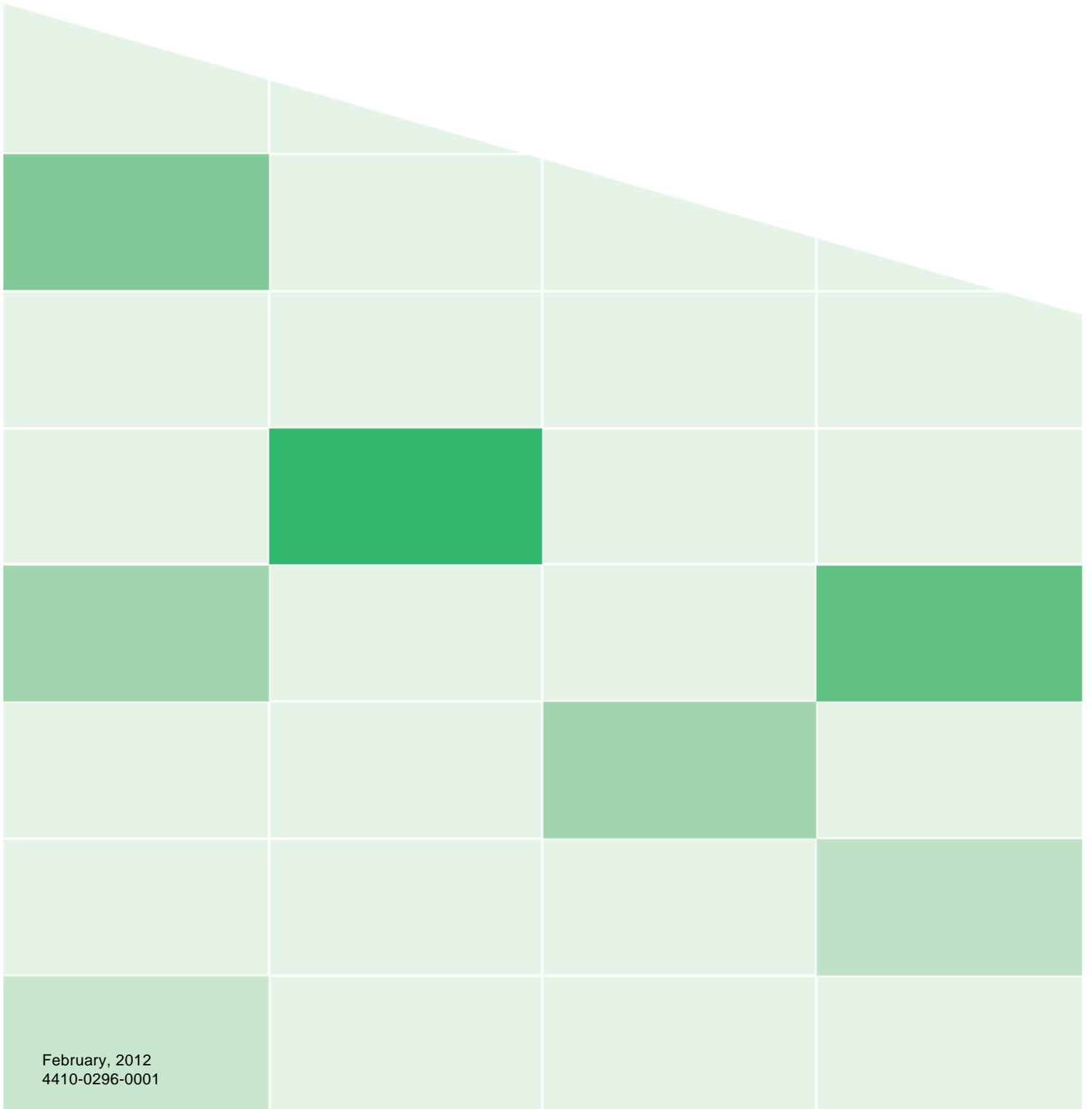




# VBrick Rich Media Desktop

VBrick RMD v1.1 Windows User Guide



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## About VBrick Systems

VBrick is the leader in Enterprise IP Video, with over 9,000 corporate, education and government customers and 60,000 installations worldwide. VBrick solutions work over standard IP networks and the Internet to enable the creation, publishing and distribution of rich media content. Our comprehensive streaming solutions are used in a wide range of live and on-demand applications including meeting and event broadcasts, employee collaboration, distributed learning, digital signage, TV distribution, and video surveillance. Headquartered in Wallingford, CT, VBrick's products and services are available through industry-leading value-added resellers.

VBrick is an active participant in the development of industry standards and continues to play an influential role in the Internet Streaming Media Alliance (ISMA), the MPEG Industry Forum, and Internet2. In 1998 VBrick invented and shipped the world's first MPEG Video Network Appliance designed to provide affordable DVD-quality video across the network. Since then, VBrick's video solutions have grown to include Video on Demand, Management, Security and Access Control, Scheduling, and Rich Media Integration. VBrick solutions are successfully supporting a broad variety of applications including distance learning and training, conferencing and remote office communications, security, process monitoring, traffic monitoring, business and news feeds to the desktop, Webcasting, corporate communications, collaboration, command and control, and telemedicine. VBrick serves customers in education, government, healthcare, and financial services markets among others.

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# Introduction

## Introduction

This guide is intended to help you understand how each feature of Rich Media Desktop operates, and to provide you with information to help you make the best presentations possible.

## Topics

- Editions and Options
- Tutorials
- Two Ways to Use this Application
- Using AutoLive
- Main Window Layout
- Layer Windows

## Editions and Options

Both editions of Rich Media Desktop (Rich Media Desktop and Rich Media Desktop Pro) are presented in this guide, and the term Rich Media Desktop is used, generally, to describe all major features. However, information that pertains specifically to Rich Media Desktop Pro is indicated by the Pro icon (shown below).

PRO

Rich Media Desktop provides support for Blackmagic capture cards, Mainconcept H264, and On2 VP6 Flash encoding. It also has an improved shot editor, many new titling options, and an enhanced user interface.

PRO

Rich Media Desktop Pro provides Virtual Sets (a library of professionally designed 3D sets), a powerful Audio Inspector, IP camera support, a networked real-time encoding and decoding device. Rich Media Desktop Pro also provides live scoreboards.

---

**Note:** If you don't have a Rich Media Desktop Pro license, Rich Media Desktop still enables you to experiment with Pro features, but all Rich Media Desktop Pro output is water-marked. Additionally, you can not save a document that has Pro features enabled.

---

## Tutorials

We suggest that you first work through the tutorials in [Getting Started](#). They are quick, informative, and the easiest way to become familiar with Rich Media Desktop.

Rich Media Desktop provides a built-in tutorial environment that corresponds with the tutorials provided in Getting Started. The tutorials take about thirty minutes and provide a brief overview of how to set up a basic presentation and create your own broadcast.

Next, we suggest that you read [Making Great Presentations](#). This topic show you how you can easily make changes in your setup and make a huge difference in the quality of your presentations.

## Two Ways to Use this Application

There are two different ways you can use Rich Media Desktop:

- **Presenter Is Operator.** The person conducting the presentation also operates Rich Media Desktop.
- **Presenter Plus Operator.** The presenter concentrates on the content and someone else operates Rich Media Desktop. In this mode, the presenter never needs to know in detail how Rich Media Desktop works.

### Presenter Is Operator

In this mode of operation, the person conducting the presentation simultaneously operates Rich Media Desktop.

Here are some suggestions for using Rich Media Desktop when you are both the presenter and operator:

- **Keep it simple.** Set up Rich Media Desktop to make it easy for you to be the operator and the presenter. Set up your logo and titles so that you need to make very few changes during your presentation. Use a minimum number of shots so it's easy for you to see which shot to choose.
- **Keep the AutoLive feature on.** This enables you to present your shots with just one click. Though this limits your ability to perform complex presentations, it is the best way when the presenter is also the operator. To turn AutoLive on or off, select the Switch menu item.
- **Pre-configure your shots.** Make sure that all the shots are created prior to your presentation. Do not try to create or modify shots while broadcasting them.
- **Use hot-keys for switching shots.** If your shot has a number in it, you can press the Alt key plus that number's key to immediately display the shot. For example, if you have a shot named "Me With Title 1", press the Alt key and the 1 key to display this shot.

### Presenter Plus Operator

In this mode of operation, an engineer (or operator) is responsible for using Rich Media Desktop, and the presenter concentrates on the content of the presentation.

Here are some suggestions for using Rich Media Desktop when you have both an operator and a presenter:

- **Keep the AutoLive feature off.** This enables you to make several changes at one time before taking the changes live. However, to quickly make a shot live, press the Shift+Ctrl keys and click the shot.
- **Open the Preview window.** The operator should use Preview mode to examine everything before it becomes live.
- **Use the Layer Windows to make more shots available.** Select New Layer Window from the Window menu to open additional layer windows so you can quickly flip between shots on several layers.

- **Use the Inspector window to open and edit shots.** The Inspector window acts exactly like the edit window but always edits the last shot you changed. To open the Inspector Window, click on the Window menu and select Inspector.

## Using AutoLive

Some users of Rich Media Desktop may want to single-click a shot to make it become live. Other users may want to make several changes to the broadcast before making them live. You can use both methods in Rich Media Desktop.

The AutoLive feature is designed to offer a single-click operation for those users who want to simply click from shot to shot. The Edit window (or other windows) is not affected by the status of AutoLive.

When AutoLive is on, clicking on a shot in the Main Window makes it become live. As a result, the Go button becomes useless, except for forcing a transition to run again. Shift+Ctrl+Click loads a shot into the preview but does not make it live.

When AutoLive is off, you click on a shot in the Main Window to display it in Preview, and the Go button is required to make a shot live. Click Shift+Ctrl+Click to take a shot live immediately.

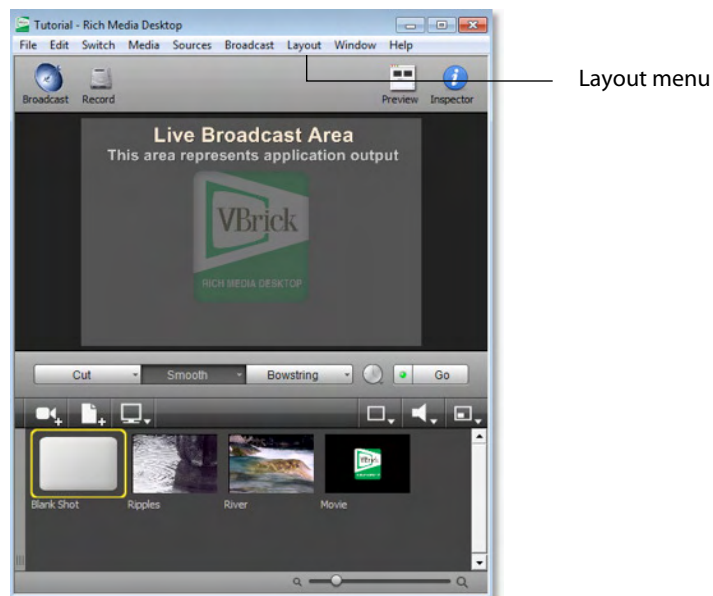
Sometimes you may want to temporarily turn on and off (toggle) the AutoLive state. Hold down the Shift and control keys at the same time to temporarily turn on Autolive. This enables you to quickly switch AutoLive on for one action (i.e. a mouse-click), then off again.

## Main Window Layout

Rich Media Desktop is designed to be immediately usable with a few mouse clicks. However, after you understand more about how Rich Media Desktop works, you'll probably want more flexibility.

Rich Media Desktop enables you to select which functions are displayed in the Main window. Most of these functions are added or removed from the main window using the Layout menu.

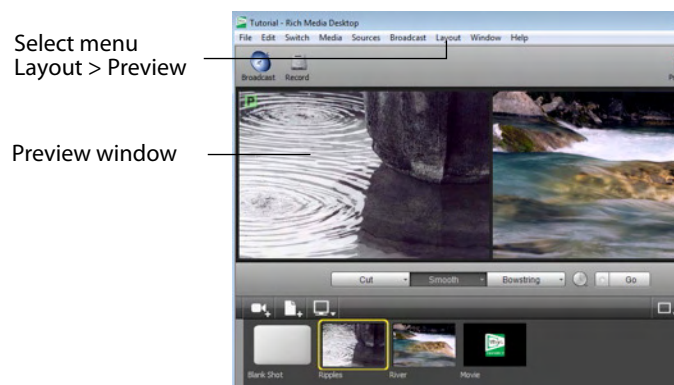
**Figure 1.** Main window Layout menu.



## Preview

Preview displays what the broadcast will look like if you click the Go button. This is only useful when AutoLive is off. To display Preview, click the Layout menu and select Preview.

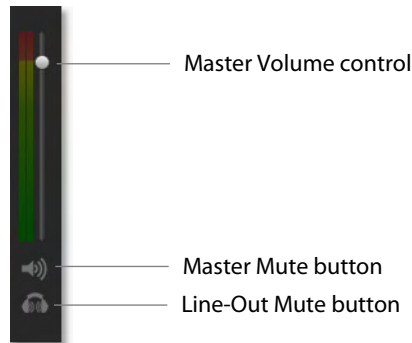
**Figure 2.** Preview window.



## Master Audio

The Master Audio panel enables you to control the output volume level, mute audio output, and mute the line-out feed. To display Master Audio, click Layout > Master Audio.

**Figure 3.** Master Audio Panel



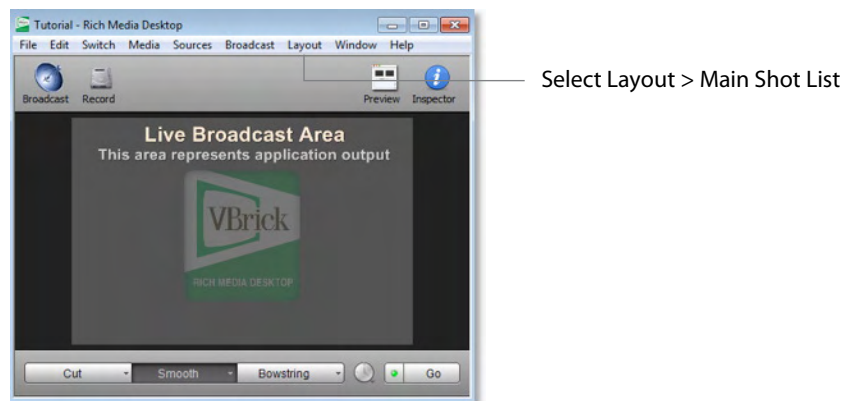
The Master Mute button controls the mute of the master audio (what your viewers hear). Even when you have muted the output, the encoder still generates audio, but it is silent. If you don't want to broadcast audio, you should modify the Encoder Presets to not process audio through the encoder.

The Line-Out Mute button controls the what you hear locally. When line-out is mute, audio is not sent to your headphones or speakers, but your viewers will still hear it.

## Main Shot List

Normally, the Main Window displays the shot list at the bottom of the window. However, you can hide the shot list display by selecting Main Shot List from the Layout Menu. This is useful if you want to open up multiple Shot List Layer windows.

**Figure 4.** Main window with Shot List turned off.





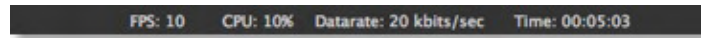
## Output Statistics

You can display statistics about your broadcast, but they are only available while you are broadcasting. To display the Output Statistics panel, click Layer > Output Statistics.

Rich Media Desktop displays the following statistics:

- **FPS Frames per second** This value is controlled by the video part of your currently selected Encoder Presets. However, most encoders use this value as a target, not an exact limit. If this value consistently drops well below your target FPS, consider using a lower-quality video output to lower the bandwidth.
- **CPU Usage (percentage)** This represents the current load on your CPU. The encoder affects the CPU usage more than any other parameter in Rich Media Desktop. If this value is high, you should use a different encoder, or modify your encoder settings. If the CPU usage is near 95%, use a lower quality video output to lower the bandwidth.
- **Data Rate** This displays the current bandwidth used by your broadcast. This value is controlled by the video part of your currently selected Encoder Presets. Like frames per second, it is not always respected by the encoder. The encoder uses this value as a target, not an exact limit. Some encoders may (by design) exceed this limit.
- **Time** This displays how long you have been broadcasting. This value does not reset when you start/stop the broadcast, it is cumulative. This enables you to save portions of a broadcast to disk and still know the total amount of time. In the example below, the presentation has been broadcasting for 5 minutes and 3 seconds:

**Figure 5.** Output Statistics Display

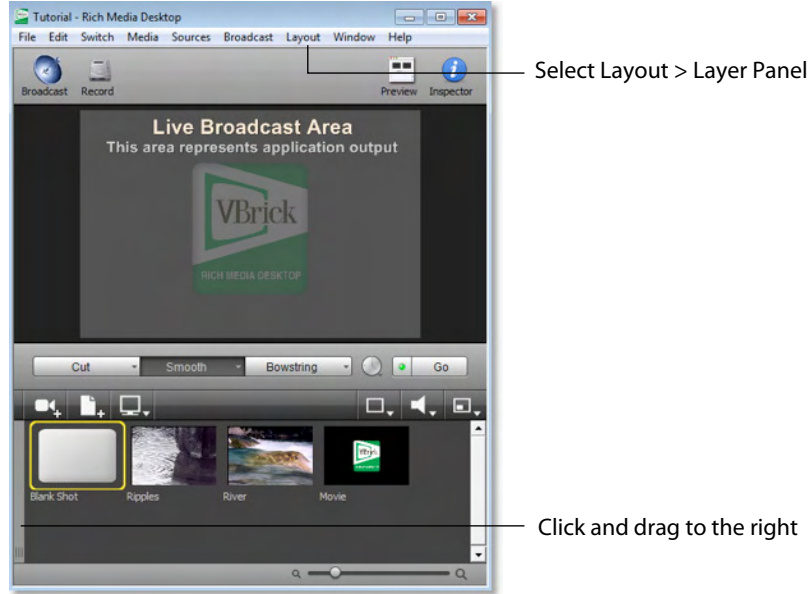


## Layer Panel

To open the Layer Panel, select Layer Panel from the Layout menu at the top of the Main window. You can also open the Layer panel by hovering over the narrow grey panel on

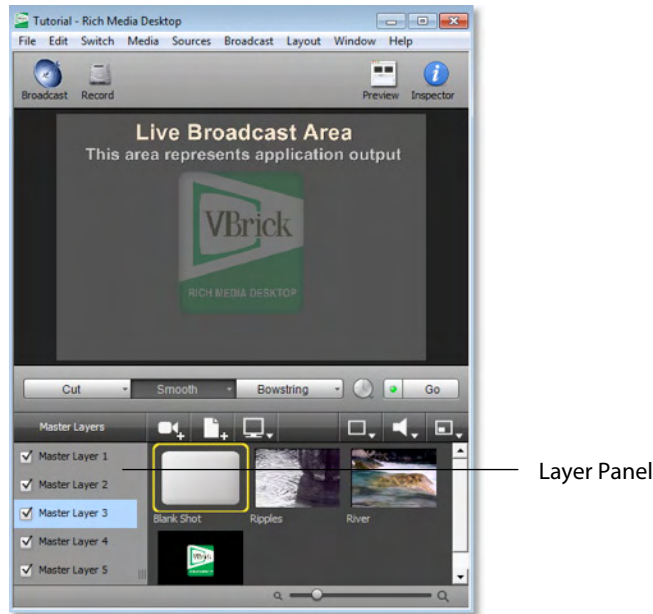
the left side of the Shot Area until Rich Media Desktop displays a double arrow, then click and drag to the right until the Layer Panel displays:

**Figure 6.** Two ways to open the Layer panel.



Here is what the Main Window looks like with the Layer Panel open:

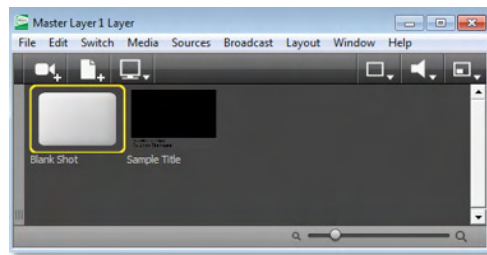
**Figure 7.** Main window with Layer panel open.



## Layer Windows

You can open the Shot List in a separate window. Select Window > New Layer Window to display the windows you can open. The figure below illustrates the Master Layer 1 window when you open it as a separate layer:

**Figure 8.** Master Layer 1 window.



This panel works exactly like the Shot List panel in the Main Window, but enables you to open multiple layer panels. You can change which layer is displayed on each panel – select Layout > Go To Layer, then select a different layer.



# Getting Started

## Introduction

The best way to get started using Rich Media Desktop is to quickly work through all its main features. This tour presents a series of three tutorials, each designed to help you understand how to create and broadcast presentations using Rich Media Desktop.

As you work through these tutorials, you will also become familiar with important Rich Media Desktop concepts and how you can use them to deliver high quality broadcasts. The more you know about Rich Media Desktop, the better it will serve your broadcasting objectives.

Because each tutorial builds on the skills and knowledge you learn in the previous tutorials, it is recommended that you take the tours in succession. Working through all the tutorials takes about thirty minutes.

As you gain hands-on experience creating video and audio presentations - which leads to a working knowledge of Rich Media Desktop and its components and architecture - you will gain proficiency in using Rich Media Desktop.

## Tutorials

- [Tutorial 1: Basic Concepts](#)
- [Tutorial 2: Editing Shots](#)
- [Tutorial 3: Broadcasting](#)

---

**Note:** You can run all of the tutorials without a license. However, a watermark on the video and an occasional voice-over on the audio are present until a valid license is activated.

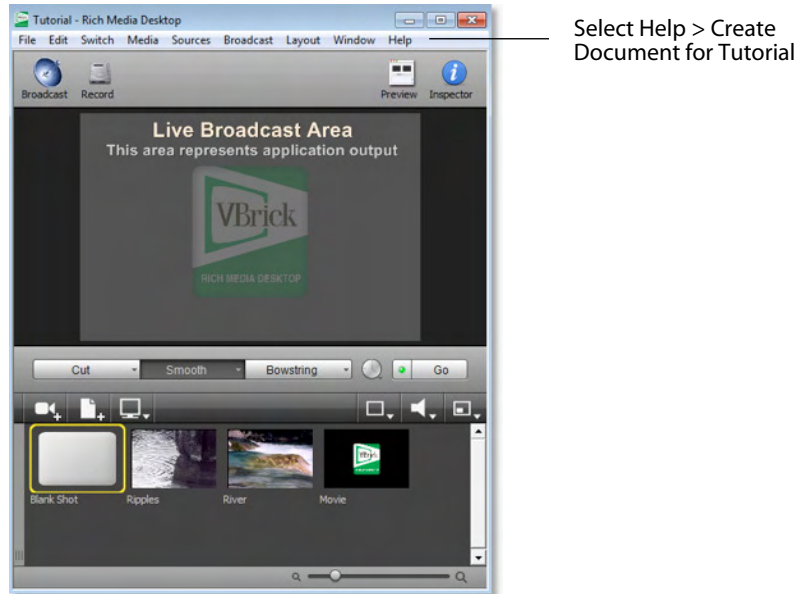
**Note:** For licensing information, select Preferences from the File menu, click the Add (+) button, then click Purchase.

---

## Tutorial 1: Basic Concepts

The goal of this tutorial is to provide you with a quick but successful experience creating and broadcasting a presentation using Rich Media Desktop. This tutorial requires that you open the tutorial document in Rich Media Desktop. To do this, select Create Document for Tutorial from the Help menu in Rich Media Desktop. A new window will open as shown below:

**Figure 9.** Main window in Tutorial



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**Note:** If you are running the tutorial with Rich Media Desktop in demonstration mode, the Rich Media Desktop logo will appear from time to time and audio output will have a periodic voice-over.

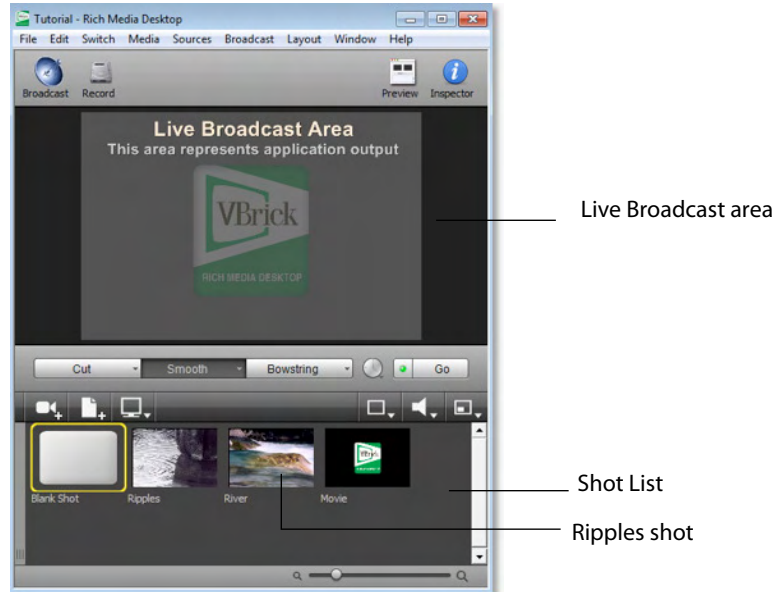
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### The Main Window

Rich Media Desktop has two main display areas: Live Broadcast and Shot List. The Live Broadcast is the large area in the upper portion of the window displaying what Rich

Media Desktop will broadcast to your viewers (or record to disk). The Shot List, in the lower half of the window, displays the shots available for broadcast:

**Figure 10.** Live Broadcast Area and Shot List



## What Is a Shot?

Rich Media Desktop uses the concept of a shot to construct presentations. A shot contains media, along with the settings for that media. In its simplest form, a shot contains one piece of media such as a photo or a video clip. But it can also be something more complex, like a live camera with a title, and background music.

A shot can be edited and its settings can be changed (See [Tutorial 2: Editing Shots](#)). Shots are important because they enable you to configure a lot of information before you broadcast your presentation. This enables you to concentrate on creating a good production during your broadcast.

## Switching Between Shots

Individual shots are displayed in the Shot List. Click the Ripples shot in the Shot List area and the image fades into the Broadcast Area display. This is called taking a shot live. Click the shot labeled Blank Shot and the Ripples image fades to a blank screen. The Blank Shot enables you to display nothing, which is sometimes useful.

## Transitions and Go Button

### Transitions

In the previous examples, a fade occurred when you clicked on a shot. This is because a smooth transition is the default. Transition controls are located just below the

Broadcast Area where three kinds of transitions are shown: Cut, Smooth, and Bowstring.

**Figure 11.** Transition Control Panel



When Cut is selected, transitions are immediate. When Smooth is selected, transitions fade in (as demonstrated above). Select Bowstring to implement the transition with a wave effect (like a bow string when it is released).

To see the Bowstring effect, Click the River shot to place it in the Broadcast Area. Next, click the Bowstring button. The Transition panel should look like this:

**Figure 12.** Bowstring Transition Control



Now click the Ripples shot. The Ripples shot will appear using the Bowstring (wave) effect.

There are more than just three kinds of transitions to choose from, but only three can be assigned to the Transition Panel. To select a different transition type, click the small arrow on the right side of the transition button. When the list appears, select a new transition to be assigned to this button. You can also click the transition button and drag the mouse downward until a menu of selections is displayed.

For example, change the first button (Cut) to be Swoop by clicking on the Cut button and dragging downward until the menu appears. Next, select Swoop from the menu. Swoop should now be selected for the first button. Now click back and forth between River and Ripples using Swoop.

These three transition buttons can also be selected by using the following key combinations: Ctrl+1, Ctrl+2, and Ctrl+3.

## Transition Speed

You can also Control how fast a transition will occur, by clicking the Clock (Transition Speed) icon:

**Figure 13.** Transition Speed Icon



Click on the clock icon and choose Slow from the menu. When Slow is selected, the clock icon changes to a small turtle, indicating slow mode:

**Figure 14.** Slow Transition Icon





In Slow mode, when you perform a transition it will occur slower than normal. When faster transitions are selected, the icon changes to display a rabbit.

## Go Button

The Go Button (or Ctrl+G) enables you to make a transition occur at any time.

**Figure 15.** The Go Button



Clicking the Go button does nothing when Rich Media Desktop is in its default mode of AutoLive. Later in this tutorial you will discover how to use the Go button to transition between different shots when the AutoLive mode is off.

## Layers

---

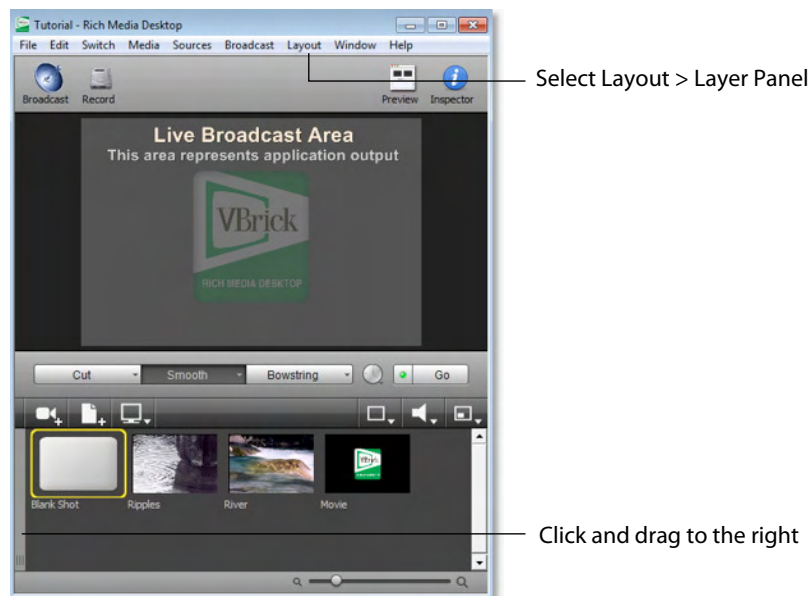
**Note:** Before you start this section, please select Smooth as your transition.

---

Rich Media Desktop enables you to use several layers. Layers are different kinds of displays (shots, logos, titles, etc.) placed on top of each other so that all are seen at the same time. It is an excellent way to add and remove objects in your broadcast.

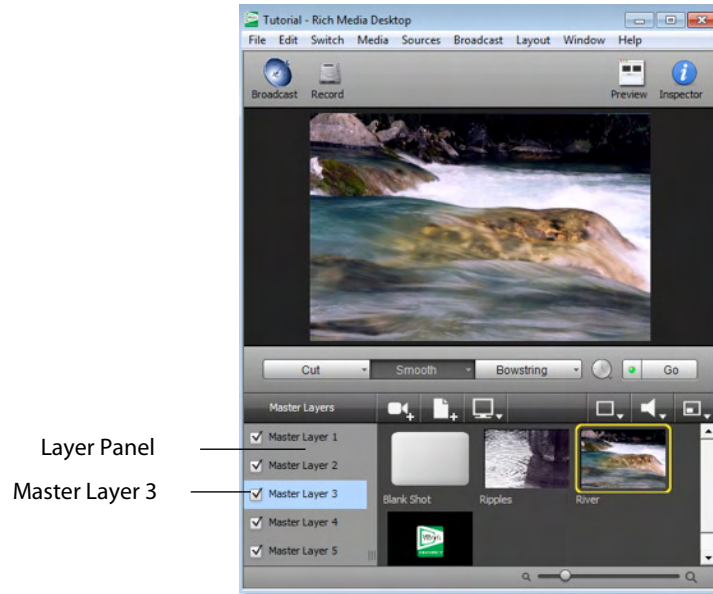
To open the Layer Panel, select Layer Panel from the Layout menu at the top of the Main window. You can also open the Layer Panel by hovering over the narrow grey panel on the left side of the Shot list until a double arrow is displayed, then clicking and dragging to the right until the Layer Panel is displayed:

**Figure 16.** Two Ways to Open the Layer Panel



Layers are displayed in a particular order: Master Layer 1 is on top, Master Layer 2 below it, Master Layer 3 below Layer 2, etc. This tutorial, so far, has been operating on Master Layer 3.

**Figure 17.** Layer Panel Display



Now select Master Layer 2 by clicking it. Each shot is assigned to a particular layer, so when you switch layers you only see the shots that are on that layer. For example, Ripples, River, and Blank shots are on Master Layer 3 (as seen previously in this tutorial), but Master Layer 2 has only a logo and a blank shot.

**Figure 18.** Master Layer 2 Shots



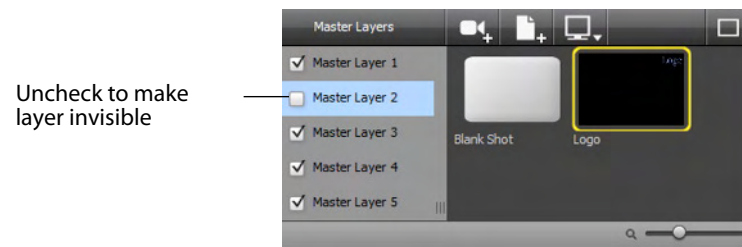
Click on the shot named Logo. Notice that the Logo fades into the top-right corner of the Live Broadcast area:

**Figure 19.** Logo Shot Added



Layers can also be made invisible by unchecking the checkbox for that layer. Unchecking Master Layer 2 causes the Logo to be removed from the Broadcast area.

**Figure 20.** An Unchecked Layer



Re-check the Master Layer 2 check box and the Logo will reappear.

## Auto Live

---

**Note:** Before you start this section, please make sure that all layers are visible (all layer check boxes are checked), and that you are on the Master 3 Layer, which shows Ripples and River shots.

---

**Figure 21.** Master 3 Level with All Layers Visible



So far in this Tutorial, Rich Media Desktop has been running in AutoLive mode. What this means is that any change you make on the Main window is automatically made live in your Broadcast. This mode is very useful for those users who want to set up all of their shots at once and then single-click them as they run their presentation. But the disadvantage of this single-click method is that you can only see one shot change at a time. Once you click a shot, your viewers also see it (with no preview of how it will look on your part).

## Turn AutoLive Off

Turn AutoLive off by unchecking AutoLive in the Switch menu. A dialog box will be shown informing you that AutoLive mode is off and transitions must be made using the Go button. Click OK in the dialog box to continue.

Try clicking the Ripples and River shots. Nothing happens because AutoLive mode is off. Now click the Ripples shot and click the Go Button. The Ripples shot is taken live in the Broadcast area. Click the River shot and, as expected, nothing happens. Click the Go button and River shot becomes Live.

---

**Note:** When AutoLive is off, you must always click the Go button (or press the Ctrl+G keys) to display the selected shot in the Broadcast area.

---

## Multiple Changes

The benefit of having AutoLive off is that you can make several changes first and then have them occur all at the same time. To do this, verify that AutoLive is off and click the Ripples shot (you should still see River in the Live window).

Now click Master Layer 1 in the Layers Panel and click Sample Title. Click the Go button (or Ctrl+G) and notice how both the Ripples shot and the Sample Title shot become Live at the same time.

## Preview

---

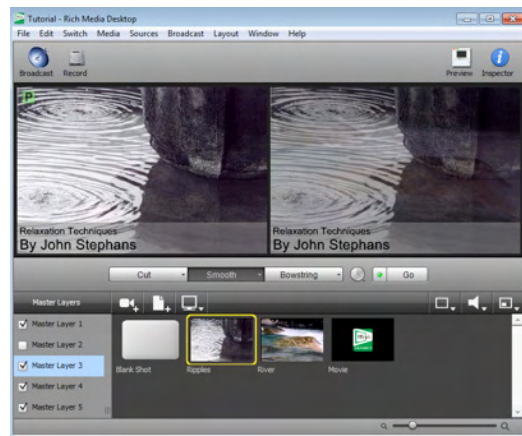
**Note:** Before proceeding, make sure Master Layer 3 is selected, and the Ripples shot is also selected.

---

One issue you may have noticed while running this tutorial is that you cannot see the changes you are making before broadcasting them. To solve this problem, Rich Media Desktop enables you to see a Preview of what you will broadcast.

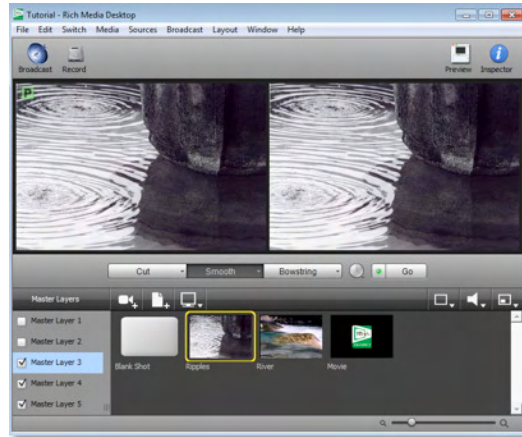
Select Preview from the Layout menu. The Left side of the Main window is the Preview area. Notice that it has a small green square with the letter P inside it. The Right side is the Live Broadcast area as before. Your Main window should now look like this:

**Figure 22.** Main window with Preview Display



Turn off Master Layer 1 and Master Layer 2 by unchecking both checkboxes. This removes the logo and title from the Preview. Now click the Go button to transition the Preview into the Broadcast area:

**Figure 23.** Unchecked Master Layers 1 & 2



## Tutorial 2: Editing Shots

The first tutorial used only the Main window, and explained various ways in which you can use an existing shot. But shots can also be created and edited. This tutorial demonstrates how to edit your shots to meet your presentation needs.

Shots can be configured in different ways. Some shots have only titles and some just a logo, others have only a photo. Shots are created to be used in broadcast presentations. When you broadcast you are choosing, in real time, the shot you want to display. Shot editing enables you to make shots you need for your broadcast.

---

**Note:** Before you start this tutorial, create a new tutorial document by selecting Create Document Tutorial from the Help menu. You should see a new Main window as shown below:

---

**Figure 24.** Tutorial Main window



### Shot Editor Overview

Double click the Ripples Shot. This opens the Shot Editor window.

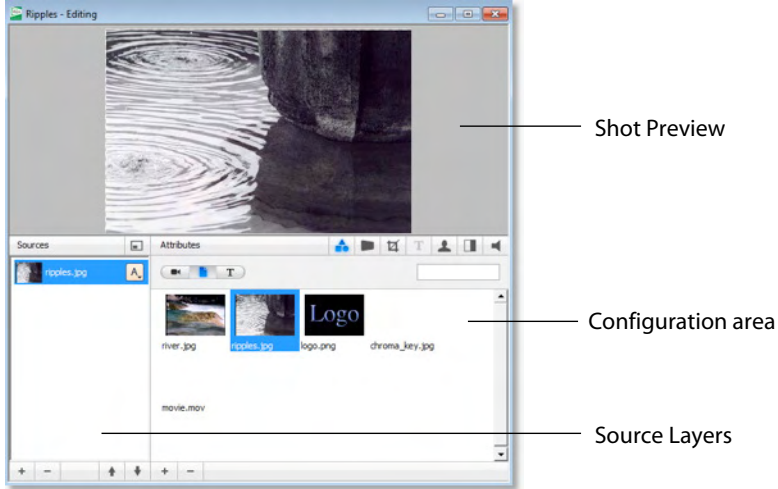
---

**Note:** If you save a document with the Shot Editor window open, Rich Media Desktop remembers this and will re-open the edit window when the document is re-opened.

---

The Shot Editor window has three main areas: Shot Preview, Configuration Area, and Source Layers.

**Figure 25.** Shot Editor window



**Shot Preview** This area shows exactly what this shot will look like to your viewers when you take this shot live.

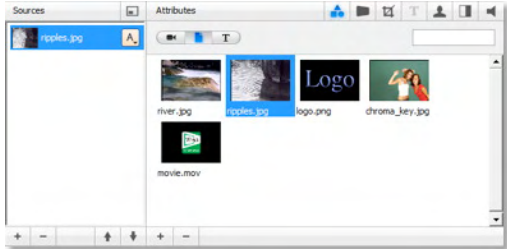
**Configuration Area** This is where you make changes to the content of the shot, and set its parameters. The configuration area changes appearance depending on the selected Source Layer. Click the source icon in the configuration area and it will become invisible in the Preview.

**Source Layers** This area enables you to add, remove, and reorder the sources in your shot. Sources are ordered visually from top to bottom. For example, the first source in the Source Layer List will appear on top of all other sources in the preview. This list also controls visibility of each of the elements in the shot.

## Source Layers

The bottom left part of the Shot Editor window lists the sources that make up your shot.

**Figure 26.** Shot Sources





Click on the Logo icon (source) in the Configuration Area. Notice that the Logo is displayed in the Shot Preview area. Click the Ripples icon (source) and the Preview switches to Ripples. This is how you change the source media for this layer in the shot.

## Template Window

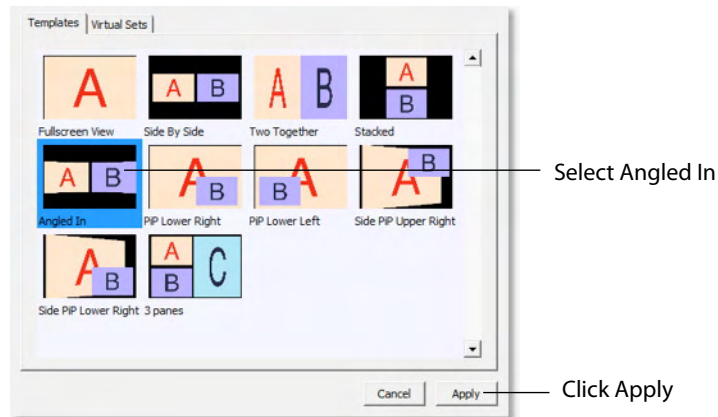
The Template window icon is located in the controls bar in the middle of the window.

**Figure 27.** Template window Icon



Click on the template window icon to open the Template window. Select the Angled In template and click the Apply button:

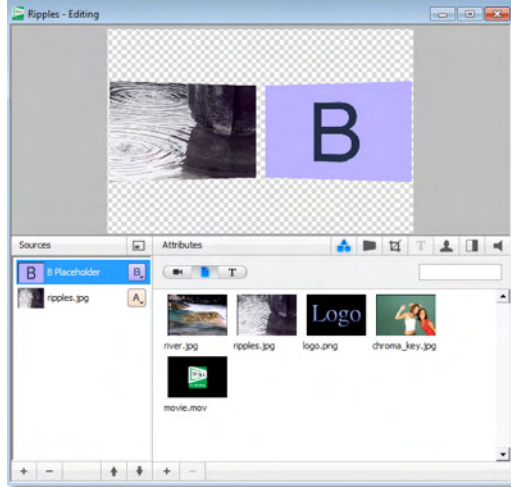
**Figure 28.** Template window



Notice the Preview has changed again in the Shot Editor window, and now shows the Ripples image on the Left side. This is because the template selected has an A and a B

portion to it. Two different sources can be assigned to A and B, but for now only A is assigned (with the Ripples source):

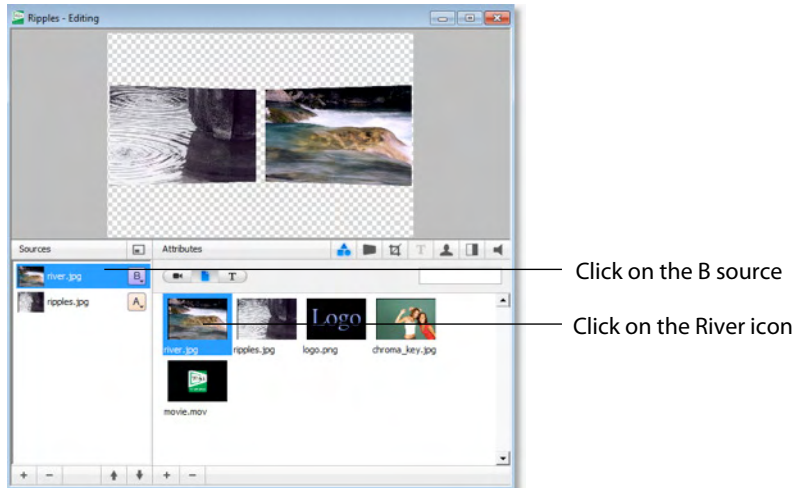
**Figure 29.** Shot Using Template



Sources in Rich Media Desktop can be assigned either A, B or C in the Source Layers list. To change the assignment, click the A (or B or C) icon and make a selection. This makes choosing a new template much simpler because Rich Media Desktop automatically positions the correct sources on screen.

For example, to change the media for the source that is identified as B, select the source identified as B, then click the River icon in the Configuration area. Your Preview should now look like this:

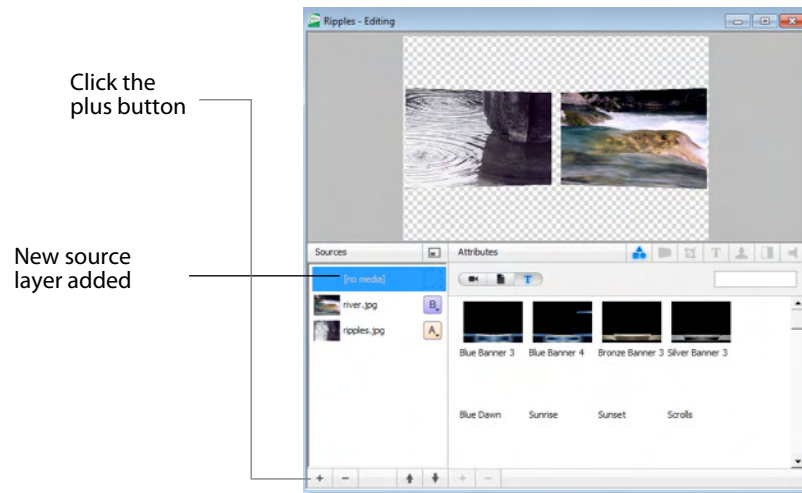
**Figure 30.** Preview with New Media Source



## Titles

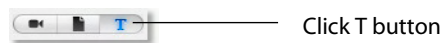
You can also add a title to a shot. First click the plus (+) button on the bottom of the Source list to add a new layer:

**Figure 31.** New Layer Added



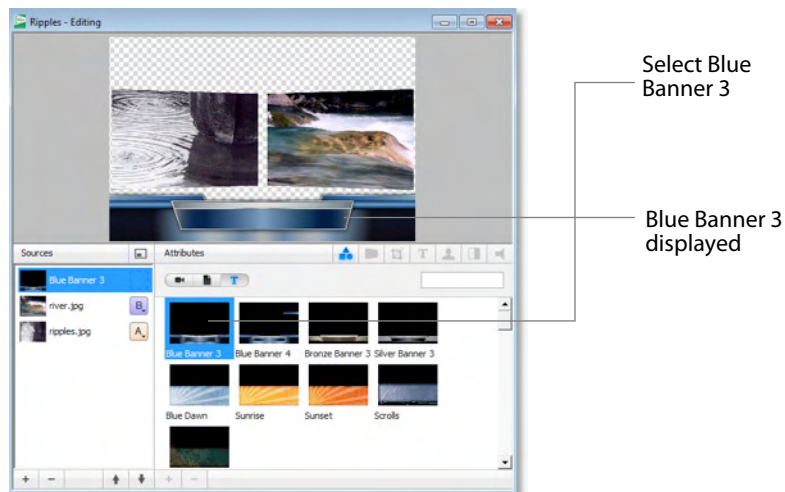
To add a title template, click the T button on the control panel:

**Figure 32.** Title Template Icon



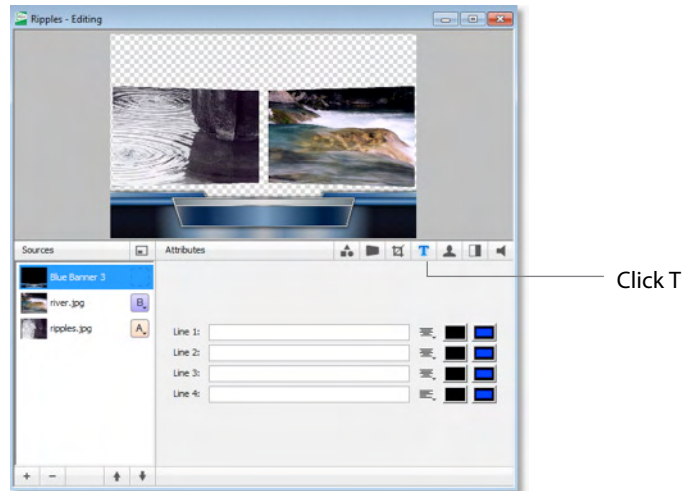
Select the title template called Blue Banner 3 (items are not listed alphabetically) and your preview will add the title:

**Figure 33.** Blue Banner 3 Selection



Next, click the T icon in the Attributes bar to enable text editing:

**Figure 34.** Edit Text window



Type text into lines 1 & 2 and it will display in the preview window:

**Figure 35.** Added Text

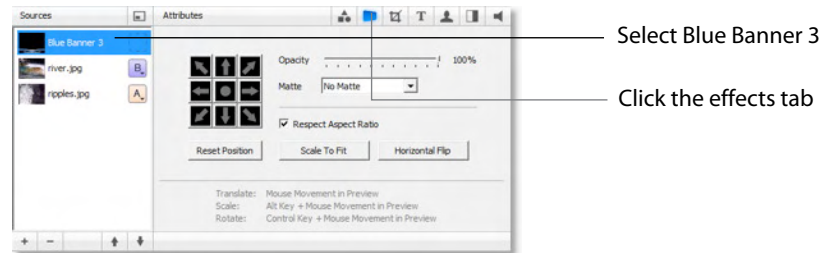


## Effects/Motion

### Positioning Objects

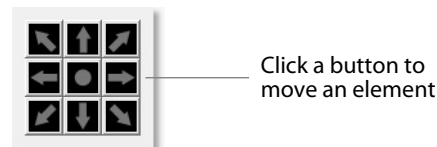
The sources in a shot can be positioned anywhere on the on screen. Make sure Blue Banner 3 is selected. Click the Effects tab in the Shot Editor.

**Figure 36.** Effects window Display



Though the title element is initially placed in the bottom middle of the Preview screen, it can be moved anywhere. To move the title, click and drag it to a new location. You can also move the title to an edge, corner, or center by clicking on one of the repositioning buttons in the configuration area:

**Figure 37.** Repositioning Controls



You can also resize or rotate the title.

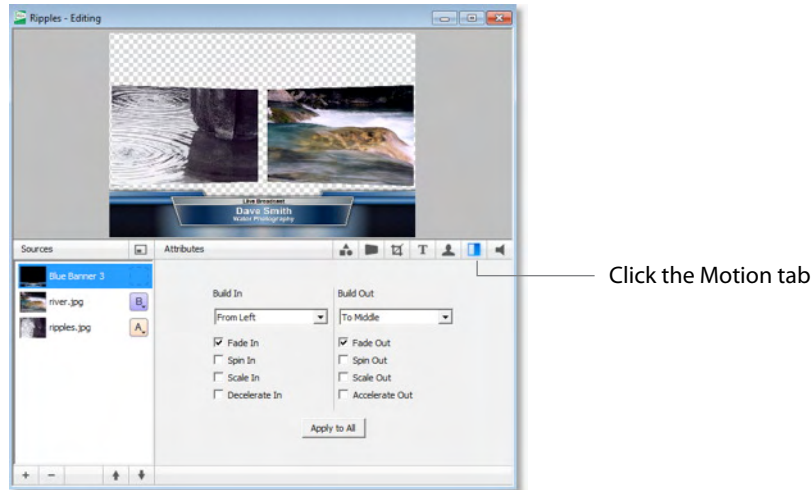
To resize the title (while respecting aspect ratio), hold the Alt key down while moving the mouse vertically. To resize (independent of the aspect ratio), hold the Alt key and the shift key down while moving the mouse vertically and horizontally. The Respect Aspect Ratio checkbox in the configuration area must be unchecked.

To rotate the title, hold down the Ctrl key while moving the mouse vertically and horizontally.

## Motion for Objects

All objects (including the title) can have motion assigned to them. Click the Motion tab, to open the Build-In/Build-Out configuration panel:

**Figure 38.** Motion window



Motion will only occur during a transition (when you click Go, or click a shot in AutoLive mode). Motion defines how to add (Build-In) or remove (Build-Out) a shot element.

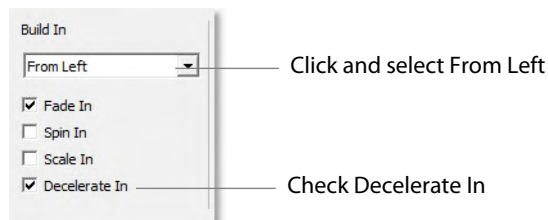
There are two forms of Motion:

- 1. Build-In (add)** Build-In motion occurs when the shot is added to the Live Broadcast display.
- 2. Build-Out (remove)** Build Out motion occurs when the shot is removed from the Live Broadcast display.

## Changing Motion Options

Click the menu under Build-In in the configuration area and select From Left. Also check the Decelerate In checkbox:

**Figure 39.** Motion Control Selections



To see this behavior in action, you must go back to the Main window and trigger the Build-In action,. To do this, follow these steps:

1. Close the Shot Editor window by clicking the X in the upper-right corner of the window.
  2. In the Main window, make sure Smooth transition is selected.
  3. Click on the Blank Shot, then click the Ripples shot (recently edited).
- Notice that when the Title appears it comes in from the left.

## Tutorial 3: Broadcasting

This tutorial demonstrates how to setup and broadcast your Rich Media Desktop presentations. You can broadcast to a specific computer (Unicast), multiple viewers (Multicast), or even record your broadcast to disk.

There are two main components for broadcasting your presentation (or saving it to disk):

- 1. Encoding** You need to decide how you are going to encode the broadcast. Encoding is the type of compression you will use (JPEG, MPEG4, etc.). Rich Media Desktop comes configured with many common encoding options.
- 2. Destination** A destination for the broadcast must be selected. You can send it to a server for broadcast or save it to disk.

## Broadcast Settings

To display the Broadcast Settings window, select Broadcast Settings from the Broadcast menu (or press the Ctrl+Y keys).

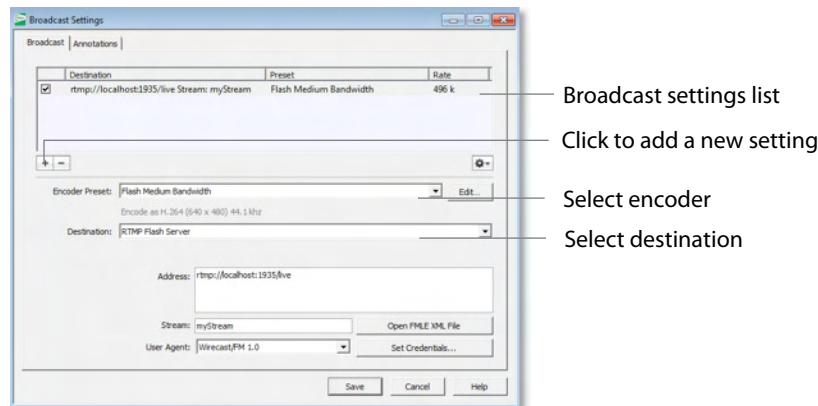
Multiple settings for the same broadcast can be listed in the top part of the Broadcast Settings window. For example, you might want to create a broadcast with multiple bit-rates for viewers using different internet connections. You may also want to record to disk while broadcasting your presentation. To add a new broadcast setting to the list, click the plus (+) button.

Use the encoder presets menu to select how your broadcast will be encoded (which CODEC to use). For the purpose of this tutorial, select any of the encoders, or just use the default setting.

Configuration options depend on the encoder selected. Only three streaming types are available: Windows Media, Flash, and QuickTime.

Use the Destination menu to select the destination of your broadcast. Most of these are remote server locations, but the last option enables you to save your broadcast on your local disk.

**Figure 40.** Broadcast Settings window



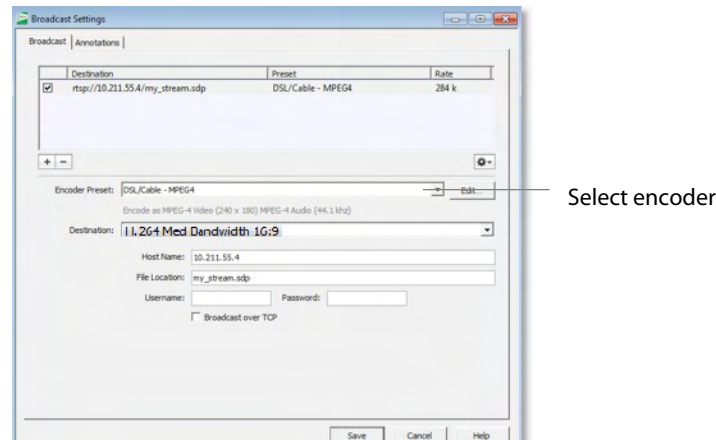


**Note:** Clicking in the list area on a location that de-selects all the settings creates a no output state. This is corrected by clicking any setting on the list.

## QuickTime Streaming

From the encoder presets menu, select one of the H.264 (QuickTime) encoders.

**Figure 41.** QuickTime Streaming Setup window



Rich Media Desktop provides five destinations for QuickTime streaming:

- 1. Announce to QuickTime streaming server** This will talk to a QuickTime streaming server and uses the server to send the broadcast to users who view that server. (This is the default destination.)
- 2. Built-in streaming server** Rich Media Desktop includes a built-in streaming server which will allow a small number of viewers to view your broadcast. Define the name of the SDP file and you can immediately broadcast.
- 3. Unicast** This will broadcast directly to one single client (computer). You must define the address for the single client, then the presentation is streamed directly to that computer.
- 4. Multicast** This is an advanced feature that will broadcast globally on a network. In a LAN environment, this option can provide the ability to broadcast to multiple users without using QuickTime streaming server. This feature only works over a LAN, not over the Internet.
- 5. Record to Disk** If you want to save your broadcast, you can use this option to record the broadcast stream to disk.

### Announce to QuickTime streaming server

Since this is the most common method for QuickTime, you should always consider using this option for your broadcast. To use this feature, you must supply a host name and file location. You need to supply a user-name and password only if your server requires a login.

This feature requires that you have access to a QuickTime streaming server (QTSS) or Darwin streaming server (DSS). Darwin streaming server is a free download from Apple and can be installed on many operating systems (not just Macintosh).

## Unicast

Unicast is used to broadcast to only one computer. To set up a unicast, follow these steps:

1. Obtain the IP address of the target computer, and configure your broadcast using it.
2. Save an SDP file on the target computer.
3. Start broadcasting your presentation.
4. The viewer must open the SDP file using QuickTime Player to see your presentation.

---

**Note:** If you change any setting regarding the broadcast (encoding settings, etc), you must re-create and re-distribute the SDP file.

---

## Multicast

Multicast is used to broadcast to any computer on your local network (not the internet). To use this feature, you must create and distribute an SDP file to all users on your local network who want to view the stream.

The Video Address and Audio Address (and related ports) are, effectively, fake addresses that do not really exist on the local network. This information is stored in the SDP file so that client applications know where to look for the stream. The default addresses/ports that Rich Media Desktop generates are generally sufficient to use.

To set up a multicast, follow the same step given for Unicasting. (See [Unicast](#), immediately preceding.)

## Record To Disk

If you want to archive your stream, you can use the Record To Disk destination. The only setup information required is the filename. If you use Auto Increment Filenames, all files will be saved with a sequential number appended to them.

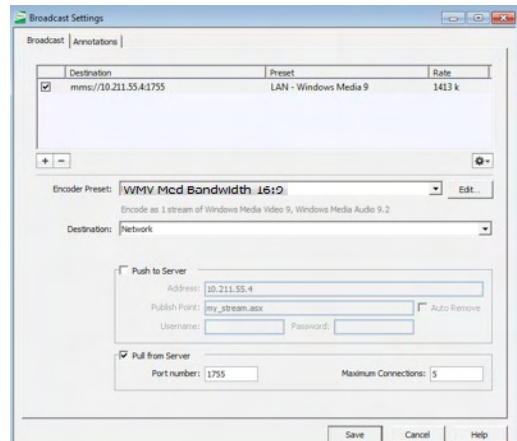
## Windows Media Streaming

Select any WMV from the encoder presets menu.

---

**Note:** Windows Media options are only available when running on a Windows computer.

---

**Figure 42.** Windows Media Streaming Display

There are three destinations available for Windows Media:

- 1. Network** The stream will be broadcast over the network, using either a server or your local computer.
- 2. VBrick** The stream will be sent to VBrick for broadcast.
- 3. Record to Disk** If you want to save your broadcast you can use this option to record the stream to disk.

## Network-Push To Server

To use the Network-Push To Server option, you must have access to a local Windows Media Server, or one located at an ISP (search the internet for Streaming Windows Media Server to find one). Using this option is a more professional way of creating a stream because it places the bandwidth strain on the remote server. All you need is a good local connection to the internet to push your presentation onto the Windows Media Server.

To configure this setting, enter the Internet address of the remote server, the file name that will become part of the URL that your users use to start the presentation, and any user name/password required by the ISP. If you check Auto Remove the file is deleted from the server when your presentation is finished.

## Network-Pull from Server

The Network-Pull from Server option turns your local computer into a mini Windows Media Server. This enables you to broadcast immediately from your computer, rather than through an ISP. There are, however, some limitations:

- 1. User Requirement** You cannot have more than 50 users connected at any one time.
- 2. Bandwidth Requirement** You must have enough bandwidth on your computer to supply all of your viewers.
- 3. CPU Requirement** Since your computer is acting as a server, the CPU must be fast enough to handle all of the user connections.

The largest issue with using this method is bandwidth. If, for example, all of your viewers are on a local network (a business or school), then you should be able to use this method. However, if you have a DSL connection to the internet and you want to broadcast a 200k stream to 20 viewers, you will probably not have enough upload bandwidth to accommodate this.

---

**Note:** Be aware that when you use Rich Media Desktop with an internet connection, the limiting factor is your upload bandwidth. Most ISP businesses offer packages that have a higher download than upload bandwidth. For example, a 512k DSL package is often limited to 256k of upload bandwidth.

---

To use the Network-Pull from Server option, set the port number that your users will use to connect to your computer. They will connect by using the Open URL option in Windows Media Player and enter a URL. For example, `mms://192.168.1.67:8080` represents a computer IP address of 192.168.1.67 and a port number of 8080.

---

**Note:** The URL "mms://" does not work with the Macintosh version of Windows Media Player, and you must use "http://" instead.

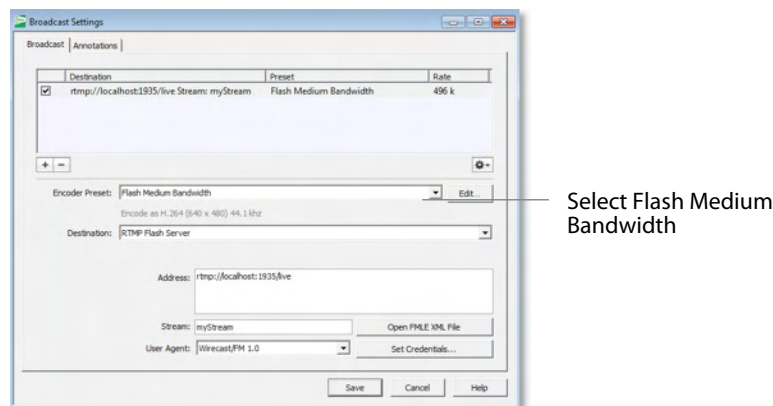
---

## Flash Streaming

Select Flash Medium Bandwidth from the encoder presets menu. Rich Media Desktop can stream to several Flash streaming servers, including Flash Media Server (Adobe) and Wowza streaming server (Wowza).

When you configure Rich Media Desktop to stream using Flash, Rich Media Desktop displays a Flash queue bar in the main window. The Flash queue shows you how much data is currently buffered on your computer, waiting to be transferred to the server.

**Figure 43.** Flash Streaming Setup window



## Encoder presets

encoder presets enables you to select an encoder used for broadcast. If you change the preset to another encoder type, the list of destinations associated with it will also change. The destinations are tied to the type of codec you are using.

## Destination

The Destination menu lists many CDN's and live streaming Websites. You need to have an account with the selected destination to use that service. You can also select Record to Disk as a destination for your presentation. The RTMP Flash Server is the default destination.

## Address

The address of the selected destination is obtained from your Flash Media Server administrator for this URL.

## Stream

Each Flash stream requires that you enter the name of the stream. Contact your Flash Media Server administrator to obtain this name.

## Open FMLE XML File

Rich Media Desktop can load configuration files that have been created for Flash Media Live Encoder (FMLE). Rich Media Desktop will read the RTMP Address and Stream Name from this file, but it will not read any other configuration information from the FMLE XML file (bit rates, codec configuration, etc.). Many popular sites provide an FMLE configuration file for your stream configuration.

## User Agent

Although rare, some streaming services require that Rich Media Desktop presents itself as FMLE when broadcasting. By default, Rich Media Desktop correctly presents itself as Rich Media Desktop/FM 1.0. Do not change this unless your provider has asked you to do so.

## Set Credentials

Some Flash Media Servers require authentication. Rich Media Desktop offers the standard Adobe authentication method. However, if required to do so by your server, you must enter your credentials here. But if your server does not require authentication, there is no need to provide these credentials.



# Adding Media

## Introduction

In addition to live video from your cameras, Rich Media Desktop enables you to work with media created outside of Rich Media Desktop. This section introduces some common media types you can use with Rich Media Desktop.

There are three ways to add media to Rich Media Desktop:

- 1. Drag & drop into a new shot.** The simplest way to add media to a shot is to drag & drop the media directly into Shot List in the Main window.
- 2. Drag & drop into an existing shot.** To add media to an existing shot, drag & drop the media directly into the Shot Editor's media list.
- 3. Select directly.** You can add a media by selecting Import Media from the File menu, by pressing the Ctrl+Shift+I keys, or by clicking the plus (+) button in the Shot Editor.

## Topics

- Images/Opacity
- Movies

## Images/Opacity

Rich Media Desktop supports a wide variety of still images types (TIFF, GIF, JPEG, PNG, etc). Some of these formats offer some form of opacity (or transparency). This is often called an Alpha Channel. Rich Media Desktop works seamlessly with these formats making them the preferred methods for using graphics and logos, which have transparency.

## GIF and Transparency

GIF files are a special case because they only offer transparency and not a true Alpha Channel. The GIF format enables you to define part of the image as transparent (completely invisible), but does not enable you to define it as partially transparent. Some GIF images use transparency for much of the image. However, near the edges of the visible data, transparency cannot be used. This happens quite often when there is a shadow near the edges of the visible data. The author of the GIF often assumes a certain background color (white, for example) and that color becomes embedded in the actual image.

When Rich Media Desktop displays these types of images, the edges of the visible data will show the background that was saved in the GIF. This is not a defect in Rich Media Desktop and, therefore, Rich Media Desktop can only present the data as it exists in the GIF. The solution is to obtain the original image and re-save the image as either TIFF or PNG. Both of these formats offer full Opacity.



## Movies

Rich Media Desktop supports a wide variety of movie formats (MOV, AVI, WMV, etc). Sometimes, however, you need to install a codec to use these formats. A very commonly desired codec is DivX®. Rich Media Desktop will inform you if a codec is missing or if you need to install one. It is beyond the scope of this user guide to describe all of the possible codecs available on the market today, or explain the installation details. Contact the provider of the codec for details on installation.

## Problems Showing Movie Types

Although there is always the possibility that Rich Media Desktop is at fault, please try to open the media with QuickTime player and/or Windows Media Player before contacting technical support. If these players cannot open the file, most likely the codec is not properly installed (or there is no available codec for that media).

Please note that Rich Media Desktop does not currently support some file formats (.mpg, .mpeg, .m1v, .m2v). The solution is to convert the media into a different type such as MPEG-4.

If QuickTime Player can play the media and Rich Media Desktop cannot, contact: your VBrick representative.

## AVI Video

Some AVI files may play the audio but not the video. The solution is to convert the media into a different type, such as MPEG-4.

## Real Media

Real Media Files (.RM) are not supported by Rich Media Desktop. The solution is to convert the media into a different type such as MPEG-4.



# Using Titles

## Introduction

Rich Media Desktop offers a wide variety of title banner templates to use in your broadcast. Adding a professional looking title is as simple as selecting a template and adding your text.

## Topics

- [Adding Titles](#)
- [Modifying Titles](#)
- [Title Area](#)
- [Placing Titles](#)
- [Creating New Templates](#)

## Adding Titles

To add a title to a shot, double-click the shot to open it the Shot Editor:

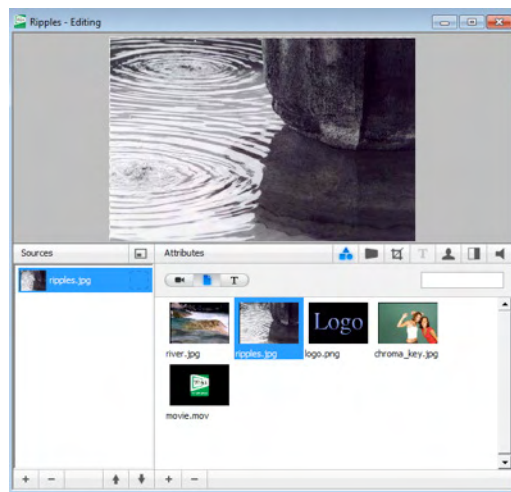
**Figure 44.** Shot Selected for Editing



Double-click a shot to edit

Rich Media Desktop displays the shot you selected in the shot editor window:

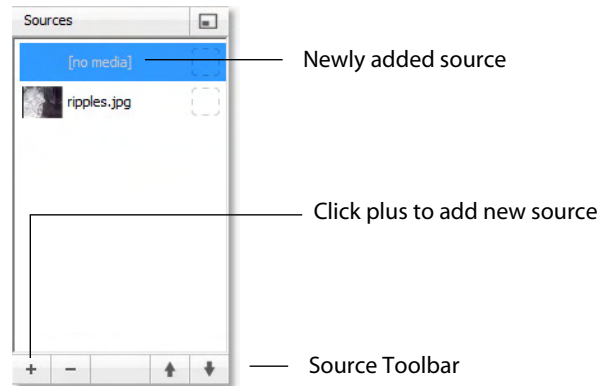
**Figure 45.** Shot Display in Shot Editor window



## Adding New Source

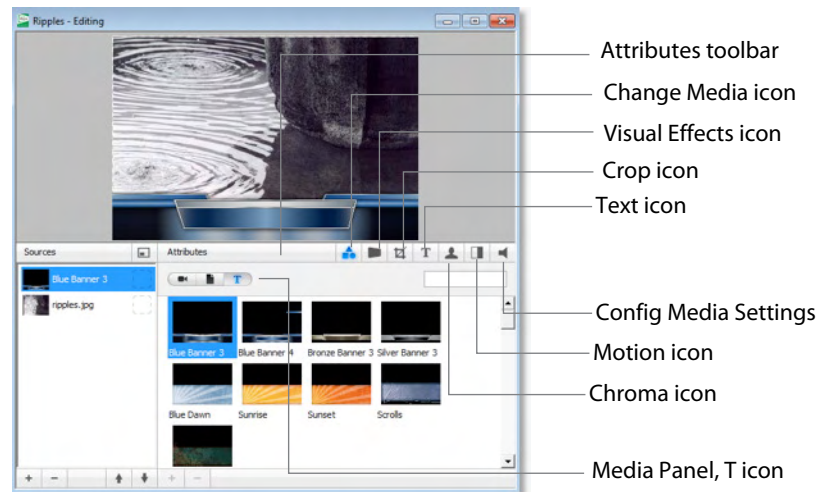
To add a new source, click the plus (+) icon in the Sources Toolbar at the bottom-left corner of the Shot Editor window. Rich Media Desktop adds a new source entry, labeled “[no media]”.

**Figure 46.** New Source Display



Using the tools in the Attributes toolbar and the Media Panel, you can configure your source so it displays as requires:

**Figure 47.** Attributes Toolbar



## Configuring Titles

The basic configuration for a media source is a title bar with text captions. Other attributes are optional. As you configure the media, you can view your progress in the Preview area at the top of the Shot Editor window. To configure a title, follow these steps:

1. Select the Change Media icon in the Attributes toolbar. (Each time you create a new source, the media icon is selected for you).

2. Click the T icon in the Media Panel to display titling templates. Scroll through the icons and select the banner graphic you want to use for a title. Be sure to select a title banner that is graphically designed to display the number of lines (1 to 4) you intend to use for this source. Rich Media Desktop provides many templates, but you can also create your own.
3. Click on the Visual Effects icon in the Attributes toolbar to adjust the position of the banner, control its opacity and matting, and set other visual effects. Usually, no adjustments need to be made.
4. Click on the Crop icon in the Attributes toolbar to crop the banner graphic as needed. As you adjust crop values, you can see the effect in the Preview window.
5. Click the Text icon in the Attributes toolbar and enter up to 4 lines of text to display in the title. You can adjust paragraph formatting, font characteristics, and font color using the buttons to the right of each line.
6. If you plan to chroma key the title, click the Chroma icon in the Attributes toolbar to enable and set up the chroma key. See Shot Editor Chroma Key to learn how to enable and configure chroma key settings.
7. Click on the Motion icon in the Attributes toolbar to set up your builds.
- 8.

---

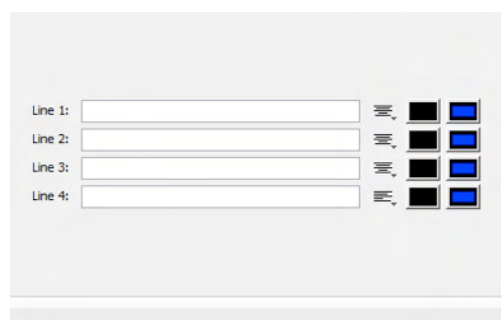
**Note:** For more detailed information on the above steps, see [Edit Menu](#).

---

## Modifying Titles

To modify the titles, you have to edit the shot. Double-click the shot to open the Shot Editor. Click the title attributes tool (T) in the Attributes toolbar. The title modification screen will be displayed:

**Figure 48.** Title Modification Screen



## Title Area

Depending on the title source selected, you can modify up to four lines of information. Each line of text has its own justification, font, and font color settings.

**Figure 49.** Line 1 of Title Modification Area



## Changing Text

To change the text, enter the text into the text entry area for the line to be changed. Rich Media Desktop supports all text entry (even in-line entry engines for Japanese, Korean, Chinese, etc).

## Changing Justification

Justification is controlled by clicking on the justification icon and selecting left, center, or right from the drop-down menu.

**Figure 50.** Justification Icon



## Changing Font

Click the font selection icon to open a font selection window. Click the icon again to close the font selection window.

**Figure 51.** Font Selection Icon



The font selection window is a floating palette that changes the text as you make selections. So if you click in a different text entry area, the font panel will notice this and configure itself to the settings of the new text entry area.

---

**Note:** The only items that Rich Media Desktop recognizes in the Font Panel are: Font Family, Typeface, and Size. All other settings are ignored by Rich Media Desktop

---



## Changing Font Color

Click the font color icon to change the color of the font. A standard font color selection window is displayed. Choose the color you desire and click OK.

**Figure 52.** Change Color Icon



## Placing Titles

The previous sections describe how to create and edit a title for an existing shot. However, you can also create a shot which has only title data. This is very useful if you want to place the same title over several different shots or if you want to modify the title independent of the shot you are choosing. But you must decide, based on your type of broadcast, if you want your titles to be tied directly to specific shots or if you want them to be independent. Rich Media Desktop seamlessly supports both methods -- even both methods at the same time.

## Seminar Title

You may want to broadcast a seminar and have the title of the seminar appear and disappear while switching between several other shots or cameras. In this case, create a shot which has only the title in it, enabling you to move this title to a Foreground layer. In this configuration, you can bring the title in and out of your broadcast by selecting it in the Title Layer. By placing the title in this separate layer, it keeps it independent of the all other shots you have created.

## Interview Title

If you are broadcasting an interview, the shot which contains the camera for the interviewee may have a title in it. In this case, when you cut to the shot of the interviewee, the title will appear. When you cut to the person asking the questions, the title will not appear because it is a different Rich Media Desktop shot.

---

**Note:** Since you can turn visibility of a title on and off inside the shot editor, you can still turn the title on and off on the shot. To do this, make the shot live, then open the shot editor. Check the Title checkbox, click Go (or press Ctrl+G). Then uncheck the Title checkbox and click Go again.

---

## Creating New Templates

The templates that Rich Media Desktop uses are not editable within Rich Media Desktop. However, you can create new templates yourself using other development application programs. Rich Media Desktop looks in the My Documents directory for a sub-directory called *RMDTitles*. You should place your own titles there.

## Other Media

Any media used by these templates must exist in the same template folder. For example, if *user\_scoreboard.png* is used in one of the example templates, it must be located in the *RMD\_User\_Titles* directory.

## Editing XML Files

There is an XML file called *description.xml* which describes all of your titles. Edit it to add, create, or delete titles. Read the header of the XML file for a list of rules and descriptions. Backup the file before editing because syntax errors will cause Rich Media Desktop not to parse the file.



# Using Logos

## Introduction

When you perform a broadcast, you may want to include a company logo in your presentation. There are two ways you can do this in Rich Media Desktop:

- 1. Global Logo (logo is its own shot)** In this configuration, you create a shot which has only a logo in it. The benefit of this configuration is that you can show the logo independently of all other shots. For example, you can choose to always show the logo in a corner of your broadcast display.
- 2. Shot Logo (logo is part of another shot)** In this configuration, you add a logo to an existing shot. This is useful if you want to have a shot you will use in the start of your broadcast.

## Topics

- [Global Logos](#)
- [Shot Logos](#)

## Global Logos

Logos are only displayed through shots. Rich Media Desktop treats logos the same as any other static media. To create a new empty shot and add your logo to it, follow these steps:

1. In the Main window, select Layout > Layer Panel.
2. Double-click Master Layer 2.

---

**Note:** Layers can be re-named at any time.

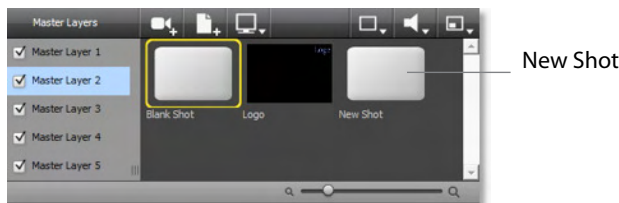
---

**Figure 53.** Master Layer 2 Display



3. Add a new shot by selecting Edit > Add Shot:

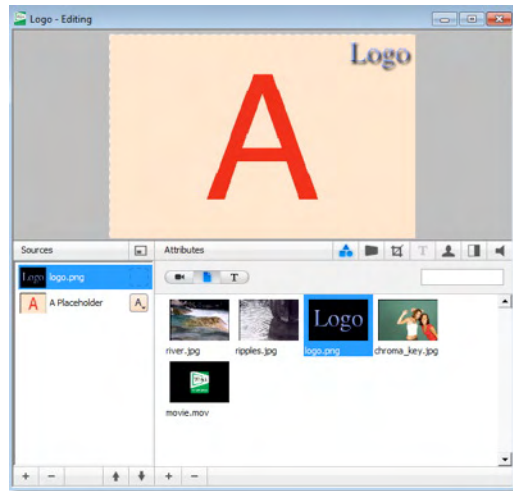
**Figure 54.** New Shot Added



4. Edit the new shot by double-clicking the shot named New Shot. When the Template window displays, select *Fullscreen View* and click Apply.

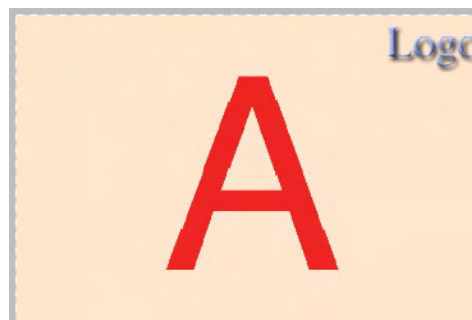
5. To add your logo, click the Add Shot button:

**Figure 55.** Shot Editor window



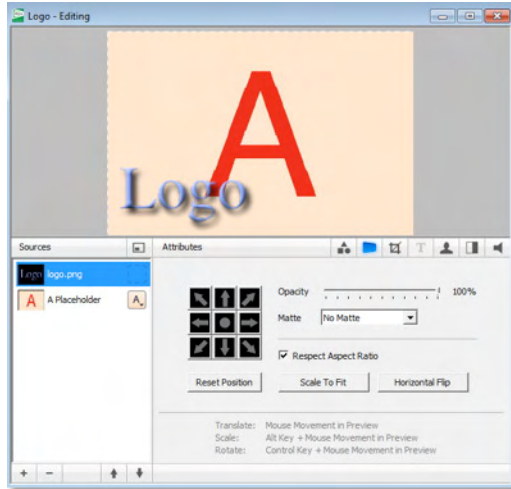
6. Select **logo.png**. The logo is displayed in the Preview window:

**Figure 56.** Logo Display



7. Position the Logo. Most likely, you will not want to display the logo in the middle of the shot. To re-position it, click the Position button in the Attributes Toolbar.

**Figure 57.** Positioning Controls



8. The logo can be moved, resized, and rotated using these controls:
  - Move: Click and drag object to a new location.
  - Resize (maintaining aspect ratio): Hold the Alt key down while moving the mouse vertically.
  - Resize (independent of the aspect ratio): Hold the Alt key and the Shift key down while moving the mouse vertically and horizontally. The Respect Aspect Ratio check-box in the configuration area must be unchecked.
  - Rotate: Hold down the control key while moving the mouse vertically and horizontally.
9. You can also move the logo to an edge, corner, or center by selecting the logo and clicking on one of the repositioning buttons in the configuration area:

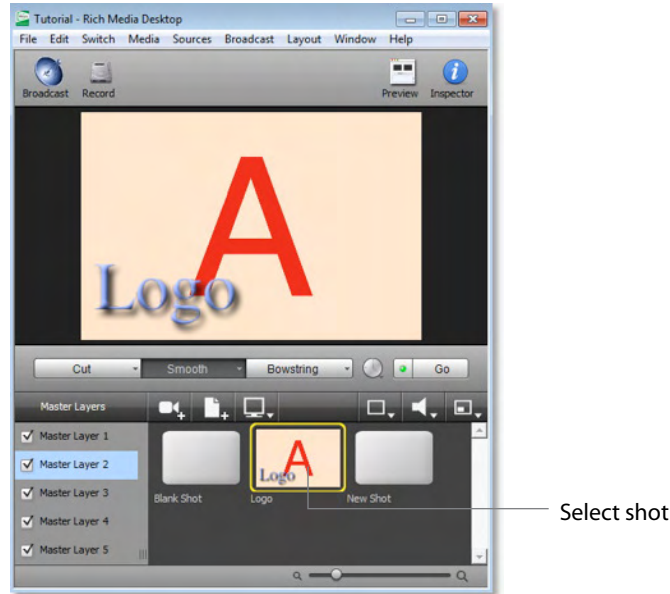
**Figure 58.** Repositioning Controls





10. To add your Logo to the broadcast, close the Shot Edit window, and click the logo shot in Master Layer 2:

**Figure 59.** Shot Display in the Foreground Layer



11. Change the shot level to Master Layer 3 in the Master Layers list. Notice that changing shots does not affect the logo you have put on the Master Layer 2.

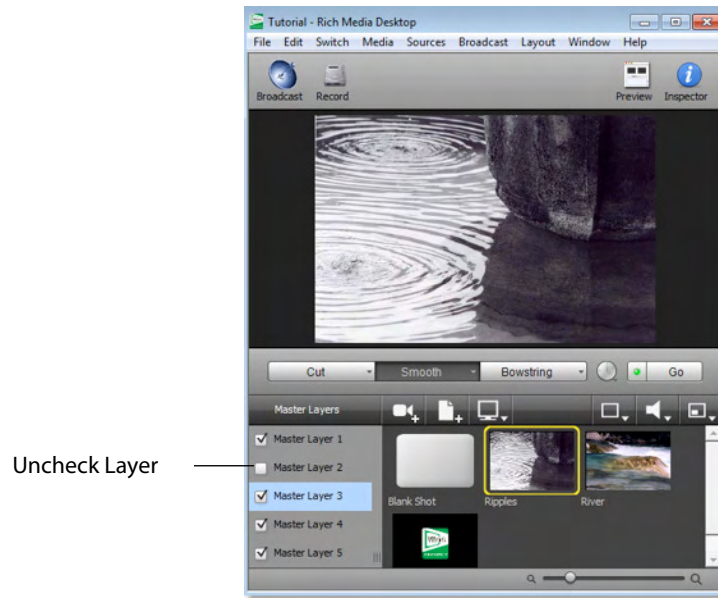
**Figure 60.** Changed Layer Display



## Turning Layers On and Off

One way that you can use Rich Media Desktop is to turn layers on and off. For example, Master Layer 2 can be turned off and then back on by checking and unchecking its checkbox. This is a very effective way to have a logo ready to display.

**Figure 61.** Turning Layer Off

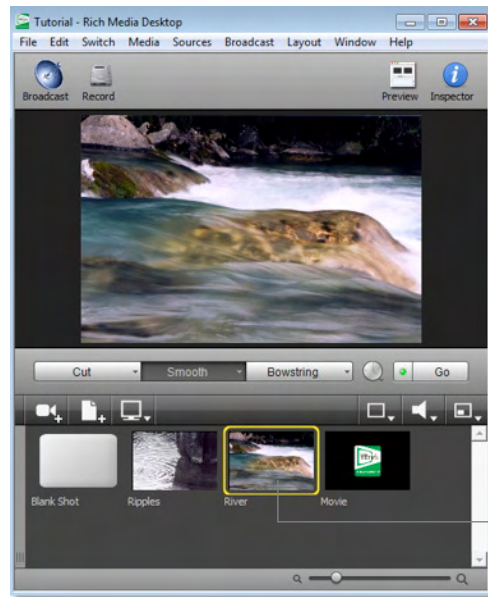


## Shot Logos

To create a Shot Logo, add your logo to an existing shot. To do this, follow these steps:

1. Double click a shot to open it in the shot editor.

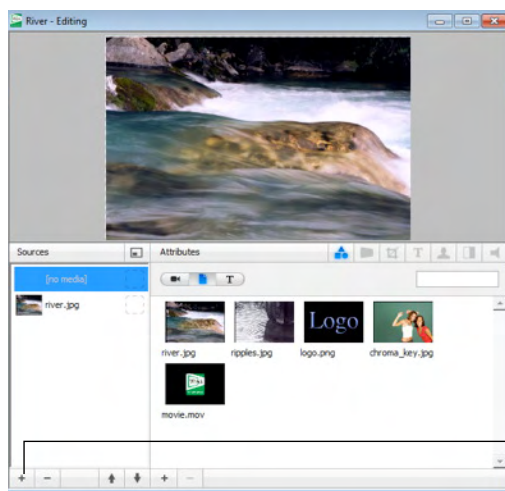
**Figure 62.** Opening a Shot to Edit



Double-click a shot

2. Click the Add Source button to add a new source:

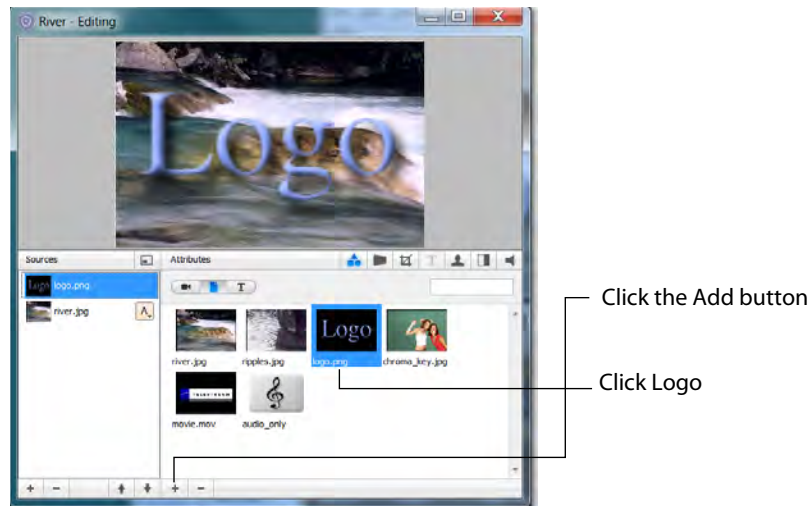
**Figure 63.** Top Source Display



Click the Add Source button

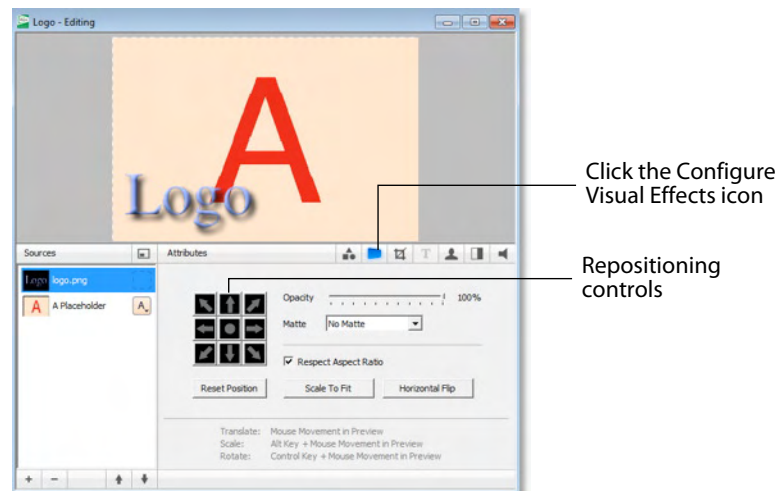
3. To add your logo click the plus (+) button then click the logo icon:

**Figure 64.** Top Source Display



4. Most likely, you won't want to display the logo in the middle of the display. To reposition it, click the Position button to display the positioning controls:

**Figure 65.** Positioning controls



You can also reposition the logo using the mouse:

- To Move Media: Click and drag using the mouse in the Preview area.
- Resize (Respect Aspect): Hold the Alt key while moving the mouse in the Preview area.
- Resize Media: Turn off Respect Aspect Ratio. Hold the Shift-Alt keys while moving the mouse in the Preview area.

- Rotate Media: Hold the control key while moving the mouse in the Preview area. Select between shots in the Main window.
5. Close the edit window and click the River logo to take your changes live. Notice that the River shot now has the logo embedded in it:

**Figure 66.** Embedded logo display





# Broadcasting

## Introduction

Before you can broadcast with Rich Media Desktop, you must configure your broadcast settings. Once configured, broadcasting is as simple as selecting Broadcast > Start Broadcast. If you broadcast without configuring, Rich Media Desktop will open the Broadcast Settings window for you.

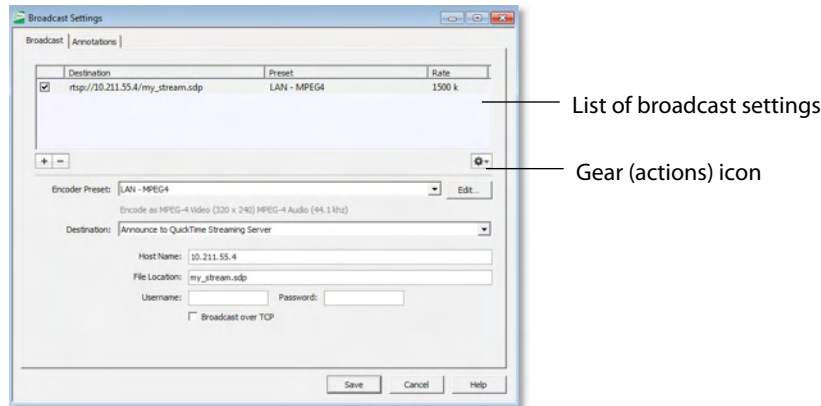
## Topics

- [Configuring Broadcast Settings](#)
- [Configuration](#)
- [Encoder Presets](#)
- [WM-Push To Server](#)
- [WM-Pull From Server](#)
- [QuickTime streaming server](#)
- [QuickTime Built-in Server](#)
- [QuickTime Unicast](#)
- [QuickTime Multicast](#)
- [Record To disk](#)
- [Flash Media Server](#)
- [Flash To VBrick](#)
- [Flash Record To Disk](#)
- [Annotation Settings](#)

## Configuring Broadcast Settings

To configure broadcast settings select menu Broadcast > Broadcast Settings (or press the Ctrl+Y keys):

**Figure 67.** Broadcast Settings window



## Multiple Broadcast Settings

Rich Media Desktop enables you to specify many broadcast settings for your presentation. This means you may configure Rich Media Desktop to broadcast at two different bit-rates (modem and DSL, for example), or you may record to disk using different encoders. You can even broadcast QuickTime, Windows Media 9, and Windows Media 8, all at the same time if you have enough processing power to perform real-time encoding.

At the top of the Broadcast Settings window is a list of the current settings. Uncheck the checkbox of any setting you want removed from your broadcast. You can add as many broadcast settings as you need, but keep in mind that high quality video will require greater CPU usage.

Click the Gear icon to access actions that enable you create reference movies you can distribute to your viewers. Each destination type provides a unique set of actions.



## Configuration

There are two items to configure before broadcasting: encoder presets and destinations.

### Encoder Preset

The encoder presets defines how your presentation is encoded (or compressed). There are many options available. Rich Media Desktop simplifies this process by providing several simple presets to choose from. (See [Encoder Presets](#)).

### Broadcast Destinations

When you broadcast with Rich Media Desktop, you must broadcast to a specific destination. A destination can be a server or Record to Disk.

Each encoding preset uses a different broadcast technology (QuickTime, Windows Media, etc). The destinations described below depend on the encoder presets you have chosen.

### Windows Media Destinations

There are two destinations offered with Windows Media:

- 1. Network** The stream will be broadcast over the network, either using a Windows Media server or using your local machine as the server. To use a Windows Media server, you need to use the WM-Push To Server option. To use a your machine as a server, you need to use the WM-Pull From Server option.
- 2. VBrick** The stream will be sent to VBrick for broadcast.
- 3. Record to Disk** You may also record your presentation to disk. You can do this whether or not you are broadcasting to a server.

### QuickTime Destinations

There are four destinations offered with QuickTime:

- 1. QuickTime/Darwin streaming server:** The QuickTime streaming server (or Darwin streaming server) resides on a second computer and acts as what is called a reflector. From within Rich Media Desktop, you send your broadcast to this one server and it, in turn, sends the broadcast to the many viewers that you have. You must use the QuickTime/Darwin streaming server if you want to broadcast a QuickTime stream live to multiple viewers.

---

**Note:** If you want to archive your stream while broadcasting, add a second broadcast setting of Record To Disk.

---

- 2. One Specific Computer:** You can configure Rich Media Desktop to send a broadcast to a single second computer. This is called Unicasting.

3. All computers on your local network: You can configure Rich Media Desktop to broadcast so that any computer on your local network can receive the broadcast. This is called Multicasting. You cannot Multicast to the Internet, only to the local network on which your computer resides.
4. Record to Disk: You can record your broadcast to disk. You can do this whether or not you are broadcasting to another computer.

## Flash Log Files

Rich Media Desktop generates log files when streaming to a flash-based destination. The files are generated in a rotating fashion with file names of flash\_log.txt, flash\_log\_1.txt, flash\_log\_2.txt, etc. Technical support may ask for these log files when attempting to diagnose a flash connection issue.

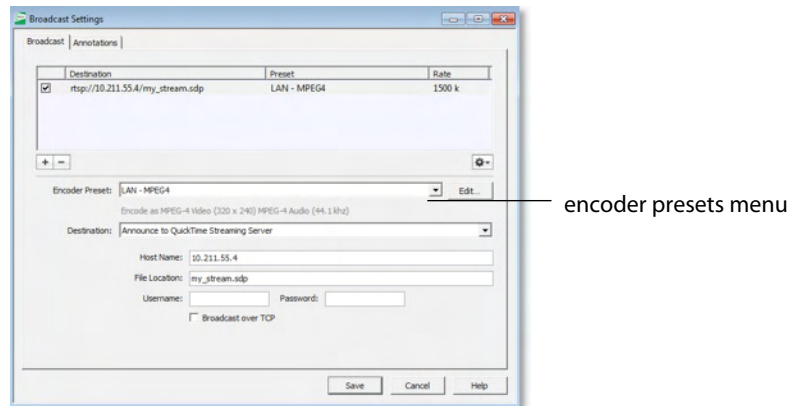
Log file locations:

- Windows 7 and Vista C:\users\%USER%\AppData\Roaming\Rich Media Desktop\flash\_log.txt
- Windows XP C:\Documents and Settings\%USER%\Application Data\Rich Media Desktop\flash\_log.txt

## Encoder Presets

The encoder presets menu is located in the middle of the Broadcast Settings window:

**Figure 68.** Encoder presets Menu



Rich Media Desktop offers several default presets. (See [Configuring Broadcast Settings](#) for details on selecting a good encoder.)

The first choice you need to make is whether you'll be using Windows Media, QuickTime, or both as the broadcast technology. This decision depends on what you expect your viewers to use. Given enough bandwidth, you can stream to both QuickTime and Windows Media by adding new destinations to the broadcast settings.

## Windows Media Settings

With Windows Media, the first choice you need to make is between Windows Media 8 or Windows Media 9. You can broadcast in both if your CPU can encode both in real time simultaneously.

## QuickTime Settings

In its simplest form, you need to choose the minimum connection speed for you and your viewers. If you or any of your viewers have a modem, you should choose one of the modem settings. If all have at least DSL or cable, then you can choose a higher speed.

The term motion is used to indicate how much movement there is in a broadcast. If you're doing an interview, most likely there will be little motion. If you are broadcasting a sports event, high motion is more likely.

In the Encoder Preset, MPEG4 and Windows Media 9 provide four bit-rate categories:

- **HD** Bit rates of 1800K or 2000k.
- **High** Bit rates of 1200K or 1500k.
- **Med** Bit rates of 750K or 1000k.
- **Low** Bit rate of 256k.

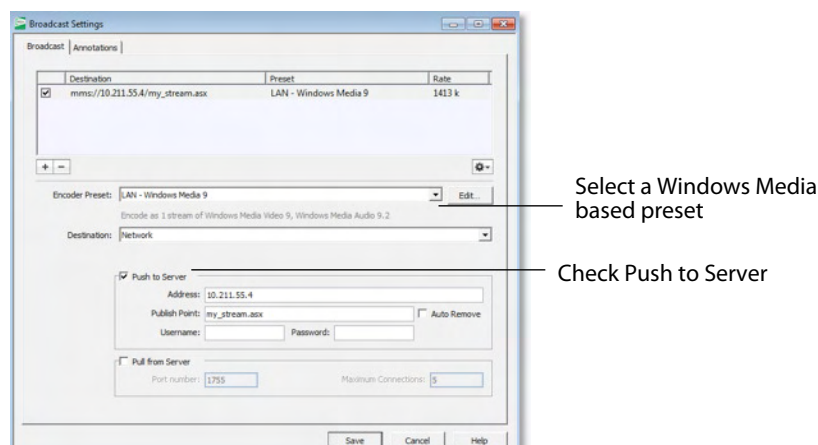
If you are going to only Record To Disk and have your viewers download the file from your server, then you may choose to encode for LAN, because your viewers are not trying to play the file in real time.

## WM-Push To Server

To access the WM-Push To Server window, select menu Broadcast > Broadcast Settings (or press the Ctrl+Y keys). From the encoder presets drop-down menu, select any of the Windows Media based presets, and check the Push to Server checkbox.

To use Push To Server, you must have access to a Windows Media Server, either in your organization or hosted by an ISP (search the Internet for Streaming Windows Media Server to find one). This is the professional way of creating a stream because it places the bandwidth strain on the remote server. All you need is a good local connection to the internet to push to the Windows Media Server.

**Figure 69.** WM-Push To Server Configuration window



## Configuration Settings

**Address** Enter the Internet address of the Windows Media Server you will use to broadcast.

**Publish Point** Enter the name of the file that will be put on the server, and that will be used as part of the URL that your users will use. Rich Media Desktop cannot know the resulting URL that your users will use, as this may vary depending on the installation of the Windows Media Server. Contact your Windows Media Server administrator to understand how to build a proper URL for your viewers, based on the Publish Point.

**Auto Remove** Check Auto Remove to remove the file used as the publish point when the broadcast is over.

**Username/Password** Enter the user name and password for the Windows Media Server. Contact your Windows Media Server administrator to obtain these. If there is no user name or password required, leave these fields empty.

## WM-Pull From Server

To access the WM-Pull From Server window, select menu Broadcast > Broadcast Settings (or press the Ctrl+Y keys). From the encoder presets drop-down menu, select any of the Windows Media based presets, and check the Pull From Server checkbox.

This option turns your local computer into a mini Windows Media Server, enabling you to broadcast immediately. There are, however, some limitations:

- 1. User Requirement** You cannot have more than 50 users connected at any one time.
- 2. Bandwidth Requirement** You must have enough bandwidth on your Rich Media Desktop computer to supply all of your viewers.
- 3. CPU Requirement** Since the Rich Media Desktop computer is acting as a server the CPU must be fast enough to handle all of the user connections.

The largest issue is with using this method is bandwidth. If, for example, all of your viewers are on a local network (a business or school), then you should be able to use this method. However, if you have a DSL connection to the internet and you want to broadcast a 200k stream to 20 viewers, you will simply not have enough upload bandwidth to accommodate this.

---

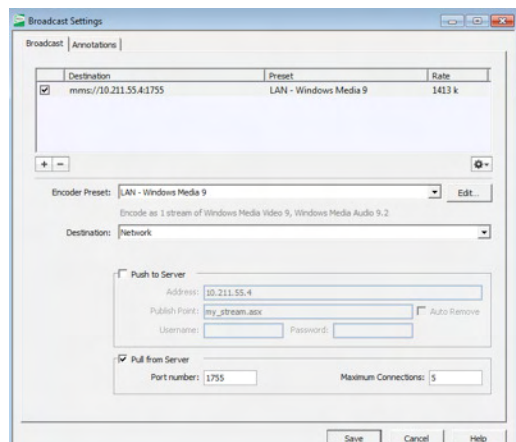
**Note:** Be aware that when you use Rich Media Desktop with an internet connection what matters is your upload bandwidth. Most ISP businesses offer packages that have a higher download than upload bandwidth (e.g., a 512k DSL package is often only 256k upload).

---

## Configuration Settings

To use the Network-Pull from Server option, set the port number that your users will use to connect to your computer. They will connect by using the Open URL option in Windows Media Player, and enter a URL (for example: mms://192.168.1.67:8080, assuming your computer IP address is 192.168.1.67 and your port is 8080).

**Figure 70.** Configuration window



**Port Number** Enter the port on your computer to use as the broadcast port. This can be, effectively, any port number as long as it doesn't conflict with any existing ports on your computer. Be aware that if you have any firewall software installed, you will need to enable the port entered here.

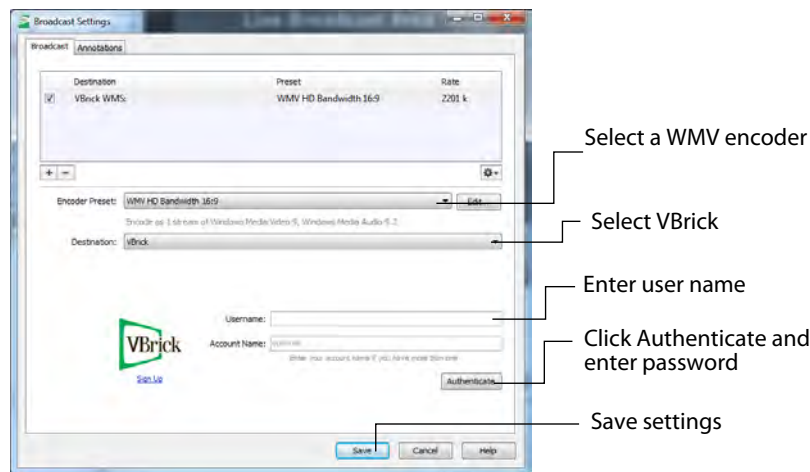
**Maximum Connections** The maximum number of connections your server will accept is 50 users. Your CPU will be affected by the number of users you have connected, therefore you may need to limit the number of connections.

## Stream To VBrick

To stream to VBrick, follow these steps:

1. Select a WMV Encoder Preset.
2. Select VBrick from the Destination menu.
3. Enter your VBrick username and click Authenticate. Rich Media Desktop authenticates your username, and enables you to stream to VBrick. If you do not have a username, click Sign Up (or go to [www.vbrick.com](http://www.vbrick.com)) to sign up and obtain a username.
4. Click Save to save your settings.

**Figure 71.** Stream to VBrick





## QuickTime streaming server

Apple's QuickTime streaming server runs on Macintosh hardware. The Darwin streaming server is the open source streaming server offered by Apple, and runs on many flavors of Unix (OpenBSD, Linux, etc).

Streaming servers act as reflectors, so your goal is to broadcast from Rich Media Desktop directly to one of these servers that, in turn, sends the stream on to your viewers.

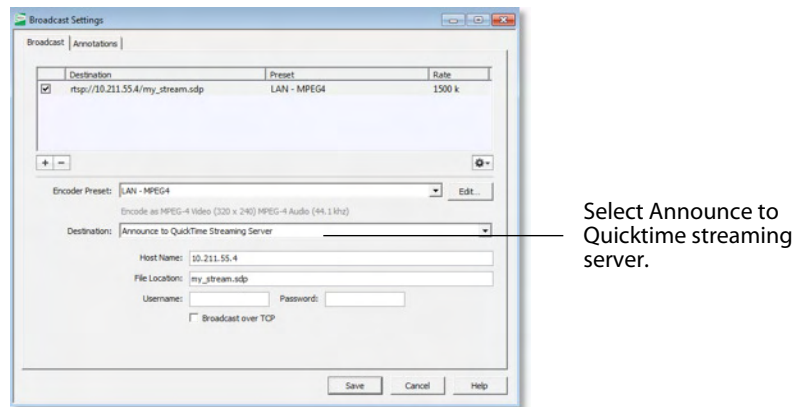
---

**Note:** This document does not describe configuring or maintaining QuickTime/Darwin streaming server.

---

To stream to a QuickTime/Darwin streaming server, select Announce to QuickTime streaming server as the destination:

**Figure 72.** Announce to QuickTime streaming server



**Host Name** Enter the name (or IP address) of the host computer that is running your streaming server.

**File Location** The streaming server uses a file on the server to contain the specific settings for the stream. You need to define the name of that file here. When you send your viewers the URL for them to use, this file name will be a part of that URL. For example, if the File Location is my\_stream and the Host Name is www.stream.com then your viewers will use this URL: rtsp://www.stream.com/my\_stream.sdp. This information displays in the bottom of the window as you configure the settings.

**Username/Password** Enter the user name and password, if your streaming server requires it.

---

**Note:** This password is saved as plain-text in the Rich Media Desktop document.

---

## Broadcast Over TCP

Defines whether you are using UDP or TCP to send the data to the streaming server. This only defines the connection between Rich Media Desktop and the streaming server and has nothing to do with how your viewers will receive the broadcast.

UDP is faster, but if you are using a firewall or are behind a NAT, you may not be able to use UDP and you should use TCP. So, if Rich Media Desktop can send UDP to the server without errors, use it. It is faster.

## Actions

When you have Announce to QuickTime streaming server selected, the gear icon will have these three actions:

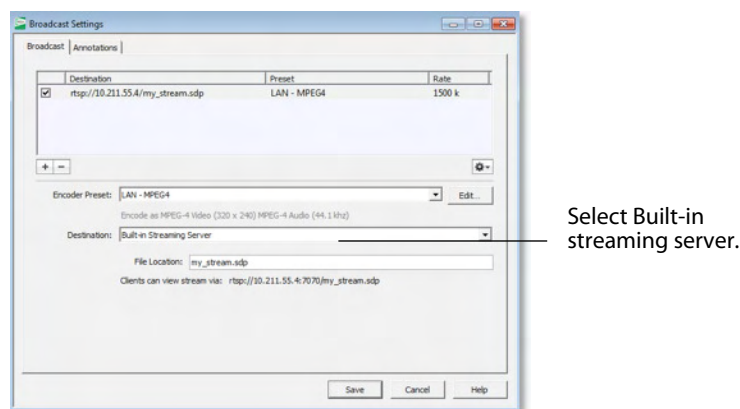
- 1. Open in QuickTime Player** This opens the stream in QuickTime Player. This is a handy shortcut and saves you from typing "rtsp://..." into QuickTime Player.
- 2. Save Movie** This saves a QuickTime movie to disk that contains a reference to the configured stream. This Movie file is very small and tells QuickTime where to find your actual stream. It does not contain the data of your movie. When you are not streaming, this movie will not work for your users. But, you can send this movie to your users or post it on your Website so that your users can view your stream when you are broadcasting.
- 3. Save Multi-stream Reference Movie** This saves a QuickTime movie to disk that contains a reference to all of your QuickTime streaming server streams. You can send this movie to your users, or post it on your Website, so that your users can view all your streams. QuickTime will then choose which stream to use based upon the users settings. This is a handy way to broadcast multiple bit-rates at the same time.

## QuickTime Built-in Server

Rich Media Desktop provides the free Darwin streaming server from Apple. When you use the Built-in streaming server it is running on your local computer and will use local resources, causing Rich Media Desktop to run slower.

The Built-in Server enables each of your users to connect directly to your computer. If you do not have sufficient bandwidth you won't be able to host many viewers (one or two over DSL, perhaps up to five or ten on a local network). If you plan to have many viewers, you need use a hosted QuickTime streaming server which is selected from *Destination > Announce To Quicktime streaming server* in Broadcast Settings:

**Figure 73.** Built-in streaming server



**File Location** Enter the name of the file used by the streaming server that contains the settings for the stream. When you send your viewers a URL to use, this file name will be a part of that URL. For example, if the File Location is my\_stream and the Host Name is www.stream.com then your viewers will use rtsp://www.stream.com/my\_stream.sdp. This information is displayed after the File Location as you configure the settings.

## Actions

When you have Built-in streaming server selected, the gear icon will provide three actions:

- 1. Open in QuickTime Player** This opens the stream in QuickTime Player. This is a handy shortcut and saves you from typing "rtsp://..." into QuickTime Player.
- 2. Save Movie** This saves a QuickTime movie to disk that contains a reference to the configured stream. This Movie file is very small and tells QuickTime where to find your actual stream. It does not contain the data of your movie. When you are not streaming, this movie will not work for your users. But, you can send this movie to your users or post it on your Website so that your users can view your stream when you are broadcasting.
- 3. Save Multi-stream Reference Movie** This saves a QuickTime movie to disk that contains a reference to all of your QuickTime streaming server streams. You can send this movie to your users, or post it on your Website, so that your users can view all

your streams. QuickTime will then choose which stream to use based upon the users settings. This is a handy way to broadcast multiple bit-rates at the same time.

## QuickTime Unicast

Rich Media Desktop lets you broadcast to a specific computer. This is called unicast. To configure the broadcast settings for a unicast, follow these steps:

1. Select Unicast under the Destination menu.
2. Enter the address. This is the domain name or IP address of the computer receiving your unicast.
3. Enter the Video Port number. This is the video port on the computer receiving your unicast.
4. Enter the Audio Port. This is the audio port on the computer receiving your unicast.
5. Create an SDP File. You must create an SDP file every time you change any option on this page (including the encoder preset). To create an SDP file click the gear icon and select Save SDP File, navigate to the desired location, and click Save in the Save File dialog window. The SDP file must be given to the user to be placed on the computer that will receive your broadcast. Your remote viewer must open the SDP file using QuickTime player.

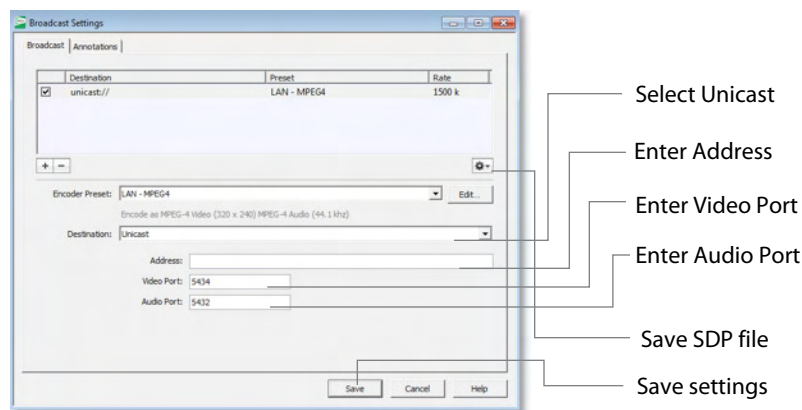
---

**Note:** Your unicast information is not stored in this file. Only QuickTime streaming server streams are saved to this file.

---

6. Save a Multi-stream Reference Movie (optionally present). This menu option is only available if you have other settings which use Announce To QuickTime streaming server.
7. Click the Save button to save your settings.

**Figure 74.** Unicast Settings



8. Start your broadcast by selecting menu Broadcast > Start Broadcast in the Main window.

## QuickTime Multicast

Rich Media Desktop lets you broadcast to your local network so that any computer on that network can view the broadcast. This is called multicast. To configure the broadcast settings for a multicast, follow these steps:

1. Select Multicast under the Destination menu.
2. Enter the Video and Audio Addresses. This is the unique addresses the multicast broadcast will use for video and audio. Although this looks like an internet address, it is not. This address must be unique among applications on your network that use the multicast protocol. Click the Generate button to generate random video and audio addresses.
3. Enter the Video Port number. This is the port that the multicast protocol uses for video. Normally, this is 5434.
4. Enter the Audio Port. This is the port that the multicast protocol uses for audio. Normally, this is 5432.
5. Create an SDP File. You must create an SDP file every time you change any option on this page (including the encoder preset). To create an SDP file click the gear icon and select Save SDP File, navigate to the desired location, and click Save in the Save File dialog window. The SDP file must be given to the user to be placed on the computer that will receive your broadcast. Your remote viewer must open the SDP file using QuickTime player.

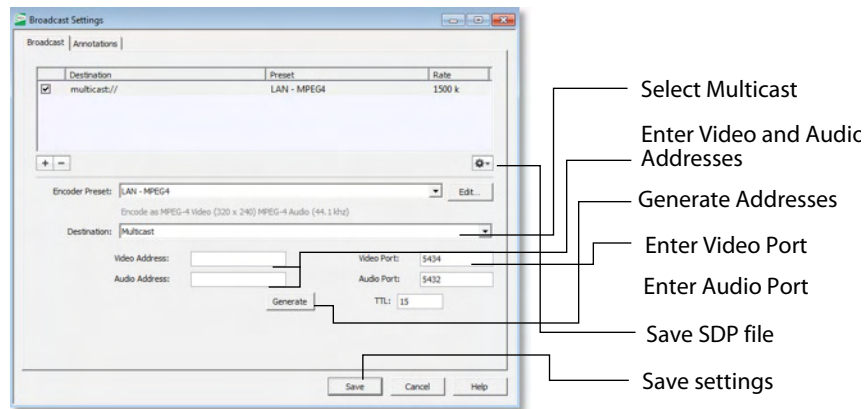
---

**Note:** Your multiicast information is not stored in this file. Only QuickTime streaming server streams are saved to this file.

---

6. Save a Multi-stream Reference Movie (optionally present). This menu option is only available if you have other settings which use Announce To QuickTime streaming server.
7. Click the Save button to save your settings.

**Figure 75.** Multicast Selection



8. Start your broadcast by selecting menu Broadcast > Start Broadcast in the Main window.

## How Multicast Works

During multicast, your broadcasting computer sends data across your local network, identifying it as a broadcast that it has no specific destination. Since many applications could be doing the same thing, the broadcasting computer must have a unique way of defining the data that is being multicast. This enables clients to choose between the available multicast streams.

The multicast protocol uses unique addresses, one for video and one for audio. Although these unique addresses look like TCP/IP addresses, they are not. Instead, they provide a way to define uniqueness among all multicast data flowing over the network. Once the broadcasting computer is streaming this data through the local network, any computer on the network can receive it.

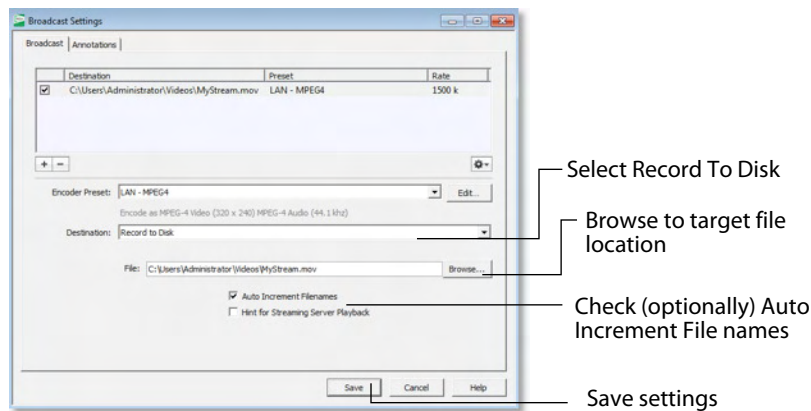
The SDP file becomes the glue between your broadcast computer and the viewer computers. The SDP file contains multicast addresses, encoding format, and other important information.

## Record To disk

You can record your broadcast to disk at any time and you do not need to be broadcasting. This means that you can use Rich Media Desktop as a way to create movies to post on your Website. Record To Disk can be turned on or off, independent of your broadcast.

To configure Record To Disk, select Broadcast > Broadcast Settings (or press Ctrl+Y), then select Destination > Record To Disk. Click Browse to navigate to the file Rich Media Desktop will use to save your broadcast to disk. If you check the Auto Increment checkbox, your filename will be appended with an incremental number. This enables you to start and stop your broadcast repeatedly and save each movie segment in a uniquely named file. Click Save to save your settings:

**Figure 76.** Record To Disk Settings





## Flash Media Server

Rich Media Desktop can stream to an RTMP/H.264-compatible streaming server (Flash Media Server, Wowza Media Server, etc). But, Rich Media Desktop only supports H.264 streaming over RTMP. Flash Players earlier than Flash 9, Update 3 (Dec 2007), may not be able to view the H.264 based streams.

---

**Note:** Rich Media Desktop does not support alternative RTMP protocols (RTMPS, etc.), Vp6, or other Flash streaming codecs.

---

To configure Flash Media Streaming, follow these steps:

1. Select a Flash preset from the encoder presets menu.
2. Select Destination > RTMP Flash Server.
3. Enter the Address to the RTMP server. (This is the same as the FMS URL in Flash Media Server.) The default RTMP port is 1935, but you may need to configure your firewall to allow connections on this port.
4. Enter the name of the Stream to broadcast. (This is the same as the Stream in Flash Media Server.)
5. Rich Media Desktop can import a Flash Media Encoder configuration file (XML file). Click Open FMLE XML File, and navigate to the configuration file and select either version 2.5 or version 3.0. Rich Media Desktop will read the Address and Stream information from that file. Many online streaming services offer FMLE configuration files which Rich Media Desktop can use.

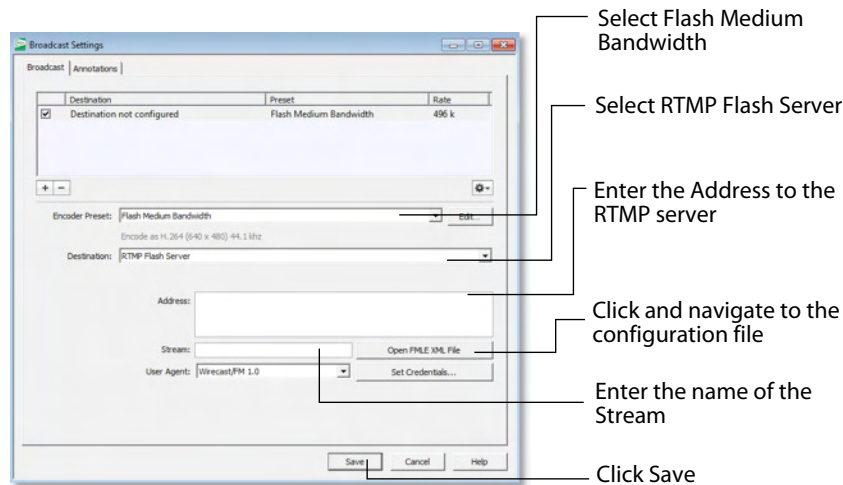
---

**Note:** Only the Address and Stream information from the XML configuration file is used. No Encoding information is imported.

---

6. Click Save to save your settings:

**Figure 77.** Flash Media Settings

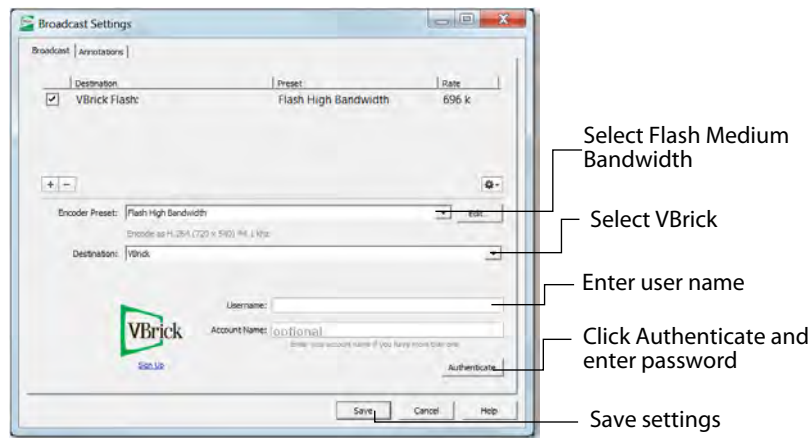


## Flash To VBrick

To stream to VBrick, follow these steps:

1. Select a Flash preset in Encoder Preset.
2. Select VBrick from the Destination menu.
3. Enter your VBrick username and click Authenticate. Rich Media Desktop authenticates your username, and enables you to stream to VBrick. If you do not have a username, click Sign Up (or go to [www.vbrick.com](http://www.vbrick.com)) to sign up and obtain a username.
4. Click Save to save your settings.

**Figure 78.** Flash to VBrick

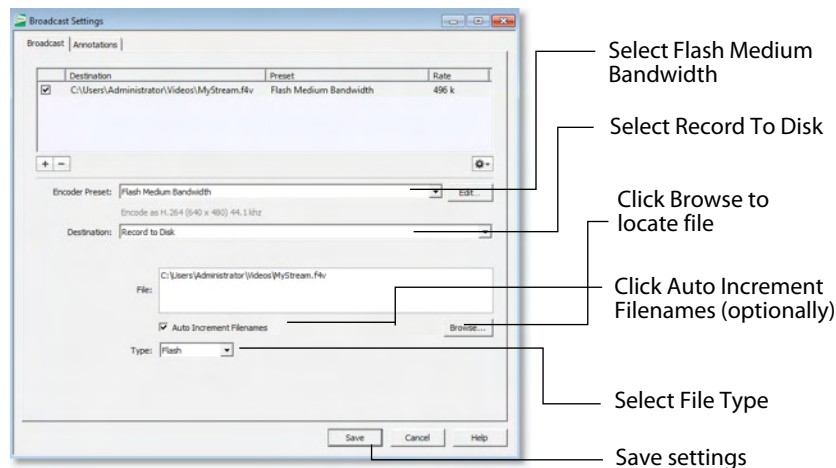


## Flash Record To Disk

Rich Media Desktop offers the ability to save your broadcast to disk as either a Flash or MPEG-4 file. To record your broadcast to disk, follow these steps:

1. To send to the QuickTime/Darwin streaming server, select Announce to QuickTime streaming server from the Destination menu.
2. Enter the path to your file, or click Browse to locate the file.
3. Check the Auto Increment Filenames checkbox (optionally), if you want your filename to have an incremental number appended to the end of it. This causes a new file to be created every time you start recording to disk. If you do not check this checkbox, then your previous file will be overwritten.
4. Select a File Type. You can choose either Flash (.F4V) or MPEG-4 (.M4V).
5. Click Save to save your settings.

**Figure 79.** Flash Record To Disk Settings



## Annotation Settings

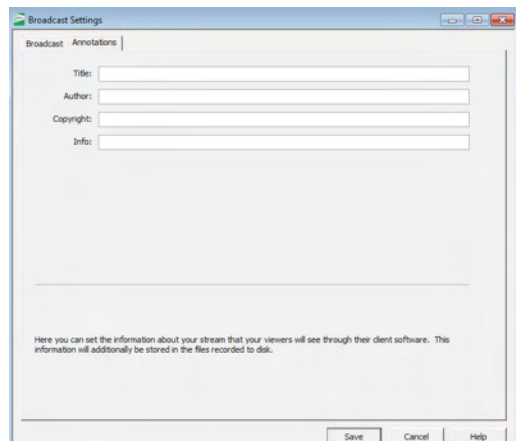
Media players offer a feature which enables the viewer to see details about the broadcast they are viewing. These can be seen in QuickTime Player by selecting Show Movie Properties from the Movie menu. Select Movie, then Annotations, to see the details.

In Windows Media Player 10, the Title is used as the name of the broadcast in the Now Playing List. You can see the other properties by right clicking on the entry in the Now Playing List, selecting properties, then clicking the Content tab.

These Annotations can be configured for your broadcast in Rich Media Desktop. When you configure annotations, they apply for all streams at the same time. This means changing your annotations is very easy when you have multiple streams. To configure the annotations, follow these steps:

1. Select Broadcast Settings from the Broadcast menu (or press the Ctrl+Y keys). Select Annotations tab.
2. Enter the title and author of the broadcast.
3. Enter any copyrights the broadcast.
4. Enter any additional info associated with the broadcast.
5. Click Save to save your settings.

**Figure 80.** Annotation window



# Setting Encoder Presets

## Introduction

Rich Media Desktop supports a wide variety of encoders (also known as codecs).

An encoder is a program that compresses the audio and/or video output of Rich Media Desktop for broadcast. Without an encoder, the uncompressed data is too large to successfully broadcast across a network. This is why encoders are so important.

The settings for encoders range from simple to very complex. Because of this, Rich Media Desktop offers presets of the most common settings for encoders. This provides a starting point, reduces complexity, and enables you to experiment and adjust settings as you test your broadcast.

## Topics

- [The Encoder Presets Window](#)
- [Windows Media](#)
- [QuickTime Video](#)
- [QuickTime Audio](#)
- [Flash H.264](#)
- [Flash VP6](#)

## The Encoder Presets Window

To open the Encoder Presets window, select Encoder Presets from the Window menu. The encoder presets menu at the top of the window provides a list of encoder presets. Select a preset to edit from this list.

## Modifying Default Presets

It is best to leave all the existing presets in their default settings and create new ones as needed. This enables you to refer back to the standard presets at any time.

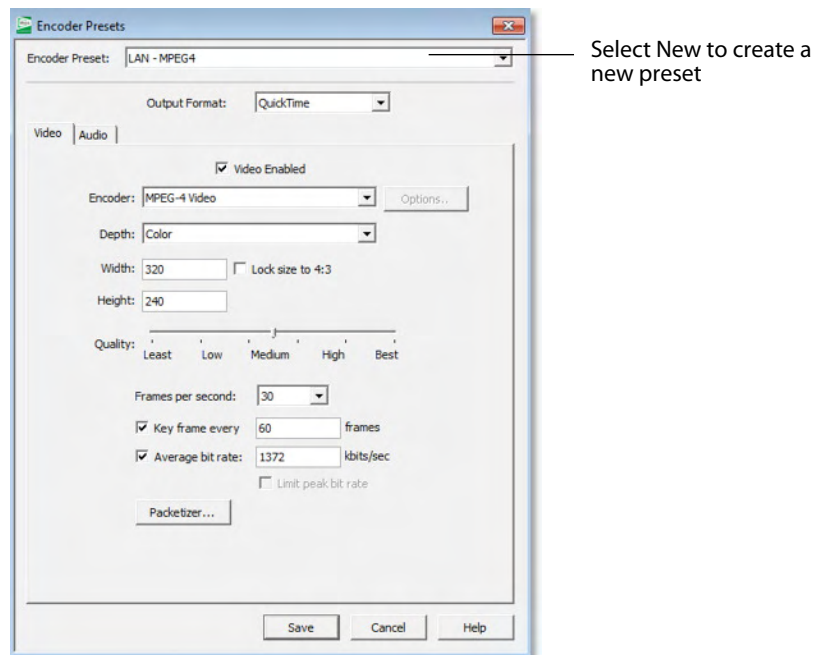
---

**Note:** You can restore the encoder presets list to its factory default state at any time by selecting Restore Factory Presets from the encoder presets menu. However, in doing so you will delete any new presets that you have created.

---

To create a new preset, you must make a copy of an existing preset. To do this select New from the encoder presets menu.

**Figure 81.** Encoder Presets window

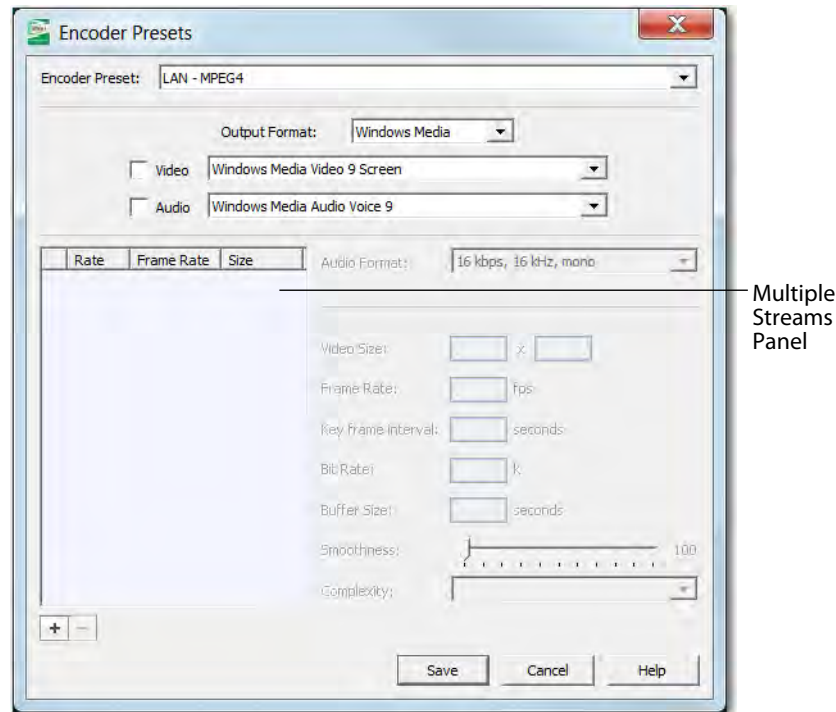


## Windows Media

To modify a Windows Media encoder preset, follow these steps:

1. Open the Encoder Presets window
2. Select an encoder presets from the encoder presets menu.
3. Select Windows Media from the Output Format menu.

**Figure 82.** Windows Media Encoder Preset



4. Check the Video checkbox and select the Windows Media codec version to use.
5. Check the Audio checkbox and select the Windows Media codec version to use.
6. Use the Multiple Streams Panel (left side of window) to set up multiple simultaneous streams in a single encoder. This allows the media player receiving the stream to adjust it's quality depending on the connection speed and reliability. The plus and minus buttons at the bottom enable you add or remove additional streams to your preset.
7. Select the Audio Format. This is a pre-configured audio encoder setting.
8. Enter the Video Size. This sets the width and height of your resulting broadcast. Every stream should have the same aspect ratio. For example, if 640x480 is used, it has an aspect ratio of 4:3. Therefore, all other streams should also have a 4:3 aspect ratio.
9. Enter the broadcast frame rate in frames per second (FPS). This is a target rate and is only a goal for the encoder. It is not a guaranteed value.

- 10.** Enter the Key Frame Interval in seconds. This controls how often the encoder makes a new keyframe. The more keyframes your broadcast has, the more bandwidth it will take (since less compression can occur). However, more keyframes means motion in your video stream is better supported.
- 11.** Enter the bit rate in Kbits (1000 bits) per second. This is a target setting for the encoder, not a guaranteed value. Higher numbers provide better quality - lower numbers, lower quality. The connection speed of your audience is a significant factor in determining your target bit rate.
- 12.** Set the smoothness using the slider. Video smoothness determines the trade-off between sharp images and smooth motion. Video appears smooth when objects move across the screen with non-jagged object edges. If you are dropping frames during encoding, consider decreasing video smoothness.
- 13.** Select Complexity. Some video codecs support multiple complexity levels. Complexity level does not directly affect the bit rate of a stream, but it can affect its quality. Complexity level is a measure of the processing power needed to reconstruct the compressed data.
- 14.** Enter the buffer size. The bit rate and quality depends on the buffer size. A larger buffer size enables more bits to be allocated for complex video. For example, if you set the buffer size to 10 seconds, the codec may choose to allocate some bytes to the first 8 seconds and the rest during the last 2 seconds. Increasing the buffer will typically improve overall quality. For lower bit rates, it is recommended to increase the buffer size. For higher bit rates, increasing the buffer size has less effect.

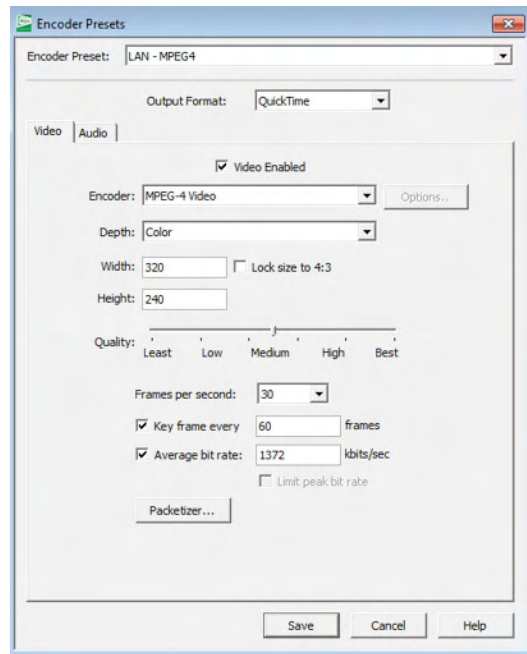


## QuickTime Video

To modify a QuickTime video preset, follow these steps:

1. Open the Encoder Presets window.

**Figure 83.** QuickTime Video Encoder Preset



2. Select an encoder presets from the Encoder Presets encoder presets menu.

---

**Note:** Use a newly created preset (See [Modifying Default Presets](#)).

---

3. Select QuickTime from the Output Format menu.
4. Select the Video tab.
5. Check the Video Enabled checkbox. When checked, the video for your broadcast is encoded. When unchecked, a blank video screen is provided. This is the preferred method of producing audio-only broadcasts.
6. Select the encoder from the Encoder menu. The encoder is sometimes called a Codec or Compressor.
7. Click Options to view and/or set the encoder options. Many, but not all encoders provide optional settings.

---

**Note:** If the Options button is greyed-out, no options are available.

---

8. Select color depth from the Depth menu. Some Encoders allow you to modify the color depth (or bits per pixel) of the broadcast. Picking a higher color depth will result in larger output, but lower color quality.

9. Enter the width of your broadcast video.
10. Enter the height of your broadcast video.
11. Select the quality of your broadcast by adjusting the slider between least and best. Generally, encoders make a trade-off between higher quality (greater bandwidth) and speed (CPU usage).

---

**Note:** If the Quality scale is greyed-out, quality is a fixed value.

---

12. Select the desired frames per second (FPS) of your broadcast. This is a target value for the encoder and is not guaranteed.
13. Check Key Frame Every checkbox (optionally) and enter the number of frames. A movie is a sequence of images and each image is called a frame. To compress video data, most encoders take a frame and make it a reference (also known as a key). This keyframe is sent as part of the broadcast, and all of the data after that keyframe is relative to it. The benefit of this is that the compressor only needs to send what has changed since the last keyframe. The main drawback of this is that over time it becomes harder for the encoder to distinguish the frame-difference information, especially if there is a lot of motion in the video. Another drawback is if your viewer's computer misses a keyframe, the video will be distorted until the next keyframe is sent. However, you can control how often the encoder makes a new keyframe by setting the number of frames. The more keyframes you broadcast, the more bandwidth required and less compression, but results in better quality video.
14. Check Average Bit Rate checkbox (optionally) and enter the average bit rate as a target setting.
15. Check Limit Peak Bit Rate checkbox to request the encoder to limit the output to a specific rate.

---

**Note:** Some encoders use this as a target value, not as an absolute value.

---

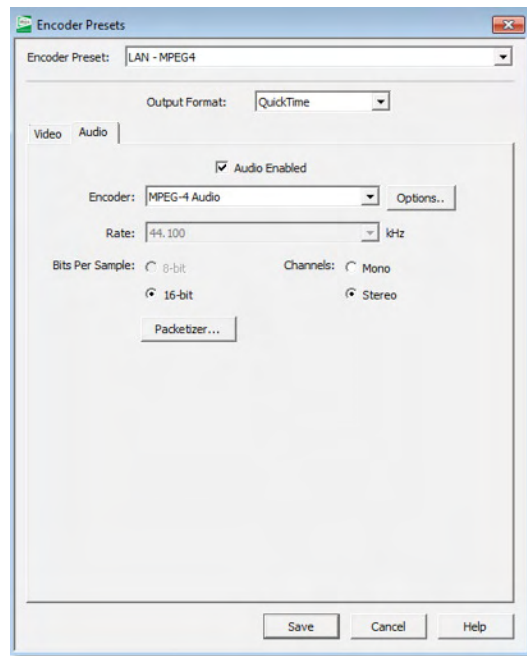
16. Click the Packetize button to modify how the QTSS packets are created. This is an advanced feature for knowledgeable users.
17. Click Save to save your settings.

## QuickTime Audio

To modify a QuickTime audio preset, follow these steps:

1. Open the Encoder Presets window.

**Figure 84.** QuickTime Audio Encoder Preset



2. Select an encoder preset from the Encoder Presets menu.

---

**Note:** Use a newly created preset (See [Modifying Default Presets](#)).

---

3. Select QuickTime from the Output Format menu.
4. Select the Audio tab.
5. Check (optionally) the Audio Enabled checkbox. When checked, the audio for your broadcast is included. When unchecked, audio is absent from your broadcast. This is the preferred method of producing video-only broadcasts because the presence of silent audio uses bandwidth.
6. Select the encoder to be used.
7. Click Options to view and/or set the encoder options. Many, but not all encoders have options that are specific to the encoder.

---

**Note:** If the Options button is greyed-out, no options are available.

---

8. Select the audio bit rate from the Rate menu. The higher the value you choose, the better the quality, but more bandwidth is required.

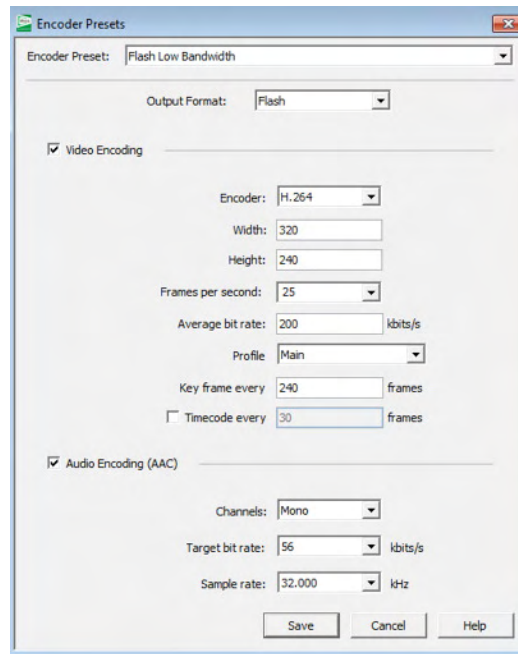
9. Select Bits Per Sample. This is how much data each sample of audio uses. The higher the value, the better the quality, but more bandwidth is required.
10. Select the number of channels: Mono or Stereo. Mono uses less bandwidth than stereo, but stereo is more pleasing to the listener.
11. Click Save to save your settings.

## Flash H.264

To modify a Flash H.264 preset, follow these steps:

1. Open the Encoder Presets window.

**Figure 85.** Flash H.264 Encoder Preset



2. Select an encoder preset from the Encoder Presets menu.

---

**Note:** Use a newly created preset (See [Modifying Default Presets](#)).

---

3. Select Flash from the Output Format menu.
4. Check the Video Encoding checkbox. When checked, the video for your broadcast is encoded. When unchecked, a blank video screen is provided. This is the preferred method of producing audio-only broadcasts.
5. Select the H.264 encoder from the Encoder menu.
6. Enter the width of your broadcast video.
7. Enter the height of your broadcast video.
8. Select the desired frames per second (FPS) of your broadcast. This value is a target value for the encoder and the exact value is not guaranteed.
9. Enter the average bit rate in Kbits (1000 bits) per second. This is the target bit rate of your video. Higher numbers provide better quality. The connection speed of your audience is a significant factor in determining your target bit rate. The encoder will compress the video to approximate this target. However, at different times during your broadcast the bit rate may be higher lower than the target rate.

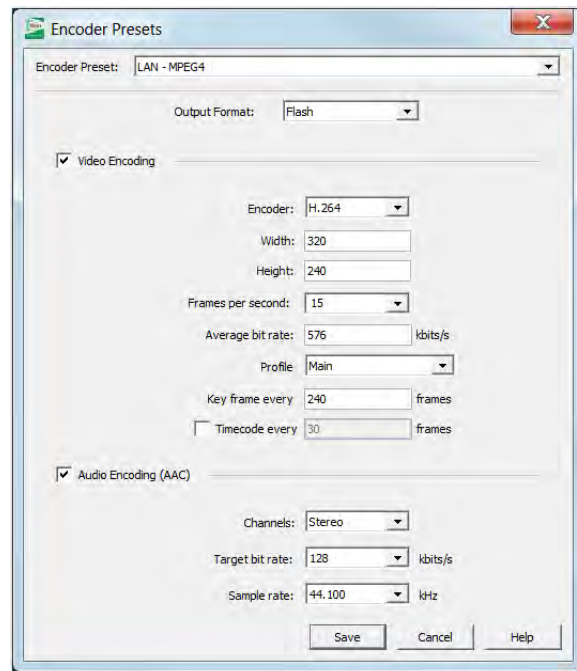
- 10.**Select an encoder profile from the Profile menu. Two profiles are provided: Baseline and Main. The Baseline profile is commonly used in mobile applications. It is also used in other applications which operate with limited processing power, storage capacity, and/or bandwidth. The Main profile is appropriate for general-purpose applications of broadcast media, such as high-bandwidth Internet broadcasting.
- 11.**Check Key Frame (optionally) and enter the number of frames. A movie is a sequence of images and each image is called a frame. To compress video data, most encoders take a frame and make it a reference (also known as a key). This keyframe is sent as part of the broadcast, and all of the data after that keyframe is relative to it. The benefit of this is that the compressor only needs to send what has changed since the last keyframe. The main drawback of this is that over time it becomes harder for the encoder to distinguish the frame-difference information, especially if there is a lot of motion in the video. Another drawback is if your viewer's computer misses a keyframe, the video will be distorted until the next keyframe is sent. However, you can control how often the encoder makes a new keyframe by setting the number of frames. The more keyframes you broadcast, the more bandwidth required and less compression, but results in better quality video.
- 12.**Check (optionally) the Timecode Every checkbox and enter the number of frames between timecodes. Rich Media Desktop can generate timecodes embedded in the flash stream. If a frames value of zero is entered, the timecode is never sent. Rich Media Desktop sends metadata along with the frames. This data looks like an onFI call. Various timecodes and timestamps are also sent with the stream.
- 13.**Check (optionally) the Audio Encoding (AAC) checkbox. When checked, the audio for your broadcast is included. When unchecked, audio is absent. This is the preferred method of producing video-only broadcasts because the presence of silent audio uses bandwidth.
- 14.**Select the number of channels: Mono or Stereo. Mono uses less bandwidth than stereo, but stereo is more pleasing to the listener.
- 15.**Select the audio bit rate, in Kbits (1000 bits) per second, from the Target Bit Rate menu. This is the target bit rate of your audio. Higher numbers provide better quality. The connection speed of your audience is a significant factor in determining your target bit rate. The encoder will compress the audio to approximate this target. However, at different times during your broadcast the bit rate may be higher lower than the target rate. The total broadcast bit rate is a function of video bit rate plus audio bit rate.
- 16.**Select the audio sample rate, in kHz (1000 Hz) per second, from the Sample Rate menu. This value specifies how many thousands of times per second to sample the audio in the broadcast. Higher values provide better quality sound, but at greater bandwidth.
- 17.**Click Save to save your settings.

## Flash VP6

To modify a Flash VP6 preset, follow these steps:

1. Open the Encoder Presets window.

**Figure 86.** Flash VP6 Encoder Preset



2. Select an encoder preset from the Encoder Presets menu.

---

**Note:** Use a newly created preset (See [Modifying Default Presets](#)).

---

3. Select Flash from the Output Format menu.
4. Check the Video Encoding checkbox. When checked, the video for your broadcast is encoded. When unchecked, a blank video screen is provided. This is the preferred method of producing audio-only broadcasts.
5. Select the VP6 encoder from the Encoder menu.
6. Enter the width of your broadcast video.
7. Enter the height of your broadcast video.
8. Select the desired frames per second (FPS) of your broadcast. This is a target value for the encoder and is not guaranteed.
9. Enter the average bit rate in Kbits (1000 bits) per second. This is the target bit rate of your video. Higher numbers provide better quality. The connection speed of your audience is a significant factor in determining your target bit rate. The encoder will compress the video to approximate this target. However, at different times during your broadcast the bit rate may be higher lower than the target rate.

- 10.** Check Key Frame (optionally) and enter the number of frames. A movie is a sequence of images and each image is called a frame. To compress video data, most encoders take a frame and make it a reference (also known as a key). This keyframe is sent as part of the broadcast, and all of the data after that keyframe is relative to it. The benefit of this is that the compressor only needs to send what has changed since the last keyframe. The main drawback of this is that over time it becomes harder for the encoder to distinguish the frame-difference information, especially if there is a lot of motion in the video. Another drawback is if your viewer's computer misses a keyframe, the video will be distorted until the next keyframe is sent. However, you can control how often the encoder makes a new keyframe by setting the number of frames. The more keyframes you broadcast, the more bandwidth required and less compression, but results in better quality video.
- 11.** Check (optionally) the Timecode Every checkbox and enter the number of frames between timecodes. Rich Media Desktop can generate a timecodes embedded in the flash stream. If a frames value of zero is entered, the timecode is never sent. Rich Media Desktop sends meta data along with the frames. This data looks like an onFI call. Various timecodes and timestamps are also sent with the stream.
- 12.** Check (optionally) the Audio Encoding (MP3) checkbox. When checked, the audio for your broadcast is included. When unchecked, audio is absent. This is the preferred method of producing video-only broadcasts because the presence of silent audio uses bandwidth.
- 13.** Select the number of channels: Mono or Stereo. Mono uses less bandwidth than stereo, but stereo is more pleasing to the listener.
- 14.** Select the audio bit rate, in Kbits (1000 bits) per second, from the Target Bit Rate menu. This is the target bit rate of your audio. Higher numbers provide better quality. The connection speed of your audience is a significant factor in determining your target bit rate. The encoder will compress the audio to approximate this target. However, at different times during your broadcast the bit rate may be higher lower than the target rate. The total broadcast bit rate is a function of video bit rate plus audio bit rate.
- 15.** Select the audio sample rate, in kHz (1000 Hz) per second, from the Sample Rate menu. This value specifies how many thousands of times per second to sample the audio in the broadcast. Higher values provide better quality sound, but at greater bandwidth.
- 16.** Click Save to save your settings.



# Using Desktop Presenter

## Introduction

Desktop Presenter is a utility application that is provided free with Rich Media Desktop. Rich Media Desktop can broadcast the desktop of any computer on your local network as a live source. This topic describes how to use Desktop Presenter.

## Topics

- [Downloading Desktop Presenter](#)
- [Launching Desktop Presenter](#)
- [Configuration with Bonjour Print Services](#)
- [Desktop Presenter Settings](#)
- [Adding Presenter Shots](#)
- [Parameters](#)
- [Applications](#)

## Downloading Desktop Presenter

Desktop Presenter can be downloaded from: [Click here to download](#). Save the installer to your computer, then run the Installer and follow the instructions.

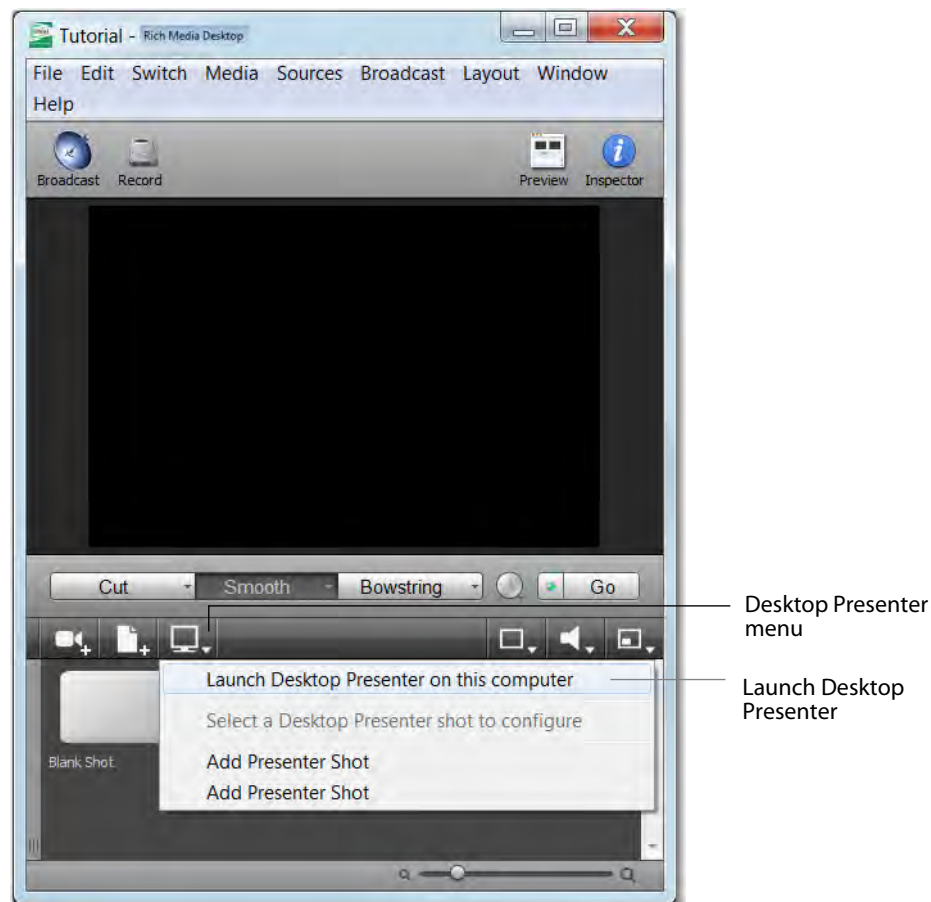
## Launching Desktop Presenter

Once Desktop Presenter has been installed, can be launched from Rich Media Desktop or launched stand-alone.

### From the Application Program

To obtain live feeds from a computer desktop, Desktop Presenter must be launched on the target computer. To do this, select Launch Desktop Presenter from the Desktop Presenter menu in the Main window:

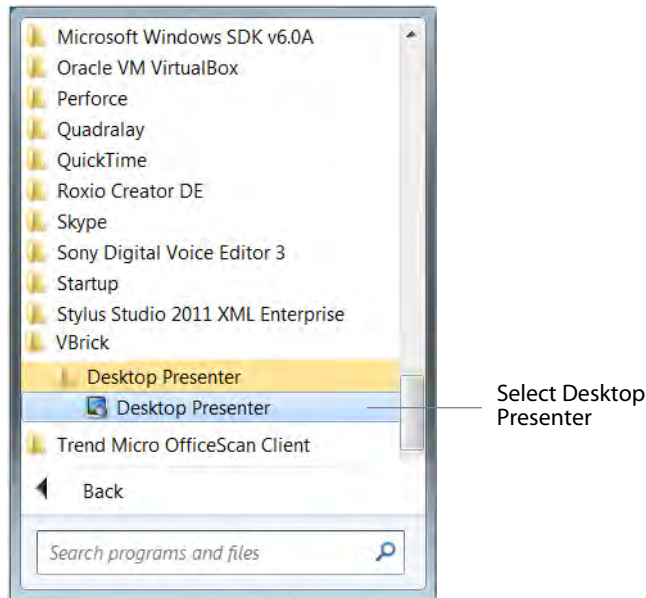
**Figure 87.** Launching Desktop Presenter



## Stand-Alone

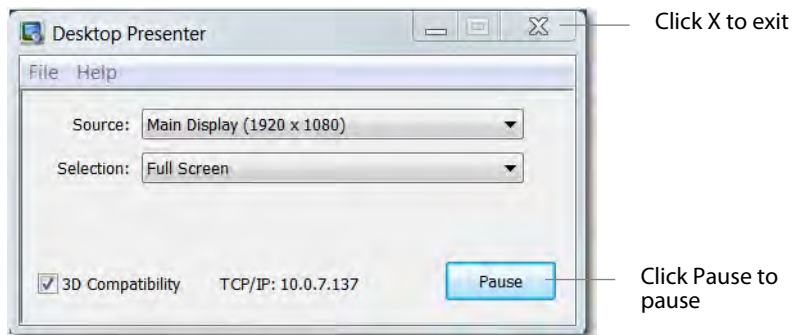
To launch Desktop Presenter stand-alone (apart from Rich Media Desktop) select Desktop Presenter under Telestream in the Start menu on the desktop:

**Figure 88.** Launching Desktop Presenter Stand-Alone



Once Desktop Presenter is running, it can be paused or exited:

**Figure 89.** Running Desktop Presenter



## Configuration with Bonjour Print Services

If you are using Bonjour Print Services, Rich Media Desktop will automatically detect Desktop Presenter when it is launched on another computer. If either the Desktop Presenter computer or the Rich Media Desktop computer does not have Bonjour installed, then you will need to manually enter the TCP/IP address of the computer running Desktop Presenter. To do this select New Desktop Presenter from the Sources menu in at the top of the Rich Media Desktop Main window. Bonjour Print Services for Windows can be downloaded from:

<http://www.apple.com/macosx/features/bonjour/>.

---

**Note:** Desktop Presenter uses port 7272.  
If you are using a firewall, this port must be open.

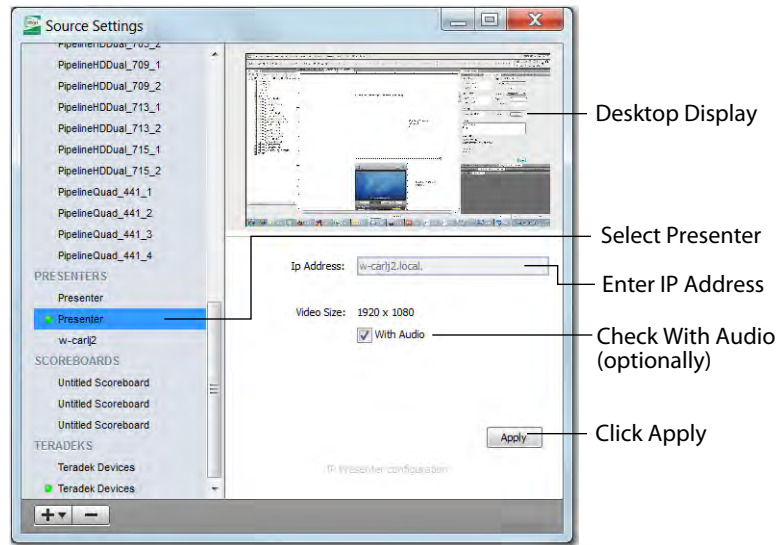
---

## Desktop Presenter Settings

Desktop Presenter is normally auto-detected by Rich Media Desktop and is automatically added to the list of sources. However, if a DTP is not detected, or if you want to add one in a remote location you can manually add it by selecting Sources > New Presenter from the menu in the Main window.

You can then setup the presenter in the Source Settings window by entering an IP address of the target computer, optionally checking the With Audio checkbox, and clicking Apply:

**Figure 90.** Desktop Presenter Settings



## Adding Presenter Shots

You can now make a shot from the desktop presenter source. To do this, select Add Presenter Shot from the Desktop Presenter menu in the Main window. The new shot from the Desktop Presenter is displayed in the Main window area:

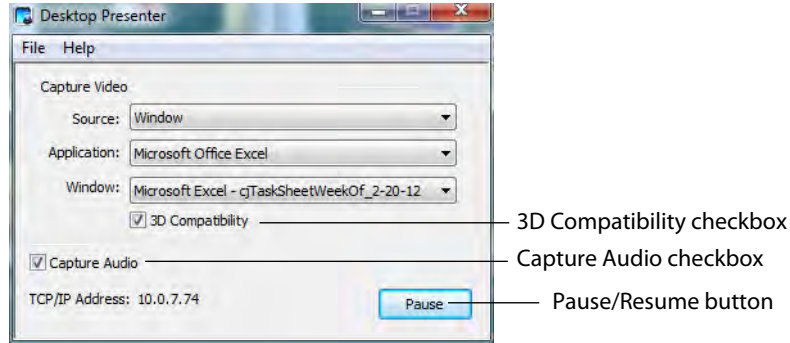
**Figure 91.** Add Desktop Presenter



## Parameters

In Desktop Presenter, select the Source of the desktop presentation: Main Display, Display 2, or Window. Optionally, you can check the 3D Compatibility and Capture Audio checkboxes if you are transmitting high motion video. During your presentation you can click Pause, which will interrupt the transmission to Rich Media Desktop, and then click Resume when you are ready to continue the presentation.

**Figure 92.** Desktop Presenter Parameters window





## Applications

Listed below are several typical applications of Desktop Presenter.

- 1. Lecture Hall/Board Room** If a lecturer installs Desktop Presenter on a laptop, you can broadcast their PowerPoint or other presentation directly from that laptop. If the lecturer is demonstrating something using the laptop (like a 3D graphical animation), Rich Media Desktop can also broadcast this to viewers. Other programs including Excel also work perfectly with Desktop Presenter, allowing the speaker to spontaneously refer to data without having to create new slides.
- 2. Training** As part of a training broadcast, you can switch to a live application to show exactly how to perform a particular action on a computer. This saves the laborious step of having to create screen shots of every minute detail.
- 3. Demonstration** You can demonstrate your business process, software, or hardware, as part of a presentation. This can be done any time during a presentation by switching directly to the application program.

---

**Note:** Video games can be captured, but make sure your computer has sufficient speed and memory capacity.

---



# Using the Asset Manager

## Introduction

The Asset Manager is used to change the sources of media in your document.

## Topics

- Documents
- Re-assigning Media

## Documents

Rich Media Desktop stores a path to your media in the Rich Media Desktop document. If you relocate your media, Rich Media Desktop will no longer be able to find them. In this case, use the Asset Manager to reassign the new media locations. However, Rich Media Desktop does keep track of the relative path to your media. If you move both the document and media to a new position, Rich Media Desktop will still find the media.

## Re-assigning Media

To reassign media, follow these steps:

1. To open the Asset Manager, select Show Asset Manager from the Rich Media Desktop Media menu.
2. Click on the media you want to assign to another source.
3. Select the new media from the Assign To menu, or click Browse and locate the replacement media on disk.

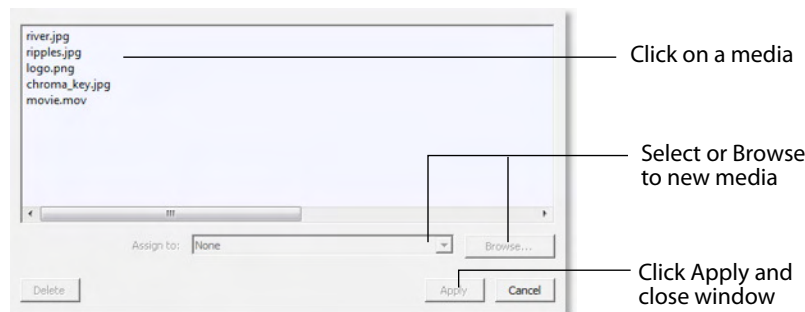
---

**Note:** When Desktop Presenter is selected as the source, you can enter the IP address to the Desktop Presenter. This enables you to build a Rich Media Desktop presentation with place-holders and then reconfigure at a later date to accommodate a new presenter with a new Desktop Presenter as a source. Additionally, if you select a camera input source from the Media List, an additional menu to set the Device Aspect Ratio of the camera is displayed. This is useful if the image aspect ratio of your camera is not automatically picked up by Rich Media Desktop. In this case, select the correct aspect ratio from the menu, click Apply, then click the corresponding icon in the Shot Selection.

---

4. Click Apply to replace the existing media, then close the Reassign Media window.

**Figure 93.** Reassign Media window





# User Interface

## Introduction

These topics describe the menus and menu items in Rich Media Desktop.

## Topics

- File Menu
- Edit Menu
- Switch Menu
- Media Menu
- Sources Menu
- Broadcast Menu
- Layout Menu
- Window Menu
- Help Menu

## File Menu

**New.** Creates a new, empty Rich Media Desktop document.

**Open.** Displays the Open dialog window for opening a Rich Media Desktop document.

**Open Recent.** Displays up to fifteen of the most recently accessed documents. Every time a document is opened or saved it is entered into the this list.

**Import Media.** Enables you to import media into Rich Media Desktop. A new shot is automatically created using the new media.

**Canvas Size.** Sets the canvas size aspect ratio used when broadcasting a Rich Media Desktop document.

---

**Note:** You should match the output to the canvas size as close as possible to preserve video resolution and quality. For example, a 800x600 source will result in significant loss of quality if an aspect ratio of 640x480 is selected. Using 720x576, which is much closer in size, will help preserve video quality.

---

**Save.** Saves the document. If the document has not already been saved, the Save As... dialog window is displayed.

**Save As.** Displays the Save As... dialog window so that the document can be saved using a new file name.

**Close Window.** Closes the currently active Rich Media Desktop window. If the window is a document, all of its Shot Editor windows are closed as well. If Rich Media Desktop is still broadcasting, asked to stop the broadcast. If the document has not been saved, you will be asked to save the document before closing.

**Preferences.** Opens the Preferences window. If the Preferences window is already open, it will be made active.

**Exit.** Closes all documents and then exits. If the broadcast is playing, you are asked to stop the broadcast. If a document has not been saved, you will be asked to save the document before exiting.



## Edit Menu

**Undo.** Reverses your last change in Rich Media Desktop. Undo is only available in some windows (such as the shot editor). Rich Media Desktop offers an unlimited number of undo actions (within computer memory limitations). Undo information is stored on a per-window basis. Also, if you close window then reopen it, your undo information is lost.

**Redo.** Reverses your last undo action. Redo is only available in some windows (such as the shot editor). Rich Media Desktop offers an unlimited number of redo actions (within computer memory limitations). Redo information is stored on a per-window basis. Also, if you close window then reopen it, your redo information is lost.

**Edit Shot.** Opens the Shot Editor. (See [Using the Shot Editor](#)). You can also double-click a shot, or right-click and select Edit Shot, to open the Shot Editor. The Inspector window is a shot editor window which always edits the last touched shot. (See [Inspector vs. Editor](#).)

**Rename Shot.** Enables you to rename a shot. You can also right-click a shot and select Rename Shot.

**Duplicate Shot.** Duplicates the currently selected shot. You can also right-click a shot and select Duplicate Shot.

**Add Shot.** Creates a new empty shot. You can also right-click a shot and select Add Shot.

**Delete Shot.** Deletes the currently selected shot. You can also right-click a shot and select Delete Shot.

**Move To Layer.** Moves a shot to the selected layer. When shots are created, they are assigned to a specific layer. They exist on that layer until they are moved or deleted. You can also right-click a shot and select Move To Layer.

## Switch Menu

**Go.** Performs the same action as clicking the Go button.

**Transitions.** Rich Media Desktop has three transition buttons that can be assigned any transitions (cut, smooth, etc.) that Rich Media Desktop supports. The Switch menu lists the currently assigned transitions by name. These three transitions can also be selected by pressing the control key and either the 1, 2, or 3 key. (See [Transition Controls](#) to modify which transitions appear in this menu.)

**AutoLive.** Toggles (turns on and off) the AutoLive feature. It can also be toggled by changing checkbox AutoLive in the Main window. AutoLive is a fundamental feature of Rich Media Desktop which enables you to control how you make shots become part of the live broadcast. (See [AutoLive](#).)

## Media Menu

**Start Playing All Movies.** Starts playing any movies that are not currently playing.

**Pause All Movies.** Pauses all movies that are currently playing.

**Play to Next Point.** Play all media to the next marker (point) that is embedded in the media.

**Jump to Previous Point.** Forces all media to jump back to the previews marker (point), and then pause.

**New Desktop Presenter.** Launches the Desktop Presenter program. If Bonjour is not installed on the computer running Desktop Presenter, you may need to manually enter the TCP/IP address of that computer. If you want to add a Desktop Presenter before it is available you can use this menu option to pre-configure your document. You can also change the IP address to a Desktop Presenter in the Asset Manager dialog.

Show Asset Manager Opens the Asset Manager dialog window. (See [Using the Asset Manager](#).)

**Show Asset Manager.** Displays devices that can be configured. Some devices (cameras, etc) may be configurable. For example, you can configure a USB camera to manually change its focus, contrast, brightness, etc. Other devices have multiple inputs you can choose (AlchemyTV Card, etc).

---

**Note:** The Configure Devices menu selection is present only if a device is connected to Rich Media Desktop. The configuration user interface is provided by the device maker. It is beyond the scope of this document to describe all of the features available for all devices. See the documentation provided with your device on how to configure it.

---

## Sources Menu

PRO

**New IP Camera.** Opens the Source Settings window with IP Camera selected as a source. Enter the IP address and frame settings to test the camera, then click Apply to create the new source.

PRO

**New Scoreboard.** Opens the Source Settings window with a new (untitled) Scoreboard selected as a source. Configure the settings and click Apply to create the new source.

**New Presenter.** Opens the Source Settings window with a new Desktop Presenter selected as a source. Enter the IP address and check *With Audio* to include audio from the desktop. Click Apply to create the new source.

**Show Source Settings.** Opens the Source Settings window. (See [Using the Source Settings](#) for more detailed information on setting sources.)

**Show USB Devices.** Opens a list of all USB devices.

## Broadcast Menu

**Broadcast Settings.** Opens the Broadcast Settings window.

**Start/Stop Broadcasting.** Starts (or stops) broadcasting to the network.

**Start/Stop Recording.** Starts (or stops) recording to disk. If you have not yet configured the Broadcast Settings for this document, you will be prompted to do so.

**External Display Output.** Selects an external display for the output of Rich Media Desktop. For example, if you have a projector connected to your computer using S-Video, select it from this menu to display the output of Rich Media Desktop to the projector.

If you have a dual-head graphics card, you can select the second monitor to display Rich Media Desktop Output. However, if you have two graphics cards, Rich Media Desktop may not be able to display to any devices (monitors) on the second graphics card.

## Layout Menu

**Preview.** Shows (or hides) the Preview area in the Main window. You can also click the Preview icon in the Main window tool bar.

**Master Audio.** Shows (or hides) the Master Audio controls.

**Main Shot List.** Shows (or hides) the main shot list.

**Output Statistics.** Shows (or hides) the output statistics.

**Layer Panel.** Shows (or hides) the layer panel.

**Go to Layer.** Displays the selected layer. The currently selected layer is always highlighted in the Layout Panel. You can also press Control + Shift keys with the T, F, N, B, or A keys to select a layer. Each of these letter keys represents a layer name: Title, Foreground, Normal, Background, and Audio

## Window Menu

**Inspector.** Opens the Inspector window. There is only one Inspector window for each document. The Inspector is very similar to the shot editor, except it always edits the last shot touched.

**Encoder Presets.** Opens the Encoder Presets window.

### PRO

**Audio Inspector.** Opens the Audio Inspector window.

**New Layer Window.** Opens a new Master Layer window for the layer selected.

**Camera Preview.** Shows a preview of all cameras currently connected to your computer.

**Document Windows.** All open document windows are listed at the bottom of this menu.

## Help Menu

**Help.** Opens the online help version of the User Guide.

**Open PDF User Guide.** Opens the PDF version of the User Guide.

**Open Tutorial HTML.** Opens the Rich Media Desktop Tutorial in your browser. To follow the tutorial, you'll need to Create a Document for the Tutorial as well.

**Create Document for Tutorial.** Creates a new Rich Media Desktop Document which contains the media necessary for following the Tutorial.

**Report a Bug.** Opens the VBrick Website bug reporting page where you can report and bugs you have encountered. Please give us as much detailed information as possible about your computer, what you were doing, and any supporting material regarding the problem. Additionally, if a specific piece of media is troublesome, please set it aside so that we can possibly obtain it and look at the problem directly. In the unlikely event that Rich Media Desktop crashes, you can also send us a debug log by clicking the Upload Debug Log File button in the File > Preferences > Advanced menu.

**Provide Feedback.** Opens the VBrick Website feedback page where you can enter any feedback you may have about our product or company.

**Visit Web Site.** Opens the VBrick Website home page.

**Visit Desktop Presenter Download Page.** Opens the VBrick Website download page for Desktop Presenter.

**Acknowledgments.** Opens on-line help to acknowledgments.

**About.** Displays version and copyright information about Rich Media Desktop



# Using Preferences

## Introduction

Rich Media Desktop is designed so that you can configure most of your options directly in your Rich Media Desktop document or the Shot Editor. The Preferences window enables you to set up Rich Media Desktop, set Desktop Presenter options, manage your licenses, update your software, and set advanced video options.

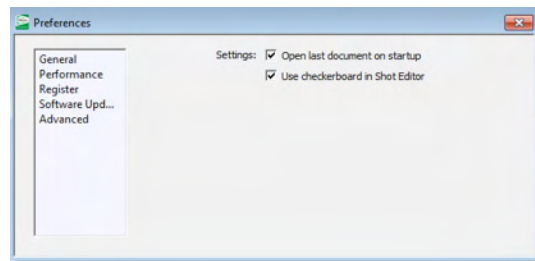
## Topics

- [Accessing Preferences](#)
- [General](#)
- [Register](#)
- [Licensing](#)
- [Software Update](#)
- [Advanced](#)

## Accessing Preferences

To open the Preferences window, select Preferences from the File menu (or press the Ctrl+ Comma (“,”) keys). Preferences are grouped under five topics: General, Performance, Register, Software Update, and Advanced. Click one of these topics to view and change its preferences.

**Figure 94.** Preferences window



Rich Media Desktop automatically saves your preferences every time you make a change. The changes are immediately applied.

## Resetting Preferences

To reset your preferences, quit Rich Media Desktop and then delete the files located at:

- Windows 7 and Vista: C:\Users\USERNAME\AppData\Roaming\Vara Software\Rich Media Desktop Preferences.
- Windows XP: C:\Documents and Settings\USERNAME\Application Data\Vara Software\Rich Media Desktop Preferences

---

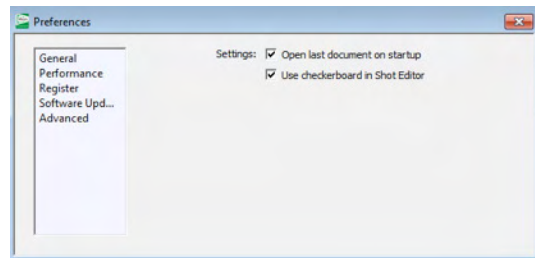
**Note:** In some Windows directories, you may need to enable the Show Hidden Files option in order to view the folder containing the Rich Media Desktop Preferences file.

---

## General

General preferences enable you to setup the Rich Media Desktop environment.

**Figure 95.** General Preferences



### Open Last Document on Startup

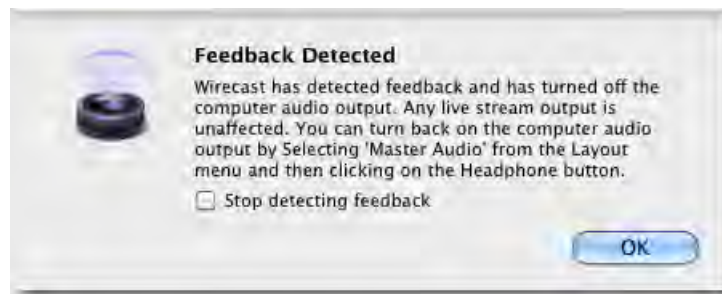
When checked, the last document you used will be opened when Rich Media Desktop starts up. Checked is the default.

### Shot Editor Checkerboard

When checked, a checkerboard background displays in the Shot Editor to indicate the absence of color in the area where it is displayed. Checked is the default.

### Feedback Detection

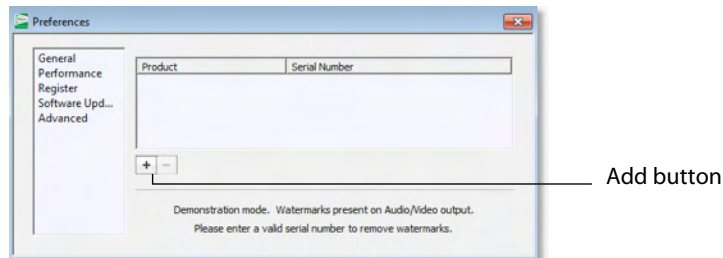
When checked, the computer audio is disabled (live feed is unaffected) whenever feedback is detected. Checked is the default. When feedback is detected, the following warning is displayed with an option to turn off feedback detection:



## Register

Register preferences enable you to register and license Rich Media Desktop.

**Figure 96.** Register Preferences



## Serial Numbers

The table in the Register Preference window displays the products and serial numbers that you have received for Rich Media Desktop.

---

**Note:** The serial number is always composed of numbers and upper case letters (excluding upper case letter O), but it never contains quotation marks. When you receive a serial number, it may be enclosed in quotation marks (e.g., "123-456-789").

---

To add a valid serial number, click the Add Button ("+" icon) below the table. When Rich Media Desktop displays the Enter Serial Number window, enter the serial number and click OK. Rich Media Desktop validates the serial number and unlocks Rich Media Desktop. If you previously purchased a copy of Rich Media Desktop and want to use that serial number, enter that serial number to unlock Rich Media Desktop.

## Licensing

To purchase a serial number for Rich Media Desktop, or Rich Media Desktop Pro, please contact VBrick at (203) 265-0044. You may also make purchases through Rich Media Desktop. To do this select the Register tab, click the Add button (“+” icon), then click purchase in the Resultant window. This directs you to the VBrick Website where you can submit your purchase request directly.

## Deactivate Serial Numbers

Deactivating a serial number allows you to re-activate it on another computer. You can always reactivate a serial number by re-entering it. To deactivate a serial number, select an activated product, and click the minus [-] button. Rich Media Desktop deactivates the serial number, disables Rich Media Desktop, and adds water-marking to the video and audio. When you deactivate a serial number, it is removed from the table.

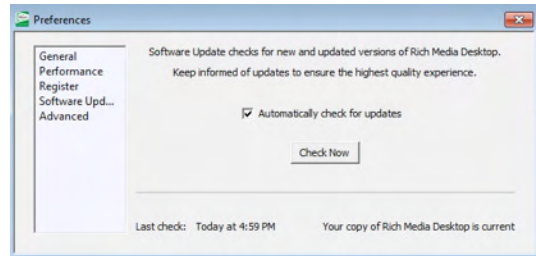
## Demonstration Mode

When no serial number is entered or activated, Rich Media Desktop water-marks all output (both to disk and network). The video water-mark is a periodic overlay of the Rich Media Desktop logo. Audio water-mark is a periodic voice over. If you have a Rich Media Desktop serial number and are using a Rich Media Desktop Pro feature without a Pro license, that output is also water-marked.

## Software Update

Software update preferences enable you to obtain Rich Media Desktop updates.

**Figure 97.** Software Update Preferences



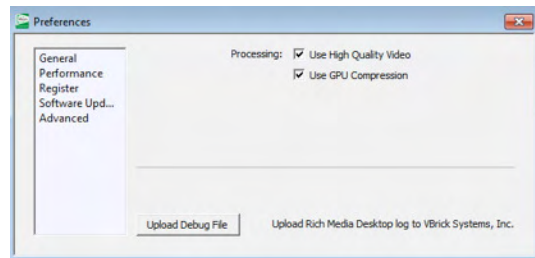
## Automatically Check Updates

Check the Automatically Check For Updates checkbox to cause Rich Media Desktop to check for updates on the VBrick Web site each time Rich Media Desktop is launched. No personal information is transferred to VBrick during this action. Checked is the default.

## Advanced

Advanced preferences enable you make advanced settings for Rich Media Desktop.

**Figure 98.** Advanced Preferences



---

**Note:** Note: Capture Device Size has been moved to the Source Settings window.

---

### Use High Quality Video

Check the Use High Quality Video checkbox to increase the quality of decoding performed on your source media files. (See [Output Statistics](#) for information on output statistics.) If CPU usage is near 95%, or if the frames per second (FPS) is consistently well below your target, uncheck UseHigh Quality Video to remedy this. Checked is the default.

### Use GPU Compression

On appropriate hardware, Rich Media Desktop can gain significant speed improvements by using your graphics card to pre-process frames before sending them to the encoders. Uncheck the Use GPU Compression checkbox only if you experience issues with your encoded output. This option is included in the rare case that you choose to use an Encoder that does not support the necessary features. Rich Media Desktop has been designed to work with all encoders, but there is no guarantee that all encoders are compatible. Checked is the default.

### Upload Debug Log File

Occasionally, VBrick may require detailed debugging information to help understand issues you have reported. At the request of customer service (or support), click the Upload Debug File button to upload a text file to our server for our engineers to review.

---

**Note:** Use this feature only under direction of our customer service or support staff. No personal information is transmitted.

---





# Using the Main Window

## Introduction

This section describes in detail how to use Rich Media Desktop's main window.

## Topics

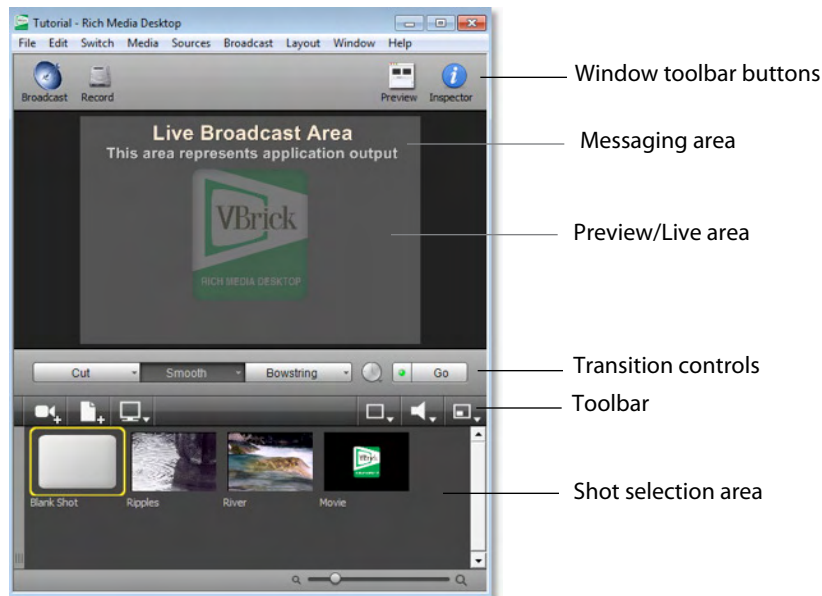
- Introduction
- Window Bar Buttons
- Preview / Live Area
- Transition Controls
- Tool Bar
- Shot Selection Area
- Layers
- AutoLive

## Introduction

Rich Media Desktop's main window is comprised of six display areas:

- 1. Window Bar Buttons** The top area with the Broadcast and Record buttons.
- 2. Messaging Area** The area just below the window's tool bar.
- 3. Preview/Live Area** The large area in the center.
- 4. Transition Controls** The area with the transition (Cut, Smooth, and Bowstring) and Go buttons.
- 5. Toolbar** The toolbar containing six tools located just above the Shot Selection area.
- 6. Shot Selection Area** The area displaying the shot icons (available shots).

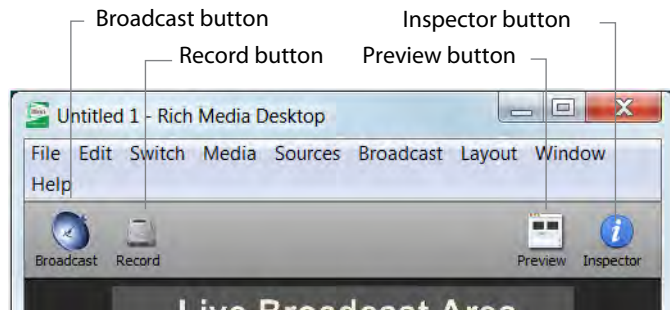
**Figure 99.** Main Window



## Window Bar Buttons

Rich Media Desktop provides four Window Bar buttons: Broadcast, Record, Preview, and Inspector.

**Figure 100.** Window Bar Buttons



- **Broadcast** The Broadcast button starts and/or stops the broadcast. If you have not yet configured the broadcast, clicking this button brings up the Broadcast Settings window. This button is independent of the Record button. You can turn broadcasting on and off regardless of whether you are currently recording the broadcast.
- **Record** The Record button starts and/or stops recording. If you have not yet configured the broadcast, clicking this button brings up the Broadcast Settings window. This button is independent of the Broadcast button. You can turn Record on and off regardless of whether you are currently broadcasting.
- **Preview** Shows or hides the Preview area. The Preview area shows what the live broadcast will look like after you click the Go button. The Preview is not very useful unless you turn off the AutoLive feature. When Preview is open it is displayed as the left panel of the Preview/Live area, and displays a green P in the top-left corner of the preview window.
- **Inspector** Opens the Inspector window. The inspector is very similar to the editor window, but the Inspector always shows the last shot selected.

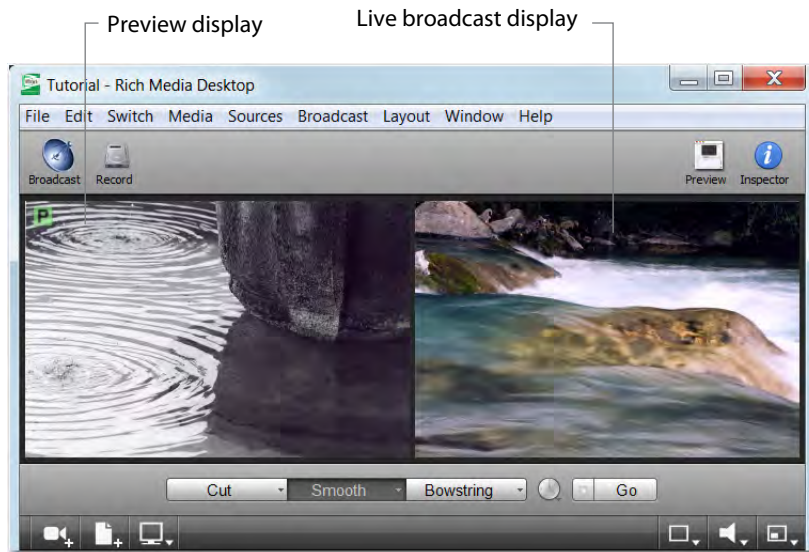
## Preview / Live Area

When you open a new document, only the Live area displays. The Live area shows what is broadcast to your viewers before the encoding or compression.

When AutoLive is off, you can make several changes without your viewers seeing the change. This is most useful when you are using an engineer to run your broadcast. When you are making changes to your broadcast, you may want to see those changes before broadcasting them. Preview allows you to do this.

To see the preview, select Preview from the Layout menu. This sets up the Main Window with Preview on the left and the live broadcast on the right. Clicking the Go button makes the Ripples shot become Live.

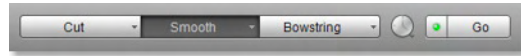
**Figure 101.** Preview and Live Displays



## Transition Controls

The transition area is in the middle of the Main Window:

**Figure 102.** Transition Controls

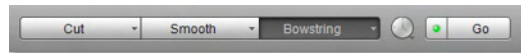


There are three Transition buttons, but each can be configured to present one of many possible transition types. In the image above, the three configured transitions are: Cut, Smooth, and Bowstring. Since Smooth is selected (button darkened), any transition executed by clicking Go will be a smooth transition.

## Changing Transitions

If you single-click the Bowstring button, it will become selected and making it the current transition type:

**Figure 103.** Bowstring Transition Control



You always have three different transition types available. You can also select one of the three buttons by pressing Ctrl+1, 2, and 3 keys for the three transition types displayed. If you click the down-arrow on the right side of any transition button, you can select a new transition to be assigned to that button. In the image below, Swoop has been assigned to the first transition button:

**Figure 104.** Swoop Assigned to First Transition Button



## Transition Time

The duration of the transition is controlled by clicking the duration icon:

**Figure 105.** Duration Icon



This button controls the duration of all transitions, except for Cut which is immediate. For example, if you click the Duration button and select Slow from the drop-down menu, the button changes to display a turtle icon.

**Figure 106.** Slow Duration (Turtle) Icon



Additionally, if Slowest is selected a bug is display, and if Fast is selected a rabbit is displayed.

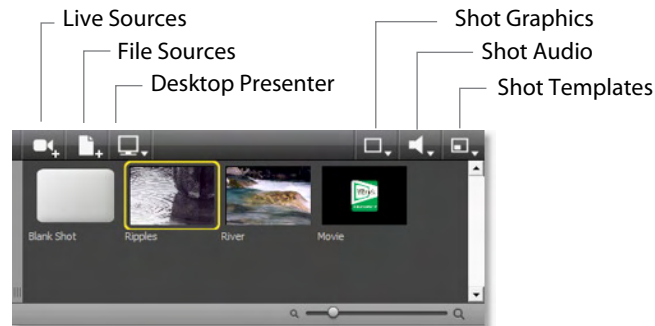
## **Go Button**

The Go button (or you can press the Ctrl+G keys) will take any changes you have made and make them Live using the selected transition and duration. However, the Go button only becomes important when you have AutoLive turned off. This is because when AutoLive is on, every time you click a shot the Go action is automatically executed for you. (See [AutoLive](#).)

## Tool Bar

The Toolbar provides a way to open live sources, file sources, the Desktop Presenter program, shot graphics, shot audio, and shot templates.

**Figure 107.** Toolbar Tools



## Live Sources

Click the Live Sources button to display a list of live sources under the categories: System Device, IP Camera, Pipeline, and Scoreboard. When a live source is select, it is added to the Shot Selection area as a new shot.

## File Sources

Click the File Sources button to display a list of file-based sources categories: Video Shots, Picture Shots, Music (audio) Shots, or a New (empty) Shot. When selected a file selection dialog window will display enabling you to navigate to and select a file to become a shot. Select Add New Shot to add a new, untitled, generic shot without any file-based resources attached.

## Desktop Presenter

Click the Desktop Presenter button to select one of three actions: launch Desktop Presenter, add a new Desktop Presenter shot, or configure an existing Desktop Presenter shot. You cannot configure an existing shot until the Desktop Presenter is open.

---

**Note:** When you click the Desktop presenter button, there is a slight delay until the menu selections are displayed.

---

## Shot Graphics

Click the Shot Graphics button to select one of three actions: Source A, Untitled Scoreboard, the current Desktop Presenter shot, add a picture from disk, or add a movie from disk. When a selection is made, the source selected is added to the Shot Area as a new shot.

## **Shot Audio**

Click the Shot Audio button to add an audio file shot. When selected a dialog window will display enabling you to navigate to and select a file.

## **Shot Template**

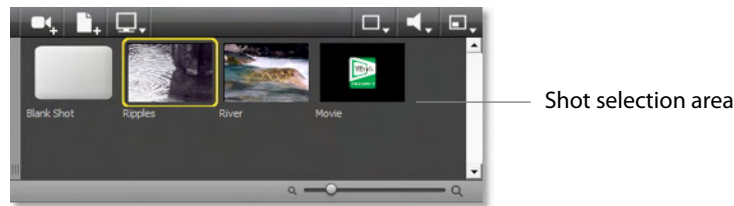
Select a shot in the Shot area, then click the Shot Template button to select a template to be applied.



## Shot Selection Area

The bottom part of the Main Window contains the Shot Selection Area, also called the Shot List.

**Figure 108.** Shot Selection Area



## Changing Shots

You can change shots by clicking on the one you want to activate. Above, Ripples is selected as the current shot. You can add a new empty shot by right-clicking on any existing shot displayed in the Shot Area.

**Delete Shot** You can delete a shot by right-clicking it and selecting Delete Shot, or by selecting Delete Shot from the Edit menu. You can also delete a shot by selecting it and pressing the Ctrl+Backspace keys.

**Edit Shot** You can edit a shot by double-clicking on it, by right-clicking it and selecting Edit Shot, or by selecting Edit Shot from the Edit menu. You can also edit a shot by selecting it and pressing the Ctrl+E keys.

**Duplicate Shot** You can duplicate a shot by right-clicking it and selecting Duplicate Shot, or by selecting Duplicate Shot from the Edit menu. You can also duplicate a shot by selecting it and pressing the Ctrl+D keys.

**Rename Shot** You can rename a shot by right-clicking it and selecting Rename Shot, or by selecting Rename Shot from the Edit menu. You can also rename a shot by selecting it and pressing the Ctrl+R keys.

## Moving a Shot to Another Layer

You can move a shot to another layer by selecting Move to Layer from the Edit menu, then selecting the target layer from the drop-down menu. You can also right-click the Shot and selecting Move to Layer. When shots are created, they are assigned to a specific layer. They exist on that layer until they are moved or deleted. (See [Layers](#).)

## Growing/Shrinking the Shot Thumbnails

In the lower right corner of the window is a slider you can use to control the size of the shot thumbnails. Drag the slider to the left to reduce the size of the thumbnails and to the right to enlarge them.

## Layers

Rich Media Desktop allows you to put shots on any of five different layers. Layering shots enables Rich Media Desktop to merge them together, from back (lowest layer) to front, to form a single visual image during broadcast.

When Rich Media Desktop first opens, the Layer panel is not shown. To display the layer panel, select Layer Panel from the Layout menu, or click the grey strip (on the left end of the Shot Area) and drag it to the right.

**Figure 109.** Layer Panel Display



## What is a Layer?

Layers are, by default, named Master Layer 1 through 5. You can change the name of any layer by double-clicking it and entering a new name (i.e. Background, Camera, etc.). Layers determine the order when presenting images in the live broadcast area. The Bottom layer (Master Layer 5) is drawn first, then the other layers, in order, up to Master Layer 1. You should name your layers according to the function they serve. Examples might be: Audio, Background, Normal, Title, etc.

Using multiple layers is a powerful way to show, for example, a company logo, or a beautiful background, or title, independently from each other. You could have a shot of

your logo on a “Title” layer (the top layer), so that it will always be visible, above all other layers placed behind (below) it.

## Changing Layers

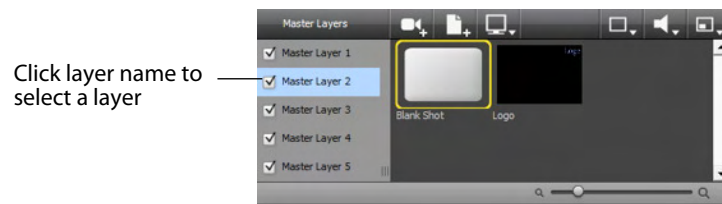
To view other layers, click in the Layer Panel on the name of the layer you want to display. When a new layer is selected, the Shot list changes to display the shots that are in that newly selected layer.

---

**Note:** There are key-press short-cuts available to help you quickly change layers. These short-cuts remain the same even when you change the name of a layer.

---

**Figure 110.** Changing Layers



## Moving a Shot to Another Layer

A shot can be moved to another layer by selecting Move to Layer from the Edit menu, or right-clicking on the shot and selecting Move to Layer. When shots are created, they are assigned to a specific layer. They exist on that layer until you move them or delete them.

## AutoLive

The AutoLive button is located in the Transition Controls, just left of the Go button. Clicking on the AutoLive button toggles it between on and off. When AutoLive is on, the button will display a green dot. You can also select AutoLive from the Switch menu.

When AutoLive is on, changes made in the Main Window automatically go to live broadcast. If you click a shot when AutoLive is on, the shot is automatically taken Live for you in the broadcast (using the current transition and duration). If you click a shot when AutoLive is off, the shot is not sent to live broadcast. In this mode you take the shot live manually, by clicking the Go button, or by pressing the Ctrl+G keys.

# Using the Audio Inspector

## Introduction

The Audio Inspector enables you to monitor and control all of the audio sources from a single control panel. This section describes in detail how to use the Audio inspector.

## Topics

- [Introduction](#)
- [Hardware Audio](#)
- [Shot Audio](#)

## Introduction

To open the Audio Inspector panel, select Audio Inspector from the window menu.

**PRO**

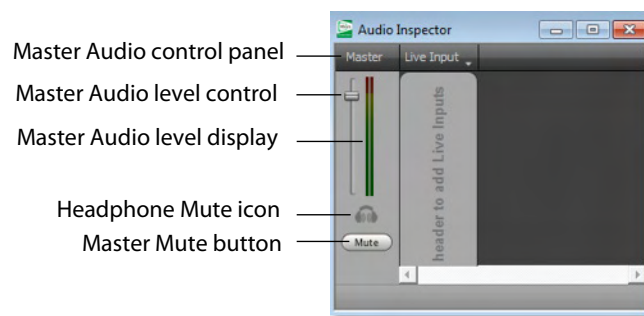
---

**Note:** The use of the Audio Inspector requires a Rich Media Desktop Pro license. For licensing information, select Preferences from the FileRich Media Desktop menu, click the Add (+) button, then click Purchase.

---

The Audio Inspector separates your audio by hardware and shot. Live Input is always the first section to the right of the Master control, and it contains all hardware audio sources you may be using. This includes microphones, audio input feeds, cameras, capture cards, Pipelines, etc. The remaining audio controls are associated with specific shots.

**Figure 111.** Audio Inspector panel.



## Hardware Audio and Shot Audio

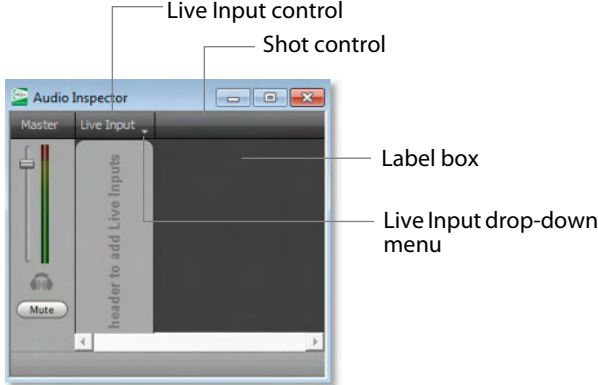
The Master control sets and displays the total audio output of your broadcast. Click the headphones icon (directly below the Master controls) to mute the local audio feed. (This has no effect on the broadcast audio output.) The Mute button, below the headphones icon, mutes all local audio and all broadcast audio.

Below the name of each audio source is a white label box. You can rename this box to as appropriate for the source, to avoid confusion during a broadcast. To rename the audio source, click in the white box and enter the new name.

Hardware audio sources are automatically added to the Audio Inspector whenever a new audio source is added through the Main window or through the Shot Editor. You

can also manually add a hardware audio source by clicking the Live Input drop-down menu at the top of the Live Input section.

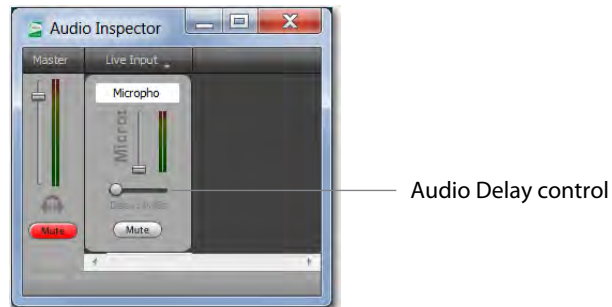
**Figure 112.** Audio Inspector



## Hardware Audio

Hardware audio sources are hardware devices and live sources. This includes dedicated microphones, cameras (that have audio), audio line feeds, Pipelines, capture cards, etc.

**Figure 113.** Audio Delay Control



When you add a device to the Audio Inspector as a Live Input, it defaults to the lowest volume level, because all Live Input audio sources act as global audio sources through the Audio Inspector. Thus, any source listed in the Live Inputs section can be immediately added to a broadcast by dragging the volume slider on that source up.

The horizontal slider in a Live Input controls the audio delay. Dragging the slider to the right will increase delay, up to one second, to fine-tune audio in sources where the audio is ahead of the video.

---

**Note:** Audio that is out of sync with video is common when running a microphone directly into your computer's audio input when using a FireWire camera as a video source. Most FireWire devices create a latency that causes the audio to be ahead of the video.

---



## Shot Audio

Shot audio sources come from shots that are currently live in your Rich Media Desktop document. Any time a shot becomes live, it immediately displays in your Audio Inspector.

### Adding Shot Audio Sources

The Shot Audio panels are always displayed to the right of the Live Input panel in the Audio Inspector. Shot audio is automatically added to your broadcast whenever a shot containing audio transitions to live broadcast.

New Shot Audio controls are created as multiple shots are made live during the broadcast. For example, if you have live shots with audio sources in Master Layer 1, 2 and 3, Rich Media Desktop displays three Shot Audio panels. Each panel provides you to control the audio output of the source it controls.

### Managing Audio Sources

Shot audio is most useful in controlling the audio levels during a live broadcast. You can use the sliding meters to adjust the volume levels of any source during broadcast. If a source begins contributing audio that is wrong or distorted, you can click the Mute button at any time to silence it. Its muted state is maintained even if you change shots and come back to it.



# Using the Source Settings

## Introduction

These topics describe how to use the Source Settings editor.

## Topics

- [Overview](#)
- [System Devices](#)
- [Scoreboards](#)
- [IP Cameras](#)
- [LiveU](#)
- [Capture Cards](#)

## Overview

To open the Source Settings window, select Sources > Show Source Settings.

The Source Settings window is divided into several sections: system devices, Preview window, configuration area, and button bar:

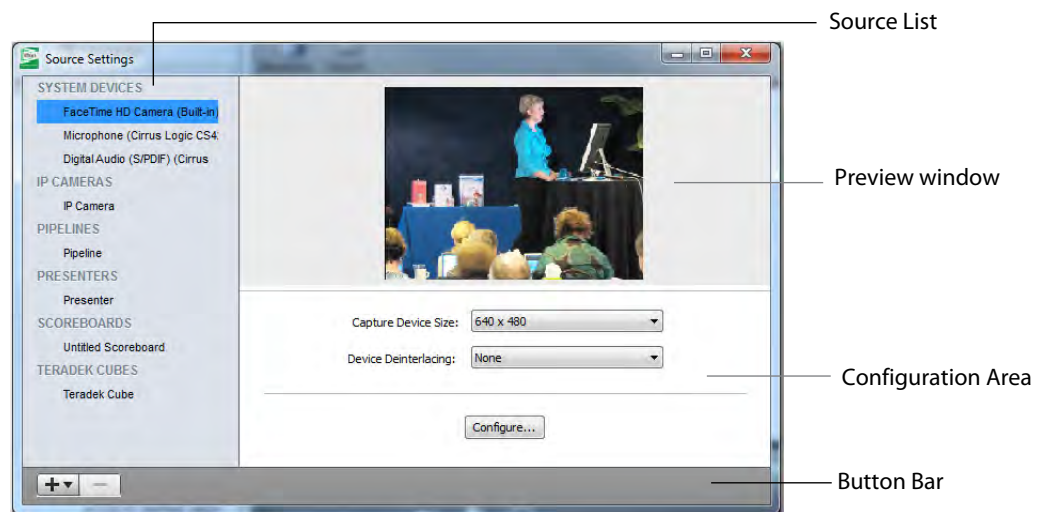
- The Source List displays all the devices detected by Rich Media Desktop (USB and FireWire devices, microphones, line inputs, Webcams, etc). Sources to be used are selected from this list.
- The Preview window provides a preview of the video coming from a selected source.
- The Configuration Area is for configuring sources. When a source is selected from the System Devices list, the configuration options for that source are displayed.
- The Button Bar contains two buttons. Click the plus (+) button to manually add new sources. Click the minus (-) button to remove them.

---

**Note:** All sources listed in the Source Settings window are also accessible through the Add Live Source button in the Main window Toolbar.

---

**Figure 114.** Source Settings Editor



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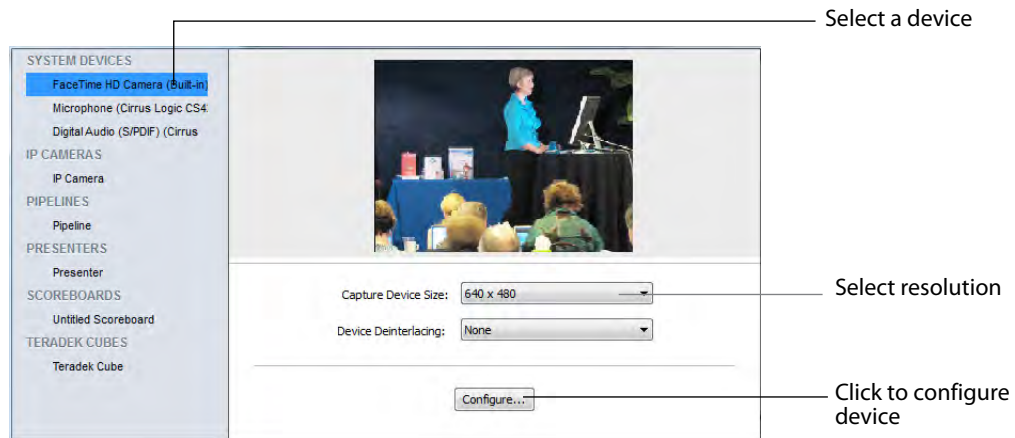
**Note:** In Rich Media Desktop versions 4.0 and above, de-interlacing has been moved from System Preferences (where it was a global setting) to the Source Settings, where it is individually controlled by each device.

---

## System Devices

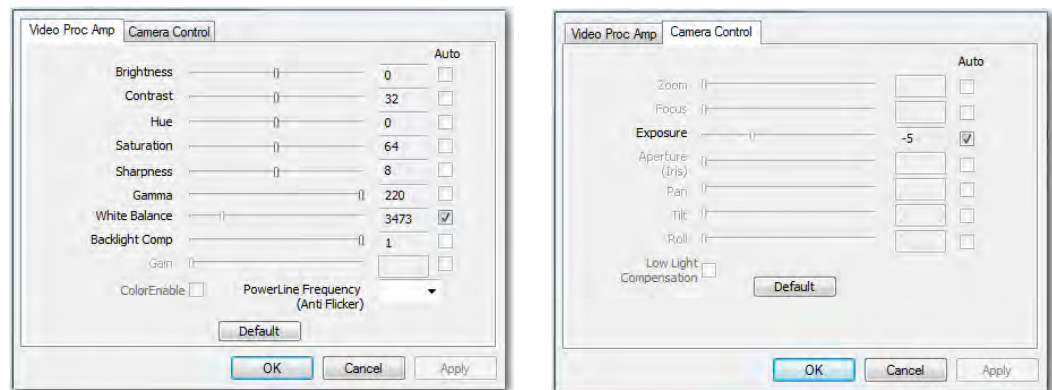
System devices include Firewire devices, USB cameras, and other USB devices. Click on a device to select it. Two drop-down menus and a configuration button are displayed. The *Capture Device Size* menu selects the device resolution from 160x120 to 1920x1080, depending on the camera. The Device Deinterlacing menu selects either None or Blend. None turns of deinterlacing enabling the video to interlace normally. Blend turns deinterlacing on enabling the video to avoid interlacing problems during motion. Click Configure to configure the selected device.

**Figure 115.** System Devices Settings



When you click *Configure*, a properties window displays with two tabs. The *Video Proc Amp* tab enables you to set the video display properties. The *Camera Control* tab enables you to set camera image properties. Any properties that do not apply to the selected camera are greyed-out.

**Figure 116.** System Device Configuration Properties



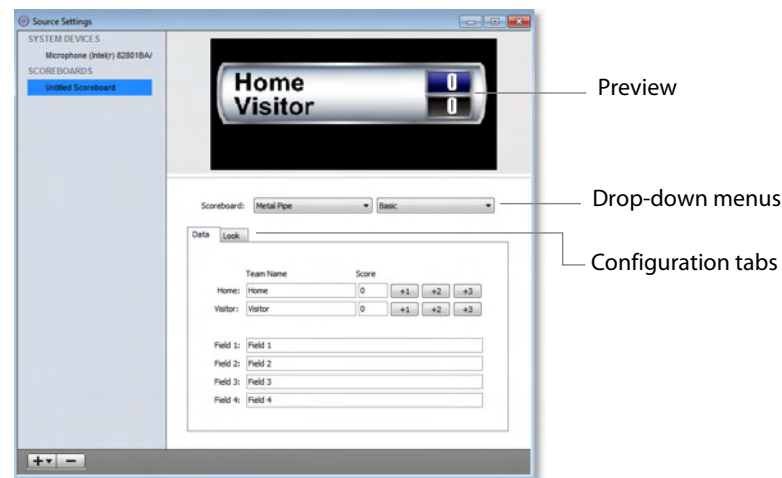
## Scoreboards

### PRO

Scoreboards allow you to add a scoreboard graphic to your broadcast that can be dynamically updated. To add a new scoreboard, select New Scoreboard from the Sources menu. Multiple scoreboards can be added.

When a scoreboard is opened in the Source Settings editor, it displays a preview of the scoreboard, two drop-down menus, and two configuration tabs.

**Figure 117.** Scoreboard window



Unlike most other elements in Rich Media Desktop, changes to the Scoreboard go live instantly without requiring a transition. Once the scoreboard is live, the preview image is exactly as it is seen in your broadcast.

Of the two drop-down menus, the first selects the style of the scoreboard (Pipe, Shade, Corner, Wide, etc.) and the second selects the scoreboard layout (Basic, Top, Bottom, etc.). Some layouts change the number of fields surrounding the scoreboard, allowing additional live information to be added.

## The Data Tab

The Data tab configures the information displayed inside your scoreboard. The first two lines of data hold the name and score of each team. Before broadcasting, you should enter the names of each team here. While the broadcast is live, click the "+1", "+2" and "+3" buttons to modify the score.

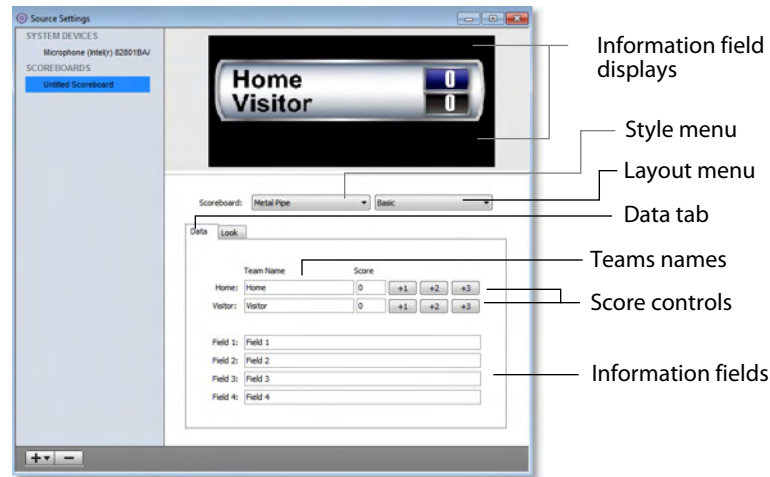
There are also four information fields (Field 1 through 4). Each field controls a line of text inside the scoreboard that can be seen using the various layout types.

---

**Note:** Because Rich Media Desktop updates the scoreboards dynamically, it is recommended that you fill in the additional information fields while using a layout that hides them. Then, change to a layout that reveals those fields when ready, otherwise your viewers will see you typing in those fields live.

---

**Figure 118.** Scoreboard Data Tab

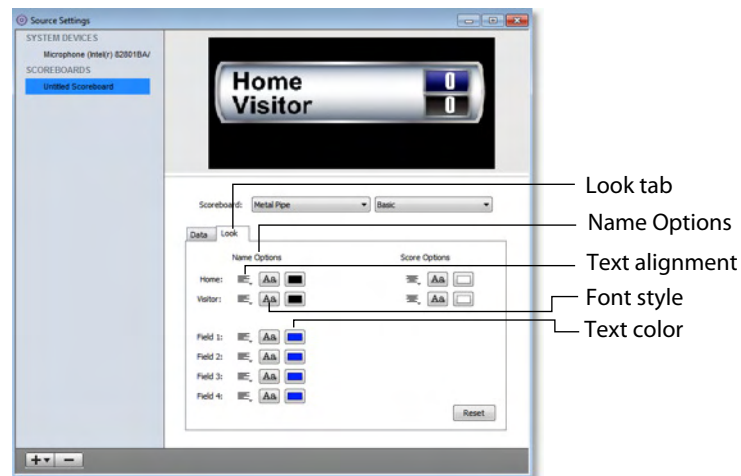


## The Look Tab

The Look tab controls the visual elements of your scoreboard. In the Name Options column, there are three buttons for each field. These buttons enable you to change the text alignment, font style and text color respectively. The Score Options (on the right side) provide the same three adjustments to the score.

Some scoreboard styles also allow you to change the background colors of the Home and Visitor fields, to make them match their team color. This option, when displayed, is located between Name Options and Score Options.

**Figure 119.** Scoreboard Look Tab



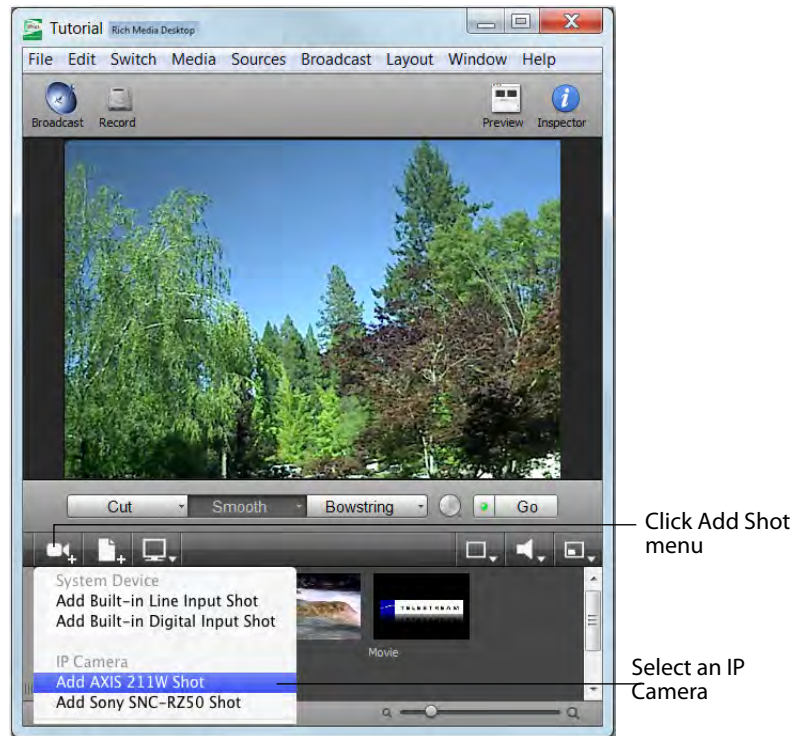
## IP Cameras

PRO

IP Cameras are devices indirectly connected to your computer, made available across a network connection. Most supported IP Cameras will be detected automatically.

To enable the use of an IP camera and create a shot using it, you must first add it to Rich Media Desktop. To do this select an IP camera from the Add Shot menu in the Main Shot List window:

**Figure 120.** Adding an IP Camera

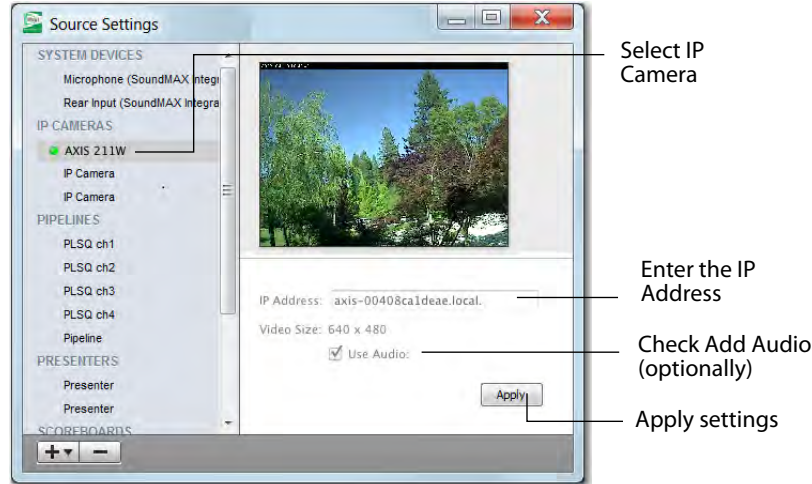


IP Cameras are usually auto-detected by Rich Media Desktop, but if not detected it can be manually set up. To do this, select an Add IP Camera from the Sources menu in the Main window. Then, in the Source Settings window, select an IP camera from the list of



devices, enter the IP Address of the camera, optionally check Use Audio, and click Apply:

**Figure 121.** Setting Up an IP Camera



When Use Audio is checked, audio from the camera is used if the camera has a microphone.

Some supported IP Cameras also have motion controls (directional arrows) that enable you to move the camera in different directions.

---

**Note:** When a IP Camera has been auto-detected, the IP Address field is greyed-out.

---

## LiveU

LiveU is a portable, video-over-cellular, video uplink system. LiveU uses a video encoder and a series of parallel cellular modems to transmit video. LiveU uses high-profile H.264 encoding to provide uninterrupted video streaming from anywhere, directly to Rich Media Desktop as a live camera source.

You can also send Rich Media Desktop output directly in to LiveU for transmission to another broadcast destination.

For more information about LiveU, see [www.liveu.tv](http://www.liveu.tv).

---

**Note:** LiveU can only be used with Rich Media Desktop for Windows.

---

## Using LiveU as a Source

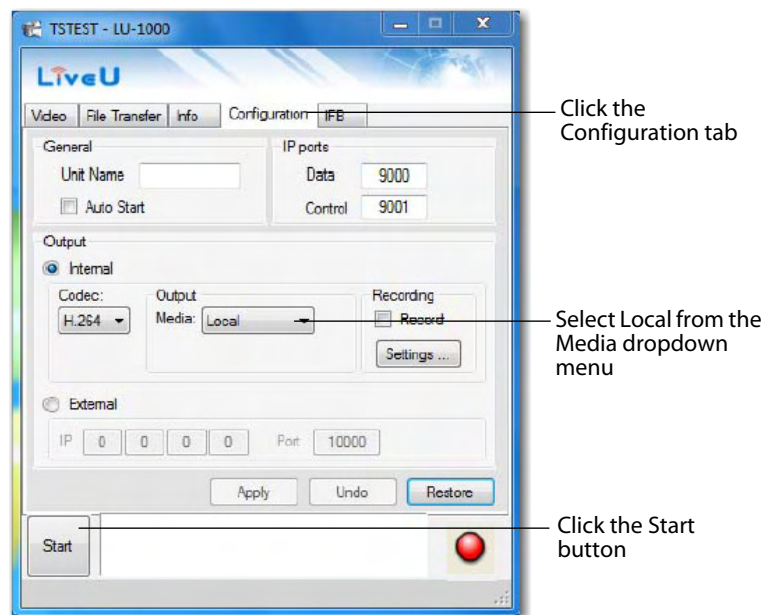
Follow these steps to set up and use LiveU as a live camera source.

### Install and Configure LiveU Software

First, download and install the LiveU server software provided by LiveU. Follow the instructions provided by LiveU to configure the software to connect with your LiveU backpack.

Next, click the Configuration tab.

**Figure 122.** Setting Up LiveU



Select the Output Media drop-down menu and select Local and click the Apply button.

## Start Transmitting Video

Press the Start button. LiveU displays a LiveU Player window without any content displayed. Do not close this window, just move it out of the way.

Now, check the status field at the bottom of the window, and wait until you observe data being received – LiveU displays "Received Rate <current rate>" in this field.

## Start and Configure

Now, start Rich Media Desktop.

**Figure 123.** Setting Up Rich Media Desktop



The LiveU source displays under the Add Live Sources drop-down menu as **liveu\_[your unit name]**.

The audio source is named **liveu\_[your unit name]\_audio**. Add both of these sources to a single shot to begin using your LiveU backpack with Rich Media Desktop.

---

**Note:** If you encounter issues connecting your LiveU unit to the LiveU server application, contact LiveU support at [www.liveu.tv/support.html](http://www.liveu.tv/support.html).

---

## Using LiveU as an Output

Configure LiveU to stream to the destination of your choice.

Next, connect your Rich Media Desktop computer to your LiveU backpack using a DVI, VGA, or HDMI connection. For VGA and DVI, you need to run an audio cable from your computer's audio out in to the LiveU backpack.

Open Rich Media Desktop and enable External Display Output on the LiveU unit.

Now, Rich Media Desktop will send video in to LiveU as though it were a camera. The Rich Media Desktop output can be re-broadcast or sent straight to a Web destination.

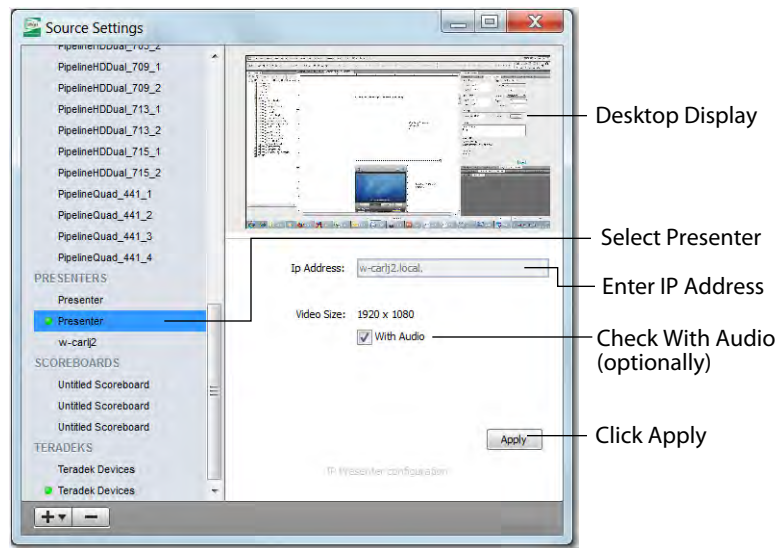
# Desktop Presenter

The Desktop Presenter is a utility application that enables Rich Media Desktop to broadcast the desktop of any computer running Desktop Presenter.

Desktop Presenter is normally auto-detected by Rich Media Desktop and is automatically added to the list of sources. However, if a DTP is not detected, or if you want to add one in a remote location you can manually add it by selecting Sources > New Presenter from the menu in the Main window.

You can then setup the presenter in the Source Settings window by entering an IP address of the target computer, optionally checking the With Audio checkbox, and clicking Apply:

**Figure 124.** Desktop Presenter Settings



---

**Note:** When a Desktop Presenter has been auto-detected, the IP Address field is disabled.

---

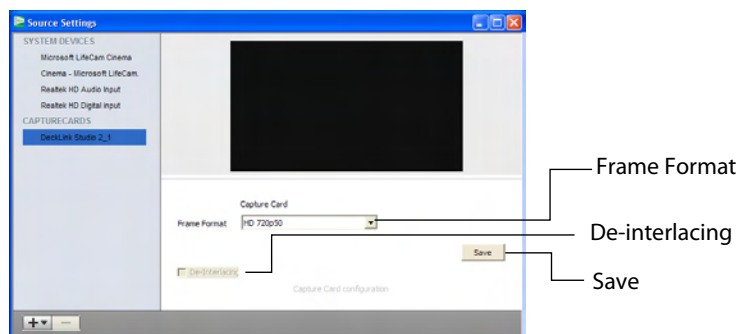
For more information, see [Using Desktop Presenter](#).

## Capture Cards

Capture Cards are hardware extensions that enable you to bring in video from more advanced HDMI and SDI sources. Most capture cards are automatically configured to the best settings. Some cards (Blackmagic Intensity Pro, for example) require some manual adjustments. When a Capture Card is selected, you can select the Frame Format. Clicking Save will cause the video to display. You can also check the De-interlacing checkbox to turn on de-interlacing. Once configured, you can add Capture Cards from the Live Source drop-down menu in the Main window.

If you experience difficulty with your Capture Card, make sure you have the latest driver from the vendor and that it is installed correctly before contacting Customer Support.

**Figure 125.** Capture Cards



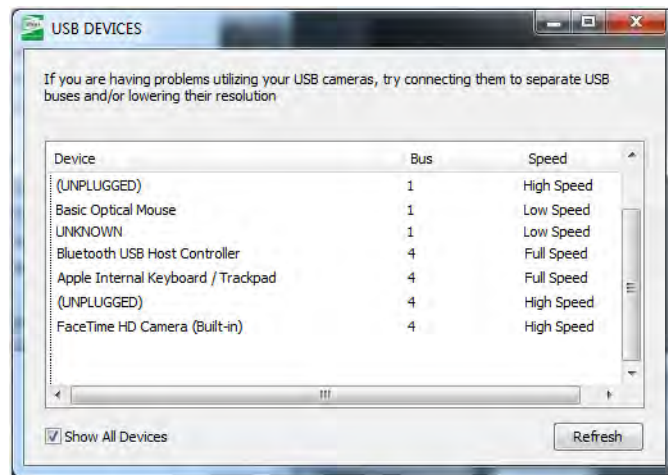
Capture cards supported by Rich Media Desktop:

- Blackmagic Intensity Pro
- Blackmagic Decklink Studio
- Blackmagic Decklink SDI
- Blackmagic Decklink Duo
- Blackmagic Decklink Extreme 3D
- Osprey 240e, 450e, 700e
- Matrox Multi

## Show USB Devices

To view a list of all USB devices select *Show USB Devices* from the *Sources* menu. The list displays all connected USB devices, the USB bus on which each USB device is located, and the speed of the device. Click *Show All Devices* to display all available USB devices, otherwise only video devices are listed. Click *Refresh* to update the list.

**Figure 126.** Show USB Devices







# Using the Shot Editor

## Introduction

The Shot Editor is used to view a shot, edit it, or create a new one. This section describes how to use the Shot Editor.

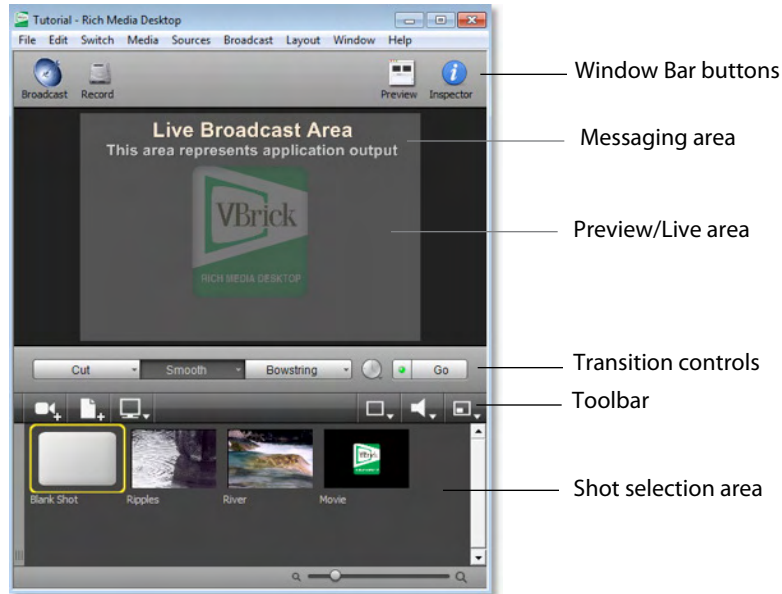
## Topics

- Shot Editor Layout
- Sources
- Shot Editor Preview
- Shot Editor Media Panel
- Shot Editor Effects
- Shot Editor Cropping
- Shot Editor Chroma Key
- Shot Editor Motion
- Shot Editor Playback

## Introduction

There are three ways to open the Shot Editor: select Edit Shot from the Edit menu, double-click on a shot, or right-click a shot and select Edit Shot.

**Figure 127.** Three Ways to Edit a Shot

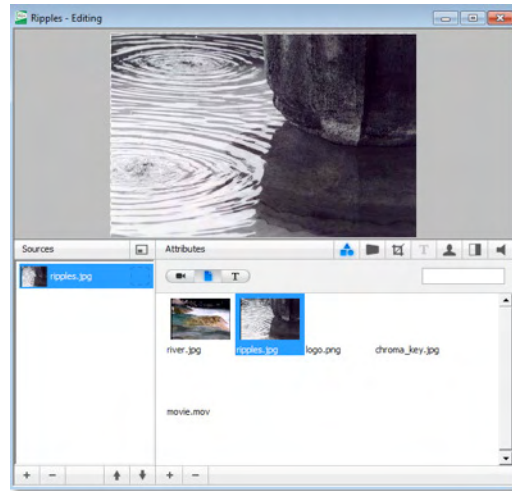


## The Inspector

You can also edit a shot using the Inspector. The Inspector is opened by selecting Inspector from the Window menu. It can also be opened by clicking the blue Inspector icon (contains the letter "i") on the far right side of the window bar at the top of the Main window.

When the Inspector opens, if the shot you want to edit is not displayed (or no shot is displayed), single-click a shot in the Main window shot list to open one. The Inspector immediately displays the shot so you can edit it.

**Figure 128.** Inspector window



## Activating Changes

Rich Media Desktop always displays your visual changes in the preview panel. However, your changes only become Live when you specifically click Go (or press the Ctrl+G keys).

---

**Note:** The exception to this occurs in the Playback Panel where you can specifically make your changes become live.

---

The AutoLive feature does not apply when using the Shot Editor.

## Inspector vs. Editor

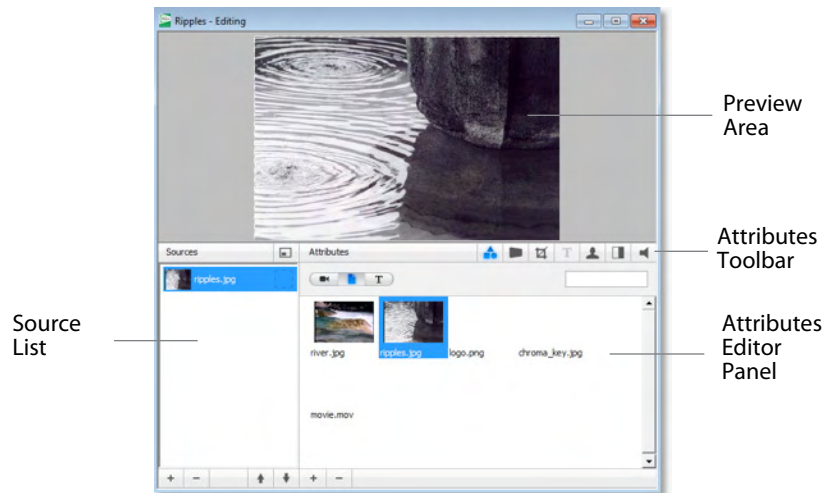
A shot can be edited in two ways: You can double-click on the shot and open an editor specifically for that shot, or you can open the inspector window and then click the shot you want to edit. Both windows displays the same set of controls. The only difference is that the Editor window displays a specific shot and the Inspector window displays all the shots that can be edited. Additionally, you can display and edit shots in both the Shot Editor and the Inspector at the same time.

If no shot is currently selected, Inspector buttons and other GUI elements are not functional. To select a shot for editing, single-click a shot in the Shot List panel at the bottom of the Main window.

## Shot Editor Layout

The Shot Editor is comprised of four major sections: Preview Area, Source List, Attributes Toolbar, and the Attributes Editor Panel.

**Figure 129.** Shot Editor window



The preview area displays a preview of how the shot will look. As you edit a shot by changing its attributes, visual changes are displayed in the Preview area.

The Source List is a list of sources (live sources, images, and title banners) currently in the shot. Rich Media Desktop enables you to put up to seven sources in each shot. You add and delete sources by clicking the plus (+) and minus (-) icons in the toolbar at the bottom of the Source List. Click a source in the list to edit it. Sources are layered in the shot, from top to bottom on the list. You can reorder sources using the up and down arrows in the toolbar below the list, or right-click the source and select Move Up or Move Down. (See [Sources](#).)

The Attributes Editor Panel displays each of the configuration panels. At the top is an Attributes toolbar for configuring each category of attributes. To view or edit a given attribute category, click the appropriate icon in the Attribute Toolbar. The attributes change depending on the type of source (live source, graphics, audio, etc.) currently selected.

## Sources

Sources are specific resources made available to Rich Media Desktop that include configuration settings. These sources can be titles, a live camera feeds, graphics, etc., and they are incorporated into shots used in a broadcast. You can place up to seven sources in a shot, where they are placed as layers that reside in front or in back of each other.

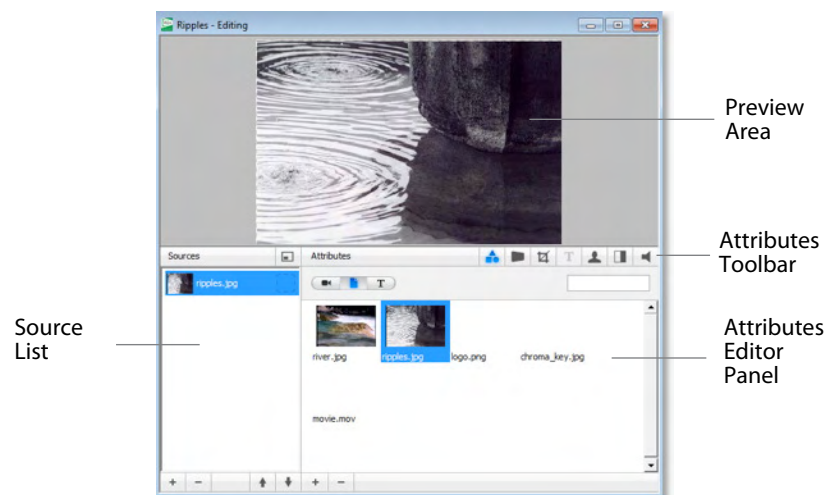
## Templates

Rich Media Desktop also provides pre-built source sets, called templates, which you can add to your source list. Templates are pre-defined configurations used for displaying the sources of a shot. The templates contain place holders, labeled A, B, and C, that define where the sources in a shot are located. For example, you can select a two-source template that displays one element in full-screen and another, superimposed in the bottom left corner. When a different template is selected for the shot, the sources stay the same but their locations are redefined.

Templates provide an easy way to add several sources to a shot, all pre-arranged and organized in popular scale, angle, and position patterns (left/right, stacked, superimposed, etc.). Some templates have a single place-holder, some have two, and still others have three.

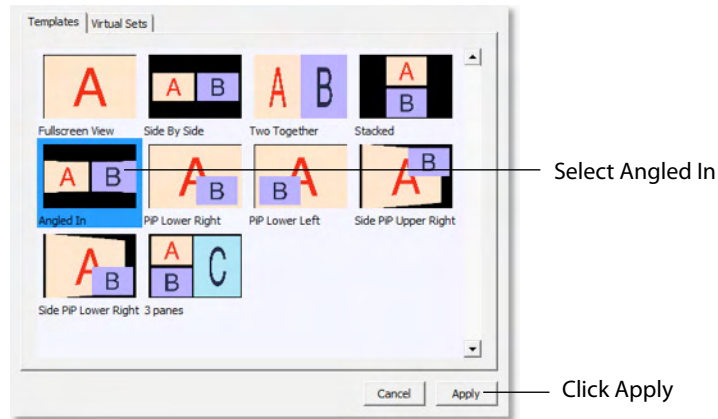
To add a set of template-based sources to your shot, click the Add Presets button to the right of the Sources List title.

**Figure 130.** Add Presets Button



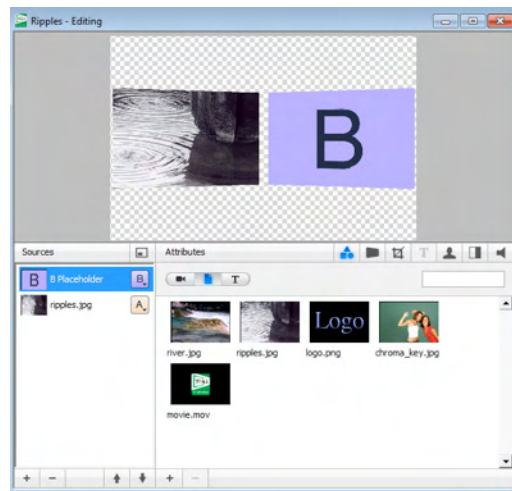
Rich Media Desktop displays a Template window with two tabs: Templates and Virtual Sets. Click the Templates tab and select the template you want to use, then click Apply.

**Figure 131.** Template window



The Preview has changed in the Shot Editor window, and now shows the Ripples image on the Left side. This is because the template selected has an A and a B portion to it. Two different sources can be assigned to A and B:

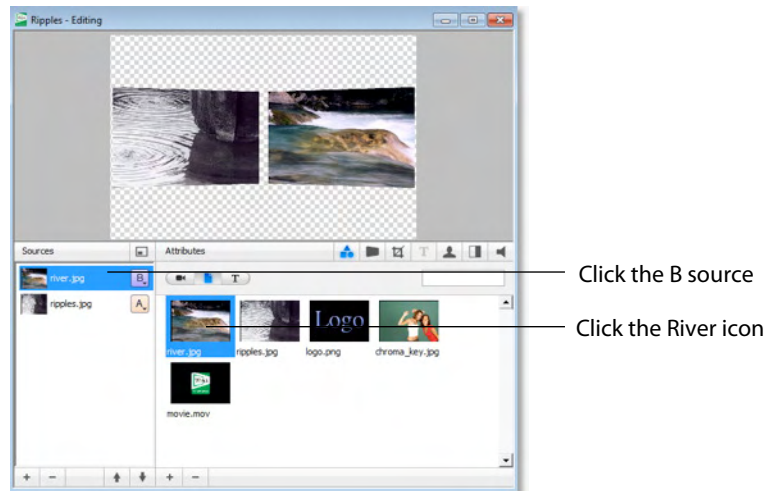
**Figure 132.** Shot Using Template



Sources in Rich Media Desktop can be assigned either A, B or C in the Source Layers list. To change the assignment, click the A (or B or C) icon and make a selection. This makes choosing a new template much simpler because Rich Media Desktop automatically positions the correct sources on screen.

For example, to change the media for the source that is identified as B, select the source identified as B, then click the River icon in the Configuration area. Your Preview should now look like this:

**Figure 133.** Preview with New Media Source



## Virtual Sets

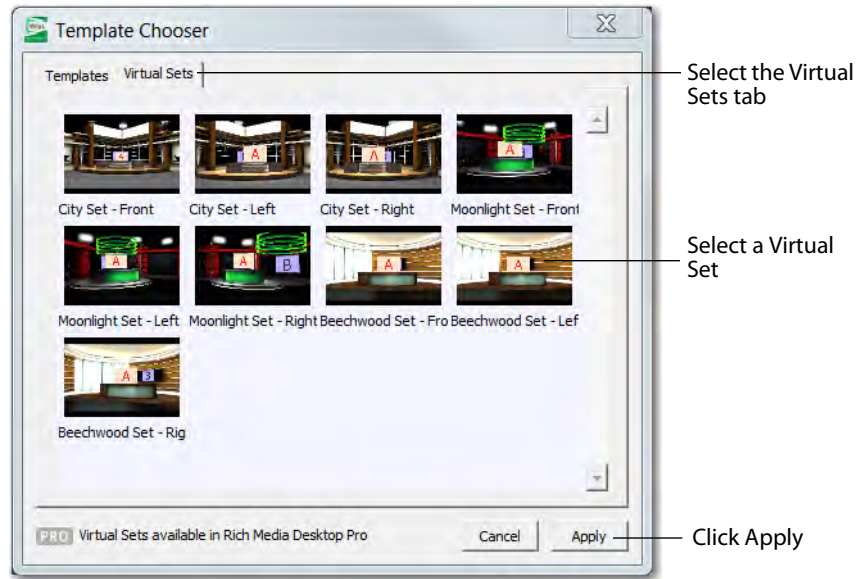
### PRO

In Rich Media Desktop Pro, you can also add pre-built source sets complete with graphics to simulate a news-anchor desk. These sets are appropriately called virtual sets which can be added to your source list. Virtual sets are predefined sources with graphics, available in various configurations. For example, you can select a two-source virtual set that displays three layers of decor (overhead lighting, a curved desk and a pillared background) with two live sources.

Virtual sets provide you with an easy way to create a professionally looking scene with one or more live feed sources superimposed on it. These virtual sets can be used as they are, or they can be edited to suit your needs.

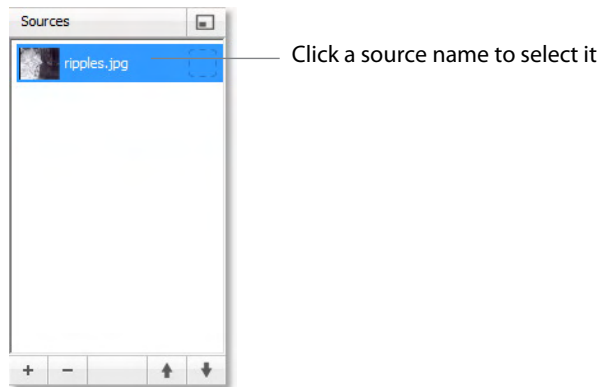
To add a virtual set to your shot, click the Add Presets button to the right of the Sources list title. In the Template Chooser window, select the Virtual Sets tab, then click the virtual set you want to use. Click Apply to display it in the Shot Editor preview area.

**Figure 134.** Virtual Sets



Select a source by clicking on the name of the source in the list.

**Figure 135.** Selecting a Shot Source



## Controlling Source Visibility

The condition of the icon to the left of each source name controls its visibility. You can hide or display sources in a shot by clicking its icon. When a source is hidden a red X is displayed over the icon.

For example, if your shot has a title, you can turn the title off by clicking once on the icon to display the red X. All of your title data still stays within the shot, but it is just not shown. To turn the title it back on, click the icon again and the red X will disappear. This



can be a powerful way to use Rich Media Desktop by pre-loading your shots with titles and then turn them on and off during your broadcast.

---

**Note:** The first time you select a source, its visibility is turned on (Rich Media Desktop assumes if you are clicking on it, you want to display it).

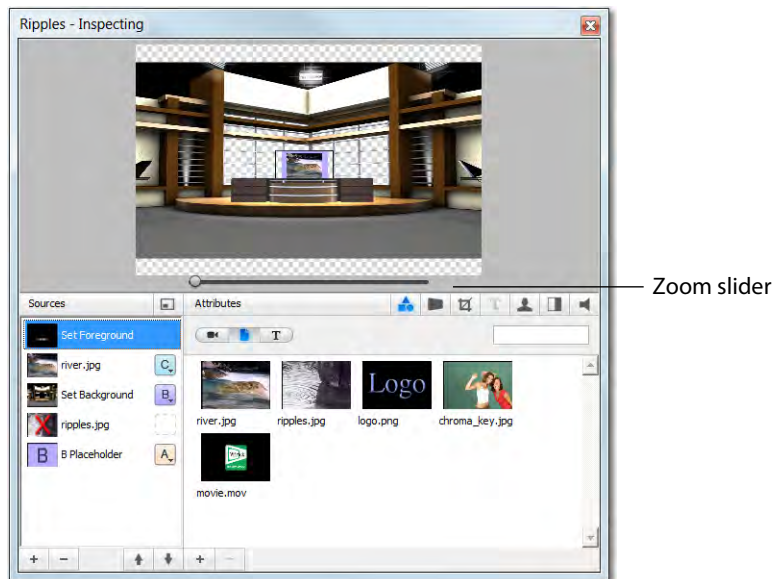
---

## Shot Editor Preview

The Preview area displays, in real time, the changes you make to the static video sources in your shot. However, temporal features (fade-in, audio playback, etc.) are not portrayed in this still shot. You can also click and drag a source displayed in the Preview area, to reposition it.

If you add a Virtual Set, the Preview area displays a zoom slider directly below the preview window. This enables you to adjust all of the layers in the virtual set, to zoom in on the set for a close up or pull back for a wide-angle view.

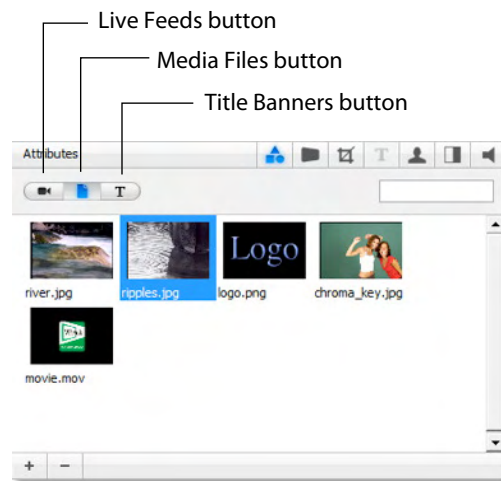
**Figure 136.** Edit Preview window



## Shot Editor Media Panel

The Shot Editor Media Panel provides a library of your shots, enabling you to easily assign a media to a given source. You can assign three types of media to a source: Live Feeds, Media Files, and Title Banners. The Media Panel displays each category separately, making it easier to categorize and identify your media.

**Figure 137.** Media Panel



## Live Feed Sources

Click the Movie Camera button (camera icon) to display, manage, and select your Live Feed sources. Live feeds also include the devices built in to your computer: microphone, Audio in (PC Audio Card), and any USB .

To add a live feed to a selected source, follow these steps:

1. Click the movie camera icon in the media panel.
2. Click the Plus (+) icon at the bottom of the media panel and select the system device you want to use for input. Rich Media Desktop adds it to the list.
3. Click the configure button (2nd button from right in the toolbar) to configure the device as needed.
4. Click the change media button (far left in the toolbar).
5. Click the Plus (+) icon at the bottom of the media panel, and select Show Source Settings to view and configure source settings.
6. In the Source Settings panel, select the device to display and change settings as needed.
7. Click Apply to save settings and close the Source Settings window.

### PRO

In Rich Media Desktop Pro, you can add other system devices, including a Scoreboard, and IP cameras.

## Media File Sources

Click the Media Files button (document icon) to display, manage, and select your file-based media sources. Media files are recordings residing as files that can be played in QuickTime. This includes: video and audio files, video-only files, audio-only files, and raster images (TIFF, JPEG, PNG, etc). Media files are created outside of Rich Media Desktop using media editing tools, then are added to the media list for easy access during broadcasting.

To add media files that you have created (or acquired) to a selected source, follow these steps:

1. Click the Media Files button (document icon) in the media panel.
2. Click the Plus (+) icon at the bottom, and navigate to and select the file you want to add. Rich Media Desktop adds this file to the list.
3. Configure it as needed.

## Title Banner Sources

Click the Title Banner button (T icon) to display and select a title banner source. Rich Media Desktop provides a comprehensive library of one, two, and three line title banners from which you can choose. Title banners are graphic files with text fields that display information you provide. You can not add your own banner files.

To add a title banner to a selected source, follow these steps:

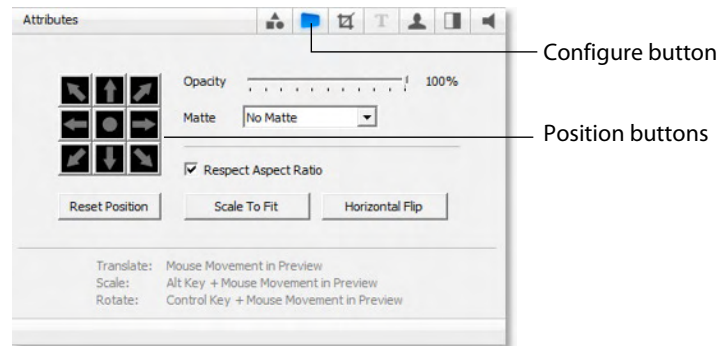
1. Click the Title Banner button (T icon) in the media panel toolbar.
2. Click the Plus (+) icon at the bottom of the media panel and select the title banner file you want to use to title this shot. Rich Media Desktop adds this title to the list.
3. Configure the title as needed by entering the text strings for each title line using the Text Attributes tool (4th button from left in the toolbar).

## Shot Editor Effects

The Effects Panel enables you to adjust the location of sources and configure opacity, matte, aspect ratio, and scaling as needed. To open the Effects Panel, click the Configure button (2nd button in the toolbar).

Clicking the position buttons (arrows) enables you to quickly change the position of the media in the preview display.

**Figure 138.** Effects Panel



You can also reposition a title using the mouse:

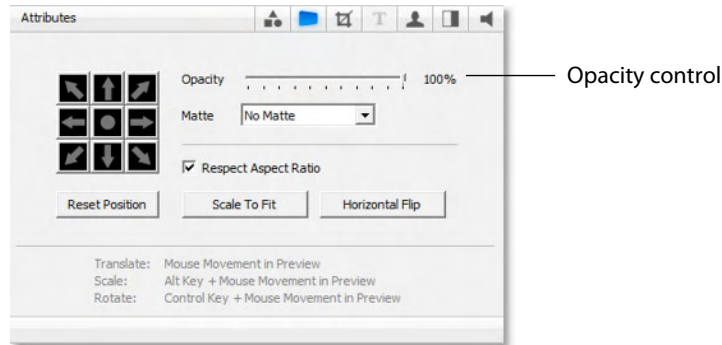
- **To Move Media** Click and drag using the mouse in the Preview area.
- **Resize Respect Aspect** Hold the Alt key while moving the mouse in the Preview area.
- **Resize Media** Turn off Respect Aspect Ratio. Hold the Shift-Alt keys while moving the mouse in the Preview area.
- **Rotate Media** Hold the Ctrl key while moving the mouse in the Preview area. Select between shots in the Main window

## Opacity

The opacity control is a slider bar on the Effects Panel. Opacity controls how much you can see through the media. Technically, transparency means to completely see through an object, but Rich Media Desktop provides only a partial transparency, it is called opacity (how opaque the object is).

**Note:** If you want to turn off the media altogether, do not set opacity to zero since this still uses CPU cycles. Instead, you should turn off the visibility of the source.

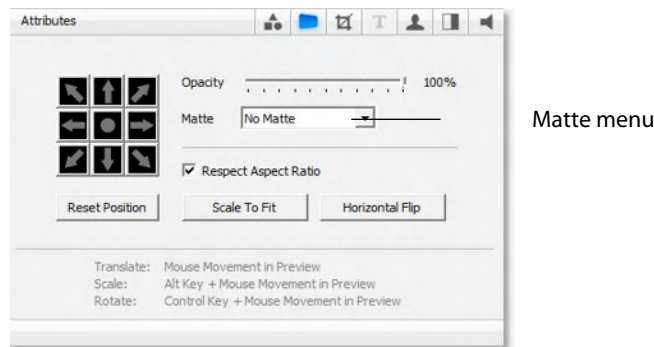
**Figure 139.** Opacity Control



## Matte

A matte is an image that is used to define the opacity of another piece of media. Rich Media Desktop comes with several mattes, which are listed in the Matte drop-down menu. Any image in your shot list which has an Alpha Channel will also show up in the Matte menu. (See [Images/Opacity](#) for more information on Alpha Channel.)

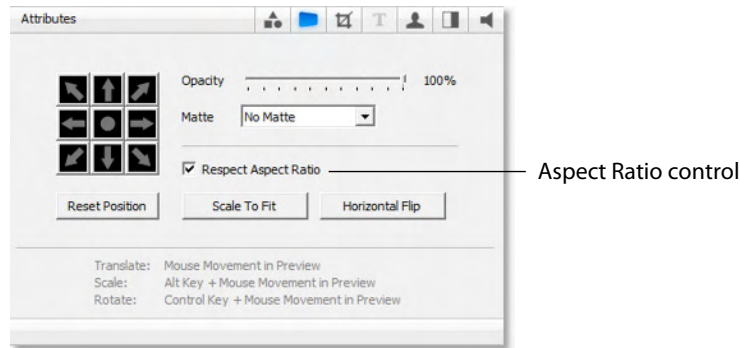
**Figure 140.** Matte Control



## Aspect Ratio

The Respect Aspect Ratio is located under the Matte menu on the Effects Panel. When checked, the source retains its aspect ratio when its size is changed. Some sources do not allow you to set this option.

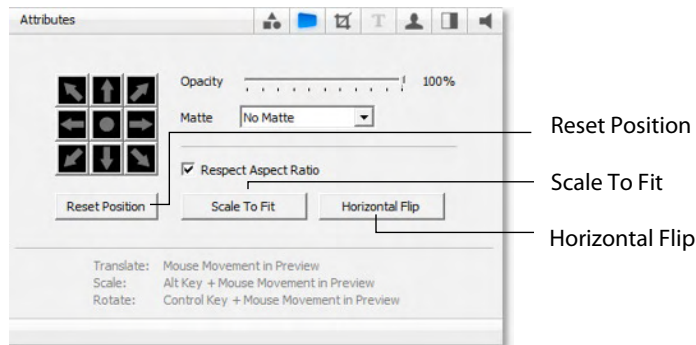
**Figure 141.** Aspect Ratio Control



## Reposition Buttons

There are three repositioning buttons on the Effects Panel: Reset Position, Scale To Fit, and Horizontal Flip. Click the Reset Position button to reset the media to its original position, size, and rotation. Click Horizontal Flip to mirror the media along the vertical axis. Click Scale to Fit button to scale the media to fit inside the broadcast window.

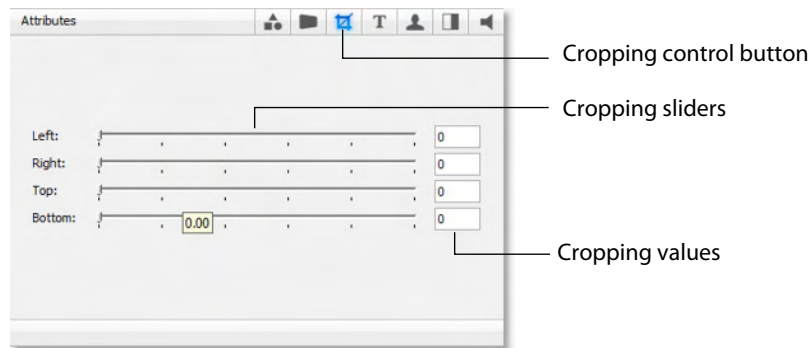
**Figure 142.** Reposition Buttons



## Shot Editor Cropping

The cropping control enables you to cut off unwanted portions of an image. To open the cropping control window, click the cropping control button. There are four sliders and four text boxes used to control cropping. Select an image, then slide the slider until the selected side of the image is cropped as needed. Notice that as the slider is moved, the value in the text box changes. This value is the number of pixels that have been cropped. You can also enter values directly.

**Figure 143.** Cropping Control

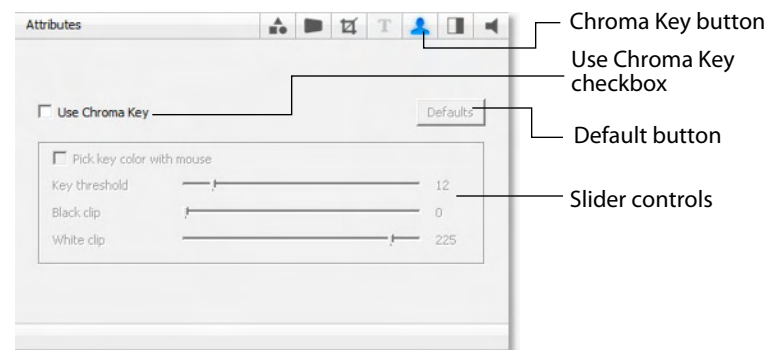




## Shot Editor Chroma Key

Rich Media Desktop enables you to perform real-time Chroma Key operations on your sources during a broadcast. Chroma keying enables you to select a color and replace all occurrences of that color in an image with some other image. Click the Chroma Key button to open the Chroma Key controls. Click the Use Chroma Key checkbox to enable the controls. Use the sliders to set the Key Threshold, Black Clip, and White Clip. Click the Defaults button to restore all controls to their default state.

**Figure 144.** Chroma Key Controls



### Working Top Down

The key color is the color of the background you want to drop out of the resulting media. The Chroma Key configuration panel is designed to work through the configuration as a process, from top to bottom, fine tuning your key as you go. It is important to not over-adjust any one control. A good key color is obtained by finding the right balance in the controls.

### Selecting a Key Color

To get the best key possible, select the key color using the mouse. To do this check the Pick key color with mouse checkbox. Use the mouse to click a point on the image in the preview area. As you do this watch the preview change in level of transparency, displaying the gray/white checkerboard pattern on the affected regions. Usually, clicking near the corners of the media provides the best key, but sometimes clicking near the main subject in the image is best.

### Key Threshold

Once you have the best key by picking the color, you can adjust the key threshold to drop out the background as completely as possible. The Key Threshold parameter enables Rich Media Desktop to determine how close the color in the video is to the key color. Adjust the key threshold (0 to 100) by using the slider.

## Black Clip

Sometimes, dark areas are keyed out, when they should not be, due to how digital cameras function. The Black Clip parameter controls how close the keying will be toward black. For example, if the host has black hair, you need to increase this value slightly so that the keying effect will not be seen in his hair. Adjust the Black Clip (0 to 100) by using the slider.

## White Clip

Likewise, white areas are also sometimes keyed out when they should not be. The White Clip parameter controls how close the keying will be toward white. For example, if the host has a white shirt on, you need to increase this value slightly so that the keying effect will not be seen in his shirt. Adjust the White Clip (0 to 100) by using the slider.

## Getting a Good Key

Probably the most important part of getting a good key is getting good source material. Poor source material will generate poor keys; no algorithm can make up for this.

## Lighting

Assuming you have a reasonably good camera, the most important part of getting a good key is good lighting. Invest in good lights and learn how to set them up properly. Here are some basics:

- The background screen (green or blue) needs to be independently lit from other items in the shot.
- Light the background screen evenly, with no shadows. The more evenly lit, the better the keying.
- Light people evenly with no shadows. A fill light is very important. An office white board may be helpful in accomplishing this.

## Good Camera

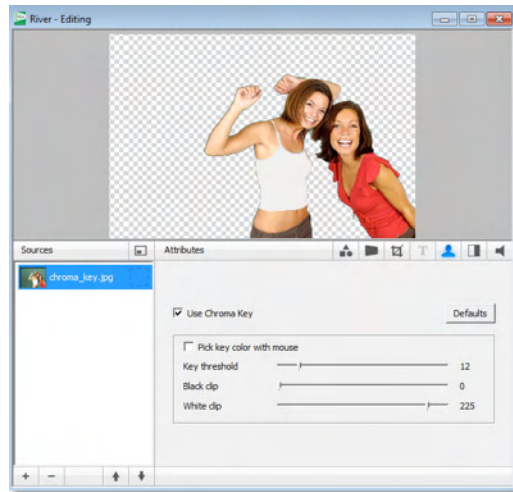
You should get reasonable quality out of most cameras on the market today. Rich Media Desktop has been tested with a low-end DV cameras to verify the quality of its Chroma Keying system. However, the better the camera the better the keying.

If you use a cheap USB Web-cam, it will not give you enough source quality to get a reasonable good key. But if you have excellent lighting, a USB camera will work well. 3CCD is better than 1CCD. If you have the choice, a PAL camera is better than NTSC, due to how data is captured internally.

## High Quality Video

If you are keying video from disk and not capturing it live, make sure the High Quality Video option is checked in the Advanced Preferences Panel. This forces Rich Media Desktop to decode the video from disk in the best quality possible, giving the Chroma Key the best data possible for keying. Rich Media Desktop will warn you if High Quality Video is turned off when you turn on Chroma Keying.

**Figure 145.** Chroma Keying

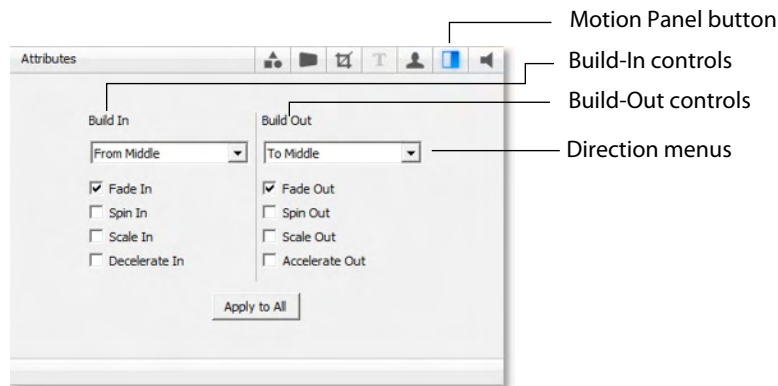


## Shot Editor Motion

The Motion Panel provides control over how objects (image, movie, title, etc.) are added or removed in the Broadcast window. To open the Motion Panel, click the Motion Panel button in the Toolbar. Rich Media Desktop only performs motion during a Smooth transition. If you are using any other transition, the motion settings are ignored.

There are two types of motion. When an object is added to the Live broadcast it is called Build-In; When it is removed it is called Build-Out.

**Figure 146.** Motion Panel



Motion only occurs when an object enters or leave the broadcast window. For example, if you have two shots, each with a foreground and the media in the foreground is the same, then a Smooth transition will be performed between the foregrounds. However, no motion is performed. Or, if a logo is positioned in the top left corner in an existing shot, and it is in the bottom right corner in a new shot, when you make the new shot Live the logo will smoothly transition from the top left corner to the bottom right corner. But the Build-In and Build-Out settings are ignored.

However, if you have two shots with a Foreground, but the media in each is different, the Build-Out will be performed for the existing shot, and the Built-In will be performed for the new shot.

**Direction Menus** These provide selections of where the Build-In will come from (top, bottom, right, etc.) when it is added, and where the Build-Out will go when it is removed.

**Fade In / Fade Out** Checking these checkboxes causes an object to be added or removed gradually. If unchecked, the object will be instantly added or removed, much like a cut transition.

**Spin In / Spin Out** Checking these checkboxes causes an object to be added or removed in a spinning fashion.

**Scale In / Scale Out** Checking these checkboxes causes an object to be added or removed in a scaled fashion.

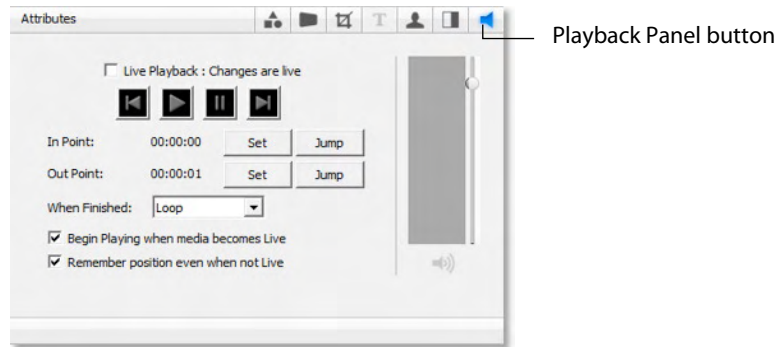
**Decelerate In / Accelerate Out** Checking these checkboxes causes all of the above actions to be performed at a slower or faster rate.

**Apply To All** Click this button to make the Motion Settings the same for all sources in a shot. This is useful if you want to make all of your motion the same for all of the elements in the shot.

## Shot Editor Playback

The Playback Panel enables you to control how movies and music play in Rich Media Desktop. To open the Playback Panel, click the Playback Panel button.

**Figure 147.** Playback Panel



Check the Live Playback checkbox to cause your changes to be taken live in your broadcast. The four control buttons enable you to rewind, play, pause, or fast forward. In Point & Out Point sets the start and stop points in the media.

Select what to do when the media is finished (loop, hold, or remove) from the drop-down menu. Check the Begin Playing checkbox to cause the media to automatically start playing when it becomes live. Check the Remember Position checkbox to cause the media to remember its position when it is not live.

The vertical slider set the audio level and the two meters display it in stereo (left and right). Click the Master Audio Mute icon to mute the audio of your broadcast. Click it again to un-mute it. Click the Headphones icon to mute the local audio feed. Click it again to un-mute it.

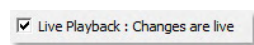
The Playback Panel only allows modification of parameters on media for which the options are possible. For example, if your media has no audio, then the audio controls will not be active. Or, if your media is a still image, you will not be able to set an In point or Out point nor play the image.

The Playback Panel setup information is saved separately for each shot, so if a media is used in two different shots, the media settings will be different in each shot.

## Live Playback

Live Playback is a part of the Playback settings. By default, changes in the Playback Panel are like any other changes in the Shot Editor, they do not take effect until you click the Go button. However, there are times when you may want to scrub (slowly scroll and view) the video and see the scrubbing in the Live broadcast.

**Figure 148.** Live Playback Control



Check the Live Playback checkbox to cause changes you make in the Playback Panel to become live. This gives you immediate control over the movie or audio in the Live broadcast.

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**Note:** If you want to pause all movies in your broadcast, you can select Pause All Movies from the Media menu. This is particularly useful if you only have just one movie and you want to quickly pause it.

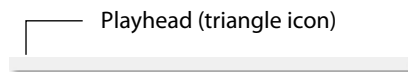
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## Scrubbing

The Scrubbing slider enables you scrub (scan) back and forth through your media. The triangle icon in the scrubbing slider is called the playhead.

Click and drag this triangle (playhead) left and right to view any location in your media. The primary use of scrubbing is to set the In Point and Out Point in your media. If Live Playback is checked, and the shot you are editing is live, then the scrubbing will also be seen in your Live broadcast.

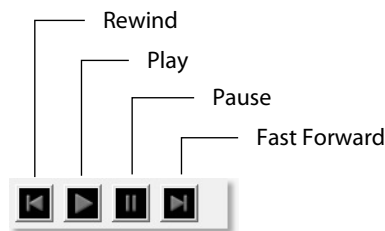
**Figure 149.** Scrubbing Control



## Transport Controls

The Transport controls enable you to Rewind, Play, Pause, and Fast Forward. If Live Playback is checked, any changes you make using these controls will be seen in your broadcast.

**Figure 150.** Playing/Transport Control

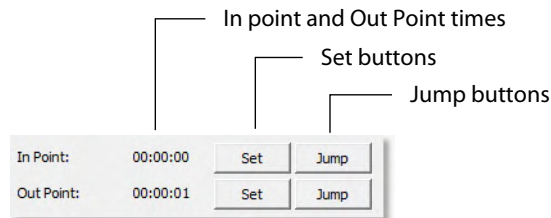


## In and Out Points

The In Point and Out Point controls are a part of the Playback settings. The In Point is the position in the media where playback will start from. For example, if you set the In Point of a movie to 2 seconds, when the movie starts to play (or loops back to the start), it will start from the 2 second point in the movie. The Out Point is the position in the media where playback will end. if you set the Out Point of a movie to 5 minutes, when the movie reaches the 5 minute mark, it will stop playing (or loop back to the beginning, depending on which When Finished option you have selected).

To set the In Point, move the playhead to a place you want the media to start playing and click the first Set button. To set the Out Point, move the playhead to the place you want the media to stop playing and click the second Set button. Clicking a Jump button moves the playhead to the In Point or Out Point location.

**Figure 151.** In Point and Out Point Controls



## When Finished Control

The When Finished drop-down menu enables you to control what happens when the media finishes playing (when it reaches the Out Point).

You have three options:

- Loop the media will loop back to the In Point.
- Hold The media will simply stop and show the last frame.
- Remove the media is removed from Live Broadcast.

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**Note:** For media without video, the Hold and Remove are effectively the same option.

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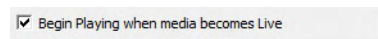
**Figure 152.** When Finished Control



## Begin Playing Control

When checked, the Begin Playing checkbox causes the media to start playing when the shot becomes Live. Checked is the default.

**Figure 153.** Begin Playing Control



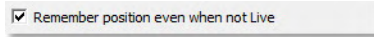
## Remember Position Control

If the Remember Position checkbox is checked, when a live shot transitions to another shot with different media, the removed shot remembers the last position where the



media was played. And so, if the removed shot becomes live again it will start playing from that remembered position. Checked is the default.

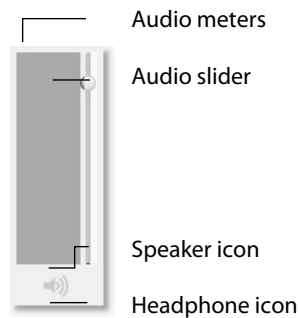
**Figure 154.** Remember Position Checkbox



## Audio Controls

If a piece of media contains audio, the audio controls become activated. The audio in each media is independently controlled. The audio slider bar enables you to control the media audio level. Clicking the speaker icon mutes the audio of your media in the Live Broadcast. Clicking it again causes it to be heard. The stereo audio meters monitor the audio output level. If you want your users to continue hearing the media, but want to mute your headphones (or local speakers), click the headphone icon.

**Figure 155.** Audio Control



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### Note:

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# Making Great Presentations

## Introduction

These topics provide helpful information about how to prepare for creating great presentations.

## Topics

- Introduction
- High Quality Audio
- Good Lighting
- Broadcast Settings

## Introduction

There are a many ways to make a good presentation even better. But this topic will focus on three main things to remember about video streaming:

- 1. High Quality Audio Input** Great looking video with poor audio input will appear unprofessional.
- 2. Good Lighting** Poor lighting can ruin an otherwise excellent presentation. If you are doing chroma keying this may become the most important part of your setup.
- 3. Broadcast Settings** Make sure the broadcast settings are configured correctly for your presentation. There are three that are the most important: bandwidth, motion, and encoder settings.

When video is saved to disk or sent over the network, it needs to be compressed. The compression process is done by encoders (codecs) which are optimized to work with clean input data. This means that if the audio or video is muddy to start with, it will be muddy after compression. Some codecs may even highlight poor input because the algorithm is built to look for differences.

Your goal should be to give the best quality audio and video to the compression process as possible. This means making sure what you see in the Live area is the best possible quality because Rich Media Desktop takes exactly what you see and sends it to the codecs.

## High Quality Audio

Audio has an artistic aspect to it. You can make a great presentation even better by remembering to focus on a few details. Here are some suggestions on producing clean audio.

- 1. Use a Good Microphone** Though this may sound obvious, a good microphone can make a huge difference. Most DV cameras have an audio input for an external microphone. Use this, whenever possible, instead of the built-in microphone that comes with the camera. Built-in microphones are usually not good quality and will pick up hum from the electronics inside the camera. Even when it is not a great microphone, an external microphone will almost always sound better.
- 2. Use a Microphone Splitter** If you are doing an interview with one camera, you can use two microphones with a splitter (\$5 from Radio Shack). This often gives better results than one omni-directional microphone at a distance. You can also use a dual lapel microphone with a splitter.
- 3. Position the Microphone Properly** Place any microphone as close to the sound source as possible, even when using omni-directional microphones, because sound volume decreases greatly the farther away the microphone is placed. Stronger signals coming into the microphone will result in better quality.
- 4. Use Lapel Microphones** Even inexpensive (less than \$20) lapel microphones can make a huge difference because it places the microphone much closer to the person speaking.
- 5. Control Environmental Noise** If a chair squeaks, use a different one. If you have a wood floor and you can hear people shuffling their feet as they talk, put down a rug. Do whatever it takes to keep noise at a minimum. Microphones pick up everything.

## Good Lighting

Do not underestimate the power of lighting. When an event is broadcast outdoors, a great deal of attention goes into lighting. For professionals, lighting is view as an artistic task. Many people make their living controlling lighting, so there is a lot to it. Here are a few suggestions to help you obtain reasonably good lighting:

1. If you are using only one lighting source, do not shine it directly on your subject. You should diffuse the light.
2. Avoid deep shadows. Make sure you fill all areas of your subject with light. Sometimes this will require adjusting the light to bounce off a different wall, or by using two lights. Placing a light low and another one high is often a good way to light evenly.
3. Do not light too evenly. If you completely evenly light a set, you may actually be worse off than not lighting the set at all. Take a sample shot and see if it looks natural. Good lighting usually has a little more light coming from above than any other direction. You should very rarely light just from below a subject.
4. Beware of having too much light on your subject. If your subjects are people, and you must use a lot of light, you will need to use make-up to compensate for the overly bright lighting. This is not necessarily a bad thing, but you must choose how much effort you want to go through to make a good presentation. If your lighting balance is excellently balanced, you will not need to use make-up on your subjects. The key in adjusting the lighting is to look at your subject and make sure they do not look washed out
5. Watch professional broadcasts and learn from them. As you watch notice how are they lighting instead of watching the program. Notice how they employ all of the suggestions listed above.

Though these rules may sound vague, they really are not. The important thing to remember is that one or two properly placed lights will make a huge difference in the quality of your presentation.

## Triangular Lighting

One advanced and very effective approach to good lighting is known as Triangular Lighting (or Three Light Setup). Although this may sound complicated, it is actually quite simple. It involves setting up three lights (sometimes using natural light as one of the light sources), in a configuration that achieves a good balance. Here are the main elements of Triangular Lighting:

1. **Main Light (Key Light)** This is the strongest of your lights, and does most of the work. This light normally comes from one side of the camera (the left, for example), and is a slightly raised. However, using just the main light will result in shadowing.
2. **Fill Light** This is a soft light placed directly in front of subject. It removes shadows and fills in the image. It is usually direct, and usually comes from the same direction as the camera (or just to the side and behind it). It would be, for example, placed on the same level as the head of a person you are lighting. If you use only a fill light, your subject will be too dark. The only purpose of a fill light is to add to the main light by

filling in shadows. If your Key light comes from the left of your camera, your fill light should come from the right, and vice versa.

- 3. Back Light (Rim Light)** This light is directed from behind the subject and above it. This is the hardest light to explain, but the best way is to describe it as an accent of your subject. If you look at a typical high school yearbook picture, you will notice that the top-left (or top-right) part of this head shots has a highlight of light in it. This light is the Back Light. It is also called a Rim Light because it makes a slight rim around the edge of the head of your subject. This light normally comes from behind the subject, but often from above, and it is focused. Make sure it is not directed at the camera.

Most serious lighting starts with these three basic lights. There are also some great Websites that describe these techniques in great detail.

## Broadcast Settings

Once you have good video and audio coming into Rich Media Desktop, the final item of importance is make sure the Broadcast Settings are configured correctly for your presentation. Though there are many broadcast parameters to modify, there are three that are the most important: bandwidth, motion, and encoder settings.

### Bandwidth

The first item of importance is knowing how much bandwidth is available. Bandwidth is how much data you can broadcast from your computer. This depends on the speed of your network connection and the type of connection your viewers are using. More specifically, it is the minimum speed between you and all of your viewers. For example, if you have one viewer who is using a dial-up modem, for that viewer to see good quality you must broadcast at Modem speed.

Thus, you must know who your viewers are and what kind of connection they have. This may be difficult to know because you must determine if their connection is cable modem or DSL and whether or not they reside on your local network.

In some situations, you are broadcasting for just your local network (in an office building, for example). In this case you should discuss your plans with your network administrator and verify that you will not disrupt the network with your broadcasts. Ask them what your upper limit bandwidth should be. Your available bandwidth will be the minimum of what you can upload, combined with what your viewers can download.

### Motion

Once you know your bandwidth, you need to decide whether or not your video will contain a lot of motion. Motion is how much things move around in your video presentations. An interview is considered low motion. A sports even, however, would probably be high motion. Rich Media Desktop comes configured with defaults to help ease your configuration task. Choose a default configuration that meets your motion (and bandwidth) constraints.

If your viewers have older versions of QuickTime (version 5 for example), you may want to use a different Encoder than the default. Using the Sorenson 3 Codec for version 5 of QuickTime may be the most effective solution.

### Encoder Settings

The parameters of the encoders are be quite technical and can be overwhelming. It is beyond the scope of this document to describe the delicate balance required in setting them. There are professionals who fine-tune encoders to do exactly what is required. The Rich Media Desktop default setting are generally optimal for the various network environments. (See [Setting Encoder Presets](#) for information on changing the encoder settings.)



# Hardware Recommendations

## Introduction

These topics describes hardware requirements and features for use with Rich Media Desktop.

## Topics

- FireWire
- Universal Serial Bus (USB)
- High Definition (HDV)
- DV Cameras
- Sleep Mode
- S-Video & 2nd Display
- Configure Devices

## FireWire

FireWire is a hardware protocol that you may use to connect devices (cameras, hard drives, etc.) to your computer. But it is important to understand that saturating your FireWire bus (using up all available bandwidth) will lead to problems in Rich Media Desktop. As a result the audio and video will appear choppy.

### Bandwidth Limits

There is an absolute limit to the bandwidth available to your FireWire devices (400 or 800 megabits per second). If the sum of your devices goes over the limit, you saturate (use up) all the available bandwidth. For example, if you have a camera attached to the FireWire bus and you saturate the bus, you will see dropped frames (choppy video).

If you use a FireWire hub and plug several devices into the hub, you share the maximum bandwidth on the FireWire bus. Adding a hub does not add bandwidth to the bus, just more places to plug devices in. Likewise, you may have several FireWire ports on your computer, but they are often all connected to the same bus. You have to add a separate FireWire card to increase the bandwidth.

### Bandwidth Use

If you have a hard disk connected to a FireWire hub and also have a camera connected to the same hub, it may appear to work but this is not a good indication of whether the bus will become saturated. For example, when new email arrives and your email program accesses a file on your FireWire drive, it can cause FireWire saturation.

So be mindful of this limitation when connecting hardware to your computer. Just because your setup works when you first put it together does not mean it will always work. Experiment with your setup and make sure that you have enough FireWire bandwidth to share all of your devices without experiencing choppy video.

Normally, a camera requires around 25 Mbps (megabits/second) to deliver audio and video to Rich Media Desktop. However, some cameras may require 100 Mbps or more.

## Universal Serial Bus (USB)

Many cameras use USB instead of FireWire to connect to the computer, but the same problems for FireWire apply to USB connections. So, keep as few devices on the bus as possible to prevent saturation. Keep in mind that even if you have multiple USB sockets they are often attached to the same USB bus. The USB devices dialog can be used to identify buses with available ports. Standard USB supports up to 12 Mbps and High-Speed USB supports up to 480 Mbps.

## High Definition (HDV)

Always uses the best quality camera you can get. Even if your viewers are going to see only 176×144 (G3 Mobile) an HDV camera is going to give you much better quality than a USB camera.

Although you can achieve extremely high quality video using HDV, there are some limitations in using it. Most of these limitations are due to resource consumption. Even if you have multiple busses, to use more than one HDV camera with Rich Media Desktop you will need a high-end (fast and powerful) computer. HDV images are so large they stress all components involved in your production (memory, video memory, video fill rate, bandwidth, etc.).

### HDV Cameras in DV Mode.

If you only have HDV cameras, and you need to use several cameras, put your secondary cameras in DV mode. This will save bandwidth. When you switch your HDV camera to DV mode, your camera acts like a DV camera. Although you do not get HDV quality, you get much higher quality than your average DV camera because most HDV cameras have very high quality CCD elements in them.

## DV Cameras

### One Camera Per Bus

Generally, you should not attach more than one camera to a FireWire or USB bus, even when using high-speed busses. The main reason for this is that most cameras will conflict with other devices on the same bus. For example, on FireWire bus each camera is expected to negotiate the channel it will use to transmit. Some cameras do not negotiate at all or ignore the results of the negotiation and a conflict will result. This causes problems in Rich Media Desktop because the incoming signal is from two cameras.

Also, since some cameras randomly pick a transmission channel, there is always a chance that two will choose the same channel.

## Sleep Mode

When a computer puts a monitor in sleep mode (screen saver mode) it also turns off the video card. Since Rich Media Desktop uses your video card for broadcasting, your broadcast will be interrupted when the computer enters the sleep mode. But, Rich Media Desktop automatically tells the operating system not put your monitor in sleep mode so that this will not happen accidentally if your screen saver is on. However, if you force your monitor into sleep mode, your broadcast will stop.

## S-Video & 2nd Display

You can select an external display for the output of Rich Media Desktop. For example, if you have a projector connected to your computer using S-Video, select that projector from the Broadcast menu to display the output of Rich Media Desktop on it. If you have a dual-head graphics card, you can select a second monitor to display Rich Media Desktop Output.

---

**Note:** You have two graphics cards, Rich Media Desktop may not be able to display to any devices (monitors) on the second graphics card.

---

## Configure Devices

Some devices (cameras, etc) can be configured. Choose the device you want to configure from Configure Devices in the Media menu.

---

**Note:** The configuration user interface is provided by the device maker. It is beyond the scope of this document to describe all of the features available for all devices. See the documentation provided with your device on how to configure it.

---



# Installation

## Introduction

This topic guides you through installing (or upgrading) and activating Rich Media Desktop.

## Topics

- [Installing](#)
- [Activating](#)
- [Uninstalling](#)

## Installing

To install Rich Media Desktop, follow these steps:

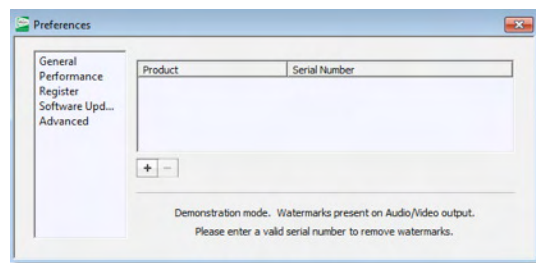
1. First download the installer from the VBrick Website at:  
<http://www.vbrick.com/products/capture/rich-media-desktop.asp>.
2. Run the installer (.exe) program and follow the instructions provided.
3. If you have the same version of Rich Media Desktop already installed on your computer, the installer will ask if you want to repair or remove the existing version. Select *Repair* if you are reinstalling the same version of Rich Media Desktop in an attempt to correct a problem. Select *Remove* if you want to uninstall the existing version of Rich Media Desktop.
4. If you have an older version of Rich Media Desktop already installed on your computer, the installer will upgrade to the newer version.
5. Agree to the license agreement and follow the instructions displayed by the installer program.

## Activating

When you purchased Rich Media Desktop a serial number was provided. This serial number must be registered in the Rich Media Desktop program to unlock the features of Rich Media Desktop. To register Rich Media Desktop follow these steps:

1. Run the Rich Media Desktop program.
2. Select Preferences from the File menu, or press the Ctrl+Comma (,) keys, then click Register.
3. Click the Add (+) button, enter your serial number in the dialog window, and click OK.
4. Your serial number is displayed.

**Figure 156.** Registering



5. Close the Preferences window.

Your Rich Media Desktop program should now be fully activated.

## Uninstalling

To uninstall Rich Media Desktop, follow these steps:

1. Run the Rich Media Desktop installer (.exe) program.
2. The installer will ask if you want to repair or remove the existing version. Select Remove to uninstall the existing version of Rich Media Desktop.

# Acknowledgements

## Acknowledgements

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- Darwin streaming server
- FFmpeg Project
- Darwin streaming server

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c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

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