# LiveText™

## USER GUIDE

NewTek
www.newtek.com

VERSION 2.0

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# 1 INTRODUCTION

Installed on a 'satellite' workstation (or laptop), LiveText greatly extends the live production environment, providing a new level of creativity, confidence, and professionalism!

Users of compatible live production systems (like NewTek's famous TriCaster™ family) are the primary beneficiaries. LiveText multiplies creative opportunities and brings new depth to production capabilities.

The LiveText system operator directly controls titling options for full pages, lower thirds, scrolls and crawls 'on the fly' -- without intruding into the live broadcast controlled by the TriCaster operator. LiveText output can be previewed for director approval, or immediately displayed 'on air. '

LiveText offloads the creative and logistical burdens of titling *during* a live production to a dedicated operator. The director is free to concentrate on the video production (with improved title accuracy as a side benefit.) LiveText 2 also provides integrated DataLink™ support (allowing direct realtime links to many popular third-part sports game clock systems), as well as great new LiveTime™ clock/timer features. In addition, LiveText allows export of various title pages file types for direct use in various NewTek live production systems.

## 1.1.1 MANUAL ORGANIZATION

While powerful, LiveText is quite intuitive. If you have some basic familiarity with graphics applications, much of it will come naturally. Or, if you're familiar with the similar titling capabilities as a result of experience with other NewTek products, you'll feel right at home.

Chapter 2 (Getting Started) will help you install LiveText and connect to your live production network. Next, in Chapter 3 (Titling Tools) you'll explore LiveText's title page creation and management tools. Chapter 4 covers DataLink™ and LiveTime™, and Chapter 5 explains how to use LiveText titles in your live production environment (as well as other applications.) Appendices providing information on keyboard shortcuts and networking are followed by a keyword index.

## 2     GETTING STARTED

This chapter will help you install, register and establish a network connection between LiveText™ and your (compatible) live production system.

We will review recommended system specifications, installation and registration, networking procedures and connection troubleshooting.

### 2.1    SYSTEM REQUIREMENTS

LiveText requires (as a minimum):

- A CPU which supports the SSE2 instruction set (typically an Intel® Core2® or better)
- A graphics display card (PCI-E recommended) with Microsoft® DirectX® 9™ (or better) compatibility
- A monitor capable of displaying a minimum resolution of 1280x800 pixels
- 2GB RAM (4GB or more preferred)
- Gigabit network recommended for network transmission to supported live systems (TriCaster, VT[5])

### 2.2    INSTALLING LIVETEXT™

On launch, the LiveText installer presents various dialogs to ask you to accept the end user license agreement, confirm or modify various defaults (such as the program installation path) , and so on as it proceed..

After installation the Registration dialog is presented, providing an opportunity to register your copy of LiveText and obtain the permanent unlock code required to operate it beyond the 14 day grace period.

### 2.2.1    STEP 1

Read the **End User License Agreement**,
and click to accept (or decline) before
proceeding.
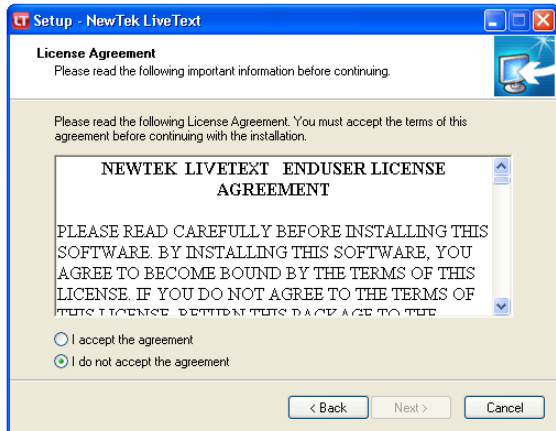
Figure 1

### 2.2.2    STEP 2

Click Next to accept the default
installation location, or using the Browse
button to modify the path where you wish
LiveText's program files to be installed on
your system.
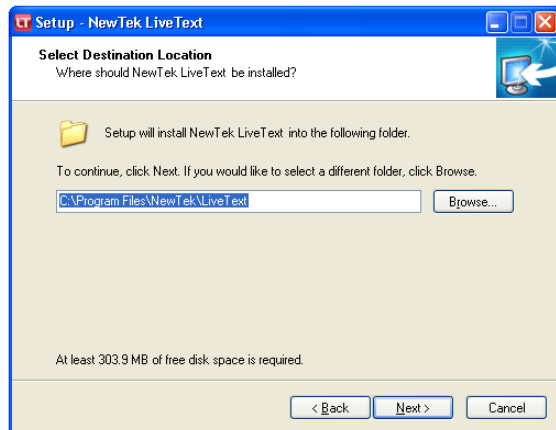
Figure 2

### 2.2.3   STEP 3

If you wish to have a convenient Desktop or Quick Launch icon to launch LiveText, click the appropriate switches and click Next.
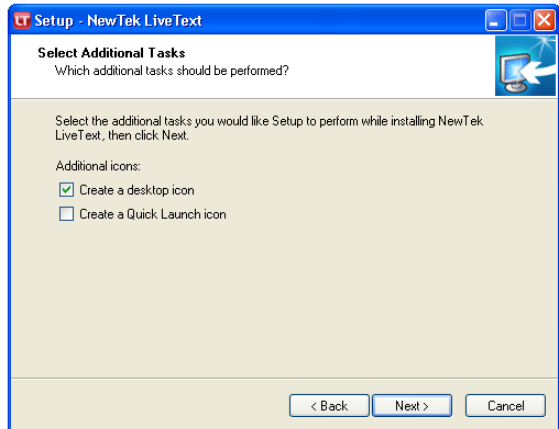


Figure 3

### 2.2.4   STEP 4

Review your previous selection, and then press **Install**.
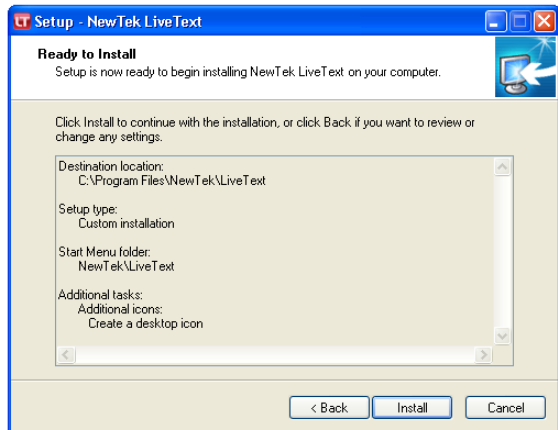


Figure 4

### 2.2.5 STEP 5

With Launch **NewTek LiveText** check-marked, click **Finish** to proceed to the Registration pane.
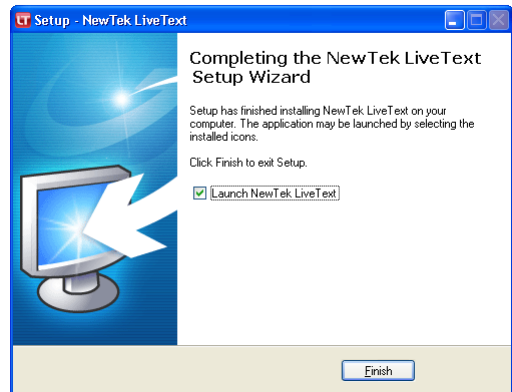


Figure 5

### 2.2.6 STEP 6

If your LiveText system is connected to Internet, you can click the "Click here" button to perform your LiveText registration online.

Otherwise, note the Product ID shown in this panel and visit the registration web page as shown to register your software and receive your unlock code.

At this point, you can begin to work with LiveText!
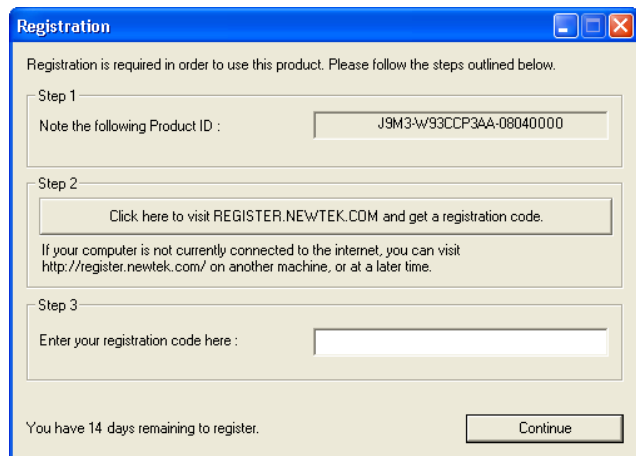


Figure 6

## 2.3 MAKING THE CONNECTION

LiveText is designed to play an important role as an integral component in a live production suite. In this configuration, the LiveText workstation is connected to the live switching unit (such as a TriCaster™) across a network.

A peer-to-peer network connection can be established between the two units using a crossover cable. Often though, the LiveText workstation will be a client on a larger LAN (local area network), which network also includes the live production system. (In this configuration, displays from *additional* networked systems may also be available to the live production system as video sources via NewTek's iVGA utility.)

Naturally, the existence of the network connection is critical if you wish to use LiveText in a 'direct-to-air' application. A 'hard-wired' Ethernet connection is preferred – and 'the faster the better' (Gigabit networking is strongly recommended, especially for more demanding use such as long animated scrolls or crawls. For HD sessions, it should be considered mandatory.)

Note that the LiveText host and networked live production system must be on the same local subnet. Also, if your LiveText host is protected by a firewall, you will need to either disable the firewall, or configure it to allow LiveText access to the network.

> *Network throughput can be quite variable in some environments (such as a corporate or tradeshow network.) To the extent you can ensure non-essential network traffic does not interfere with LiveText operation during live production, you will enjoy more peace of mind.*

In most cases, at this point your network connection is correctly established and you are 'good to go.' (If you should happen to run into a connection issue, see Appendix B – Networking Notes for information on diagnosing network problems).

Otherwise, you can skip right to the next chapter – Titling Tools.

> ***Performance Note***: *Realtime playback depends on several factors. For example, previewing a scroll in the edit window could cause another scroll playing Live to skip on some systems. To be safe, it's always wise to test prior to important live events.*

## 2.4 A SIMPLE EXAMPLE

Let's try creating a simple title page:
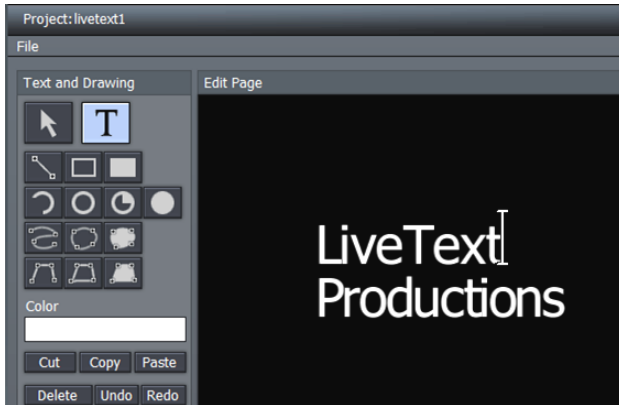
1. Click the **T in Text and Drawing**, then click in the **Canvas** to set the insertion point

2. Type "LiveText", press Enter, then type "Productions"
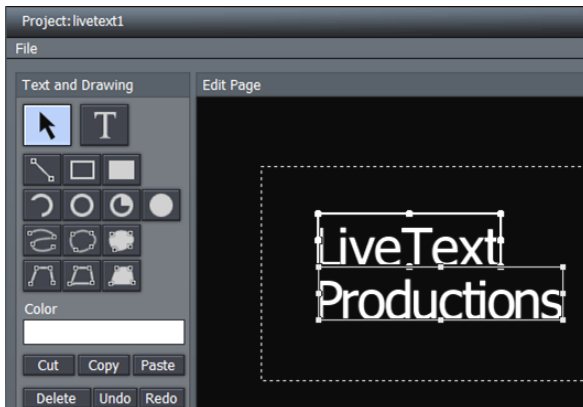
3. Click the **Arrow** (Select) button, and drag out a box (marquee) to surround both lines of text on the **Canvas**, selecting them (Figure 8).
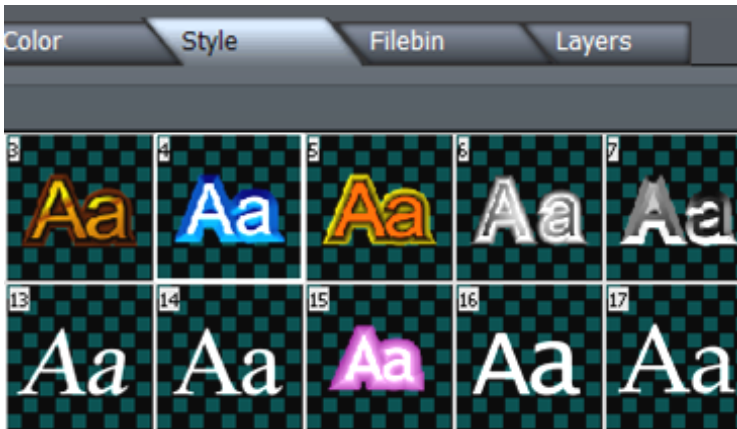
4. Click the **Style** tab (below the **Canvas**), and then click thumbnail number 4 in the Styles bin area.  This will immediately add color and beveling to the (selected) text you entered previously.

5. Click the **View** tab, and turn on **Safe Area**, to help compose your page
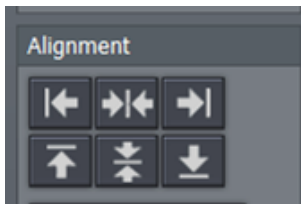
6. Next, click both the **Vertical** and **Horizontal Center** buttons in the **Alignment** section of the **Tool Panel**, centering the text on the **Canvas**.
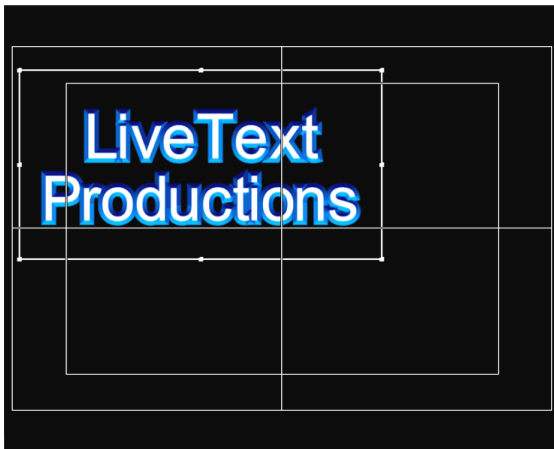
7. With both lines of text still selected, click **Group** (in the Alignment section) to link them together

8. Then drag a corner point of the grouped text to make it larger (use your judgment, using the Safe Area overlay as a guide – the inner rectangle denotes the traditional 'text safe' margin.)

Figure 13

9. Click the **Filled Rectangle** button in **Text and Drawing**



Figure 14

10. Click thumbnail number 6 in the **Styles** tab, and drag out a rectangle in the Canvas that completely covers your text.
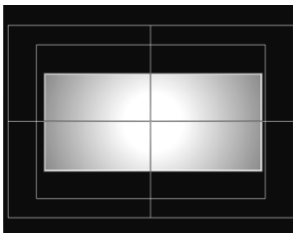


Figure 15
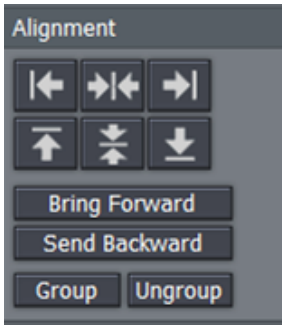
11. Select the rectangle (using the **Arrow** tool), and click **Send Backward** in the Alignment section

12. Go on to adjust **Tracking, Leading** in the tabbed **Text and Drawing** controls beneath the Canvas, and finish up by adding a **Shadow** to your text

## 2.5   USING PAGE TEMPLATES

A large number of gorgeous and very useful Page Templates are included with LiveText, to speed you on your way.  You can easily modify these to suit your own production designs.
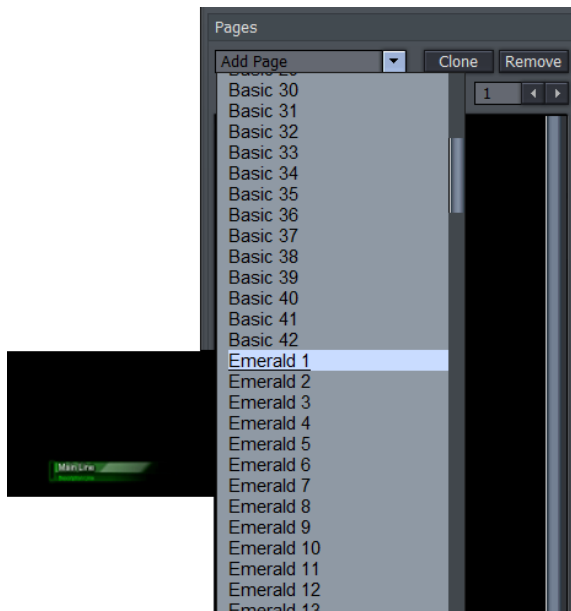
1.  Select **Add Page** from the drop-down menu in the **Pages** panel at right (Figure 19).

2.  As you slide your mouse down the list, notice that a thumbnail fly-out keeps pace showing a preview for each template.

3. Select **Emerald 1**, loading that template into the **Canvas** for modifications
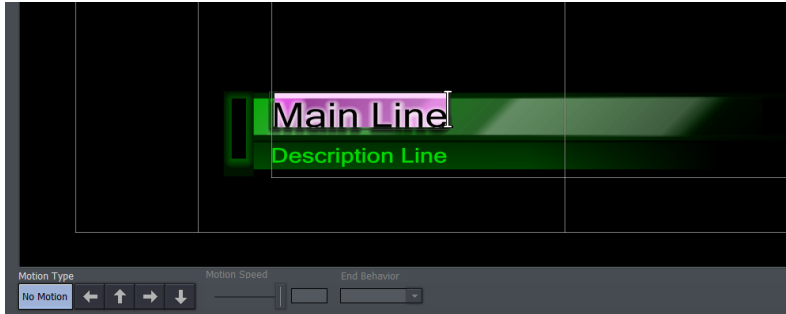
4. Click the **T** button (Text) in the **Text and Drawing** control panel at upper-left, and slide you mouse around over the text fields in the **Canvas**

5. Notice that a black outline surrounds each text line in turn.  Select the text inside one of these outlines, and change it to suit your need.

Congratulations, with LiveText you're a CG artist.  Could it be *any* easier?  ☺

Designing and managing great looking still and animated text and graphics for your productions is easy with LiveText. It's deep professional character generation tools will provide a clean, professional looking result you'll be proud to broadcast!

## 3.1  LIVETEXT OVERVIEW

The main panel is dominated by the large cental **Canvas**, which provides an interactive display of the current project page.

The column at left is a **Tool Panel** for creating and editing visual elements, including text.  LiveText's **File** menu is above this column.

The **Motion Panel is** located just below the Canvas.  It permits you to create animated scrolls or crawls.

Right beneath the Motion Panel is the tabbed **Control Panel**, which gives you control over attributes of text and graphic objects.



**Figure 22**

Finally, a column on right of the Canvas provides multi-page management (the **Pages** panel) of your project, file **Load**, **Save** and **Export** functions, and at the top – the all important **Live Preview** pane.
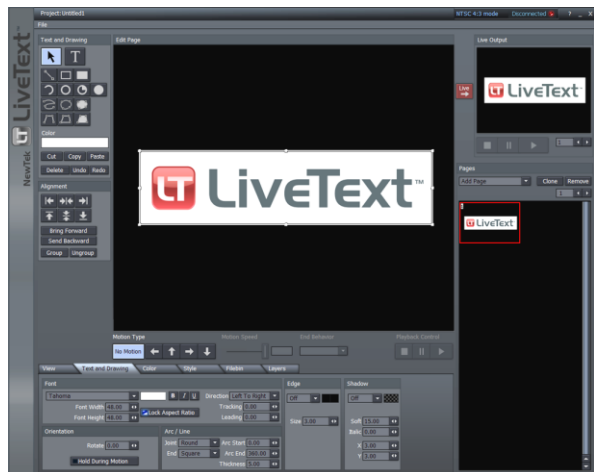
## 3.2   OUTPUT ASPECT (4:3 OR 16:9?)

You may be wondering whether you need to consider the image aspect of your LiveText projects.

LiveText 2.0 projects are effectively aspect independent.  The LiveText **Canvas** (canvas) where you prepare your title pages is *always* 16:9.  When connected to a compatible live broadcast system (such as TriCaster) over a network, the current LiveText output aspect is updated as required (from 4:3 to 16:9 or vice versa) to conform to the aspect of the live production system connected.  The current network output format is shown at upper-right in LiveText's titlebar.

When exporting title pages as bitmap (image) files for external use, you choose the resolution and image aspect from the export dialog.  When you opt for a 4:3 export only the corresponding center region of 16:9 title pages is exported.  (The **Safe Area** overlay has 4:3 page edge and text safe lines to make this easy to visualize.)

## 3.3   PROJECT PAGE MANAGEMENT

LiveText projects consist of one or more *pages*. If you want one main introductory title, another title for a station ID, an animated list of scrolling credits for the end, and so on – each of these is created as a separate page within the whole project.
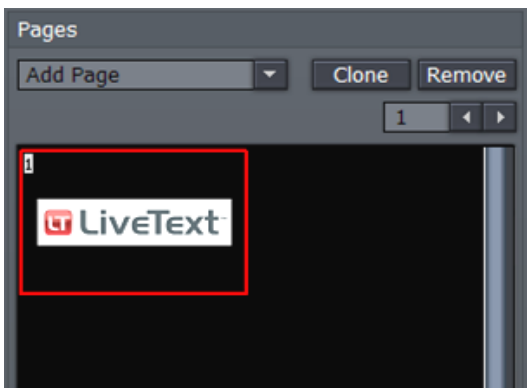


Completed pages may be exported (using **Export Current Page** or **Export All Pages** in the **File** menu) for use in other programs supporting (including TriCaster, VT[5] and SpeedEDIT) as image (.PNG) or animation (.avi) files, or as Title Pages (.cgxml) compatible with TriCaster TCXD systems.

Figure 23

Entire projects can also be saved and re-loaded later, allowing you to work with one design for one production while a completely different look for another is only a few clicks away.

*Note: Project and page files (.cg files) created with earlier versions of LiveText came in 4:3 and 16:9 formats. If you load one of these older files into LiveText 2.0, you will be asked whether you wish to load it as 4:3 (centered on the page), or as 16:9 (filling the screen).*

### 3.3.1   THE PAGES PANEL

The **Pages** panel at the right of the **Canvas** displays a thumbnail image of each page in the current project, and provides page management tools. A new project will show one (empty) page. When a project has multiple pages, the thumbnail for the one currently selected for editing in the Canvas is surrounded by a white border.

*A (red border) indicates the page currently assigned as LiveText's **Live** output (if any).*

Jump to a specific page in your project by entering the page number in the **Page** field. Or you can cycle up or down through the pages by clicking on the neighboring arrow buttons. Click a page thumbnail in the **Pages** panel to edit it (displaying it in the **Canvas**,) or double-click it to send it out **Live**.

### 3.3.1.1   CLONE AND REMOVE

Clicking the **Clone** button copies the currently highlighted page, inserting the copy below that page.

*Hint: Clone permits you to quickly and easily ensure pages conform to a particular graphic theme or format – just Clone an adequate number for you needs, then modify them individually.*

Clicking **Remove** deletes the currently selected page from the project (careful, there is no Undo for this action.)

### 3.3.1.2   ADD PAGE

You click the small arrow button beside **Add** P**age** to insert another page into your project. New pages are added under the current page (and of course, they are not sent out as Live until you want them to be).

The drop-down menu reveals a number of types of pages you can add. The uppermost choices represent new blank pages of various types.

> *Hint: You can also quickly add blank pages simply by clicking repeatedly in an empty black area of the thumbnail column – each click adds one empty page.*

This drop-down menu is home to a long list of professionally designed templates, ready and waiting for your modifications. As you scroll over the entries, a fly out thumbnail representation appears to make choosing something just right for your needs easy.
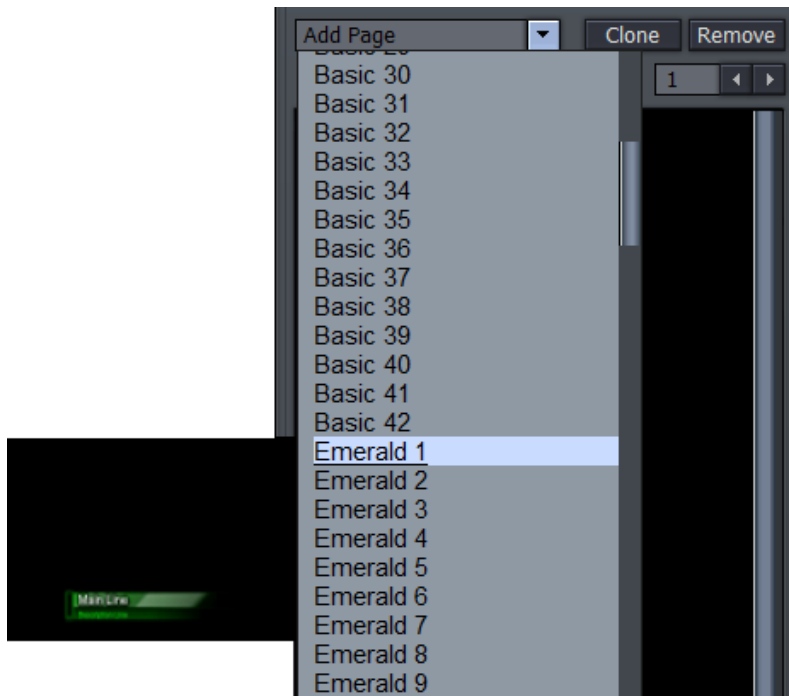
> *Hint: Another selection in the **Add Pages** menu permits you to "**Add Page to Templates List**." This lets you store the currently highlighted pages as LiveText templates, for quick access and consistent styling using templates of your own design.*

## 3.4   FILE MENU

The **File menu** is in the upper-left corner of the LiveText desktop, and contains project and page file management tools.  These functions are considered in Chapter 5, Live Production and File Management.

## 3.5   THE TOOL PANEL

The Tool Panel situated left of the Canvas provides the basic tools to create the text and graphic elements of your title page compositions, establish their relationships to one another if any, and set their primary attributes.

### 3.5.1   TEXT AND DRAWING
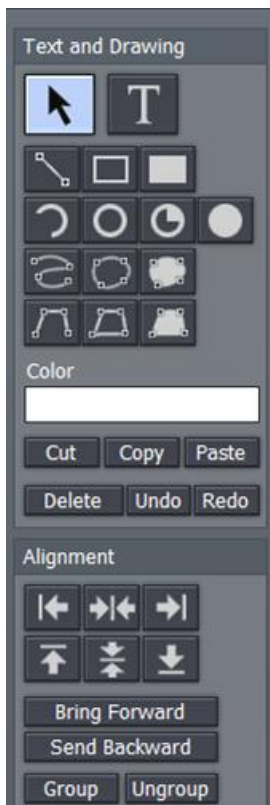


**T (Text)**

Click on the T (Text) button to activate the text function. Before you enter text, this button must be highlighted. Click in the Canvas and an I-beam icon starts blinking. This is your Canvas cursor. When you type, the I-beam is the insert point for the text. You can move the I-beam anywhere on the Canvas by clicking it with your mouse and dragging it around or just clicking your mouse on another spot in the Canvas.

To edit the characters of any existing text, click your cursor anywhere on the line of text, and drag your mouse to select letters or whole words (selected character will be highlighted.)

*Hint:  Use the **End** and **Home** keys on your keyboard to navigate to the beginning and end of text lines. If you mistyped, you can use the **Backspace** key to erase or the keyboard **arrow** keys to go back or forth on the line or up and down between lines.*

**Figure 25**

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**Arrow (Selection)**

Clicking on the **Arrow** button activates the Selection tool (and switches off the Text tool). This selects the whole line, not just parts of it. If you have just typed something in, clicking the Arrow will create a box around what you typed. Select the line by clicking anywhere on it.

When you roll your mouse over the box, the cursor changes form. When it becomes a two-headed arrow, you can click to grab an edge of the box and drag it in or out to resize the text. When the cursor sprouts four arrowheads, you can click and grab the whole box to move it around the Canvas. Hold down the **Shift** key over a corner of a selected object and a curved arrow cursor indicates you may now drag to rotate it.

## 3.5.1.1  GRAPHIC SHAPE TOOLS



The area immediately below the Arrow and T(Text) buttons is home to a number of tools used to create shapes. Each shape is initially a separate graphic object.

The tools are very easy to use, and just as easy to edit at any time after their creation, whether simply to adjust their position, or to add or modify much more elaborate treatments.

For the most part, shapes are easily created by clicking one of the buttons, and dragging the cursor in the Canvas. The shape responds interactively to your movements, and is created when you release the mouse button.

**Figure 26**

**Line**
To make a straight line, you simply click in the Canvas where you want the line to begin and then drag the mouse to where you want the line to end.

**Rectangle**
The Rectangle button creates outlines of four-sided objects.

**Filled Rectangle**
This tool works just like the Rectangle tool except it fills in shape with the same color as the outline.

**Arc**

The second row contains variations of ellipses. With the first, you can create segments of arcs. Click the mouse in the Canvas and drag to establish the radius of the arc, releasing the button when you are happy. Then click and drag again to define the extent of the arc. Release the button to complete it.

**Oval**

The Oval works just like the Rectangle tool. Click and drag in the Canvas to draw out your shape.

**Filled Arc**

The Filled Arc operation is the same as the Arc tool (see above). The only difference is that the arc created is filled in. Think of the Filled Arc as the pie chart tool.

**Filled Oval**

This tool works like the Filled Rectangle.

**Spline**

This tool and its siblings create freeform spline curve shapes. Click in the Canvas and release the mouse to establish the starting point. Move to another spot on the screen and click again to establish a second node though which the spline will pass. Continue to add nodes until you are satisfied, then double-click to end the curve.

**Closed Spline**

The technique for the Closed Spline is similar to the Spline: click in the Canvas, release the mouse, move to the next spot and click again, etc... With this tool though, nodes are automatically connected to the first (anchor) point to create an enclosed object. When you're finished, simply double-click.

**Closed Filled Spline**

This tool works just like the Closed Spline tool except it fills in shape with the same color as the outline.

**Polygonal Line**

This tool functions like the Spline except it doesn't create a curve between the nodes. You click in the Canvas to establish your anchor point, release the mouse and move to your next spot, and click to create a node. A straight line will connect the two points. Move and click again and a line will connect this point with the previous one. With this tool, a sharp angle is maintained at the intersection of the lines. You double-click at the last point to finish.

**Polygon**

This tool works like the Polygonal Line, except as soon as you create the first node, it's connected to the anchor point, automatically creating an enclosed object.

**Filled Polygon**

This tool works just like the **Polygon** tool except it fills in shape with the same color as the outline.



Figure 27

**Color** - The large color well below the drawing tools permits you to set a base color for the objects you create using the tools. Left click it to open the Color Picker panel, or right click and drag to use an eye dropper cursor to pick a color from the screen.

> *Note: Extensive control over color is provided in the **Color** section of the tabbed **Control Panel** discussed a bit further on in this chapter.*

### 3.5.1.2   OBJECT MANAGEMENT

Completing this section are essential basic editing tools: **Cut**, **Copy**, **Paste**, **Delete**, **Undo**, and **Redo**. The traditional Windows keyboard shortcuts also work:
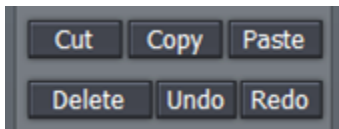


Figure 28

- Cut — **Ctrl + x**
- Copy — **Ctrl + c**
- Paste — **Ctrl + v**
- Delete — **Delete** key
- Undo — **Ctrl + z**
- Redo — **Ctrl + y**

## 3.5.2  ALIGNMENT

The alignment panel permits quick and easy positioning and re-ordering of objects on the Canvas.

### 3.5.2.1  HORIZONTAL JUSTIFICATION

The top row of buttons in this section control horizontal justification buttons, aligning text as are commonly found in word processing programs.
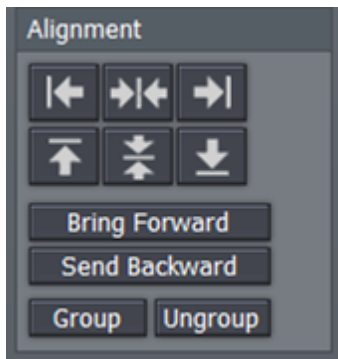


**Left Justify** - aligns your text to begin just inside the left edge of the Text Safe Area

**Center -** aligns the center of the line(s) with the center of the Text Safe Area**.**

**Right Justify -** aligns your text so the end of the line(s) is just inside the right edge of the Text Safe Area.

**Figure 29**

### 3.5.2.2  VERTICAL JUSTIFICATION

Each of the buttons in the next row justifies your text within the vertical Safe Text area of the screen.

**Top -** aligns your text just below the upper limit of the Text Safe Area.

**Center -** centers your text vertically in the Text Safe Area.

**Bottom -** aligns your text just above the lower limit of the Text Safe Area.

### 3.5.2.3  DEPTH CONTROL

Text and objects in the Canvas which occupy the same space are normally displayed in the order created – first items to the rear, as it were, with newer object in front.  The depth controls in this

section permit you to modify this order.  Select an object (or line of text) and click once to move one step relative to other objects.

**Bring Forward** – move the selected item forward

**Send Backward** – move the selected item back

> *Note:  The **Layers** section of the tabbed **Control Panel** (discussed in Section3.7.6) provides an alternative (and often more convenient method) of re-ordering objects and text.*

## 3.5.2.4  GROUP/UNGROUP

Even though each line of text and graphic object is really a separate entity, you can select multiple lines and **Group** them together to respond to modifications in unison.

The **UnGroup** button undoes the union. Hold down the Ctrl key while clicking multiple items or lines of text and press the Group button. The bounding boxes are now replaced by a single bounding box. Hit UnGroup again, and the lines become separate entities once more.

## 3.6   THE MOTION PANEL
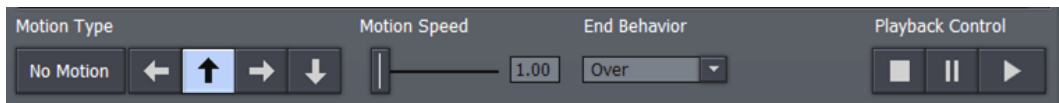
The **Motion Panel** contains the tools to create both scrolls and crawls.  This is where you control the direction, speed and behaviors of your crawls and scrolls.

The **No Motion** button and **Direction arrows** are self-explanatory. If you want a text **crawl** from left to right, pick the right pointing arrow. For a **scroll** moving up, choose the up arrow, etc.

### 3.6.1 SPEED CONTROL

In the **Motion Speed** field, choose a specific rate of motion in units of 'pixels per frame.'

> *Fun with math: For a text crawl across an NTSC format screen, knowing that the screen is 720 pixels and there are roughly 30 frames per second, you can readily work out a suitable value. To have an object or text item crawl from one side to the other in four seconds, 720 divided by 120 (30 frames per each of the 4 seconds) equals 6.*

If motion pages move too quickly, motion may not appear smooth. A common preference is for a line of text to take about seven seconds to travel from the bottom of the screen to the top. You may wish to test the speed out on a TV monitor to see if it suits you.

### 3.6.2 END BEHAVIOR

The **End Behavior** setting in the **Motion Panel** determines what happens when an animated page runs its full course.

- **Over** tells the CG to scroll or crawl the page once, and then stop when the page has left the screen.
- **Stop** tells the CG to scroll or crawl the page once and then to hold on the last line of text.
- **Loop** tells the CG to loop the page continuously.
- **Loop + Frame** tells the CG to loop the page continuously and to place a blank frame between loop repetitions.

## 3.7 CONTROL PANEL TABS



**Figure 31**

Near the bottom of the screen (beneath the Motion Panel) is the multi-tab **Control Panel**. The individual panels provide precise command of countless text and graphic object attributes, organization, and management.

## 3.7.1  VIEW

**Figure 32**

The View tab reveals three sections, **Grid**, **Guides** and **Display**.  These all add one or another type of overlay to the **Canvas** above, as an aid to composing your graphic and text pages on.  As you would expect, none of the overlay elements appear in the final output.

## GRID
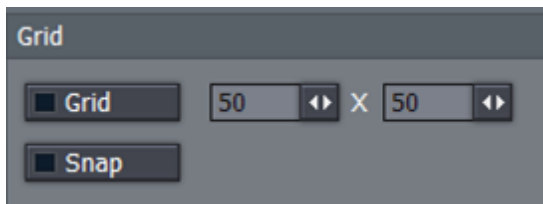


Define a grid to help you align objects on the Canvas in specific arrangements.

The two numeric entry fields with associated mini-sliders adjust the width and height of cells in the grid.

**Figure 33**

The **Grid** switch toggles the grid overlay on/off. Enabling **Snap** effectively makes the lines of the grid *somewhat* magnetic - you are not restricted to placing items exclusively along the grid lines, but the cursor is drawn toward them, making it easy to do so if you wish.

## GUIDES
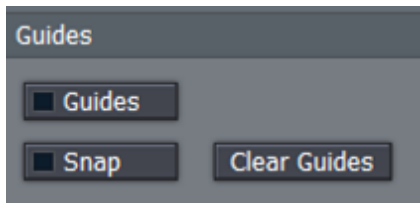


This feature is somewhat similar, in that it offers overlaid lines and a similar Snap feature.  However, rather than displaying a full grid, you define where the lines will go – add just one guide line, or as many as you like.

**Figure 34**

To add a Guide, **Rulers** must be enabled in the Display section.  Click in the calibrated ruler display, (horizontal or vertical), and drag the cursor across the Canvas.  Release the mouse

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button when the new Guide is positioned where you want it to go.  If you hover the cursor above a Guide, it becomes a double-headed arrow that you can drag change the Guide's position.

Use **Clear Guides** to remove all existing Guides from the screen.

## DISPLAY
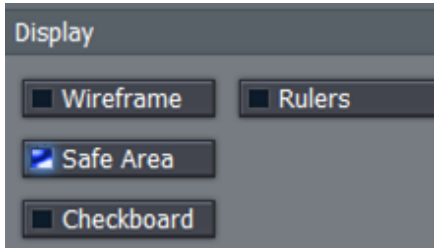


Traditional television displays crop the image area of video somewhat.

For this reason, it's customary to allow a certain amount of 'safe area' on the margins of the screen – to make sure that important text displays or action are not inadvertently cut off for viewers.

The **Safe Area** switch in the **Display** pane enables an overlay on the **Canvas**.  The lines make it easy for you to create your title pages with these *overscan* limitations in mind.  Inner rectangles mark the 4:3 **Text Safe** area and outer boundaries, while the outermost lines show the edge of the entire 16:9 page.

For very complex pages, it can be useful to enable the **Wireframe** switch.  While enabled, this removes opaque color from objects on the Canvas window, leaving only an outline through which other items can be seen.

**Checkerboard** replaces the default black **Canvas** background with two-tone checks (these do not appear in exported title pages, of course).  Finally, the **Rulers** option provides another level of precision when preparing your title pages by adding calibrated scales to the display.  (And, as noted a moment ago, you add Guides to the Canvas using the Rulers.)

## 3.7.2   TEXT AND DRAWING
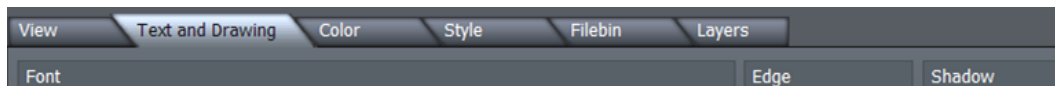


**Figure 36**

This tab provides primary control over all text and graphic object attributes.

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## FONT

The drop-down **Font** menu allows you to choose from your installed typefaces**. Bold**, **Italic**, and **Underline** buttons are to its right, along with another *basic* face color well.

The **Width** and **Height** controls are locked proportionally when the neighboring **Lock Aspect Ratio** control is lit up. **Rotate** adjusts the exact degree of rotation (on the Z axis.)

**Tracking** adjusts the amount of space between neighboring pairs of letters.

> *Hint: You can also adjust tracking interactively in the Canvas.  Place the cursor between letters and hold down the Alt key while using the arrow keys to add or reduce spacing.*

**Leading** adjusts the amount of vertical space between text lines. Multi-select the lines you wish to adjust using CTRL + click (or by dragging a rectangle around them in the preview window), and raise or lower the Leading value to suit your need.

## ORIENTATION

**Rotate** changes the orientation of text and drawing objects. **Hold During Motion**, when enabled, ensures that the selected object does not move as an element within **Scroll** or **Crawl** pages. **Do Not Render** prevents the image from being displayed as part of the page when displayed or rendered.



## ARC/LINE

The **Joint** menu options affect way corners of a drawn CG object are created – choose from **Round**, **Bevel**, or **Square**. Similarly, the **End** menu

**Figure 37**

selection determines whether the ends of a line object terminate in a **Square**, **Round**, or **Point**.

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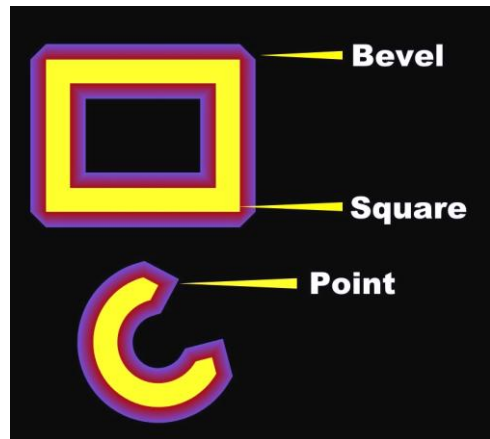
**Arc Start** and **End** values permit great precision for **Arc** and **Filled Arc** objects, and the **Thickness** value is pretty much self-explanatory.

## EDGE

**Edge** refers to a two-tone border that conforms to character or object shape. The way corners are painted is controlled by the drop-down menu – options are **Round**, **Square**, or **Bevel**.

The two boxes to the right of the menu are where you choose the colors for the inside and outside edges of the border applied around your objects. Inside color is the box on the left, outside color is on the right.

Click in the box to bring up the **Color Picker** panel, or right-click it to activate the Eyedropper tool to choose a color from the Canvas.

## SHADOW

**Shadow** options include **Cast**, **Drop**, and **Soft (**the numeric **Soft** setting is only relevant to the latter.)

The **Italic** setting permits you to shear the Shadow independent of the 'shadow-casting' object, and the **X** and **Y** fields control the amount of offset for the shadow.

## 3.7.3   THE COLOR TAB

The **Color** tab provides the control over characteristics for coloring and texturing objects, including text.



**Figure 38**

### 3.7.3.1   COLOR DESCRIPTION

Use the **Edit** menu to specify which aspect of a text line or graphic object you intend to modify.

There are three choices:  **Fill** controls colors used in the body of the font or object.  Choosing **Edge** or **Shadow** restricts modifications one of those characteristics.

**Type** permits you to choose between six different types of color (or image-based texture):

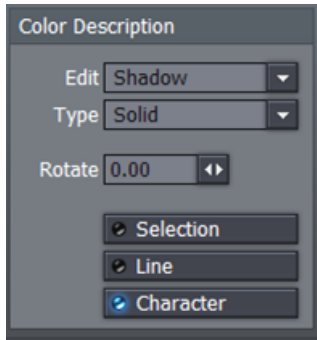Choosing **Solid** for Type applies a single color to the surface (the one in the neighboring **Solid Color** pane). When you pick one of the middle four instead (**Linear**, **Corners**, **Angle**, or **Radial**), the current **Gradient** colors are applied.

**Linear** (Type) applies the Gradient in a straight left-to-right pattern. **Corners** will apply the gradient color starting at the upper left corner diagonally, sweeping around to the bottom right. **Angle** applies the **Gradient** starting at 3 o'clock and rotating counterclockwise.

**Radial** applies the gradient starting at the center of the surface and emanating to the edge. **Texture** applies an image map (specified using the **Image** drop-down menu in the **Solid Color** Pane at right) to the surface.

Adjusting the **Rotate** value changes the application angle for the gradient or texture, when active.

## SELECTION, LINE & CHARACTER
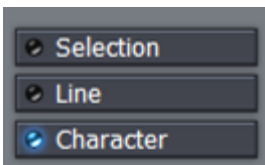


Figure 40

If you have multiple lines of text on a page, you can choose how the color, gradient, or texture will be applied.

**Selection** fits your settings to selected characters or objects (including multiple selections.) **Line** applies them independently to each line of text, while **Character** applies the texture independently to each character.

*Note: In reality, each text line is always a separate object. If you select just part of a text line (in the Canvas while in T(Text) mode (whether by dragging the mouse or using Shift with the arrows keys), and apply different settings, the line will split into two objects to accommodate your wishes. You may want to use the Group function to permit you to continue treating the line as a single object subsequently.*

## 3.7.3.2 THE GRADIENT PANEL

The gradient panel provides awesome color control, allowing you to create and apply many beautiful effects.

### GRADIENT PRESETS
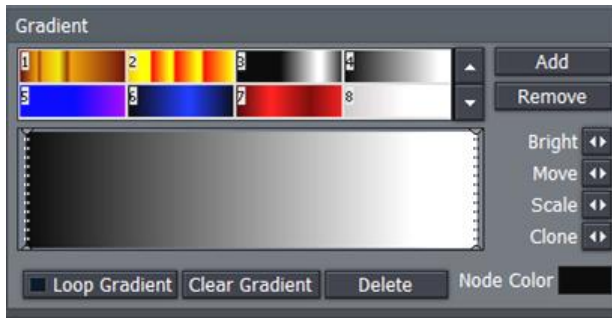


The upper section of the Gradient Panel contains a goodly number of presets, represented visually.

Scroll up and down through the selections using the arrow buttons at right, and simply click a gradient you like to activate it (replacing the content of the gradient edit pane below.)

Use **Add** to send the current gradient to the presets list, or **Remove** to clear a preset.

The dotted vertical lines in the gradient preview pane mark the nodes of specific color values that define the gradient. You can drag these left or right interactively, or select one by clicking directly on it, and **Move** it using the mini-slider control at right. The display updates immediately to show the results of the changes you make.

**Add** a new node by double-clicking in the gradient preview. Delete a selected node using the **Delete** button, and set its color using the **Node Color** well. You can also separately adjust the **Bright(**ness) of nodes using the mini-slider at right.

To multi-select nodes for certain operations, you can click them one at a time with the Ctrl key depressed or drag out a marquee around them right in the editor (a shaded box shows the selection zone in this case.) With one or more nodes selected, each time you drag the **Clone** slider, another set of duplicate nodes is created. You can also clone one or more nodes by holding down Ctrl and dragging left or right in the gradient preview pane. **Scale** expands or contracts the distance between multi-selected nodes.

**Clear Gradient** lets you start fresh, while **Loop Gradient** allows the gradient to repeat itself, so that the color at one end loops seamlessly to the opposite end (this control has no effect when nodes exist at each end of the gradient.)

### 3.7.4   THE STYLE TAB

The **Style** tab allows you to add gorgeous and complex treatments to your text and graphic objects with a single click.  It is also a great way to ensure consistency for the title slates you use in your productions!

To apply a Style preset, simply select a line of text or an object in the Canvas, and then click a representative thumbnail in the Styles pane.  Create your own custom look, and add it to the Styles list using **Add**, and of course, remove those you don't care for using **Delete**.

### 3.7.5   THE FILEBIN

You can drag image, .cg or .TXT file icons right onto the **Canvas** directly from this **Filebin**. (Loading a .CG file in this manner replaces the current project.)
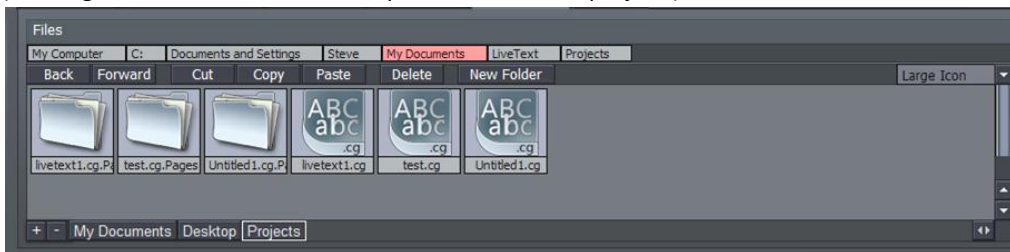
Above the file window is a menu with navigation and file management buttons at left, and a file icon preference menu at right.  More detail on the various features of the Filebin can be found in Chapter 5, Live Production and File Management.

## 3.7.6   THE LAYERS TAB

The **Layers** tab provides a convenient way to modify the depth of various text and CG objects on the **Canvas**, as well align objects relative to one another.

At times the **Canvas** can become rather cluttered, making it tricky to select text lines or objects directly by clicking.  The final tab provides a convenient alternative. Each item in your current page is represented by an individual line in the Layers panel.
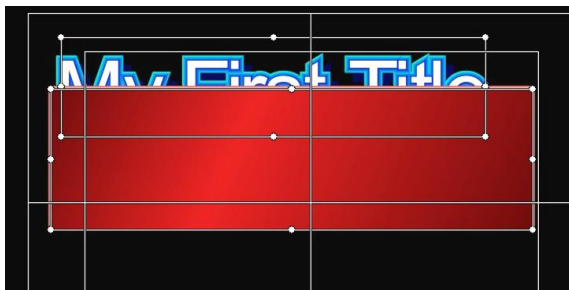


Consider the situation at left, which shows a line of text which is unfortunately occluded by a rectangle object.

Re-ordering layers is a simple matter in the **Layers** panel.
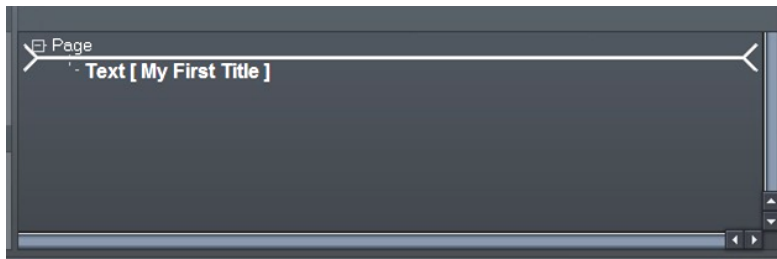
Figure 46

Simply drag the line for the rectangle above the text line with the mouse.  The insertion point where the current selection will be dropped when you release the mouse is shown by a thick white line.



Objects nearest the top of the list will appear further back in the result – appearing behind objects that appear lower down in the Layers list.

Figure 47

Multi-select objects by dragging a box around them in the **Canvas** window; then just click a button in the **Align** section to line them up.

> *The last object selected will be brightly highlighted in the Layer panel, and will be the one that other objects align to.*

## 3.8    OPTIONS AND KEYBOARD CONTROL

An extensive list of **Keyboard Shortcuts** is available (for example, pressing Alt + s toggles the Safe Area overlay in the Canvas on and off.)  Press F1 to view shortcuts (please see also Appendix A – Keyboard Shortcuts).

# 4    DATALINK™ AND LIVETIME™

DataLink™ provides users of NewTek's TriCaster™ and VT[5]™ live video production systems the ability to display dynamically updated data from a variety of external sources.

Supported data sources include several third-party sports scoreboard systems, plus two common file types – standard ASCII text files and SQL database files.  In addition, LiveText 's native LiveTime™ allows users to embed realtime clock and date displays in title pages.

Together, the combined features of **DataLink** and **LiveTime** allow you to prepare and display title pages that containing score, time or various other data types (including images) from both internal and external sources, and update these in realtime.

Three different **DataLink** modules continually monitor data from their respective sources as follows:

- The **Scoreboard Linker** monitors a data feed from external hardware scoreboard controllers (typically found in sports venues).
- The **TXT Linker** draws values from specified ASCII text files.

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- The **Database Linker** provides allows the use of MySQL database functions, and even supports data accessed across a network.

**LiveTime** brings additional capabilities, using the LiveText host's internal system clock to supply time displays embedded in title pages.
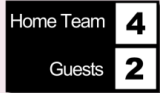
 Sections of this chapter displaying the scoreboard icon (seen at left) are of special interest to users who plan to connect their LiveText system to a supported external hardware scoreboard controller.

## 4.1    DATALINK OVERVIEW

### 4.1.1   KEY NAMES AND TITLE PAGES

**DataLink** dynamically updates special **key name** entries in your Title Page.  When the page is displayed on output, information drawn from an external data source is substituted for the key name.  (The external data is formatted with the current attributes assigned to the key name).

You could think of **DataLink** this way:  the *Data* portion of the name refers to external information (data) expressed as a 'key-value pair'.

The data is thus formatted as follows:

(*key name*) = (*value assigned*)

Here is a typical key-value pair:

current temp = 75° F

The *Link* part of **DataLink** reflects the fact that key entries in your title pages are linked to matching data from the key-value pairs.  To provide dynamic updates in this manner, DataLink operates quietly in the background, patiently monitoring external sources for changes.

As mentioned earlier, three special DataLink components monitor specific external sources. These are the **Scoreboard Linker***,* **TXT Linker**, and **Database Linker**. Let's consider these modules individually in more depth now.

## 4.1.2  SCOREBOARD LINKER



This **Linker** receives data from an external hardware scoreboard controller such as a Daktronics™ system.  The external system provides information to **DataLink** by a physical **COM port** connection. (Section 4.3, Connecting External Devices, explains how to connect these devices so they can communicate with DataLink.)

DataLink supports popular external devices from several different manufacturers. The **Scoreboard Linker** monitors the incoming data stream, and assigns specific values to unique DataLink key names.  These values are then substituted for the corresponding key name entries in title pages.  These special key names are listed by brand in Section 4.5.1.

> *Note: As the data supplied by various external systems differs, DataLink uses unique key names for each supported brand.  As well, this arrangement permits devices from two (or more) manufacturers to be connected simultaneously without conflict.*

## 4.1.3  TXT AND DATABASE LINKERS

These two **Linkers** each keep an eye on their namesake file types, refreshing the display as required, and serving many handy and creative purposes.

> *Note: **TXT Linker** monitors files (.txt) you place in the folder Text Input.*

For example, a simple ASCII text file (.txt) containing a list of names (prepared as key-value pairs) could be used to automatically update a credits slate, or perhaps to populate the name fields in a series of individual lower thirds for a weekly production (Section 4.2.1 explains the details of this example).

The **TXT Linker** continuously watches for changes in the values assigned to keys.  If a value changes in the file, the display is immediately updated.  Thus, third-party programs may be designed for various applications that continuously update the onscreen text display by changing values assigned to keys in the file.

The **Database Linker** provides even more powerful possibilities.  It allows the use of supported MySQL database functions to derive replacement values for DataLink keys on the title page – even accessing the data across a network.

> *Note: **Database Linker** monitors files (.txt) you place in the folder Database Input.*

## 4.2    WORKING WITH KEYS AND VALUES

In this section we'll get into the details of working with DataLink for your live productions. We'll explain how to add DataLink **key names** to your title pages, and how these may be used in various ways. The quickest way to become familiar with DataLink is to dive right in and try it out.

### 4.2.1   TXT LINKER

As discussed back in Section 4.1, DataLink's **TXT Linker** pulls data from ASCII text files (.txt) residing in a specific (constantly monitored) folder. As this is arguably the simplest source available to DataLink, let's begin by using it to demonstrate a few basics before continuing.

This monitored folder *location* varies depending on your operating system.  The simplest way to find it is to use a shortcut in the Windows™ **Start menu**.   Click **Start**, then the **Programs** link, and locate the NewTek>LiveText>DataLink folder.  Click the folder *icon* inside that labeled **Open File Observer Folder**.
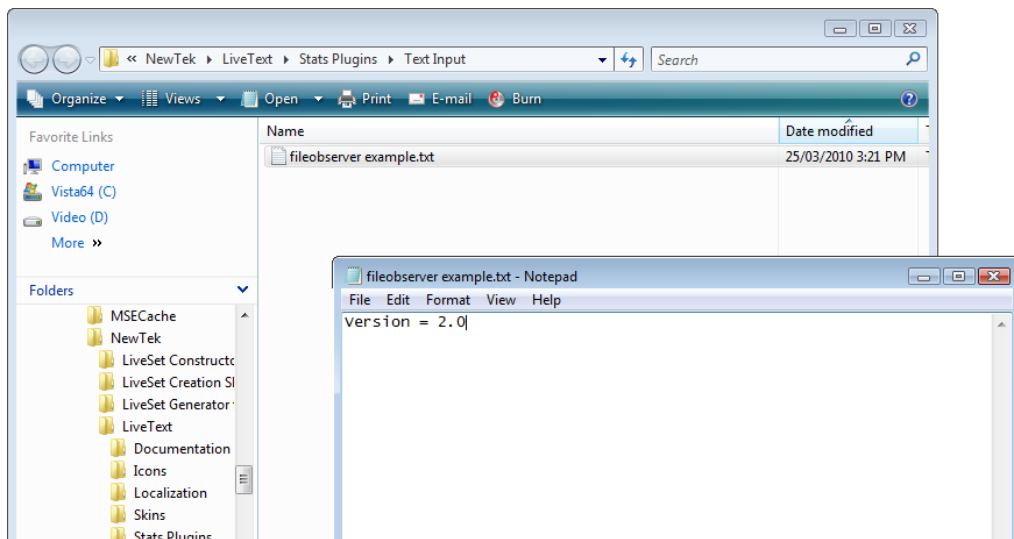
By default, this folder contains just one file, named *fileobserver example.txt* (Figure 49).

1.   Double-click the text file icon to open it in your default text editor.

To supply usable values for **DataLink**, text files should contain nothing other than *key-value pairs*, arranged in the following format:

[key] = [value]

Key names from the file(s) will be available as **DataLink** entries in your **LiveText** title pages. The value you enter beside the key name in the text file is the actual information that will be shown when the page is displayed on output.

The sample file currently contains just one key-value pair, as follows: "version = 2.0".

*Note: Both keys and values may contain punctuation and spaces.*

2. Launch LiveText, if it's not already running. Note that you can move back and forth between the text editor (with the sample file loaded) and the **LiveText** window by pressing **Alt + Tab** on your keyboard.

3. Click the **Text** [T] tool button, click somewhere on the empty **Canvas**, and type "My current LiveText version is:"

4. Left-click outside that text object (to complete it), then move over to the right a bit and press the right mouse button. This will open a drop-down menu (Figure 50).



**Figure 50**

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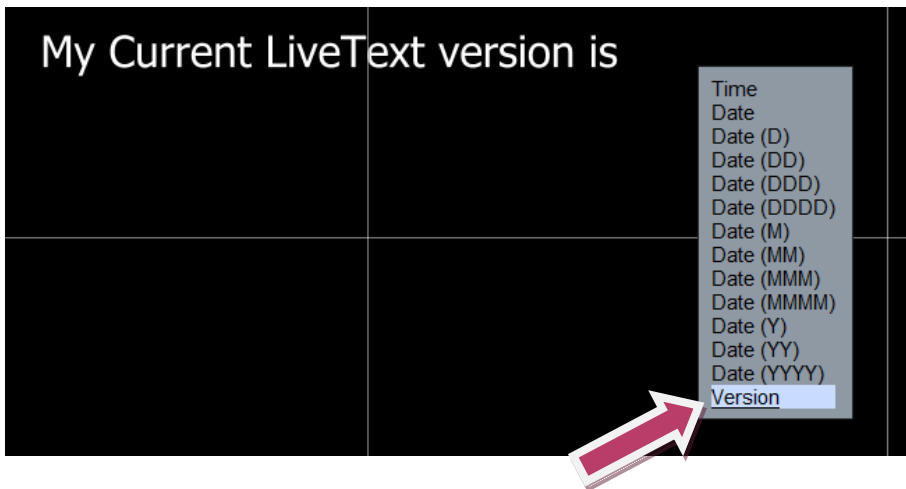
5. Select **Version** from the list, and release the mouse button.

6. A new object is created containing the text %Version%. This is how a DataLink key appears on the canvas in Text edit mode (bracketed between percentage signs).

The keyword "Version" was listed in the menu because it has been defined in *fileobserver example.txt*, as we noted previously. Likewise, a value is assigned to "version" in that ASCII text file. Let's see how LiveText displays that value.

7. Click the **Select** (Arrow) button in LiveText's tool panel. The "version" key is immediately replaced by "2.0", the value currently assigned to that key in the text file.

8. Press **Alt + Tab** on your keyboard to switch back to the text editor. (If necessary, move it a bit to one side on the screen so you can see"2.0"on the LiveText canvas.)

9. Change the value assigned to "version" in the text file to "10", then pull down the **File** menu (in the text editor) and select **Save**.

As soon as you save the change to the text file, **LiveText** refreshes its display as well.

10. On a new line (below the "version = 10" line in the text file), type:

    developer = NewTek

11. Re-save the text file.

12. Now, click the **Text** [T] tool in **LiveText**.  Right-click on the canvas, and notice that a new item appears in the drop-down menu options – "developer".

Let's try something slightly different.

13. Press **Alt + Tab** to bring the text editor forward again, and delete all of the text in the file (don't save the file, though).

14. Enter a new line of text as follows (enter your personal name for *your name*):
    My Name = *your name*

15. Select **Save As** from the **File** menu, and save the file using the file name *Names.txt*, then right-click on the canvas again – notice that "My Name" appears in the menu option list, even though it's in a different text file.  **TXT Linker** watches for changes in *all* suitable files located in the observed folder.

Experiment with **TXT Linker** a bit more:

- Try applying a **Style** to DataLink key objects.

- Click the **Layers** tab, and double-click on a **DataLink** object name.  Notice that this allows you to type in a custom name for the object.  Press **Enter** on the keyboard to complete the operation; naming the layer does not modify the object on the canvas.

- Type a sentence in a new text object, then right-click *between* words in the sentence to *insert* a DataLink key into it – right in the middle of another text object (or select the characters of a word, and repeat the exercise to *replace* them with a DataLink key.

Let's briefly consider one (slightly more elaborate example) using the **TXT Linker:**

Suppose you regularly produce a half-time show featuring interviews with 8 to 10 different guests.  You *could* create a **LiveText** project with 10 pages, and manually modify each page before every episode.

Or, you could prepare the pages *once*, and let **DataLink** update them all for you automatically every time!  To do that, you could proceed as follows:

1. Prepare a simple text file similar to this one:

    guest1 = Bill E. Bob

guest2 = Sam Houston
guest3 = Dorothy Lamour
 … etc.

2. Go to the **Add Pages** drop-down menu in **LiveText**, and select a nice-looking lower third template (or make your own if you prefer).

3.  Where the guest's name should appear, place the **DataLink** key "%guest1%".

*Note: You may find it faster at times to directly type the key name on the canvas (between percentage signs) rather than using the drop-down menu.  Either method will work just fine.*

4. Clone the page as many times as necessary

5. Click the *second* thumbnail (no need to edit the first one) in the **Pages** column at right to select it for modification, and click the **[T]** button (to activate text entry).

6. Click in the DataLink key field on the **canvas**, and replace %guest1% with %guest2% Note that

7. Click the next page, and change the key to %guest3%, and so-on, until all done.

That's all you need to do.  Before each episode, have your production assistant take a few moments to update the *guest.txt* file content, and the hard part is done. Afterward, simply load the **LiveText** project you created – each successive page automatically displays the correct name in sequence when displayed.

The other two **DataLink** modules (**Scoreboard Linker** and **Database Linker**) reference different data sources, but the process of creating title pages with DataLink key names is exactly the same as we have reviewed above.

Let's go on to consider the **Scoreboard Linker**.  Unlike the other two modules, **DataLink** depends on an external hardware connection to supply values for these keys.  In the next section, we'll explain how to connect these external devises.

## 4.3    CONNECTING EXTERNAL DEVICES



***THE STEPS IN THIS SECTION ARE MANDATORY IF YOUR INSTALLATION REQUIRES DATA FROM AN EXTERNAL DEVICE (SUCH AS A DAKTRONICS™ OR COMPARABLE SCOREBOARD SYSTEM).***

Naturally, for **DataLink** to communicate with an external data source, that equipment must be connected to the **LiveText** host system and powered up.  As well, DataLink must be configured to find and use the connection.  We'll discuss how to make and configure connections under this heading.

### 4.3.1    USB-SERIAL ADAPTERS

The diversity of supported external systems, cable connectors, and available ports on the host system means this connection may require an adapter. Newer external devices may use USB connections, but others use older RS-232 (25-pin) connectors, or occasionally (slightly more recent) 9-pin style connectors.



*Unless the external system is supplied with a USB connection, a USB-Serial adapter is likely required to connect it to a host systems with newer motherboards).*

To connect using a USB-Serial adapter, follow these steps:

1.  Connect the scoreboard controller's output cable connector to the USB-Serial adapter.

    a.  Plug the adapter into the **LiveText** host system.

    b.  Install drivers for your USB-Serial adapter on the host system.  Drivers for the adapter are generally supplied on a Compact Disk (CD) packaged with the adapter by the manufacturer. Unless these drivers are correctly installed, DataLink cannot receive data from the external controller.  (Carefully follow the instructions provided by the manufacturer of the adapter you purchased).

### 4.3.2    FIND THE COM PORT

The next step involves determining *which* **COM port** the operating system has assigned to the new connection.  This information is required to configure **DataLink**.

2. Right-click the **My Computer** icon on the Windows Desktop, and select **Manage** from the menu **(**to open the **Computer Management** panel).

3. Open the **Device Manager** (Figure 53) by clicking that entry in the left-hand pane of this window.

4. Click the + sign next to **Ports (COM and LPT)** in the right-hand pane to disclose available communication ports.

5. Locate the entry for your scoreboard controller – take note of *which* COM port number is assigned to it (such as COM 1 or COM2).
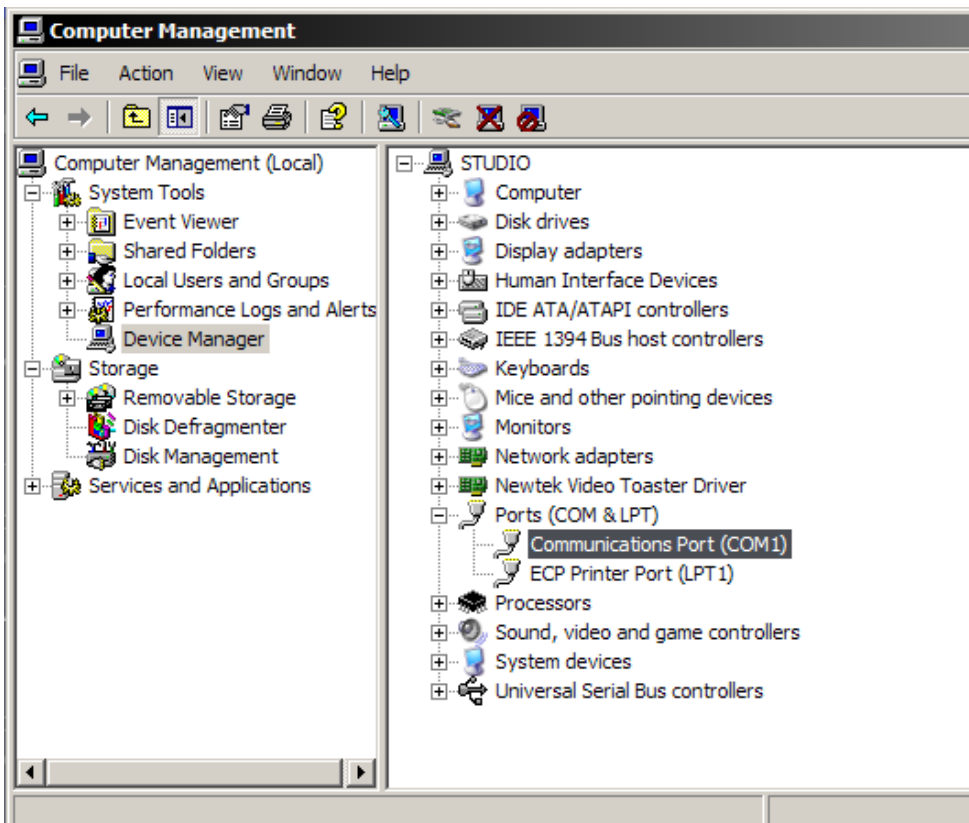


**Figure 53 - Device Manager**

*Note - you should see your new connection listed, as in Figure 53. If it doesn't appear at first, try removing and re-inserting the USB cable connector – or you can use the "Scan for hardware changes" item in the Device Manager's Action menu.*

*(If it does appear, but shows a ! icon next to the entry, this may indicate a problem with the USB connection or your adapter driver installation – try re-installing the adapter driver, following the directions supplied with it.)*

6.  Close the **Device Manager**.

Again, the port number you noted above is required to enable **DataLink** to recognize the external device.  The next heading explains how to configure DataLink to access this source and the stream of information it provides.

## 4.4    CONFIGURE DATALINK
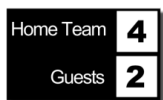


*THE STEPS IN THIS SECTION ARE MANDATORY IF YOUR INSTALLATION REQUIRES DATA FROM AN EXTERNAL DEVICE (SUCH AS A DAKTRONICS™ OR COMPARABLE SCOREBOARD SYSTEM).*

Assuming you followed the steps listed in Section 4.3 (Connecting External Devices), there's one more thing to do before **DataLink** can communicate with an external device.  You need to tell DataLink which COM Port(s) it should *listen* to.

1.  Click the Windows **Start menu**, and go to **Programs**.

2.  Select **Programs>NewTek>LiveText>Configure Scoreboard** (this will open the file *Scoreboard.ini* in a text editor, allowing you to modify it).

3.  Locate the section (of the .ini file) appropriate for the brand of scoreboard controller you connected.

    *Note: DataLink currently supports 4 different brands of external devices, namely Daktronics™, Whiteway™, DSI™, and OES™.*

4.  Change the value for **Port** in the connected device brand's section to correspond to the Port number you noted earlier in Section 4.3.2 (enter Port=1 if the device was found at COM1, and so on).

5.  Change the value for **Enabled** in the appropriate brand's section to 1 (from 0).  For any and

all brands of controller that are not connected, Enabled should be set to 0.

*Note that it is possible to connect more than one controller brand simultaneously.  In this instance, enter Enabled=1 and the corresponding Port number for each connected controller in the Scoreboard.ini file.*

6.  **Save** the *Scoreboard.ini* file, and **Exit** the text editor.

> *Important Note: In some environments, Windows may arbitrarily reassign the external device to a different COM port following a reboot.  If this happens, you could simply update the COM port entry in the .ini file.  However, you may prefer instead to lock the connected device to a specific COM port, using the Windows Device Manager.*
>
> *To do this, please locate the current port entry for your scoreboard controller.  Right-click the entry name, and select Properties in the drop-down menu.*
>
> *Next, click the Port Settings tab at the top of the Properties panel, and click the button labeled "Advanced". Use the Com Port Number drop-down menu to choose an unused port number, and click the OK button.  OK the Properties panel too, then close the Device Manager.  The Port Number you assigned should now be retained on subsequent reboots.*

At this point, DataLink is ready to utilize information from the scoreboard controller.

## 4.5   SCOREBOARD LINKER



As must be clear by now, this **DataLink** component receives data from an external scoreboard hardware controller, such as a Daktronics™ unit.

We explained how to connect these external devices to the host system in Section 4.3, Connecting External Devices.   If you have a supported device successfully connected and configured, **LiveText's** drop-down key insertion menu will now list valid key names for that specific brand of device.

### 4.5.1   KEY NAME LIST

This section lists the actual key names that are available for use with DataLink and the different brands of external equipment it supports.

Mostly, the key names are self-explanatory, but we've added slightly more descriptive notes anyway. Here's the complete current list, grouped by manufacturer.

*Note: the **key names** listed are shown inserted between percent (%) signs as a reminder, since this is how you will enter them onto your pages.*

## DAKTRONICS KEYS:

| | | |
|---|---|---|
| %DakClock% | - | Game Clock Time – "MM:SS.T" |
| %DakClockStatus% | - | Game Clock Status |
| %DakShotClock% | - | Shot Clock Time – "SS" |
| %DakHomeScore% | - | Home Team Score |
| %DakAwayScore% | - | Guest Team Score |
| %DakHomeFouls% | - | Home Team Fouls |
| %DakAwayFouls% | - | Guest Team Fouls |
| %DakHomeTOFull% | - | Home Time Outs Left – Full |
| %DakHomeTOPart% | - | Home Time Outs Left – Partial |
| %DakHomeTOTotal% | - | Home Time Outs Left – Total |
| %DakAwayTOFull% | - | Guest Time Outs Left – Full |
| %DakAwayTOPart% | - | Guest Time Outs Left – Partial |
| %DakAwayTOTotal% | - | Guest Time Outs Left – Total |
| %DakPeriod% | - | Current period |
| %DakHhr% | - | Hour (from Clock Time) |
| %DakMin% | - | Minutes (from Clock Time) |
| %DakSec% | - | Seconds (from Clock Time) |

%DakTen%                 -        Tenths (secs/10 from Clock Time)

## WHITEWAY KEYS:

%WWPeriod%               -        Current period

%WWMin%                  -        Minutes (from Clock Time)

%WWSec%                  -        Seconds (from Clock Time)

%WWTen%                  -        Tenths (secs/10 from Clock Time)

%WWAwayScore%            -        Guest Team Score

%WWHomeScore%            -        Home Team Score

%WWShotClock%            -        Shot Clock Time

%WWClock%                -        Game Clock Time – "MM:SS.T"

## DSI KEYS:

%DSIClock%               -        Game Clock Time – "MM:SS.T"

%DSIShotClock%           -        Shot Clock Time

## OES KEYS:

%OESClock%               -        Game Clock Time – "MM:SS.T"

%OESShotClock%           -        Shot Clock Time

%OESAwayScore%           -        Guest Team Score

%OESHomeScore%           -        Home Team Score

%OESHomeFouls%           -        Home Team Fouls

%OESAwayFouls%           -        Guest Team Fouls

%OESHomeTO%              -        Home Team Time Out

%OESAwayTO%          -          Guest Team Time Out

%OESPeriod%          -          Current period

## 4.6     DATABASE LINKER

Like the **TXT Linker**, this component monitors an external file for keys (and changes to the corresponding values).  In this case, though, it accesses a more complex and powerful file structure – the database.

This allows users to take advantage of supported MySQL database query functions to derive replacement values for the keys on the text page.

> *Hint: If you plan to use this feature, you (or someone helping you) will need a measure of familiarity with database queries.*

In this case, **DataLink** monitors the folder *Database Input*, located inside the **Stats Plugins** folder (which you can find, as before, using the NewTek>LiveText>DataLink section of the Windows **Start menu**).

The database file itself doesn't need to be located in this folder, however.  Rather, a special .xml type file goes here.  In turn, the XML file content provides the information that **DataLink** needs in order to access the external database values.  Here's a sample xml file:

```
<!—
        Example connection string and query for DataLink using MySQL.
        This produces the keys %book.1%, %book.2%... etc
-->

<sql_databases>

    <database connection_string = "Driver={MySQL ODBC 3.51 Driver};
Server=localhost; user=root;password=my_password; database=book_table">

        <query>
            command = "SELECT title FROM Books;"
            key = "book"
            timeout = "10000"
            multiple_keys = "true"
        </query>

    </database>

</sql_databases>
```

Replacing the *Server*, *user*, *password*, etc. values with the correct ones for your environment permits the **Database Linker** to supply values to **DataLink** keys as described in the commented lines listed at the top of the file (i.e., an array in the format book.1, book.2, and so on).

With respect to the line that states timeout = "10000" in the xml file – this tells **DataLink** to how often (in milliseconds) to update its values from the database.  Lower values result a faster refresh rate.  (Rates that are overly high are undesirable as the data may not seem to be updated in a timely manner).

The multiple_keys = "true" entry tells **DataLink** that more than one match to the SQL query is acceptable. In this case, DataLink will create a key/value pair for each qualified result.  For example, a keyword "author" could produce an array of matches, which DataLink would arrange as follows:

> %author% -> "Voltaire"
>
> %author.1% -> "James Joyce"
>
> %author.2% -> "Herman Melville"

## 4.7   CONTROL KEYS

LiveText's DataLink tools provide still further possibilities. Several special keys called *control keys* effectively permit you to *drive* LiveText output externally (beyond merely altering the value of a text string).

### 4.7.1   PAGE CONTROL KEYS

For example, control keys permit you to replace a photo embedded in a title page (even while it is displayed live), or change the title page currently displayed, and additionally (if it is an animated scroll or crawl) play or stop it.  The principal control keys are **LiveText_PageNo** and **LiveText_Play**.

As you would expect, simply changing the numeric value assigned to the key **LiveText_PageNo** causes the corresponding page in LiveText's **Pages** list to be sent to **Live** output.  The control key **LiveText_Play** accepts either of two different values – 1 or 0. Assigning the first causes an animated page to play, whereas assigning 0 (zero) to LiveText_Play stops playback.

## 4.7.2 IMAGE CONTROL KEYS

Custom control keys governing image file references in title pages can also be created. These keys and corresponding values are defined in either ascii files or by a database query (see sections 4.2.1 and 4.6).

This works as follows:

- Assign a custom control key name and value that can be detected by either the **TXT Linker** or **Database Linker**, as discussed earlier – let's say you that a key named *mytitlepic01* is given the value *D:\PlayerPics\Joe Gamestar.jpg*. In this case, as you can see, the value is the full file path for a specific image.

- In LiveText, add an image to the current page (in the canvas pane), right-click it, and select the key "mytitlepic01" from the drop-down menu – just as you would assign any DataLink key to an object.

That's all that's required to configure the page for realtime image updates. Afterward, whenever the **Database Linker** module returns a new value for mytitlepic01, the image displayed in the title page will automatically be updated. For example, if the value for mytitlepic01 is changed to *D:\PlayerPics\Suzy Q. Champion.jpg*, that new file will immediately replace *Joe Gamestar.jpg.*

Many of the default title page templates pages supplied with LiveText have stand-in (or 'placeholder') images all ready for you to replace with imagery of your own. These too can have image keys assigned to them. If you look at the entry for a stand-in image in LiveText's **Layers** tab, you can determine which of the several default files is used in a given title page.

You may find it useful to note the resolution for those images (to prepare images that will fit perfectly). The file resolutions for the common placeholder images in LiveText 2 are as follows:

- PLandscape_placeholder.png (936x586)
- PLargePortrait_placeholder.png (521x578)
- Portrait_placeholder.png (406x441)

## 4.8 LIVETIME™

Whether or not you have an external scoreboard system connected (and regardless of whether you are using **TXT Linker** or **Database Linker** or not), a number of time-related options appear in LiveText's key insertion drop-down menu. Examples of these key names are **Time**, **Date**, and variants on these – such as **Date (YYYY)**.

These keys are courtesy of **LiveTime** which allows you to place clock and date objects that are updated in realtime on your title pages.  When LiveTime keys are displayed, the corresponding values are derived from the LiveText host's **system clock**.  This provides many useful and creative possibilities.

Title pages and projects created in LiveText can be utilized in a surprising number of ways. Going 'direct to air' in a live production is amazing enough, but there are also many other benefits to LiveText, too!

This chapter explores the options available, whether in connection with immediate live display or for other purposes.  As well, it explains the many convenient and useful features available in LiveText's file windows.

LiveText output is immediately available for display in live productions using network-connected live production systems such as NewTek's TriCaster.  Too, individual LiveText pages can be exported as image or animations files, and used in various ways.

## 5.1    LIVE DISPLAY
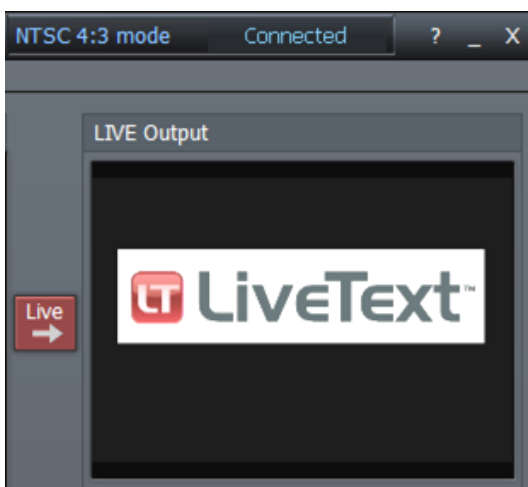


Once a network connection exists between the LiveText workstation and live production system (see Section 2.3, Making the Connection) 'going live' is a simple matter.

Click the large red **Live** button (beside the Live Output display in the upper-right corner) outputs the currently selected title page to the network as a source.

The person controlling the connected live production system then selects the LiveText entry from the list of available sources.
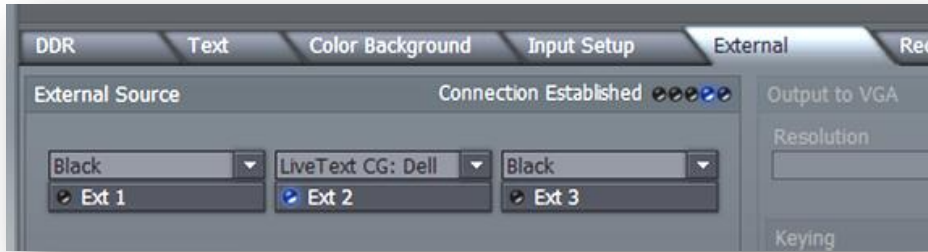
Figure 54

Figure 55 – TriCaster Studio External Tab with LiveText source selected

*Hint: When the LiveText output is selected in the **External** panel of the live production system, the status line (above the Live Output preview) says "**Connected**."*

Once assigned as the currently active **External** source, the LiveText page can be displayed as part of the live production by selecting either the **EXT** (or **Net**) button on a **Switcher** row, or the similar button in the **Overlay** section.
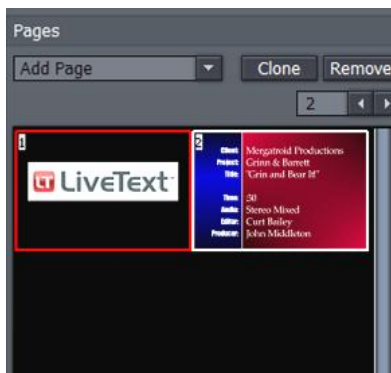


You can use **Add Page** or edit other title pages in the **Canvas** even when a LiveText page is displayed on the networked live broadcast system. The **Live Output** is normally only updated when you click Live again. There is *another* way to select the **Live Output** page, though:

*Double-clicking* a thumbnail image in the **Pages** panel sends it immediately to **Live Output**. (When you do this, the designated page is added to both the Canvas and the Live Output preview.)

Figure 56

*Hint: The thumbnail icon for the Live Output page is outlined in red, and the thumbnail for the page you are editing is outlined in white.*

54

If the current page is animated – i.e., a (vertical) **Scroll** or (horizontal) **Crawl** - the transport controls beneath the preview pane are activated.

Click the right-most (>) button to commence **Play**, the center button (||) to **Pause** (or resume play when already paused), and the first button (|<) to go to the beginning of the animated page.

*Hint: Conveniently, LiveText automatically begins scroll and crawl animation on a blank frame.*

Figure 57

The number of the current Live Output page is shown in a field to the right of the **Play** button. You can use the nearby arrow buttons to move backward and forward through the list of pages, or jump to a specific page by entering its number and pressing the Enter key.

> *Note: The forward/backward buttons and direct numeric entry controls are disabled if an animated page is either playing or paused.*

## 5.2    FILE EXPORTS

LiveText pages exported as bitmap format files (.png, .avi) can be used creatively in the **DDR** and **Picture** modules of compatible live broadcast systems (such as TriCaster).

LiveText also exports **Title Page** files (.cgxml) for use in the **Media Players** (DDR, Stills, Titles) found in the **Live Desktop** of TriCaster TCXD series systems.

Image and animated pages (both bitmap and .cg formats) exported from LiveText can also be used in connection with SpeedEDIT 2 video editing projects.

*CGXML Title Page Notes: The Title Page format (.cgxml) used by TriCaster TCXD series systems presently supports almost every attribute that LiveText offers – but there are a few exceptions.*

*For example, multiple font properties on one text line are not supported, which means in turn that different words on a single line cannot be different colors, or use different typefaces. Of course you can achieve the same effect by using additional text objects as necessary. (For similar reasons, text entered as paragraphs is automatically split into multiple lines in .cgxml Title Page files.)*

## 5.2.1   FILE MENU
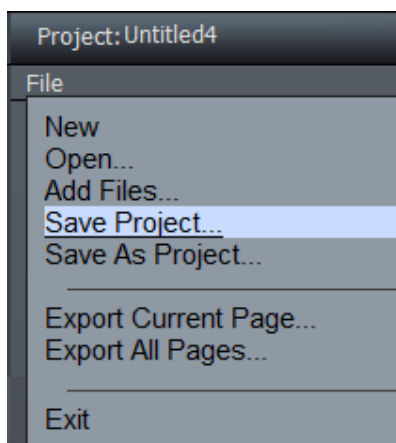
The **File menu** is in the upper left corner of the LiveText desktop. It contains project and page file management tools. Projects and (editable pages) are stored as *.cg files.

Choosing **New** clears the current project, and opens a new blank one. (LiveText's custom file explorer is discussed in detail shortly, in Section 5.3).

**Open** also clears the current project, replacing it with another a .cg file (a LiveText project) you have previously created and saved (see the note in Section 3.3 re: legacy LiveText projects).

### 5.2.1.1   ADD FILES (IMPORTING)

**Add Files** can be used to add an image or even a text file (see below) to the current LiveText page.  Alternatively, you can change the file suffix in the file requester to show files ending in ".txt".

This permits you to import long lists of textual data prepared in standard ASCII text format and saved as a .txt file.  This feature will be discussed a bit later, in Section 5.3.1.6.

> *Note: You may find it preferable to add files using the Layers tab (discussed next) to drag files onto the Canvas.*

### 5.2.1.2   PROJECT (SAVE AS)

Save the current project with all of its component pages as a LiveText project file (.cg).  Saved files may be reloaded later of course, and may also be compatible with selected CG applications in the NewTek family.

This latter option opens up possibilities similar to those discussed next under **Export Current Page**.

### 5.2.1.3   EXPORT CURRENT PAGE

**Export Current Page** can export a single **CG Page** (.cg is LiveText's project file format), convert the highlighted page into a **Still Image** file format (.png file format), or a **Title Page** file (.cgxml) for live production use with TriCaster TCXD systems.  If the current page is a motion page (Scroll or Crawl), the options in the File Type are **CG Page** and **Video for Windows** (.avi) file format.

You can choose common NTSC or PAL video resolutions when saving either still or animated files using the **Resolution** menu options.

Exported page types (other than .cg) can be added to the playlist of a **DDR** module (or **Picture** module) on selected live production systems, and applied via the **Overlay** module; or you may use them in non-linear editing applications.  If the page(s) contain transparent areas, the transparency will be retained.
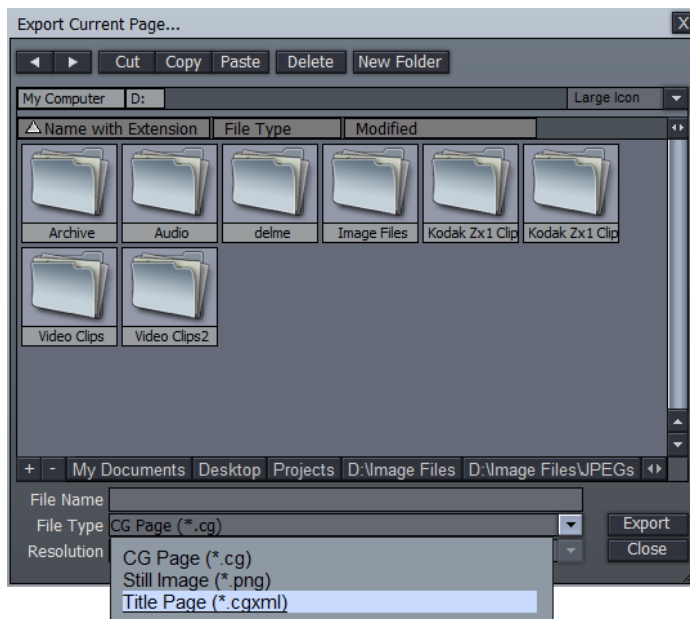
**Figure 59**

Project files (.cg) can be imported into LiveText 2 compatible software, or re-loaded into LiveText.

## 5.2.1.4  EXPORT ALL PAGES

This export feature works much like **Export Current Page**. The primary difference is that all pages comprising the current project are exported.

The **Title Page** (.cgxml) file export type does not support motion pages – hence if you choose that alternative, LiveText will automatically prepare .avi clips for any motion pages encountered as it exports the project pages.

If the current page when you select **Export Current Page** is a still, the **File Type** menu offers export as Still Image (*.png).  Nevertheless, LiveText will again automatically prepare .avi clips for any motion pages encountered as it exports the project pages.

## 5.3   FILEBIN FEATURES

LiveText features custom file browsing features used in connection with loading and saving various file types.  Two file browsers are provided – the one used in connection with File menu selections, and the main Filebin - a tabbed panel underneath LiveText's Canvas and Motion Control pane.

For the most part, although the layout of the two file panes varies slightly, the features are quite similar, and you should quickly become comfortable with them.

## 5.3.1.1   VIEW OPTIONS

The largest part of either file browser is the file list window. In the default view (and several of the optional ones) you will see a large thumbnail image icon to represent any image file.
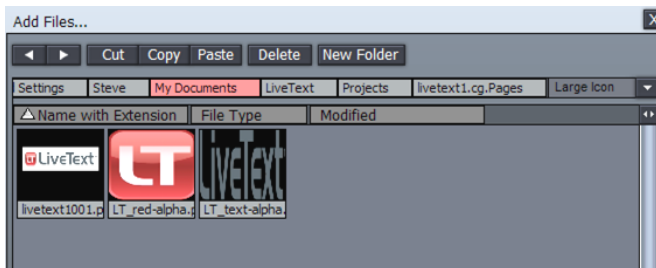
This view can be personalized to suit your need or taste in several ways.
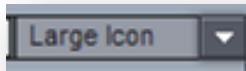
A drop-down menu in the upper-right corner of the pane controls the appearance of items in the file list window.  By default this menu is set to **Large Icon**. You can use this menu to radically alter the appearance and features of the panel. Try the different view options out, and you'll quickly see how they affect the display.

The only view option that requires a little longer explanation is the **Details** view (**Details Only** is similar, but minus the file icon.) The Details view gives you a lot of in-depth information about your files.
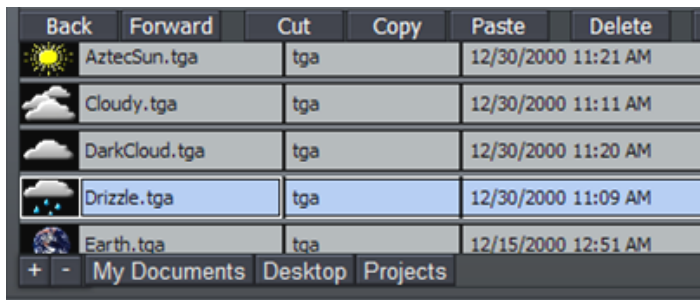


Figure 63 – Filebin tab, Details View

## 5.3.1.2  NAVIGATION

In standard fashion, double-click a folder or drive shown in the file list window to enter it, displaying its content.
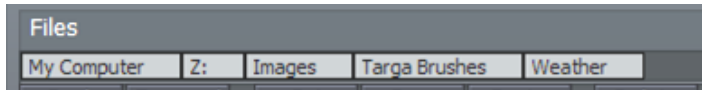
Above the file list pane, a row of rectangular text boxes appears (Figure 64) as you navigate down into your directory structure.  These text boxes show the directory path of the current view. Click directly on a text box to jump back to that drive or folder location.
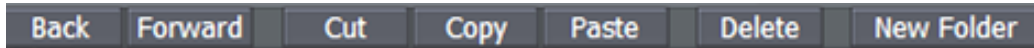
Nearby you will find buttons labeled **Back** and **Forward** (or triangular forward and back gadgets.) These work just like the similar features found in an internet web browser.

## THE HOTLIST

If you have a folder you frequently access, you can add it to the **Hotlist** at the bottom of file windows. Navigate to the folder you want to add, and press the plus sign at the left corner (click the minus sign to remove the current Hotlist button.)
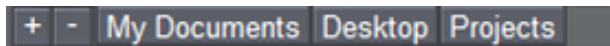
When you right-click directly on a **Hotlist** button, a two-item menu pops up.  You can **Remove** the selected entry, or **Rename** it.  The Rename option creates a 'nickname' for the current folder, and refreshes the Hotlist to display it. (If your list is wider than the bin, there is a scroll gadget lower right.)

### 5.3.1.3   CUT, COPY, PASTE, DELETE

**Cut, Copy, Paste** and **Delete** buttons are also located here.  These operate on the currently selected items in the file list window.

> *Of course, the common keystroke shortcuts also work in the usual manner (CTR+c for Copy, CTRL+v for Paste, CTRL+x for Cut, and the DEL key to Delete a file.)*

The **New Folder** button creates a new directory at the current level, and pops up a small dialog allowing you to change its name on creation.  Alternatively, you can create a New Folder from the menu that appears when you right-click in an empty spot in the file list window.

## 5.3.1.4   FILE SELECTION

As you'd expect, simply clicking a file in the file list window selects it.  If you click one file and then hold Shift down when you click another, you can select all the files in between.  Or, click multiple files (in any order) while holding down the CTRL key to select a number of files which are not next to each other in the file list.

## 5.3.1.5   FILEBIN OPERATIONS

The tabbed **Filebin** panel (under the **Canvas**) is unique in that it has no 'add' or 'save' (etc.) buttons.  Really, *this* Filebin is intended for quick and convenient interactive use. Simply drag a file onto the Canvas to load or import it.  When the file is a .cg file, the current LiveText project will be completely replaced by the import.  On the other hand, if you drag an image file into the Canvas, it is added to the current page.

Text files (in standard ASCII .txt format) are a special case.  Dragging a text file onto the Canvas (or importing one using the File menu) triggers a powerful feature, described next.
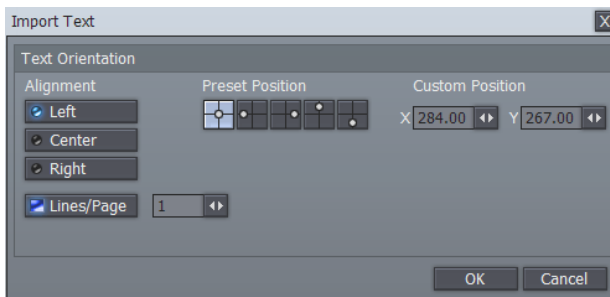
## 5.3.1.6   IMPORT TEXT



If you drag an (ASCII) file onto the Canvas from the tabbed Filebin, the **Import Text** panel pops up.

This panel offers numerous controls over the manner in which the lines of text in the file are treated on import, and how multiple pages will be generated as necessary for them.

**Figure 67**

You can create a new page for each line of text, or form a single long page containing multiple lines.  As well, you can control placement of the text on the newly created page(s) using the **Alignment**, **Preset** or **Custom Position** buttons.

# 6 APPENDIX A – KEYBOARD SHORTCUTS

| | |
|---|---|
| Show Keyboard Shortcuts | F1 |

## 6.1.1.1 FONT

| | |
|---|---|
| Font Name (next/previous) | F5  (Shift +) |
| Font Size | F6  (Shift +) |
| Font Rotation | F7  (Shift +) |
| Font Tracking (Spacing) | F8  (Shift +) |

## 6.1.1.2 TEXT

| | |
|---|---|
| Increase/decrease Width by 5 pixels | Alt w  (Shift +) |
| Increase/decrease Height by 5 pixel | Alt h  (Shift +) |
| Increase/decrease Edge by 1 pixel | Alt k  (Shift +) |
| Increase/decrease Italic by 1 pixel | Alt i  (Shift +) |
| Increase/decrease Tracking by 1 pixel | Alt space  (Shift +) |
| Next/Previous Font | Alt f  (Shift +) |

### 6.1.1.3  CLIPBOARD

| | |
|---|---|
| Select All | Ctrl a |
| Deselect All | Ctrl d |
| Cut | Ctrl x |
| Copy | Ctrl c |
| Paste | Ctrl v |
| Delete | Del |
| Redo | Ctrl y |
| Undo | Ctrl z |

### 6.1.1.4  TEXT TOOL

| | |
|---|---|
| Select One character | Shift + L/R Arrow |
| Move curser to beginning | Home |
| Move curser to end | End |
| Select to the beginning | Shift + Home |

| | |
|---|---|
| Select to the end | Shift + End |
| Delete entire trailing word | Ctrl + Delete |
| Select entire line | Shift + Up/Down Arrow |
| Kerning by letter | Alt + L/R Arrow |
| Move and scale | LMB (Left Mouse Button) |

### 6.1.1.5 MODIFY TOOL

| | |
|---|---|
| Rotate and Spacing | LMB + Shift |
| Multi-Select by area | LMB + Drag |
| Multi-Select Individual Objects | LMB + Ctrl |
| Nudge Up 1 pixel | Up Arrow |
| Nudge Down 1 pixel | Down Arrow |
| Nudge Left 1 pixel | Left Arrow |
| Nudge Right 1 pixel | Right Arrow |
| Nudge Up 10 pixels | Shift + Up Arrow |

| | |
|---|---|
| Nudge Down 10 pixels | Shift + Down Arrow |
| Nudge Left 10 pixels | Shift + Left Arrow |
| Nudge Right 10 pixels | Shift + Right Arrow |

## 6.1.1.6  ALIGNMENT

| | |
|---|---|
| Left Safety | Alt l |
| Center Safety Alignment | Alt c |
| Right Safety | Alt r |
| Bottom Safety Alignment | Alt b |

## 6.1.1.7  LAYOUT

| | |
|---|---|
| Align Left | Alt Shift l |
| Align | Alt Shift r |
| Align Top | Alt Shift t |
| Align Bottom | Alt Shift b |
| Align Horizontal Center | Alt Shift c |

| | |
|---|---|
| Align Vertical Center | Alt Shift v |

| | |
|---|---|
| Add a new page | Ctrl Insert |
| Delete Current Page | Ctrl Shift Delete |
| Clone Current Page | Ctrl Shift Insert |
| Move up the Page list | PageUp |
| Move down the Page list | PageDown |
| Move to top of Page list | Ctrl PageUp |
| Move to bottom of Page list | Ctrl PageDown |

| | |
|---|---|
| Add (Sub) 1 to Shadow Offset X | Alt x  (Shift +) |
| Add (Sub) 1 to Shadow Offset y | Alt y  (Shift +) |
| Shadow Type (up/down) | Alt F5  (Shift +) |
| Shadow Size (raise/lower) | Alt F6  (Shift +) |

| | |
|---|---|
| Shadow Angle (raise/lower) | Alt F7  (Shift +) |
| Shadow Softness (raise/lower) | Alt F8  (Shift +) |

### 6.1.1.10 EDGE

| | |
|---|---|
| Edge Type (up/down) | Ctrl F5 (Shift +) |
| Edge Size (raise/lower) | Ctrl F6 (Shift +) |

### 6.1.1.11 VIEW

| | |
|---|---|
| Toggle Safe Area on and off | Alt s |

### 6.1.1.12 FILES/FILEBIN…

| | |
|---|---|
| Open | Ctrl + O |
| Save | Ctrl + S |
| Save As | Ctrl + Shift + S |
| Add Files | Alt + Insert |
| Back | Backspace |
| Forward | Shift + Backspace |

| Selection… | |
|---|---|
| Select All | Ctrl + A |
| Deselect All | Ctrl + Shift + A |
| First Item | Home |
| Last Item | End |
| Previous Item | Left/Up Arrow |
| Next Item | Right/Down Arrow |
| Previous Item and Keep Current Selection | Ctrl + Left/Up |
| Next Item and Keep Current Selection | Ctrl + Right/Down |
| First Item and Keep Current Selection | Ctrl + Home |
| Last Item and Keep Current Selection | Ctrl + End |
| Select All Previous Items | Shift + Home |
| Select All Previous and Keep Current Selection | Ctrl + Shift + Home |
| Select All Following Items | Shift + End |
| Select All Following and Keep Current Selection | Ctrl + Shift + End |

## 6.1.1.13 LIVE

| | |
|---|---|
| Send current page to live | F9 |
| Play current live motion page (toggles play and pause) | F10 |
| Pause current live motion page | F11 |
| Stop current live motion page | F12 |

Clearly, a reliable and competent network connection must exist for your LiveText workstation's output to be displayed live using a compatible live production system. Any issue that impedes a good connection will likewise impede or even preclude the use of LiveText along with a live production system such as TriCaster or VT[5].

Reading this section will not turn you into a network guru, but it *will* assist you to diagnose some simple issues.

## 7.1 PING IS YOUR FRIEND
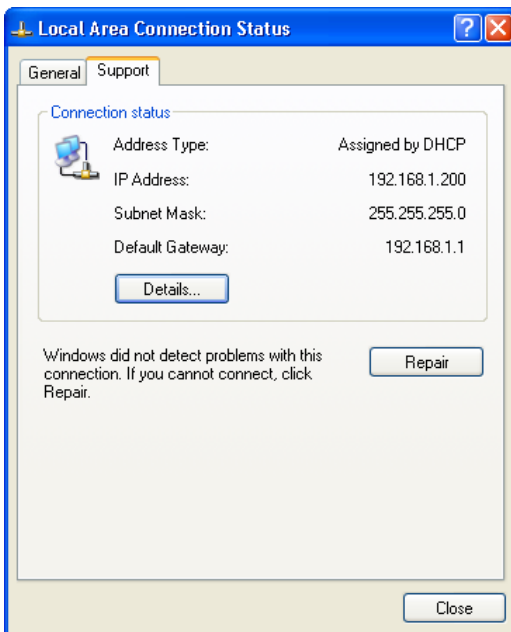


More complex problems may require you to turn to the system administrator for help -- but you may be able to resolve simpler issues by borrowing one of the IT Departments secret weapons!

**Ping** is a humble but effective (and free!) tool to confirm that the requisite connection exists. A standard inclusion in operating systems, Ping may help you diagnose LiveText connection issues.

Figure 68

Ping sends a small set of data packets to the target host (IP number), then 'listens' for an echo response in return. It estimates the round-trip time in milliseconds, records any data losses, and displays a summary when finished. Bottom line, if you can't ping your target, your connection has problems (the problem might be as simple as a bad cable connection.)

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**Finding the target IP number:**

To issue a ping, you need know the IP number of the target computer.

On a Windows XP® system, you can find this number by:

> (On TriCaster, click the [x] button in the upper-right corner of the screen, and select **Admin** to get to the Windows Desktop.)
>
> Next, select **Network Connections** from the Windows **Start Menu** (look in the **Settings** sub-menu if it is not listed at the top level.)
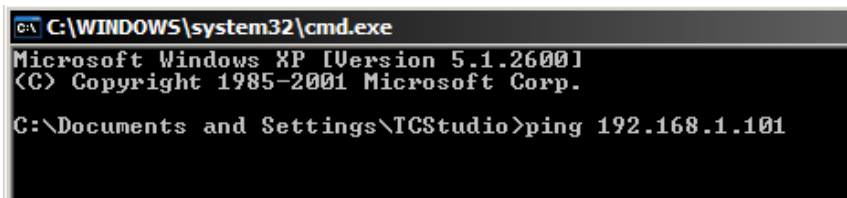>
> Inside the **Network Connections** panel, right-click on the icon for your **LAN** (local Area Network) and select **Status**. The **IP Address** for the system is shown on the **Support** tab.

**Issuing a Ping**

Ping is a command line program, and must be run from a command shell on the issuing computer. To open a command shell and send a ping, follow the procedure below that applies.

**Windows**

- On TriCaster, click the [x] button in the upper-right corner of the screen, and select **Admin** to get to the Windows Desktop.
- For all Windows XP® systems (including TriCaster) select the Windows Start Menu command **Run**
- Type "**CMD**" (without quotation marks) into the **Run** dialog panel
- Press your **Enter** key a command shell window will open.)
- Type "Ping" (without quotes) followed by a space and the target IP number, as in the image below – then press **Enter**.



Figure 69

- Ping will go to work, and in a moment or two begin reporting results. A ping *failure* (indicating a network problem) will look like Figure 70.

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- A successful ping will display a report like Figure 71.

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# 9   CREDITS

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