

TriCaster™

Virtual Set Editor 2.0

May 16, 2012

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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.

ABOUT THIS MANUAL



Virtual Set Editor 2.0 provides new and important capabilities, and for the first time, is available as a standalone application for use on an external workstation or even a laptop.

This manual provides basic information you need to begin working with Virtual Set Editor in the introductory Walkthrough section, and goes on to provide a comprehensive reference section you can turn to when you need finer detail.

Please take a moment to peruse *this* section, which explains the manual's organization.

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.

CHAPTER 1 INSTALLATION AND ACTIVATION



This chapter explains how to properly install your new software, whether for integration and use within TriCaster or for standalone operation.

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.

SECTION 1.1 WELCOME

NewTek TriCaster comes with 'network-class' 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.

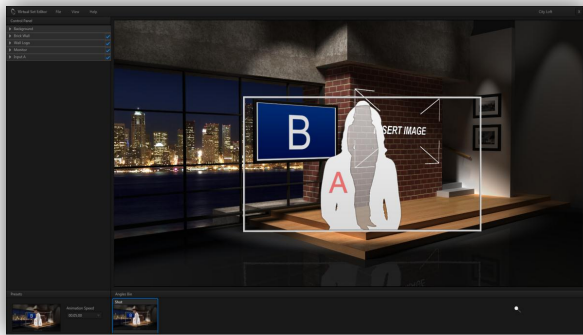


FIGURE 1

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.

SECTION 1.2 SYSTEM REQUIREMENTS

TriCaster VSE 2.0 can be installed on a standalone Windows® workstation, or directly on the following NewTek TriCaster models: TCXD300, TCXD450 and TCXD850 (including EXTREME models), TCXD 455 or TCXD855, or TCXD 8000. (You should always check for TriCaster software updates prior to installing new Add-ons.)

SECTION 1.3 INSTALLATION

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

- USB key
- Installation instruction card (insert).

1.3.1 GETTING READY

1. Power up the system you intend to install VSE on (whether a TriCaster or suitable Windows PC).
2. For a TriCaster setup:
 - a. Select the *Shut Down* icon on the icon ring in the TriCaster Startup Screen's Home page.
 - b. Click the *Exit to Windows* link at right.
 - c. 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.)
3. Insert the *TriCaster VSE* thumb drive into an unused USB port.

1.3.2 INSTALLATION STEPS

4. Click the Windows *Start Menu* icon at lower left on the Windows® Desktop, and select the *Computer* button (to open a system file explorer).
5. Double-click the icon for the TriCaster VSE USB thumb drive to open a file window.
6. 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.)

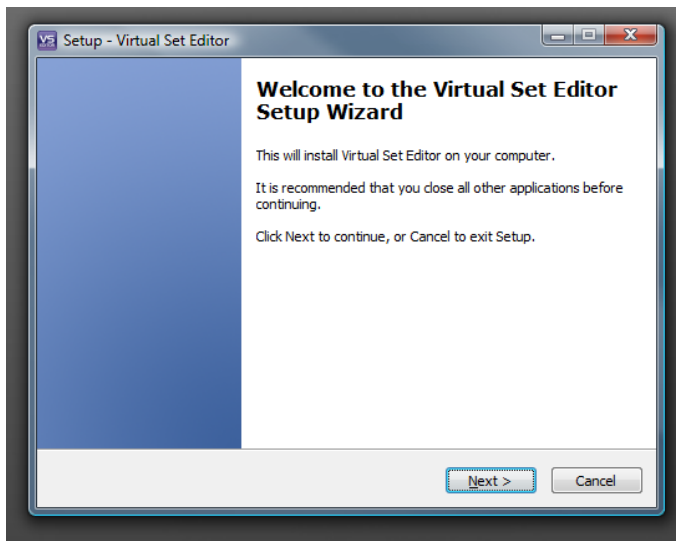


FIGURE 2

7. Click *Next* in the introductory dialog to begin the installation process (Figure 2).
8. Read the *License Agreement* in the following dialog, and then select *I accept the agreement* and click the *Next* button to continue.

9. 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.
10. The installer will now set up TriCaster VSE on your system. A progress gauge is shown during installation (Figure 3).

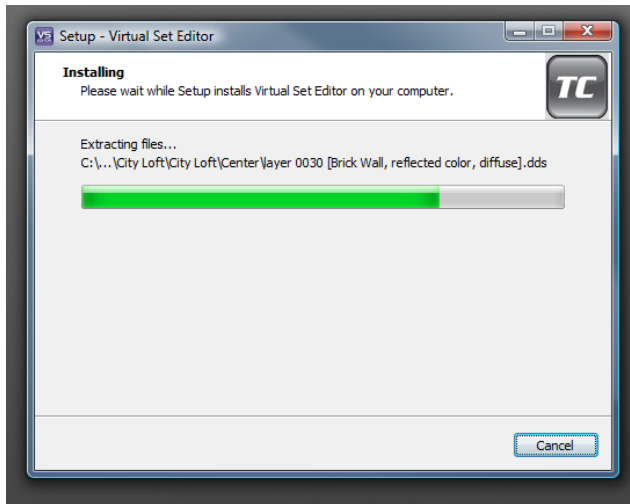


FIGURE 3

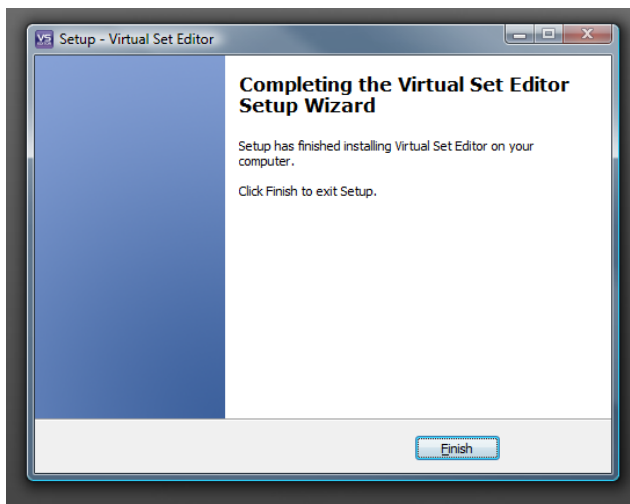


FIGURE 4

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

1.3.3 TRICASTER VIRTUAL SET EDITOR LAUNCH

TRICASTER

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

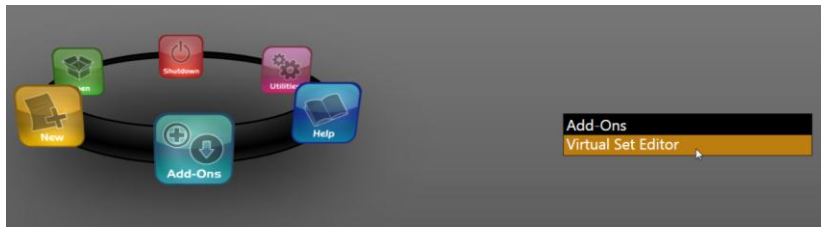


FIGURE 5

13. 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).

STANDALONE

12. By default, a TriCaster *VSE icon* is shown on the Windows® Desktop after installation.
13. Double-click this icon to launch VSE (or use the Windows® Start menu to do so).

1.3.4 REGISTRATION

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

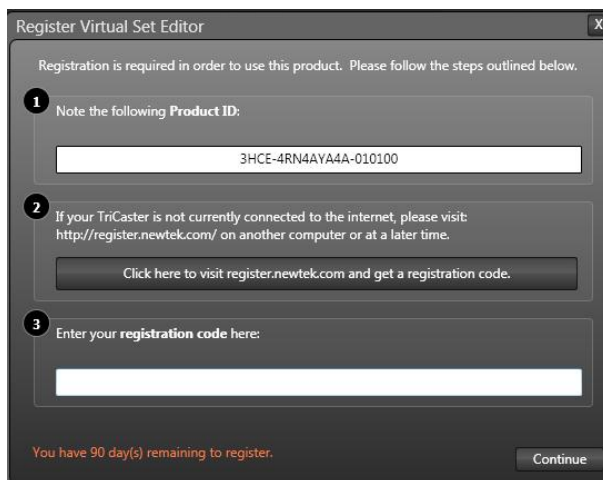


FIGURE 6

15. If the host system is connected to Internet, you can click the “Click here ...” button to perform your TriCaster VSE registration online.
16. 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.
17. 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.

CHAPTER 2 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.

SECTION 2.1 FIRST STEPS

As Chapter 1 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.

1. Launch the *Virtual Set Editor*, either from the link displayed at right when you click the *Add-Ons* icon on TriCaster's *Startup* page, or using the icon on your Windows® Desktop for standalone installations.

SECTION 2.2 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.

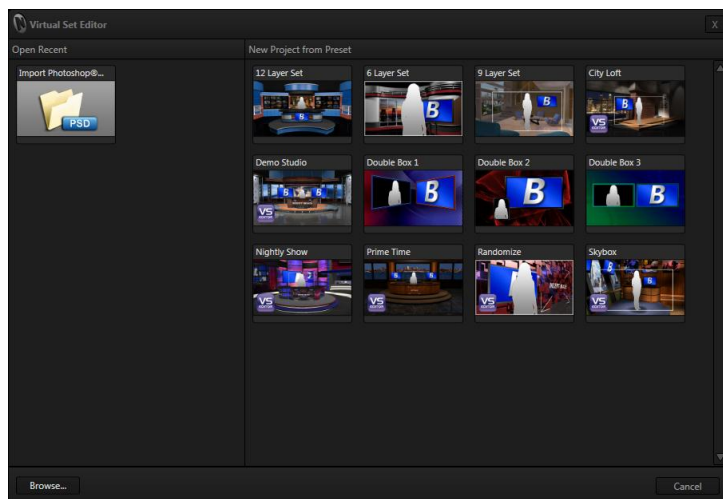


FIGURE 7

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.

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

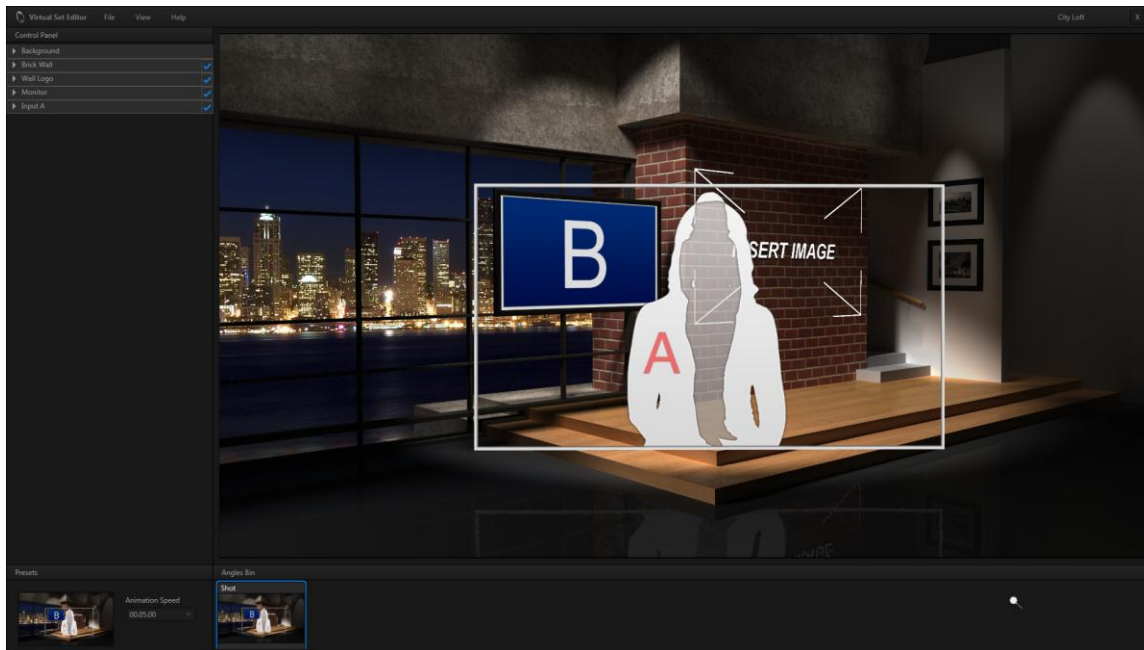


FIGURE 8

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).

SECTION 2.3 VSE DESKTOP TOUR

3. 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:

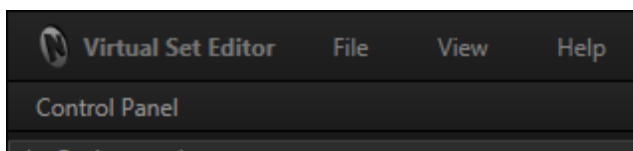


FIGURE 9

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

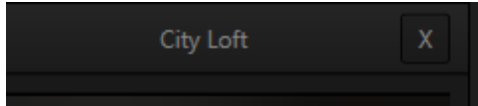


FIGURE 10

5. 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.
6. 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

7. 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.

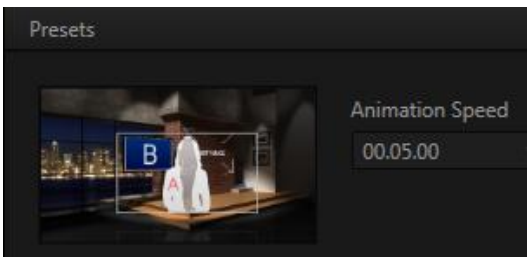


FIGURE 12

8. The *Presets* control group is located at left in the *Desktop* footer (Figure 12). These controls allow you to set custom *Shot* positions, effectively *LiveSet* zoom/pan presets. (Clicking the thumbnail opens the *Shot* selector.

Standalone and TriCaster™ 8000 installations support 9 different shots, while all other systems will show just 2.

9. The *Control Stack* (Figure 13) occupies a column on the left 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.

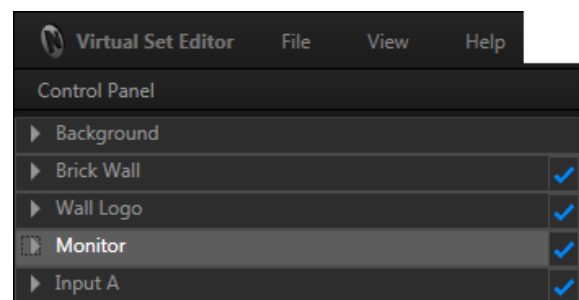


FIGURE 13

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

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



FIGURE 14

12. 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).

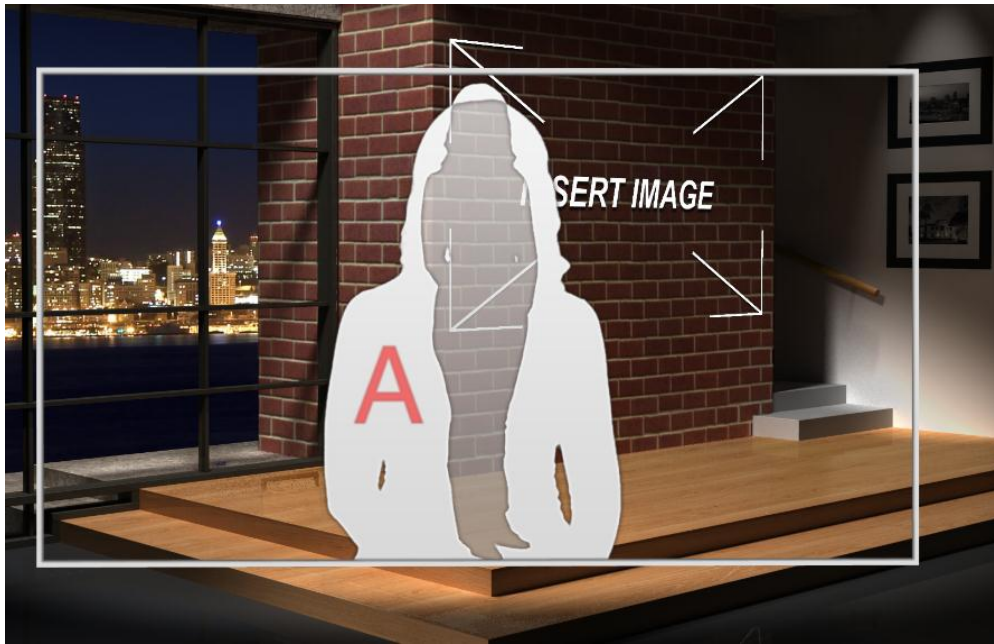


FIGURE 15

The monitor vanishes from the scene (as shown by our somewhat ethereal 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

13. 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.

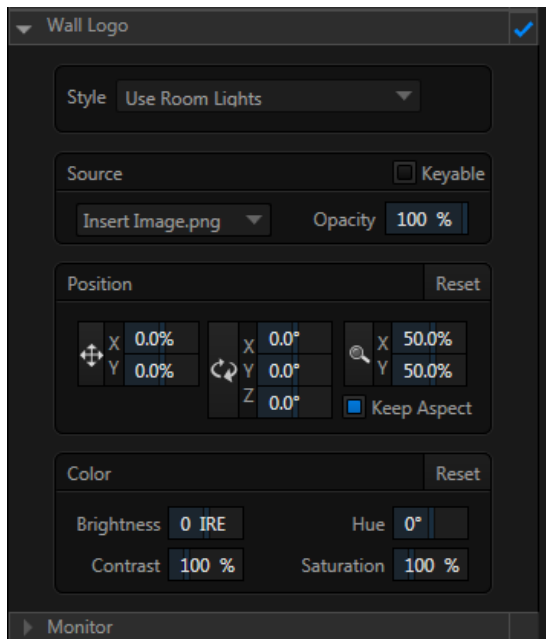


FIGURE 17

Now, if your client is named “INSERT IMAGE”, you’re finished. 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.

14. 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).

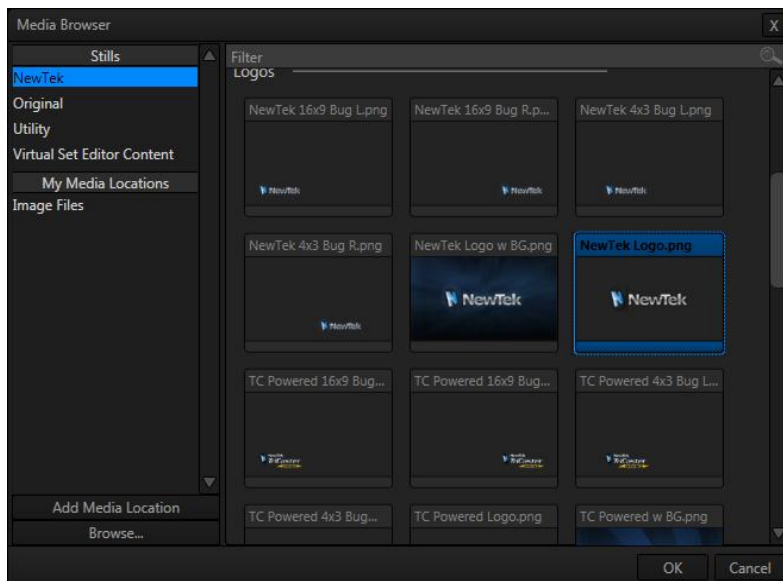


FIGURE 18

15. Select the *NewTek* entry shown beneath the header *Stills* in the *Locations* column at left.
16. In the *File Pane* at right, locate the icon named *NewTek Logo.png*, which you will find in the *Logos* category; click the *OK* Button.

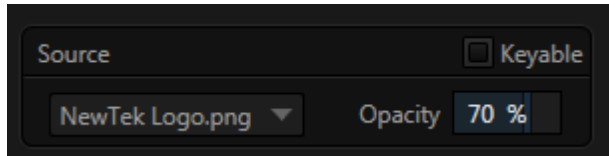


FIGURE 19

17. 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

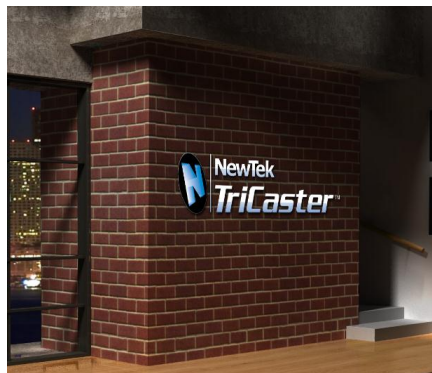


FIGURE 21

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

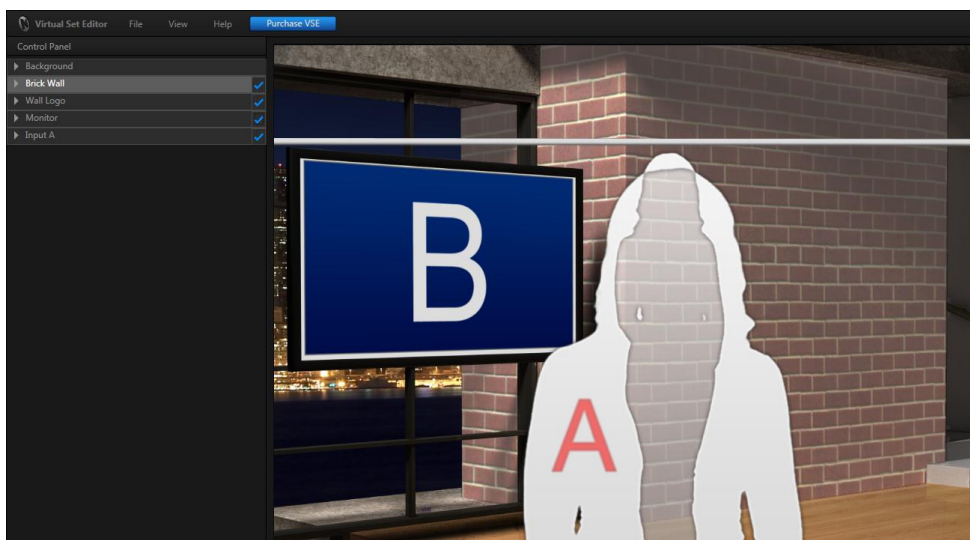


FIGURE 22

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

19. Roll your cursor over the *Brick Wall* header in the *Control Stack*. The header brightens even before you click it. Notice, too, that the item that is highlighted in the *Control Stack* is also highlighted in the *Virtual Set Canvas*.

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.

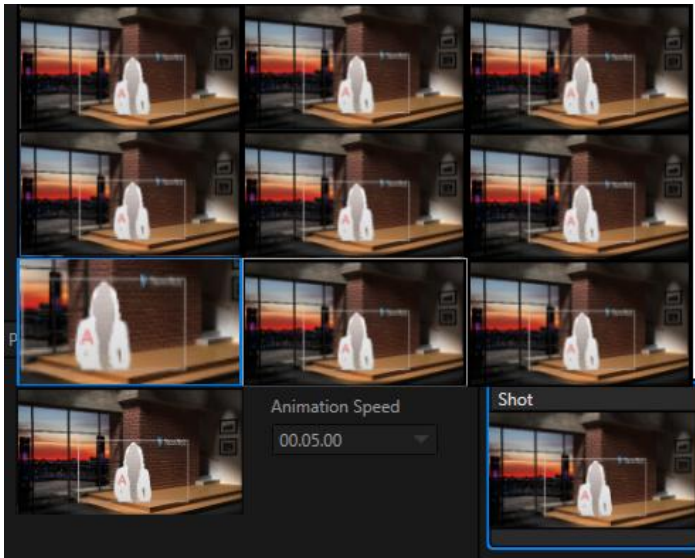


FIGURE 23

20. Until now, we've been viewing the default (first) *Shot* position for this set. Locate the *Animation Controls* group at lower left, just beneath the *Control Stack*. Click the thumbnail icon to reveal the expanded *Shot selector* (Figure 23), and pick a shot to edit.

(Note that the number of thumbnail icons shown in the *Shot* selector depends on the type of system VSE is installed on; more on this in the Reference section of this manual.)

21. 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

22. 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%.

23. 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 24.

Having scaled the *Input A* frame to a smaller size, and perhaps more off-center than desirable, we should take steps to ensure that the *Shot* we're currently editing is framed to produce the desired result.

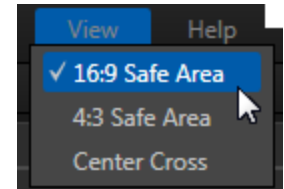


FIGURE 25

24. First, to help with placement, click the *View* menu at left above the *Canvas*, and turn on the *16:9 Safe Area* overlay (Figure 25).

25. To 'move the world' left, right or up and down, 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.

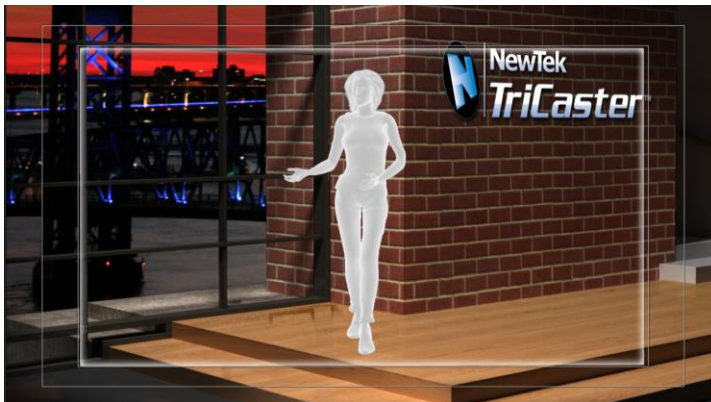


FIGURE 26

26. You may feel that the 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 26).

27. Click a different thumbnail icon in the shot menu to preview the animated zoom, demonstrating the end result of all your modifications.

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

28. Click the *File menu* label above the *Canvas*, and select *Save As*.

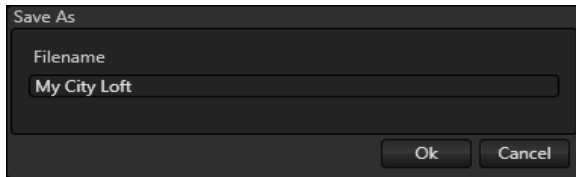


FIGURE 28

29. 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.
30. Now select *Export to live > This TriCaster* from the *File* menu. The exported LiveSet will be listed in the *LiveSet* section of the Live Desktop’s *Media Browser* afterward.

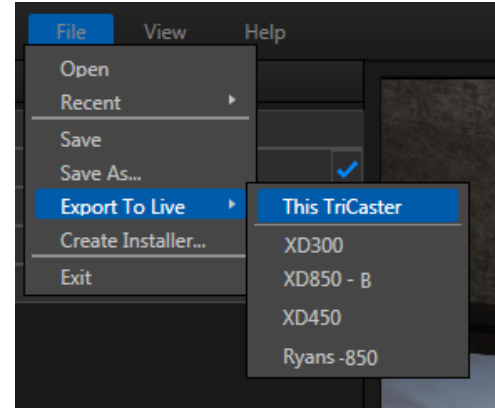


FIGURE 27

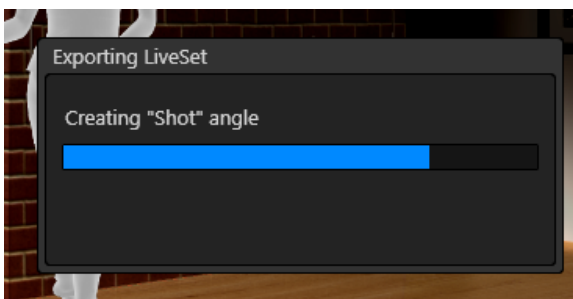


FIGURE 29

31. Click the *Exit* button in the upper right corner to close *TriCaster Virtual Set Editor*.
32. 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*.

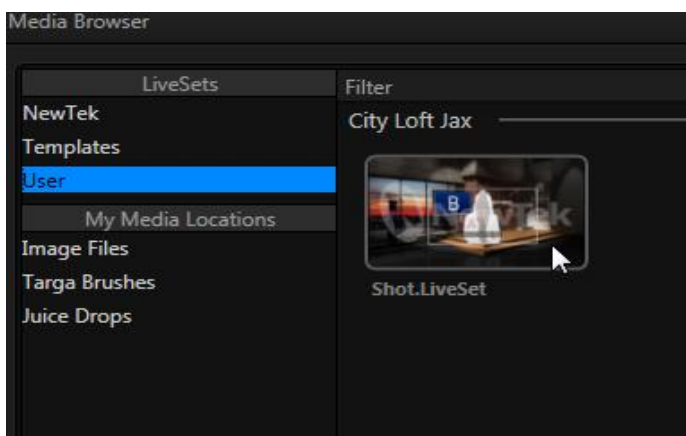


FIGURE 30

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.

CHAPTER 3 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.

SECTION 3.1 STARTUP WIZARD

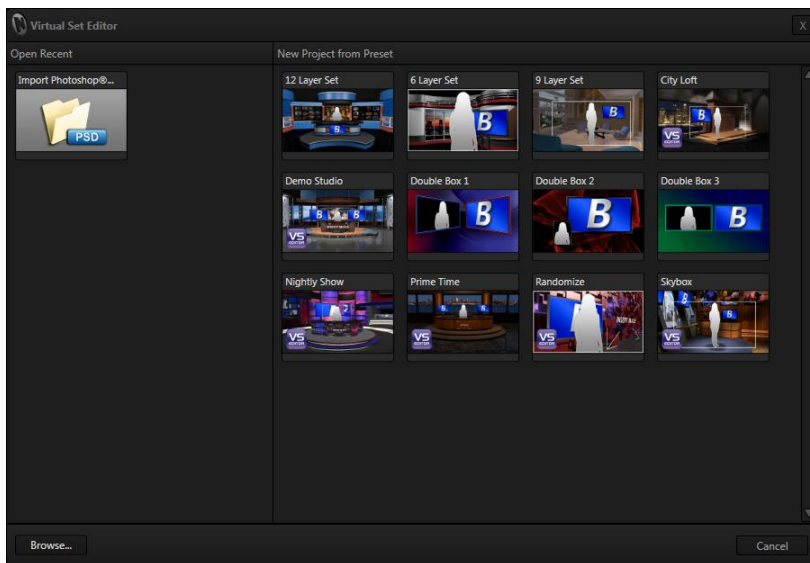


FIGURE 31

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 a folder icon named *Import Photoshop®*.

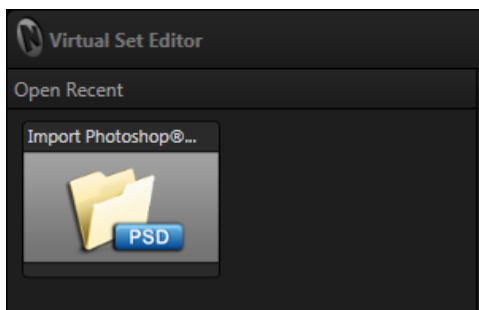


FIGURE 32

- The ability to *Import* layered Photoshop® files (.PSD) and convert them to LiveSets delivers amazing creative power. Helpful details are provided in Section 3.7 of this manual.
- The *Browse* button at the bottom of the dialog lets you navigate to suitable content located elsewhere on your system.

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.

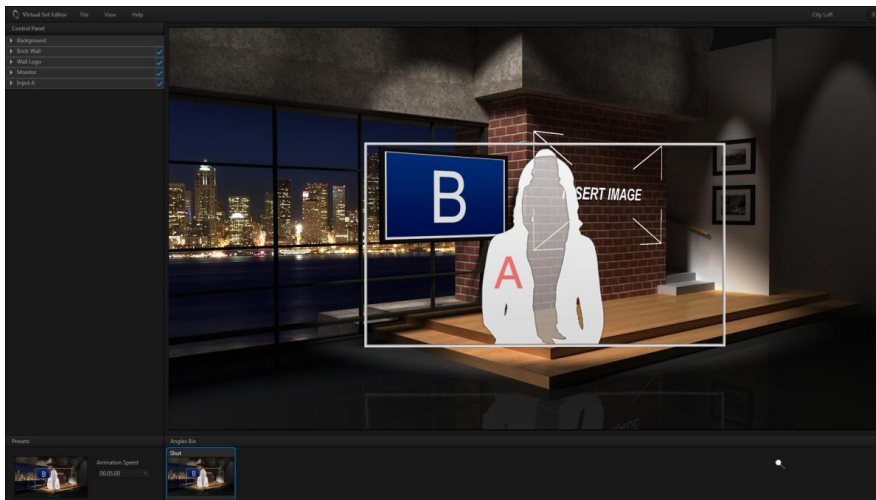


FIGURE 33

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

SECTION 3.2 MENUS

3.2.1 FILE

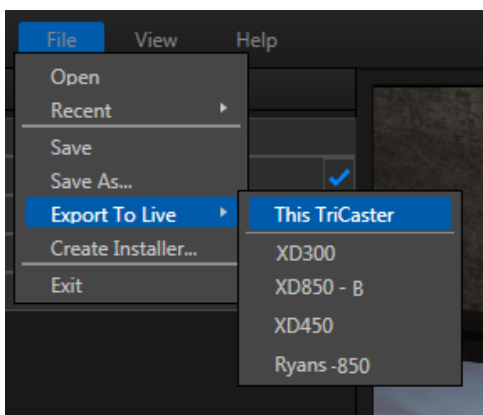


FIGURE 34

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

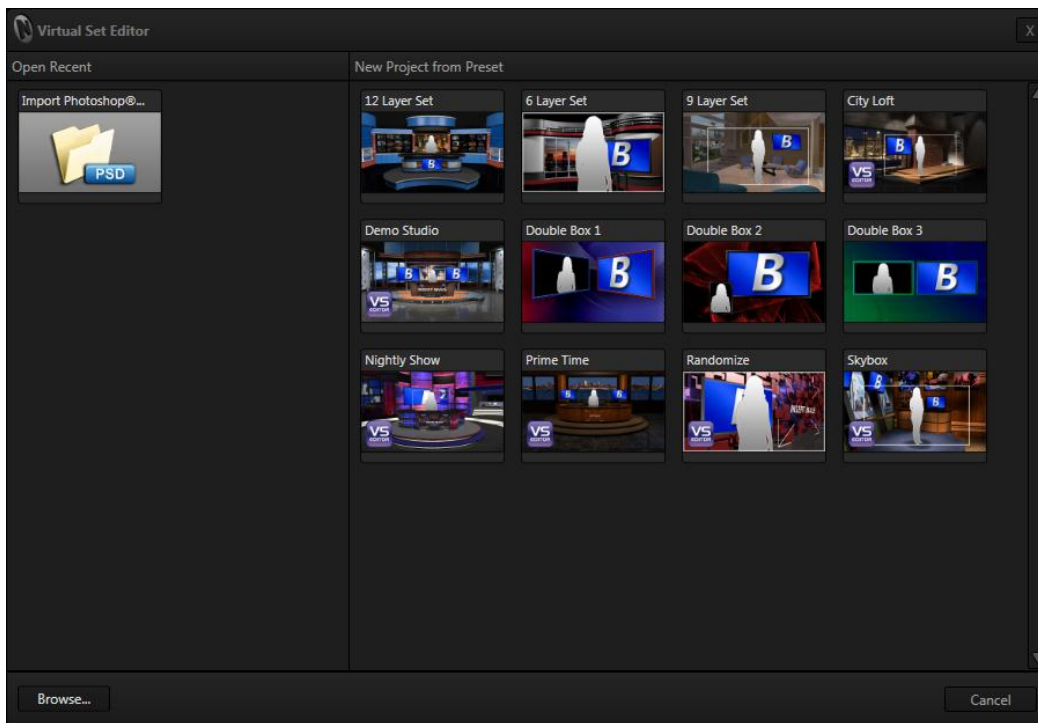


FIGURE 35

- 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 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 VSE project file, or the latter to save it under a new name.
- Selecting *Export to live ...* compiles the shots for the current TriCaster VSE project, and sends them to the proper location for use in the *Live Desktop*. The process can take some time to complete, and progress gauges are shown.

The export sub-menu displays *This TriCaster* (for a local host), and then lists any other qualified TriCaster systems on the same network (sub-net) below. The latter feature appears for standalone VSE installations as well, allowing graphics artists to instantly update different TriCasters on their local network.

- *Create Installer* allows you to set and select file attributes and content such as readme files, etc., then asks for an export path, and finally bundles up the LiveSet as an executable installer file for use on a remote TriCaster (a great way to distribute custom LiveSets to clients).
- Finally, *Exit* closes *TriCaster VSE*, returning you to the *Startup Screen*.

3.2.2 VIEW

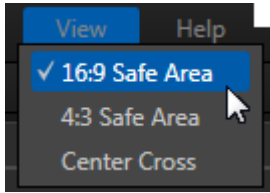


FIGURE 36

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.

3.2.3 HELP

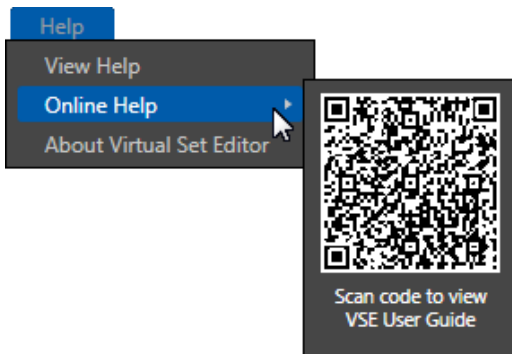


FIGURE 37

- The *View Help* item in this menu opens this manual for convenient review.
- Selecting *Online Help* displays a QR code, allowing you to view the very latest version of the manual on a mobile device.
- Select *About Virtual Set Editor* to review various details 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.

SECTION 3.3 ANGLE BIN

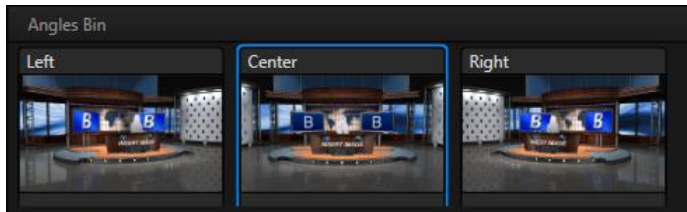


FIGURE 38

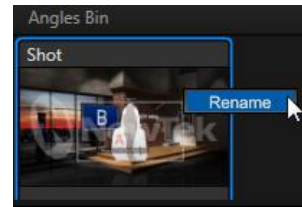


FIGURE 39

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.

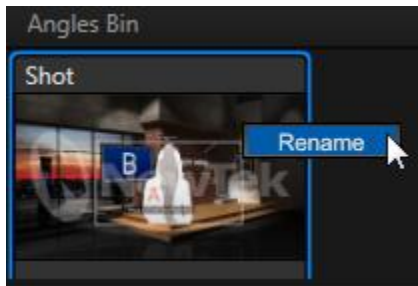


FIGURE 40

To rename an angle, right-click its icon in the bin, and select *Rename* (Figure 40).

SECTION 3.4 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.

3.4.1 ITEM HEADERS



FIGURE 41

Initially, all we see of the *Monitor* control group is its collapsed header (Figure 41). 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. You may find it even faster to simply double-click the group header. Like the triangle gadget, this expands or contracts the group.

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

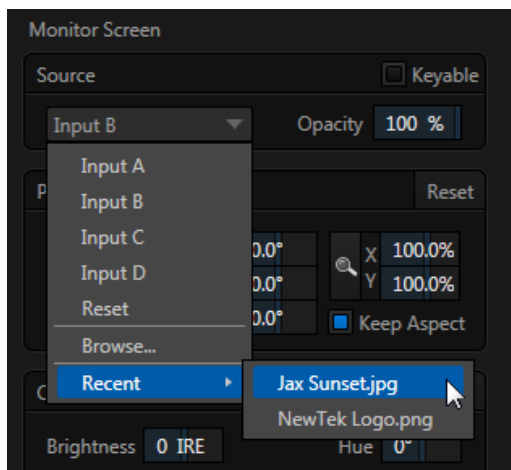
Hint: You'll recall that group headers highlight as you roll the cursor over them, and that the corresponding feature will also highlight on the Canvas as you do so. Some local items nested within a control group also provide this handy behavior.

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 a video source, and you can select a specific input here.

Note: The inputs shown in the list vary – some TriCaster installations will list just two inputs as available (A and B), while others show four, as appropriate for the TriCaster model.

Standalone installations show four available inputs. However, when exported LiveSets are used on TriCaster models that do not support four LiveSet inputs, only A or B selections will work as expected.



The *Opacity* slider defaults to 100%, or fully opaque. Reducing the value makes the object increasingly transparent. Observe also the *Keyable* switch. This is an important option. When enabled, *Keyable* tells TriCaster you wish the TriCaster operator to be able to applying *LiveMatte* (chromakeying) to the input.

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.

FIGURE 42

3.4.2 POSITION, SCALE, AND ROTATION

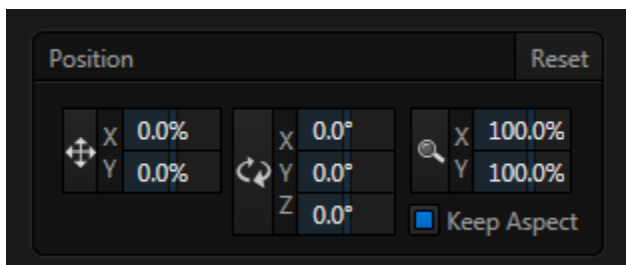


FIGURE 43

Next we see a *Position* control group, with *Position*, *Rotation* and *Scale* sections, respectively.

- Click and drag on the *Position* button (identified by a double-headed arrow) to relocate the assigned source 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.

3.4.3 PROC AMP

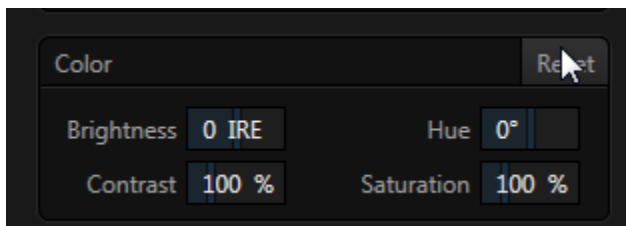


FIGURE 44

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

- *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.)

3.4.4 STYLE

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 a one-person or a two-person frame overlay on the *Virtual Set Canvas*. Elsewhere, it may be used to provide other options, such as enabling or disabling lighting effect. Be sure to check it out wherever it appears.

SECTION 3.5 ANIMATION CONTROLS

We reviewed the use of the *Animation Controls* (Figure 45) in the Walkthrough Chapter. The thumbnail icon shows the active zoom/pan preset position, which is also a) seen on the *Canvas* and b), highlighted with a blue border in the *Shot* selector that opens when you click the thumbnail icon.

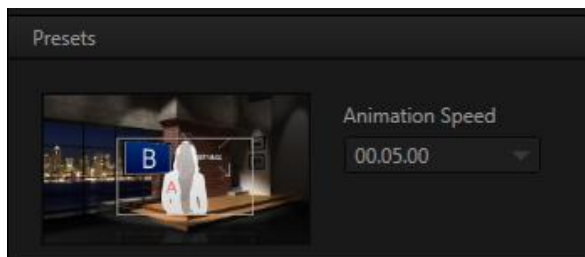


FIGURE 45

Edits made to the composition of the current preset take effect immediately. Clicking a different thumbnail in the *Shot* selector begins an animated zoom preview right on the *Canvas*.

Notice, too, that you can right-click a *Shot* menu thumbnail to open a context menu offering *Copy* and *Paste* features. This makes it a simple matter to duplicate a *shot*, and then tweak the new iteration to taste.

Note: The first and last presets serve as Start and End (min and max zoom) positions for TriCaster models that do not support all nine preset shots.

SECTION 3.6 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 46

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. As soon as you have zoomed in a bit, though, you can drag left, right, up or down to re-center the frame – in essence relocating its target point.

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

- Hold down the right mouse button, and drag up or down.
- If you 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.

SECTION 3.7 IMPORTING PHOTOSHOP® FILES

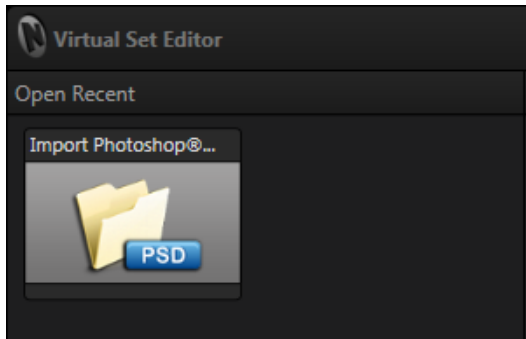


FIGURE 47

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.

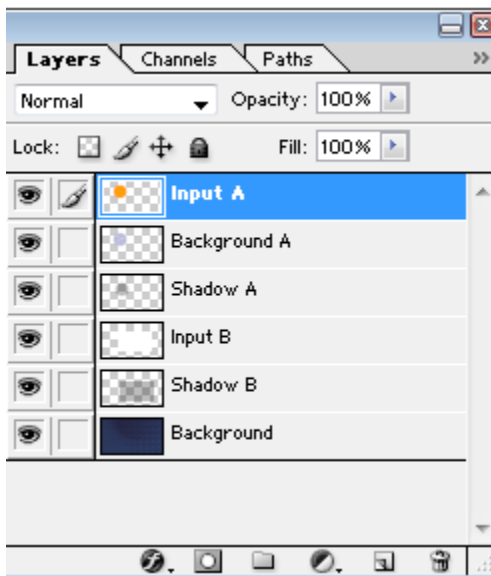


FIGURE 48

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 48, but will appear at the top of VSE's *Control Stack* after import.

3.7.1 FILE REQUIREMENTS

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

3.7.2 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*.

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”

Add the word “keyable” to a video input layer in a PSD file will enable the Keyable switch on import into VSE. (Failure to use this keyword simply means the layer won't *initially* have *Keyable* checked; it does not prevent you from changing the switch setting later in VSE.) Consider some layer name examples:

Input A Keyable

input b name = “Talent” Keyable

input d keyAble name=“No Talent”

Note: The “Input x” designation must come first on any input layer. Modifiers such as a custom name or “keyable” can come in any order after that.

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.

MULTI-ANGLE LIVESETS

Specially named groups (folders) in Photoshop® PSD files can be used to create VSE project s with multiple angles. Let’s consider an example. Suppose your PSD file contains a group named as follows:

Angle=“Left”

On import into VSE, you will see an angle named “Left” in the *Angles Bin*, and its *Control Stack* content will reflect the layer structure of the group. Optionally, append the keyword “default” to the group name to make this the default angle when the project is loaded into VSE. For example:

Angle=“Center” Default

It is possible to use a single group to provide layers for more than one virtual set angle. For example, if the angle name is set to “left, right”, or “left, center, standing”, the group will supply content to all of the named angles on import. Similarly, if a PSD file includes both individual layers along with angle groups, the ungrouped layers will appear in every angle of the VSE project. (Note that nesting angle groups inside other groups will generally result in missing layers).

Finally, angle group names can also be used more than once in a PSD file (i.e., two or more groups can share the same name). ‘Same name’ groups will be treated as though they were a single, merged group, and will result in a single angle in the VSE project after importing.

DISTORTION AND WARPING

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 49).



FIGURE 49

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 VSE.

Caution: Care must be taken if a video input is referenced more than once in the file. Distortion can occur in the result if 'same source' layers overlap. Unless the foremost 'same source' layer (from the viewer's perspective) – or an intervening layer – is fully opaque (i.e., has no transparency at all) where the overlap occurs, problems will ensue.

KEYING

If the *Keyable* switch is set in TriCaster VSE for an input source, when the resulting LiveSet is displayed in TriCaster's *Live Desktop*, the background behind it in the *LiveSet* will be seen (Figure 51) when *LiveMatte* is correctly configured and applied.



FIGURE 50



FIGURE 51

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

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 52

However, if you want a shadow (as in Figure 52), frame, or similar graphic element to be rotated or skewed to match a rotated input layer, this must be prepared in the source file before import. (Afterward, use the *Position* controls to adjust the input layer to match, or use the UV gradient image to map the layer to match as discussed earlier.)

PART III (APPENDICES)

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

A HOW DO I ... ?



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/>

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A.1 VIRTUAL SETS

A.1.1 ADD MORE VIRTUAL SET PRESETS?

NewTek may 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?

Some TriCaster models support two inputs into virtual sets, while other models support four. For the former, you can apply LiveMatte to Input A (only) in the Virtual Input tab (Live Desktop), the background behind it appears wherever the chromakey settings result in transparency. On those models (i.e., those supporting just two inputs in virtual sets), it is not possible to successfully apply LiveMatte to a source set to Input B.

A.1.3 CREATE A COMPLETELY CUSTOM VIRTUAL SET?

The primary raison d'être for TriCaster VSE is to allow TriCaster 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 3.7).

Beyond this, it is not anticipated that most users will wish to pursue custom LiveSet authoring. In some cases, users may utilize specialist services offered by various third-party developers rather than endeavoring to master the skills (and tools) required.

A.2 FILE MANAGEMENT

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

1. When you perform an export operation, the newly created virtual set is stored in the *User* folder at the default *LiveSet* effects location on the system.
2. Open a TriCaster session, and click a *Virtual Input* tab.
3. Click the *Add* button in the *Virtual Input* tab, to show the *Media Browser*.
4. 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*.
5. Click the *User* location entry and icons for your new *LiveSets* 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:

- Support for 4 video inputs
- Create LiveSets that work in any current HD TriCaster model
- Respects masks in PSD file layers.
- Updated interface
- Input layers with "keyable" keyword appended are marked keyable in the VSE project.
- Supports masks in PSD layers
- New Shot thumbnail menu; prepare zoom and pan presets for TriCaster 8000
- Export virtual sets as LiveSet installer (.exe) files

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This product uses the following libraries, licensed under the LGPL license (see link below). For the source, and the ability to change and recompile these components, please visit the links provided:

- FreeImage library <http://freeimage.sourceforge.net/>
- LAME library <http://lame.sourceforge.net/>
- FFmpeg library <http://ffmpeg.org/>

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

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