

## FLASH COMMAND LINE TUNER FOR REALONE PLAYER

RealNetworks' command line tuner for Flash Player files is available for Windows, Macintosh, and Linux. It tunes a Flash 4, 3, or 2 Player file (.swf) to a specified streaming bit rate, which is a necessary step for streaming the file to RealOne Player, or earlier versions of RealPlayer.

If you develop your animation with Macromedia's Flash 5 application, you do not need to use this tuner because Flash 5 can directly export a Flash Player file tuned for RealOne Player. The file must be in the Flash 4, 3, or 2 Player format, however, because RealOne Player does not read the Flash 5 Player format. Refer to your Flash 5 manual for information on exporting a file for RealOne Player.

**For More Information:** For tips on producing a streaming Flash Player file for RealOne Player, see the Flash animation chapter of *RealNetworks Production Guide*.

### Running the Flash Tuner

The Flash tuner comprises an executable program, swftune, and one library:

- swfe3260.dll on Windows
- swfexp rt.so.6.0 on Linux
- swfexp rt60.dll on Macintosh (for System 8.6 or higher)

Both the executable and the library must reside in the same directory.

### Tuning on Windows or Linux

To tune a Flash Player file on Windows or Linux, run the swftune program from the MS-DOS or Linux command line with this command:

```
swftune -b Kbps input.swf [output.swf]
```

## Tuning on Macintosh

To tune a Flash Player file on Macintosh, double-click the swftune application. In the application window, enter the following command in the **Argument** field and click **OK**:

```
-b Kbps input.swf [output.swf]
```

## Setting Tuner Options

The following table explains the tuner options.

**Flash Tuner Options**

Tuner Option	Action
<code>-b Kbps</code>	Sets the streaming bit rate in Kilobits per second. You can use a decimal point as in 8.5, for example, to set a streaming bit rate of 8.5 Kbps.
<code>input.swf</code>	Specifies the path and file name of the Flash Player file to tune. The file name must be exact. If you specify just the path and file name with no other options, the tuner output shows file statistics but does not modify the file.
<code>output.swf</code>	Optional name for the tuned Flash Player file. If you do not specify a new name, the input file is overwritten.

## Tuning Examples

### Example 1

The following example takes the file `flash4original.swf` as input, tunes it to stream at 34 Kbps, and creates the output as `flash4tuned.swf`. The input file remains unchanged. Because no path is given, the input file must be in the same directory as the swftune application. This is the command for Windows or Linux:

```
swftune -b 34 flash4original.swf flash4tuned.swf
```

On Macintosh, you enter the following in the **Argument** field and click **OK**:

```
-b 34 flash4original.swf flash4tuned.swf
```

## Example 2

The next example tunes a file in a Windows subdirectory to 11.5 Kbps, overwriting the input file so the tuned file has the same name:

```
swftune -b 11.5 animation\flash4original.swf
```

On Linux, the command uses a UNIX path designation:

```
swftune -b 11.5 animation/flash4original.swf
```

On Macintosh, the command follows Macintosh file system conventions:

```
-b 11.5 animation:flash4original.swf
```

**Note:** Use double quotation marks around the path and file name if a directory or folder name contains spaces.

**Tip:** When overwriting a file, always keep a back-up copy of the original input file.

## Tuner Information

When you tune a Flash file on Windows or Linux, the tuner displays information about the input file and the tuned output.

**Flash Tuner Information**

Field	Units	Information Given
Script Length	bytes	The untuned file's size.
Native Width	pixels	The file's display width.
Native Height	pixels	The file's display height.
Frame Rate	frames per second	The file's frame rate, which RealNetworks recommends to be 7 to 12 fps.
Number of frames	integer	The number of frames, including key frames.
Bitrate	Kilobits per second	The file's streaming bit rate.
Preroll	seconds	The amount of initial buffering (preroll) required before the file plays.

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**Flash Tuner Information (continued)**

Field	Units	Information Given
Non-linear	yes   no	Whether the file contains commands, such as <b>Go To</b> , that make it non-linear. A “yes” means that RealOne Player will cache the entire file in memory to ensure support for interactivity.
Number of Characters	integer	Number of defined objects such as shapes, text strings, and fonts.

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## Tips for Producing Flash Player Files

As explained in *RealNetworks Production Guide* you must target an audience bandwidth correctly to produce a good streaming presentation. The following are tips for producing streaming Flash Player files:

- Ensure that a Flash Player file and any other clip you combine it with do not consume more than 75 percent of the connection bandwidth for analog connections such as dial-up modems, or 90 percent of the connection bandwidth for high-speed digital connections such as DSL or cable modems.
- When you combine a Flash Player file with another clip, such as a RealAudio clip, consider how best to balance the quality requirements for each clip. This ensures that neither the visual quality nor the sound quality is impaired.
- When you tune a Flash Player file, always look at the tuner output to learn the number of seconds of preroll the file will require. If preroll exceeds 15 seconds, your Flash Player file is too large to stream effectively at your chosen bandwidth. You need to increase the file’s streaming bandwidth if possible, or reduce the file size.
- To reduce the file size, lower the JPEG quality when exporting the Flash Player file. This compresses imported graphics more. If the file is still too big, you may need to change the animation by dropping key frames or simplifying complicated objects.

**For More Information:** For more information on these topics, see the Flash animation chapter of *RealNetworks Production Guide*.