** in the result. If **LiveMatte** is applied to the video source for Input A when the LiveSet is displayed in TriCaster’s **Live Desktop**, the background behind it in the **LiveSet** will be seen (Figure 58).



Figure 57



Figure 58

With LiveMatte disabled, the video source will obscure the background, just as you would expect.

Note: Input B does not support keying effects at this time.

PERSPECTIVE EFFECTS

It might be that you wish to apply a perspective effect to a video input. You will find it works best to simply supply a full-screen layer in this case, and do the positioning using TriCaster VSE's **Control Stack**.



Figure 59

However, if you want a shadow (as in Figure 59), frame, or similar graphic element to be rotated or skewed to match a rotated input layer, this must be done in the source file before import. (Afterward, use the **Position** controls to adjust the input layer to match.)

PART III (APPENDICES)

A time-saving question and answer section, followed by an extensive listing of Shortcut Keys, schematic diagram and keyword index ...



In this section, we'll consider the most common questions TriCaster Virtual Set Editor users may have (and of course we'll provide the answer, too).

The answers are intentionally brief – perhaps just a reminder of one or two steps required to perform some operation. For this reason, we'll also point you to explanatory information elsewhere in this manual whenever that would be useful.

If you've largely mastered your TriCaster VSE but have a specific question, this may be the best place to look first. The headings that follow list related questions and answers together, along with cross-references and other helpful remarks.

Hint: The NewTek website includes a comprehensive FAQ database containing a wealth of useful information on all of its products – please see <http://www.newtek.com/faq/>

How do I ...

<i>Virtual Sets</i>	50
Add more virtual set presets?	50
Add a background to my second double-box?	50
Create a a completely custom virtual set?	50
<i>File Management</i>	51
Locate my new virtual sets in TriCaster's Live Desktop?	51
Organize virtual sets in custom locations?	51
Delete unwanted virtual sets?	52

A.1 VIRTUAL SETS

A.1.1 ADD MORE VIRTUAL SET PRESETS?

NewTek will offer optional content packs with more virtual set presets from time to time. The new presets will be installed to the correct location on your TriCaster automatically.

A.1.2 ADD A BACKGROUND TO MY SECOND DOUBLE-BOX?

Chromakeying (LiveMatte) is supported for Input A in TCXD850's Virtual Inputs, but not for Input B. You can assign Input A to either Box 1 or Box 2 (or, though seldom used, both of these) when creating a double-box virtual set in TriCaster VSE.

Then, when you apply LiveMatte to source selected as Input A in the Virtual Input tab (Live Desktop), the background you chose for the box in TriCaster VSE appears behind it wherever the chromakey settings result in transparency.

A.1.3 CREATE A COMPLETELY CUSTOM VIRTUAL SET?

The primary *raison d'être* for TriCaster VSE is to allow TriCaster TCXD300 and TCXD850 users to *easily* customize LiveSets to their local need. In addition, it allows users to create completely custom virtual sets by importing layered Adobe® Photoshop® PSD files (see Section 4.7).

Beyond this, it is not anticipated that most users will wish to pursue custom LiveSet authoring. In some cases, user may utilize specialist services offered by various third-party developers rather than endeavoring to master the skills (and tools) required. For those who do wish to engage in advanced set authoring, more powerful tools are available in the form of the TriCaster TCXD LiveSet SDK, a command-line tool provided for serious LiveSet developers.

The TCXD LiveSet SDK allows advanced users to create virtual sets from content authored in a wide variety of content creation applications (typically 3D, paint or compositing programs). It consists of a complete set of developer tools that can be integrated into a production pipe-line for compiling and debugging virtual sets for use with TriCaster TCXD systems. The prerequisites for TriCaster TCXD LiveSet SDK users follow:

1. Agreement to and compliance with end-user license and non disclosure agreement.

2. A 64bit computer system and operating system (such as Windows Vista™ 64bit or Windows 7™ 64 bit).
3. A TriCaster TCXD300 or TCXD850 (to test your LiveSets).
4. An application capable of creating high dynamic range imagery (full precision floating point formats, such as .EXR.) and working knowledge of same.
5. Experience in the creation of LiveSets and knowledge of their use.
6. Users should be comfortable working with command line applications, .bat and .xml files.

Developers may apply for participation in the TriCaster TCXD LiveSet SDK program by sending email to liveset@newtek.com.

A.2 FILE MANAGEMENT

A.2.1 LOCATE MY NEW VIRTUAL SETS IN TRICASTER'S LIVE DESKTOP?

7. When you perform a **Save As** operation, the modified virtual set is stored in the **User** folder of the default **LiveSet** effects location.
8. Open a TriCaster session, and click a **Virtual Input** tab.
9. Click the **Add** button in the **Virtual Input** tab, to show the **Media Browser**.
10. You will see a **User** sub-heading listed (along with **NewTek**) under the **LiveSets** header in the **Location List** at left in the **Media Browser**.
11. Click the **User** location entry and icons for your new LiveSet angles will be shown in the **File Pane** at right.

A.2.2 ORGANIZE VIRTUAL SETS IN CUSTOM LOCATIONS?

1. To move your virtual sets to custom locations, select the **Shutdown** icon on the **Home Page** of TriCaster's **Startup Screen**, select **Exit to Windows**, and confirm this decision.
2. Navigate from the **Windows Desktop** to *C:\TriCaster\Effect\LiveSets*.
3. Create a new sub-folder with the custom name you wish to appear alongside *NewTek* and *User* in the **Media Browser Location List** (under the *LiveSets* header).
4. Drag the folder(s) for the LiveSet you wish to appear in the custom location into the new folder you created earlier.

5. Then simply re-launch TriCaster, and re-open your session. The newly created folder will appear as a sub-heading in the Media Browser's **Locations List**, and its content will be displayed in the **File Pane** at right when you select it.

A.2.3 DELETE UNWANTED VIRTUAL SETS?

1. You may create some virtual sets that, for one reason or another, are not 'keepers'. To remove them from TriCaster entirely, select the Shutdown icon on the Home Page of TriCaster's Startup Screen, select Exit to Windows, and confirm this decision.
2. Navigate from the Windows Desktop to C:\TriCaster\Effect\LiveSets.
3. Locate the folder for the LiveSet you wish to delete, then simply right-click on it and select Delete from the context menu.
4. Re-launch TriCaster.

B KEYSTROKE SHORTCUTS

B.1 MENU OPERATIONS

New	Ctrl + n
Open	Ctrl + o
Save	Ctrl + s
Save As	Ctrl + S (Shift + s)
Close	Alt + F4
Help	F1

B.2 VIRTUAL SET CANVAS

Zoom In	Ctrl + (plus sign)
Zoom Out	Ctrl - (minus sign)
Drag to zoom	Alt + drag mouse up/down
Constrain dragging (panning)	Hold Shift before dragging

B.3 CONTROL STACK

Reset control to default value	Shift + double-click
Constrain drag operation (pan/scale direction, rotation axis)	Hold Ctrl before dragging

B.4 ANIMATION CONTROL

Jump to current Start preset position	Home
Jump to current End preset position	End

C VERSION NOTES

This section lists changes and features that are new in this version:

- Improved video source mapping from imported imagery (Section 4.7.2).
 - 16 or 32 bit PSD file layers support rotation and distortion of video inputs in virtual sets.
- PSD (Photoshop® Document) layer group support (Section 4.7.2).
 - Improved organization and control in custom VSE projects created from PSD files.
 - Grouped layers convert to expandable VSE groups on import.
 - Layer group names convert to VSE stack group header names.
- Rename individual virtual set angles in VSE (Section 4.3).

D INDEX

A

Add-Ons, 11, 13
Adobe® Photoshop® Files, 41, 50
Angle Bin, 33
Angle, rename, 33
Angles Bin, 16
Animation Control, 23
Animation Controls, 16, 22, 39

B

Browse, 19, 36

C

Canvas, 21, 39
Check for Updates, 33
Chromakeying, 44, 50
Control Stack, 16, 18, 34, 41
 Headers, 34
 Hinting, 21
 Source, 35

D

Distortion, 43

I

Import Files, 41, 50
Input Layer, 42
Installation, 8

K

Keying, 44, 50

L

Layer Group, 42
Layer, Video Input, 42
LiveMatte, 44, 50

M

Media Browser, 19, 25, 36
Menus, 15
 File, 31
 Open, 25, 31
 Recent, 32
 Save As, 24
 Help, 33
 Check for Updates, 33
 View, 22, 32

P

Photoshop® Files, 41, 50
Position, 36
Preset, 14, 30
Proc Amp, 37
PSD Files, 41, 50

R

Registration, 11
Rename Angle, 33
Rotation, 36, 45

S

Safe Area, 22, 32
Scale, 36
Startup Wizard, 13, 29

Style, 38

W

Warping, 43

U

Updates, 33

Z

V

Version Notes, 55

Video Input Layer, 42

Virtual Set Canvas, 21, 39

VSE Desktop, 14, 30

Zoom Presets, 16, 22, 23, 39, 40

Zooming, 23, 24, 39, 40

CREDITS

Acknowledgments: Tim Jenison, Jim Plant

Engineering: Andrew Cross, Kevin Rouviere, Nathan Kovner, James Killian, Kirk Morger, Brian Brice, Kevin Nations, Jeremy Wiseman, Masaaki Konno, John Perkins, Mike Watkins, Bennie Pierce, Cary Tetrick, Alvaro Suarez, Steve Bowie, Charles Steinkuehler, Menghua Wang, Shawn Wisniewski, Bob Peene, Greg Heine, Dan Fletcher, Anthony Louviere, Jan Uribe, Jeremy Brosius, Michael Joiner, Jarrod Davis, Ryan Hansberger

Design Consultants: Kris Gurrad

Additional thanks to:

- NewTek Marketing
- NewTek Technical Support
- NewTek Customer Service
- NewTek Sales

This product uses the FreeImage library. This is licensed under the LGPL license (see link below). For the source, and the ability to change and recompile this component, please visit:

<http://freeimage.sourceforge.net/>

This product uses the LAME library. This is licensed under the LGPL license (see link below). For the source, and the ability to change and recompile this component, please visit : <http://lame.sourceforge.net/>

This product uses the FFmpeg library. This is licensed under the LGPL license (see link below). For the source, and the ability to change and recompile this component, please visit : <http://ffmpeg.org/>

For a copy of the LGPL licence, please look in the folder c:\TriCaster\LGPL\

Portions use Microsoft Windows Media Technologies. Copyright (c)1999-2008 Microsoft Corporation. All Rights reserved.

VST Plugin Spec. by Steinberg Media Technologies GmbH.

TriCaster TCXD850, TriCaster TCXD300, TriCaster DUO, TriCaster, TriCaster PRO, TriCaster PRO FX, TriCaster STUDIO, TriCaster BROADCAST, 3Play, SpeedEDIT, DataLink, LiveText, LiveControl, VT, VT[3], VT[4], VT[5], Video Toaster, Toaster, Inspire 3D, 3D Arsenal and Aura are trademarks of NEWTEK. LightWave and LightWave 3D are registered trademarks of NEWTEK. All other brand names, product names, or trademarks belong to their respective holders.



TriCaster™

TriCaster is a trademark of NewTek Inc.
Copyright © 2011 NewTek Inc. All Rights Reserved