

Sprites Tutorial

Introduction

When it comes to QuickTime interactivity, the Sprite Track is the glue that holds it all together. This will become the most used track in many of your projects. In fact, the Sprite Track is the only track in LiveStage Professional that can be created using its very own shortcut.

If you have ever authored in Macromedia's Director, you already understand sprites. If you haven't, don't worry. Sprites are fairly simple and allow you to create incredibly complex interactivity within your projects.

Sprites are objects in your QuickTime movie that can be manipulated – tell them where to move and how to look. Sprites can even manipulate and communicate with other sprites and the environment that surrounds them. It may sound confusing, but in reality it is not. The important thing to know is that Sprites are the key to most of QuickTime's interactivity. And, as with Flash media (see the Flash Tutorial), sprites effectively deployed add very little to the file size of your QuickTime movies.

Although the following tutorial is a simple VCR controller, the lessons you learn using sprites are applicable to any LiveStage Professional project that incorporates interactivity. This is an important tutorial, and is recommended as your starting point if you are new to LiveStage Professional.

A wonderful feature of QuickTime is that you can customize your presentation controllers. In this tutorial we will create a custom controller for a video. We will make something very similar to a standard VCR controller.

Before we start, let's take a look at what we will be creating. Open up the ***“Tutorial - Sprites”*** Folder and you will see a movie titled: ***Sprites_comp.mov***.

Play the movie and you will see our mascot, HipBot, showing off his moves. However, the standard QuickTime Controller is not present. There is a new VCR- like controller instead. Click on the buttons and notice how they control the Hip Bot video. Close the movie when you are done.

Let's get started.

Creating Project and Library Folders

- 1 First we need to create a Project Folder. On your desktop, create a project folder called *MySpriteTutorial*.

A Project Folder contains a LiveStage Professional Document (.lsd) and a “Library” folder. The Library folder contains all the local media that is unique to this project. It is essential that you set up a Project Folder. Not only is it a standard method of organizing content for most rich media authoring tools (e.g. ProTools, most NLE Systems, 3D Animation etc.), it will also ensure that your media is always linked to your LiveStage Professional document when it is open. This is even more important if you are in a work group and frequently transfer projects.

- 2 Create a “Library” folder.

The “Library” folder is an essential component of the Project Folder. Like other rich media authoring tools, a LiveStage Professional document holds no media, but instead refers to it. By maintaining a Library folder (Note: it *must* be named “library”) within your project folder, you will ensure there are no broken links in your project.

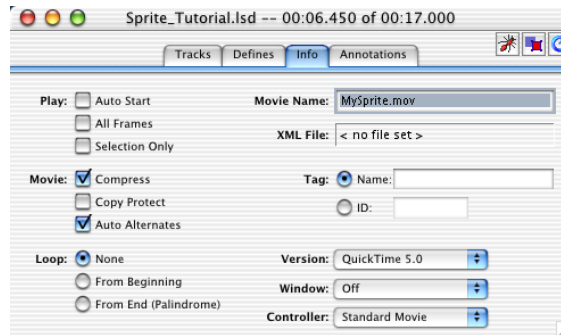
- 3 Bring your media into the “Library” folder.

We have already created a library of media for you which is located in the same folder as this pdf document. Drag it into your project folder.

- 4** Open Up LiveStage Professional 3.0 if it is not already open and create a new project.

Immediately save this project to your project folder. Call it “*Sprite_Tutorial.lsd*”.

- 5** You will start off at the Info Tab. In the “Movie Name” field, enter “*MySprite.mov*”.



This will be the name of your exported QuickTime movie when it is complete.

- 6** Click on the Tracks Tab.



The Tracks Tab is where all the action happens. This is where you will place all the media that will be in your final QuickTime movie. To start off, we will need to bring our media into the Tracks Tab.

Bringing in Media

All the media used in this tutorial will come from the Local Library that we dragged into your project folder.

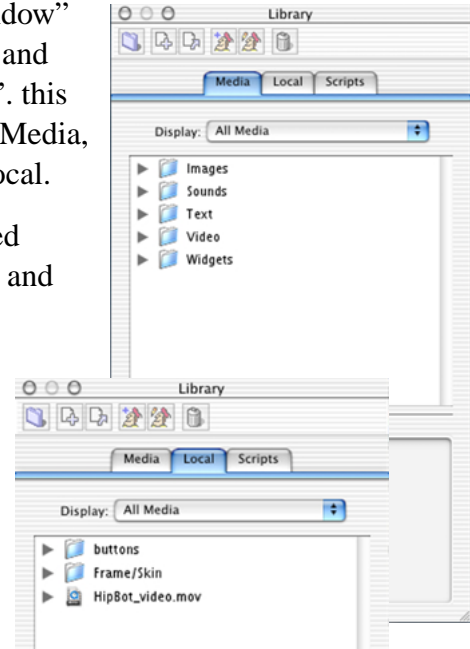
- 1** To view the media, select the Library window.

A Note on the Media Library:

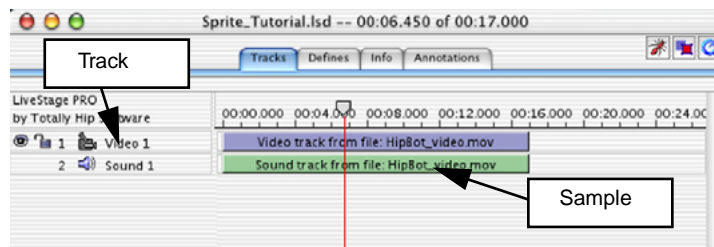
The Media Library is very similar to your Local Library, except that your Media Library is accessible by every LSP project you create. While the Local Library is accessible to LSP projects in the same Project Folder.

- 2 If it is not open, click the “Window” menu at the top of your screen and select “Show Library Window”. this Library window has three tabs: Media, Local, and Scripts. Click on Local.

You will see two folders entitled “**buttons**”, and “**Frame/Skin**”, and you will also see a file named ***HipBot_video.mov***. If you do not see these items in your Local Library, ensure that both the LiveStage Professional document and the Library folder are located in the same project folder that you named “***MySpriteTutorial***”.



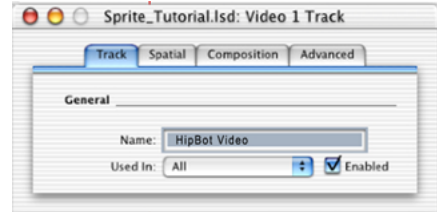
- 3 Drag the ***HipBot_video.mov*** to the Tracks Tab.



Notice that two tracks appear. These two tracks represent the most common tracks in video on the net: a Video Track with a synchronized Sound Track. The default track names that appear when such media is dragged to LSP are ***Video 1***, and ***Sound 1***.

- 4 Double-click on the Track Header of the track called ***Video 1***.

The ‘Track Header’ is the area on the left of the window, as displayed in the screenshot above. The area displayed to the right on the time line contains the “samples”. By double-clicking on the Track Header of a track, you will open the Track Properties window. This is where you can edit the properties for the entire track. Enter ***HipBot Video*** in the name field. Close the Track Properties window.



Adding a Background

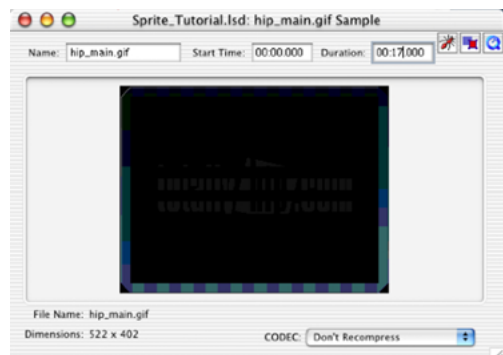
We can make the video presentation more interesting by giving our video a nice background or frame.

- 1 In the ‘Local’ Tab of the Library window, open the “***Frame/Skin***” folder and drag the file named “***hip_main.gif***” to the Tracks Tab.

This automatically creates a Picture Track with the default name “***untitled***”. Change the name of the track to “***Background***”, by opening the Track Properties window. Adding a Picture Track adds very little to the file size of your movie.

- 2 Notice that the Picture Track, “***Background***” only has a duration of one second, but our video has a duration of 17 seconds.

Double-click on the Picture Track’s sample and the Sample Properties window will open. This is where you can edit the properties for the sample. Enter 00:17.000 in the duration field. Close the Sample Properties window.



You can see a preview of the movie we are creating at any time by simply clicking the blue QuickTime icon on the top right hand corner of your project window.

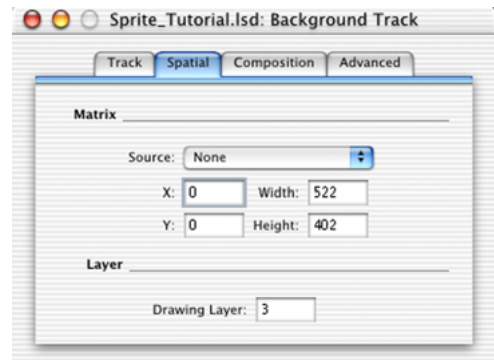


- 3 If you preview your movie, you will notice that the HipBot video is no longer visible.

This occurs because our background is on a layer in front of the video. We need to move the Picture Track behind the video. Again, double-click on the Track Header of the Picture Track to open the Track Properties window.

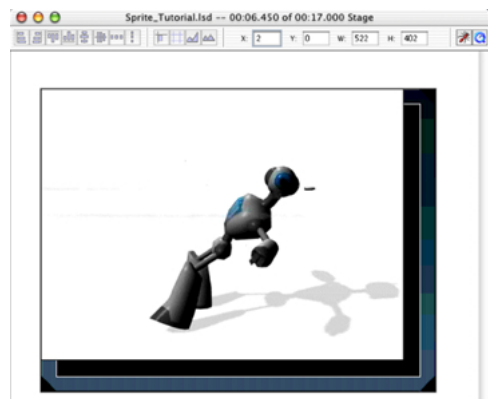
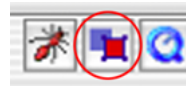
- 4 Click the “Spatial” Tab. Enter 3 in the Drawing Layer field.

QuickTime draws its tracks on layers. The smaller the value, the closer it is to the top. So a track on layer 0 is in front of a track on layer 3, and layer -5 is in front of layer -2. Yes, it sounds a bit strange, but this is how QuickTime numbers its layers.



- 5 Click on the Stage icon.

This will provide a visual representation of your movie and is also where you can lay out your media. Notice that the HipBot video is not centered on the background. You can click and drag the video to align the track, or you can simply type in 21 for both the “x” and “y” in either the Track Properties Window or directly on the stage. These coordinates will center our video track.

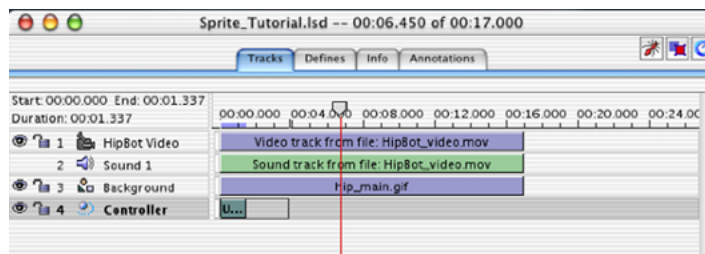


Working with the Sprite Track

We will create our VCR controller by using a Sprite Track. The Sprite Track is QuickTime's most important track for interactivity. In fact, we believe it is so important, it is the only track that can be created using a shortcut (Command-K for Mac, and CTRL-K for Windows).

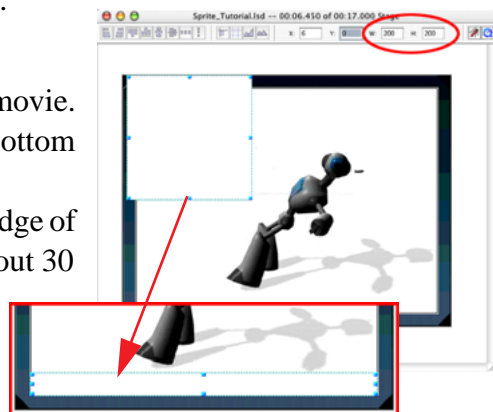
- 1 Create a Sprite Track (Cmd/CTRL-K), and change the name of the Sprite Track to **Controller**.

Notice that the default sample size is only one second. We can change the duration by opening the sample and changing the value in the duration field as we did for the Picture Track, or we can simply click and drag the edge of the track to lengthen it. If you press the option key as you drag, the track will snap to the edges of the other tracks.

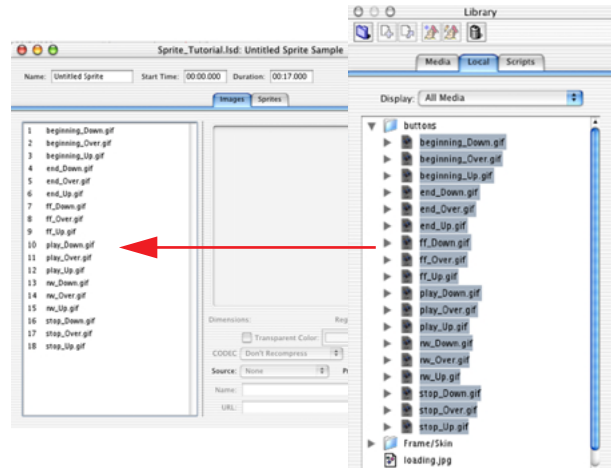


- 2 Open the Stage. You will see the dimensions of the Sprite Track outlined. They are 200 x 200.

We want our controller to be located on the bottom of our movie. Simply drag the track to the bottom of the movie, and change the dimensions by dragging the edge of the track until the track is about 30 to 40 pixels high and spans the width of the Video Track.



- 3 Open the Sprite Sample by double-clicking on it. Drag and drop all the images in the buttons folder located in your Local Library to the Images Tab in the Sprite Sample Window.



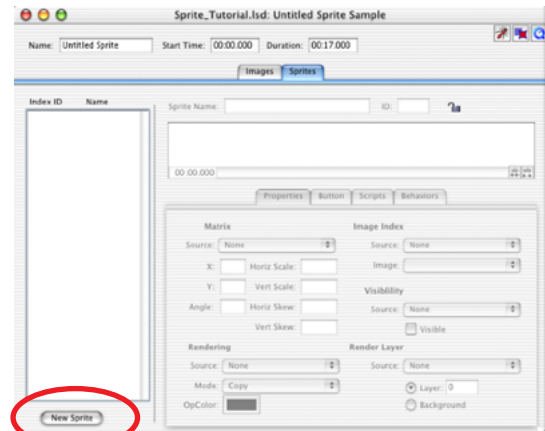
These images represent the VCR buttons we will make with their rollover states. We haven't made any sprites yet - we have only loaded images into the Sprite Track.

- 4 Click the “Sprites” tab.

This is where we will create our sprites. The sprites in this example will be our VCR buttons.

- 5 Click the “New Sprite” button.

The default name is *untitled*. In the Sprite Name field, change it to **“Beginning”**.



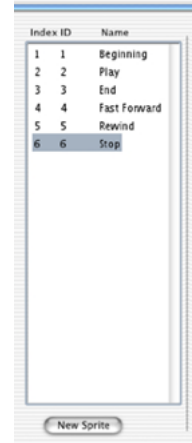
- 6 We will also need to assign an image to this sprite.

To do this, click on the Image Index menu. Select **“beginning_Up.gif”**. This is the ‘up’ state of the Restart button we will create.



7 Make another New Sprite.

Name it **Play**, and assign it the image “*play_Up.gif*”. Repeat this procedure for your **End**, **Fast Forward**, **Rewind**, and **Stop** sprites. Don't forget to choose the ‘up’ image gif in the image index menu for each sprite. You should have six different sprites when you're finished.



8 Open the Stage.

All of your sprites will be on top of each other within the Sprite Track. Simply drag them and lay them out within the Sprite Track on the Stage as shown. You don't need to be too exact - we will use the alignment tools to help the process. All your sprites must be present in the Sprite Track to be visible in your exported movie. If they are over the Video Track, but not within the Sprite Track, they still will not display.

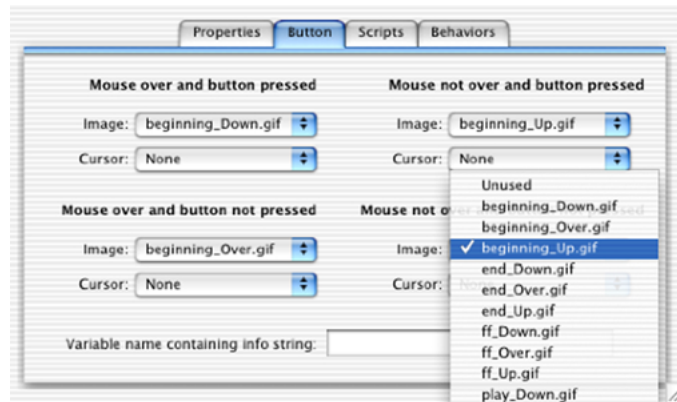
To use the alignment tool, select all of the buttons by holding down the shift key and clicking on each sprite. Click the “Spread Horizontally” tool, and the “Align Top” tool to align your buttons properly. Close the Stage.



Assigning the Rollover States

We want the user to have an indication that the sprites are buttons so we will assign them some mouse rollover states.

1 In your Sprite Sample select the Beginning Sprite, and click on the Buttons Tab.



This is where we will assign the rollover states to each button. The Buttons Tab is separated into four possible states:

- **Mouse Over and Button Pressed**
This is the down state - from the menu select *“beginning_Down.gif”*.
- **Mouse Over and Button Not Pressed**
This is the over state - from the menu select *“beginning_Over.gif”*.
- **Mouse Not Over and Button Pressed**
An up state in this case - from the menu select *“beginning_Up.gif”*.
- **Mouse Not Over and Button Not Pressed**
This is the up state - from the menu select *“beginning_Up.gif”*.

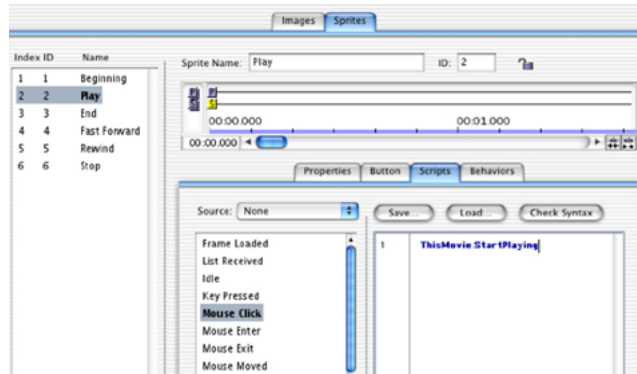
2 Follow the same procedure for the other five buttons.

If you preview your movie, you will notice that the buttons are responsive to your mouse moving over and clicking them. However, they do not affect the movie playback as we haven't scripted them yet.

Scripting the Buttons

To enable the buttons to control the movie, we need to attach some scripts to them.

- 1 Click on the Play sprite, then click the Scripts Tab.

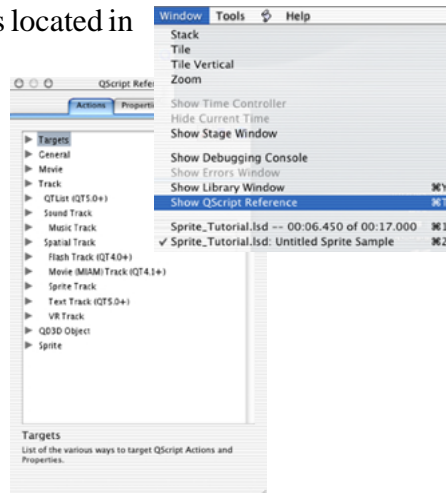


You will see a list of event handlers. We want our buttons to function when the buttons are clicked, so select the Mouse Click event handler. Type the following:

`ThisMovie.StartPlaying`

The entire list of scripts is located in the QScript Reference. You can access this by selecting “Show QScript Reference” located in the Window menu, or you can type Command-T.

Clicking on individual script names will provide a brief description of the script’s functionality.



- 2 Here are the Scripts for the rest of the buttons. Type them into the Mouse Click event handler.

Beginning: `ThisMovie.GoToBeginning`

End: `ThisMovie.GoToEnd`

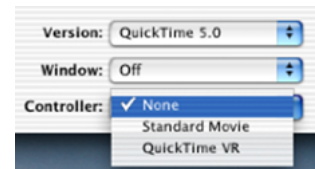
Rewind: `ThisMovie.SetRateTo(-2)`

Fast Forward: `ThisMovie.SetRateTo(2)`

Stop: `ThisMovie.StopPlaying`

If you preview your movie, your buttons should now function. However, if we exported the movie now, it would have both the QuickTime controller and the controller we just made. Let's turn off the QuickTime controller.

- 3 Select the Info Tab on the project window again and select “None” from the controller menu.

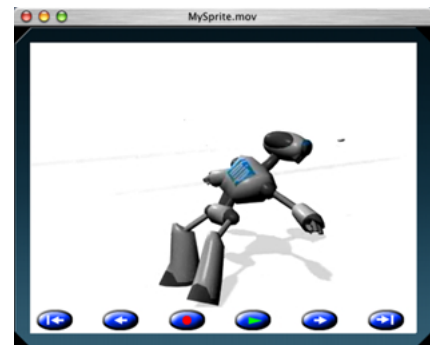


- 4 Export your movie. You are done.

To export your movie, select “Export Wired Movie” from the File Menu or use the shortcut, Command-M for Macs or CTRL-M for PCs.

Again it is important to remember that although this sprite project is fairly simple and straightforward, sprites are used extensively in many different ways. Take some time to explore other LiveStage Professional projects to see other ways sprites can be used:

<http://www.totallyhip.com/lsgn/>



Optional: You may notice that the Sprite Track shows up as a white area at the bottom of the video. If you would prefer to have the Sprite Track’s background transparent, you can open the Sprite Track Properties window. Select the Composition Tab and change the Mode from “Dither” to Transparent.