



**REALPRODUCER PLUS™ USER'S GUIDE**  
Version G2 for Macintosh



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## INTRODUCTION TO REALPRODUCER PLUS

Welcome to RealProducer Plus G2 from RealNetworks. This tool converts standard audio and video files into streaming media clips. Utilizing easy-to-use assistants, a simple interface, and customizable settings, RealProducer Plus is perfect for either novice or advanced content creators. In addition, you can also use this tool to publish your RealMedia files, adding sight and sound to your Web site.

### New Features for G2

This version of RealProducer Plus includes new features that allow you to:

- Record for multiple audiences using SureStream™
- Create RealMedia clips that automatically switch down to a lower bandwidth during network congestion
- Create RealMedia clips compatible with older versions of RealPlayer™
- Create improved-quality RealAudio® G2 audio output and RealVideo® G2 with Intel® video output
- Use a more flexible and usable interface
- Convert compressed QuickTime® files
- Customize target audience settings
- Monitor statistics during a recording session

### About This Manual

**Chapter 1: Installing RealProducer Plus** explains installation procedures and provides information about system requirements for installing and using RealProducer Plus.

**Chapter 2: Using RealProducer Plus** explains how to create streaming media from existing files. It also describes how to choose a target audience, how to use SureStream, and how to monitor the recording process.

**Chapter 3: Publishing to the Internet** discusses how to generate streaming media-enabled Web pages and publish those Web pages to a server.

**Chapter 4: Customizing Recording Options** explains how to change RealProducer Plus preferences and how to modify target audience settings.

**Chapter 5: Recording Tips** provides information for increasing performance, using RealProducer Plus more efficiently, and creating high-quality audio and video.

**Chapter 6: Using AppleScript** shows you how to use the RealProducer Plus script commands.

## For More Information

For additional information about using streaming media effectively and how to create multimedia presentations with your clips, refer to the *RealSystem G2 Production Guide*, available for download from the RealNetworks Web site at:

- <http://service.real.com/help/library/index.html>

For technical support with RealSystem G2, please fill out the form at:

- <http://service.real.com/contact/email.htm>

The information you provide in this form will help technical support personnel to give you a prompt response. For general information about RealNetworks' technical support, visit:

- <http://service.real.com/help/call.html>

## INSTALLING REALPRODUCER PLUS

Installing RealProducer Plus is quick and easy. You can download RealProducer Plus from the RealNetworks Website or install it from a CD-ROM. Before you begin, make sure your computer meets the necessary system requirements. See “System Requirements” on page 4 for more information.

### How to Install

Follow this procedure to install the product onto your computer.

► To install RealProducer Plus:

1. Download the installation program, or insert the CD-ROM into your drive.
2. Close any other applications that may be open and double-click on the installation program icon.  
The installer begins by preparing your system for RealProducer Plus. When complete, the installer opens to the Software License page.
3. Read the terms and conditions carefully, and click **Accept** if you agree. You can click **Cancel** at any time to abort the installation.
4. Enter your e-mail address in the appropriate field.
5. Modify the directory RealProducer Plus will install into by clicking the **Browse** button and selecting the new path.
6. Enter the serial number you received when you purchased RealProducer Plus.
7. Click **Finish**.  
The install program installs all necessary programs and opens RealProducer Plus.

## System Requirements

This section outlines the basic hardware and software requirements needed to run RealProducer Plus.

The following table lists the minimum and the recommended requirements for converting existing audio and video files into RealMedia files:

Recording from Files		
Requirement	Minimum	Recommended
CPU	Power PC 120 MHz 604	Power PC G3
Operating System	8.1	
RAM	32 MB	64 MB
Hard Disk space (software)	8 MB	
Hard Disk space (data)	10 MB	1 GB
Color Display	16-bit	24-bit (TrueColor)

You must have an FTP program installed, either Anarchie or Fetch, to use RealProducer Plus's Web Publishing features. Go to **http://www.stairways.com** for information on using Anarchie.

# Chapter 2

## USING REALPRODUCER PLUS

This chapter describes how to use RealProducer Plus to convert standard audio and video into streaming RealMedia. The entire conversion process is known as a “recording session.” Here, you will learn how to create a recording session, how to record with SureStream, and how to monitor your recording session.

### What is Streaming Media?

RealMedia clips created by RealProducer Plus are streaming audio and video presentations, also known separately as RealAudio and RealVideo. Prior to RealMedia, one had to wait for a media file to download in order to play it. When you create a streaming clip, users can play it almost instantly.

By streaming a clip, you are sending small packets of information over a connection. On the other end, the user receives the information and plays your media clip bit by bit. The process is almost invisible to the user, except for a small amount of initial buffering.

RealProducer Plus G2 is an integral part of the RealNetworks RealSystem G2. RealProducer Plus creates the clips, RealServer™ sends the clips, and RealPlayer™ shows the clips.

### The RealProducer Plus Main Window

Before you begin to create RealMedia content, let’s briefly tour the different components of the RealProducer Plus main window. This window is where you create, start, view, and stop a recording session.

### The RealProducer Plus Main Window



The upper section of the window is where you monitor the recording process. “Viewers” show you the input video and the recorded output during a recording session. Meanwhile, an audio level indicator gives you a visual representation of the audio track.

The middle section lists all necessary information about the final RealMedia file. Details such as clip information, the target audience, audio format, video quality, and the type of stream being recorded are found here.

On the bottom are the recording controls. These controls allow you start, stop, and play the current recording session. Also located here are the publishing controls. They are explained in “Publishing to the Internet” on page 25.

## Creating Streaming Media

RealProducer Plus includes a simple assistant to guide you step-by-step through the recording process. This assistant is specifically designed to convert existing audio and video files into RealMedia files.

If you are more familiar with the recording process, you can bypass the assistant and set up the recording process manually. This option is discussed later in “Recording Without the Assistant” on page 15.

## Recording from Media Files

This section describes how to record a RealMedia file from different types of existing media files using the recording assistant.

Only the following audio and video formats can be converted into RealMedia clips using RealProducer Plus:

- Audio (.au, .aiff, .snd, .wav)
  - QuickTime for Windows (.mov); must be QuickTime 3.0 compatible
- To create a RealMedia file from an existing file using the recording assistant:
1. Select **Recording Assistant** from the **File** menu.
- The Recording Assistant opens.



2. Use the **Browse** button to locate the audio or video file that you will use as the source for your recording.

3. Click **Next**.

The RealMedia Clip Information page opens.



4. Enter the following information in the provided spaces. This information will appear in the viewer's RealPlayer when your clip is played. You may leave them blank.

**Title**—the title of the clip

**Author**—the name of the clip's creator

**Copyright**—year and owner of the clip's copyright

5. Click **Next**.

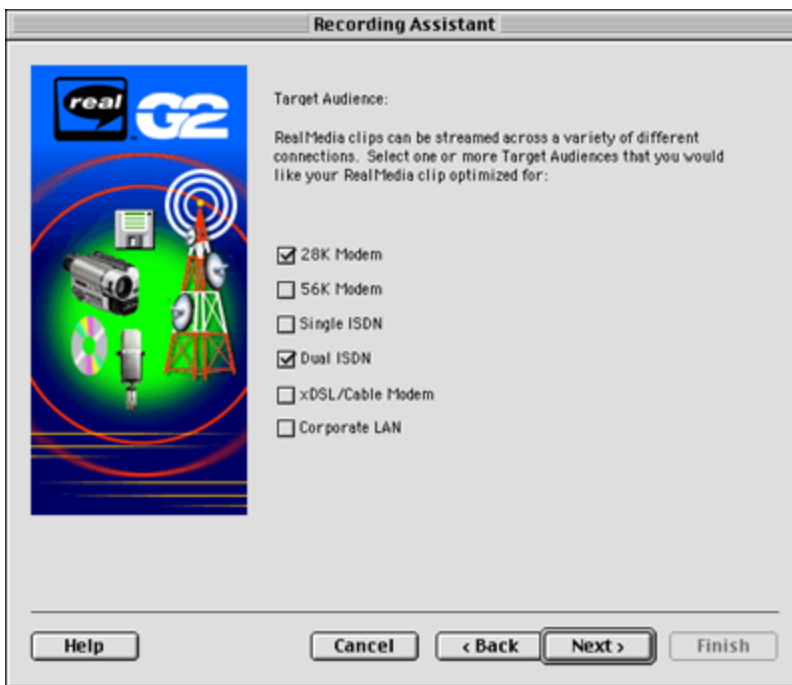
The File Type page opens.



6. Select the type of RealMedia file you want to create: **SureStream** or **Single Rate**. For more information on SureStream files, see “About SureStream” on page 16.

7. Click **Next**.

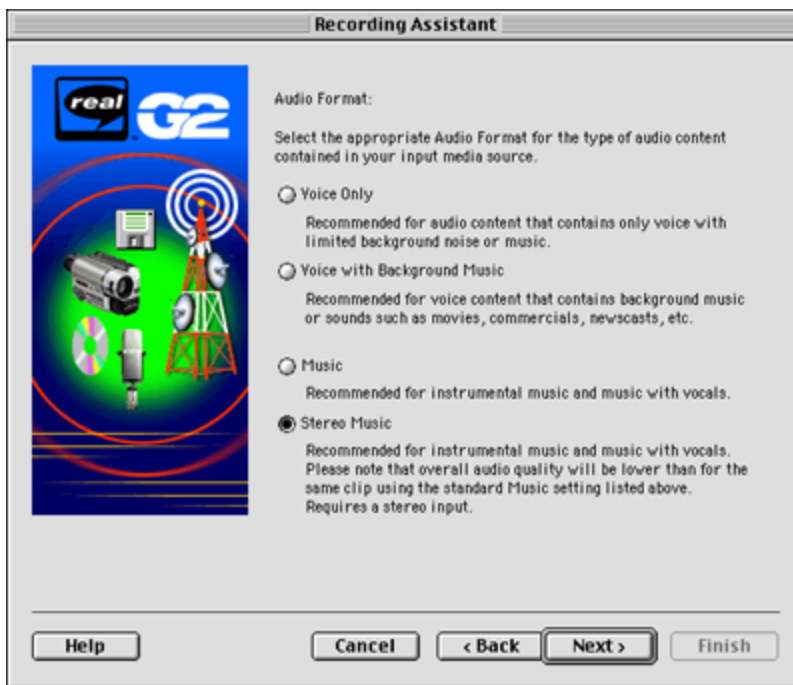
The Target Audience page opens.



8. Select the connection speed for your audience. You may make more than one selection if you are creating a SureStream file.

9. Click **Next**.

The Audio Format page opens if your source file contains audio. If not, skip the next step.

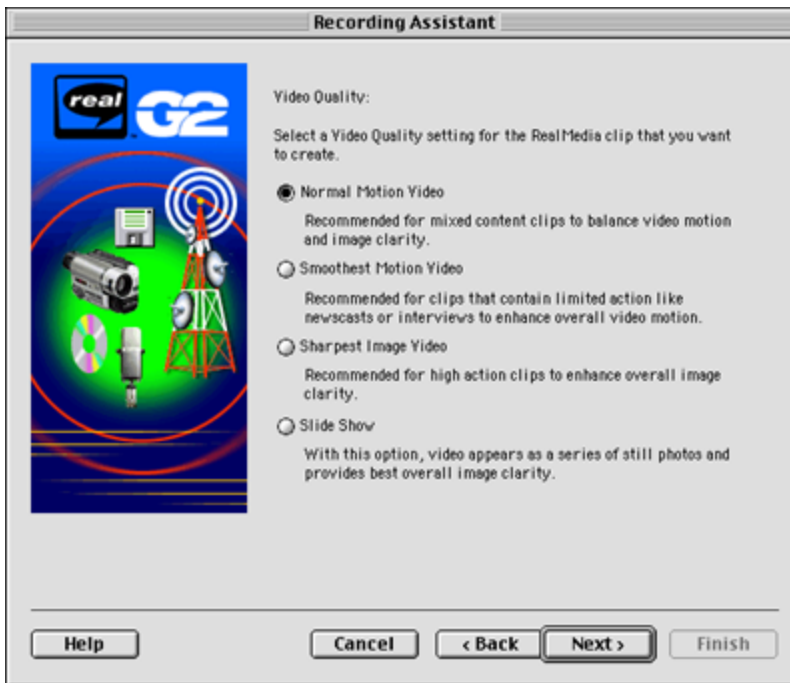


10. Select the type of audio that your file consists of (if applicable), and click **Next**.

**Note**

You can only select the Stereo Music format if your input audio is in stereo.

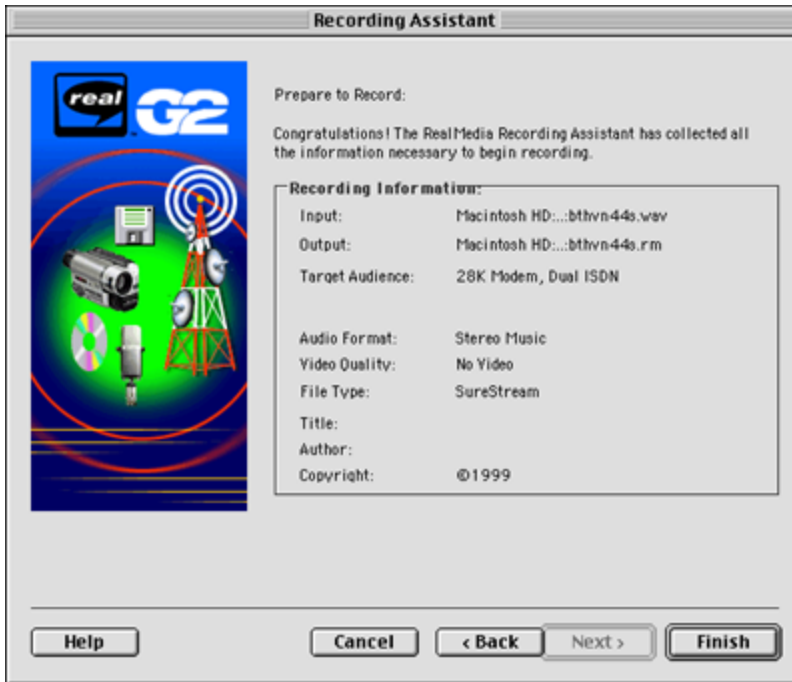
The Video Quality page opens if your source file contains video. If not, skip the next step.



11. Select the video quality for your output file (if applicable), and click **Next**. The Output File page opens.



12. Enter the name and directory of your final output file.  
The output file must have a .rm extension (for example, myfile.rm).
13. Click **Next**.  
The Prepare to Record Page opens.



14. Review all information regarding your file. If it is correct, click **Finish**. You can use the **Back** button to reverse through the assistant and change any information. After clicking **Finish**, you are returned to the RealProducer Plus main window. If you are recording video input, the Input Source viewer shows the first frame.
15. You can change any recording options at this point, or simply click **Start** to begin recording.
16. Click **Stop** to quit recording before the source file ends. A dialog box opens asking you to confirm ending the recording, but the session continues to record.
17. Click **Yes** to close the dialog box and stop the recording. The Recording Complete dialog box opens. This dialog shows you final recording information about your RealMedia file.

18. Click **Statistics** to view complete information about your recording session. See “Monitoring Recording Statistics” on page 17 for more information.
19. Click **OK** to return to the main window.
20. Click the **Play** button to open your RealPlayer and play the RealMedia file.

## Recording Without the Assistant

Although using RealProducer Plus's recording assistant allows you to easily create RealMedia content, after time you'll likely be able to do without it.

- ▶ To create RealMedia without using the assistant:
  1. Select **Open File** from the **File** menu.  
The Open File dialog opens.
  2. Navigate to the file you want to record, and select it.
  3. Click the **Choose** button.  
The Open File dialog closes, returning to the RealProducer Plus main window.
  4. Enter the **Title**, **Author**, and **Copyright** information for your output. These fields are optional.
  5. Select the **File Type**, either **Single Rate** or **SureStream**. For more information, see “About SureStream” on page 16.
  6. In the **Target Audience** section, select the connection speed for your audience. You may select more than one target audience if you are recording with SureStream.
  7. In the **Audio Format** section, select the type of audio contained in your source (if any).  
  
**Note**  
You can only select the Stereo Music format if your input audio is in stereo.
  8. In the **Video Quality** section, select the type of video contained in your source (if any).
  9. Click **Start** to begin the recording process.

10. Click **Stop** to end the recording.

## About Target Audiences

Whenever you create a RealMedia file or broadcast RealMedia content, you should always keep in mind the connection speed of your audience. Are they using lower-speed modems, or are they streaming your file over a high-speed network?

When you select a specific target audience, you are actually specifying a maximum bandwidth for your RealMedia stream at the selected target audience. Bandwidth, measured in kilobits per second (Kbps), is the amount of data that can be sent through an Internet or network connection during a set period of time. Standard modems are commonly referred to by the bandwidth they are able to receive--for example, 28.8 and 56 Kbps.

In addition to these standard audiences, you can record clips for connection speeds of 100 Kbps, 200 Kbps, or higher. These higher bandwidths, however, are generally more typical of corporate Local Area Networks (LANs) or entertainment-based Web sites.

Keep in mind that the maximum bandwidth a connection is capable of is greater than the average bandwidth carried across it. For that reason, 28 Kbps connections actually only use approximately 20 Kbps, while a 56 Kbps connection actually uses about 34 Kbps.

Normally, these constraints can affect your recording in many ways. Sometimes you have to compromise between reaching the largest audience (with the lowest-speed connections) and the quality of your work. Fortunately, RealProducer Plus enables you to record for a number of target audiences simultaneously using SureStream.

## About SureStream

With SureStream recording you can reach the widest possible audience, and provide all users with the best listening and viewing experience optimized for their bandwidth.

There are several advantages to using SureStream. You can create:

- a single RealMedia clip recorded for multiple target audiences
- a clip that will automatically switch to a lower bandwidth during poor network conditions

- a clip that is compatible with an older version of RealPlayer

SureStream RealMedia files can combine several different streams that take advantage of any or all of these features.

For example, you can record a video clip for both 28 Kbps and 56 Kbps audiences, and RealPlayer G2 will automatically use the correct stream based on the user's connection speed. Meanwhile, a separate stream can exist for people who still own a RealPlayer 5.0 so that they can experience your clip. All streams are contained within a single RealMedia file.

Keep in mind that if you will place the SureStream files created with this product on a server, you must use a RealNetworks RealServer G2.

## Monitoring Recording Statistics

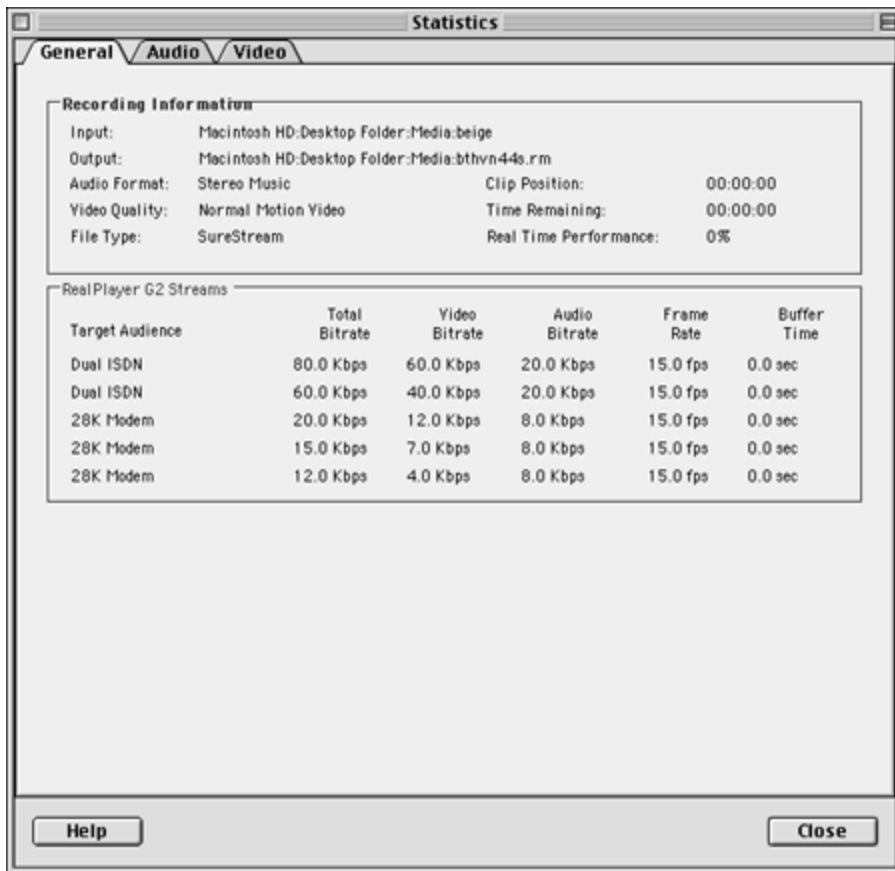
The Statistics window is a useful tool that allows you to monitor the performance of your recording session.

You can watch general statistics, audio-only statistics, or video-only statistics. Plus, if you are using SureStream, statistics are shown for each stream that RealProducer Plus creates.

- To monitor recording statistics:

1. After you have created a recording session, choose **Statistics** from the **View** menu.

The Statistics window opens. You can return to the RealProducer Plus window without closing the Statistics window.



2. Start recording, noting the top section of the Statistics window. Here is where you will find basic information about your recording session such as:

- name and location of the input file
- name and location of the generated output file
- audio format and video quality
- whether the output is SureStream or Single Rate

You also find information that constantly changes, such as:

- time remaining in the clip
- real time performance

3. Also monitor the general, audio, and video information located at the bottom of the Statistics window. These statistics are described later in this section.

## Monitoring Real Time Performance

A main feature of the statistics dialog is its ability to show the performance of your recording session.

This statistic compares the time it took to record your clip to the time it takes to play the input. For example, if your input is a 10 second video clip and it takes RealProducer Plus 5 seconds to process the clip, the Real Time Performance would be 50%.

Any value near or above 100% means that your computer may not be able to process data as fast as it is received, and the session may fail due to lack of computing resources.

## General Statistics

These statistics give you information about each target audience selected during the creation of the recording session. If you are recording a Single Rate clip, only one stream appears. If you are using SureStream, all streams are listed for each target audience.

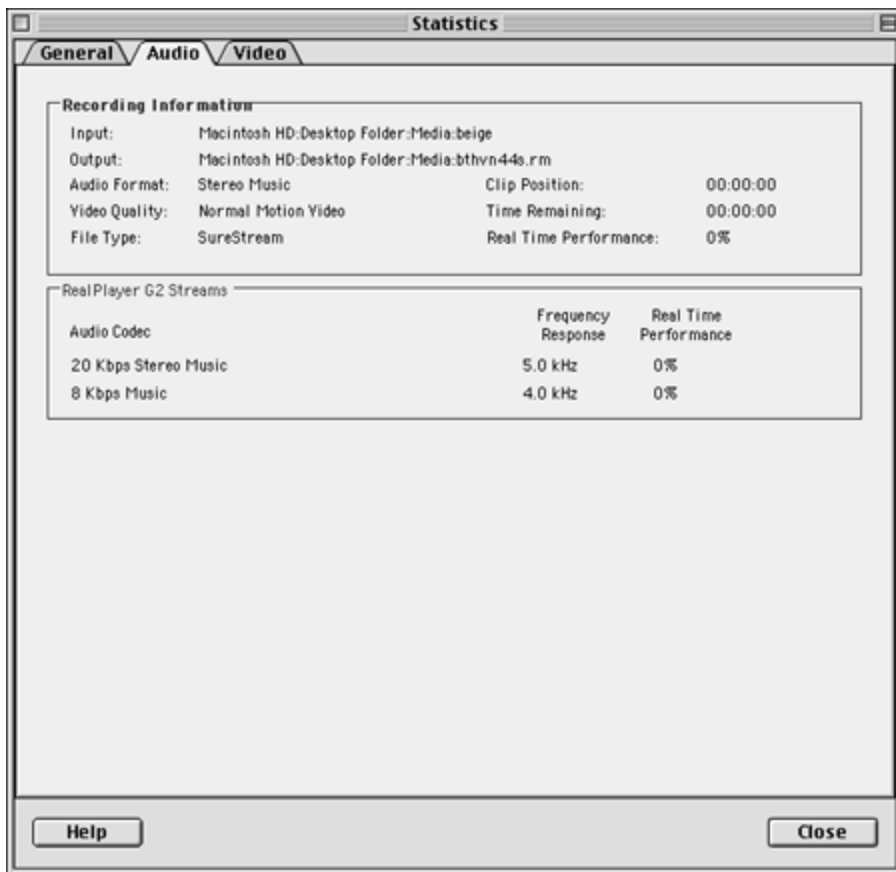
See the table below for more details about these statistics.

**Using General Statistics**

Statistic	Description
Target Audience	target bit rate of your audience
Total Bit Rate	total bit rate of the clip
Video Bit Rate	bit rate of the video stream
Audio Bit Rate	bit rate of the audio stream
Frame Rate	frames per second of video
Buffer Time	number of seconds needed before the clip can be played

## Audio Statistics

These statistics give you information about the audio codecs (compression/decompression algorithms) used to create the audio streams. More than one codec appears if you are using SureStream.



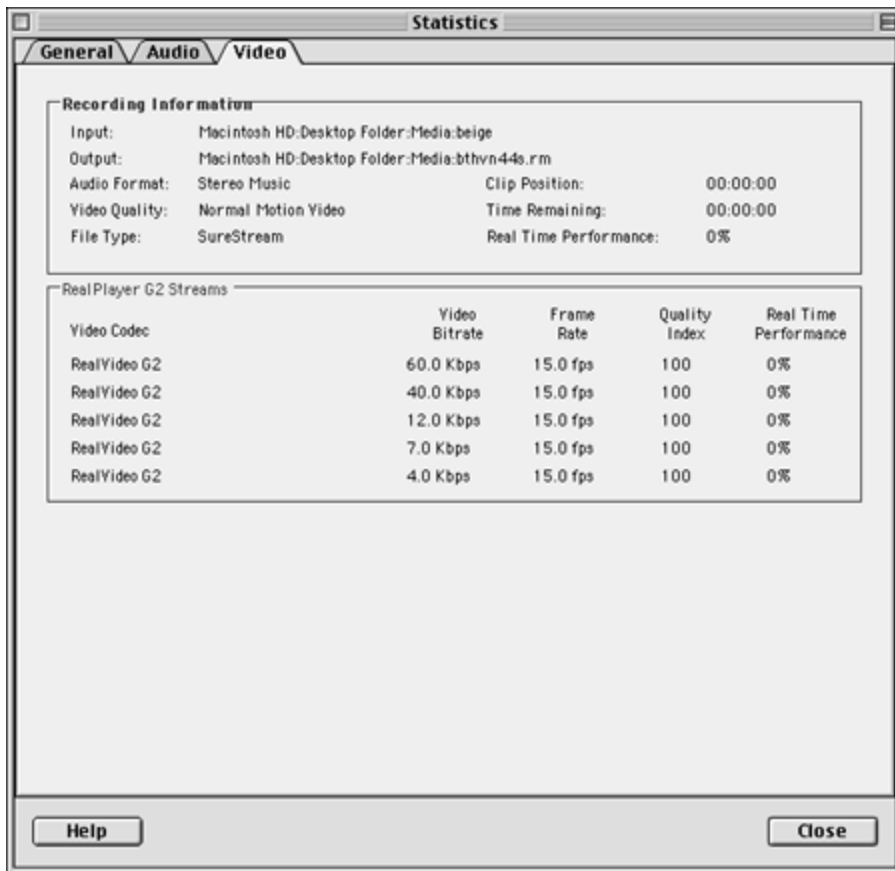
See the table below for more details about these statistics.

#### Using Audio Statistics

Statistic	Description
Audio Codec	codec being used to convert audio stream
Frequency Response	highest frequency found in the recorded audio
Real Time Performance	approximate percentage of your computer's audio recording speed compared to real time audio playing speed

### Video Statistics

These statistics give you information about the video codecs (compression/decompression algorithms) used to create the video streams. More than one codec appears if you are using SureStream.



See the table below for more details about these statistics.

#### Using Video Statistics

Statistic	Description
Video Codec	codec used to convert video
Video Bit Rate	bit rate of the video
Frame Rate	frames per second of video

(Table Page 1 of 2)

**Using Video Statistics (continued)**

Statistic	Description
Quality Index	video quality affected by your computer processor's recording speed; 100 is best, and values less than 80 reflect reduced quality
Real Time Performance	approximate percentage of your computer's video recording speed compared to real time video playing speed

(Table Page 2 of 2)



# Chapter 3

## PUBLISHING TO THE INTERNET

Along with its powerful recording features, RealProducer Plus includes assistants that allow you to publish your streaming content to the Internet. Using these assistants, you can create a RealMedia-enhanced Web page and upload it to a server.

### Creating Web Pages

A primary publishing feature of RealProducer Plus is the Web Page Assistant. With this assistant, you can instantly create a Web page enhanced with RealMedia. The assistant creates all of the HTML necessary to provide a page that contains your streaming media file.

Guided through a series of prompts, you choose how to stream your RealMedia file: either with a RealPlayer in a separate window, or with a RealPlayer embedded within the page. The assistant then allows you to preview the finished page with your Web browser and a RealPlayer.

Follow these steps to create either type of RealMedia Web page, pop-up or embedded.

- To create a Web page that opens a separate RealPlayer:
  1. Select **Create Web Page** from the **Tools** menu.  
The Web Page Assistant opens to the Introduction page.
  2. Click **Next** to begin the assistant.  
The Media File page opens.
  3. Select a RealMedia file.  
The name of the last RealMedia file created by RealProducer Plus appears by default. Click the **Browse** button to locate another file.
  4. Click **Next**.  
The Playback Method page appears.

5. Choose **Pop-up Player** and click **Next**.

The Web Page Caption page opens.

6. Enter text that will appear in the Web page that, when selected by a user, will open the RealPlayer and play your file.

7. Click **Next**.

The Web Page Filename page opens.

8. Enter the name and directory of the Web page you want to create.

9. Click **Next**.

The Web Page Results page opens. This page informs you that a Web page and a RealMedia metafile have been created.

10. If you wish to preview your Web page with an Internet browser, click **Preview** on the Results page.

You must have RealPlayer installed to view your page properly.

11. Click **Finish** to close the assistant.

- To create a Web page with an embedded RealPlayer:

1. Select **Create Web Page** from the **Tools** menu.

The Web Page Assistant opens to the Introduction page.

2. Click **Next** to begin the assistant.

The Media File page opens.

3. Select a RealMedia file.

The name of the last RealMedia file created by RealProducer Plus appears by default. Click the **Browse** button to locate another file.

4. Click **Next**.

The Playback Method page appears.

5. Choose **Embedded Player** and click **Next**.

The Player Control Layout page appears. In this page, you can decide what components of the RealPlayer to include within the Web page.

6. Select a control layout from the available options.

7. Select **Auto Start** if you want the RealMedia file to play automatically when your Web page is opened.

8. Click **Next**.

The Web Page Caption page appears.

9. Enter a caption name that will appear as a title for the RealMedia file.
10. Select whether you want the caption to appear above or below the Player controls.
11. Click **Next**.

The Web Page Filename page appears.

12. Enter the name and directory of the Web page you want to create
13. Click **Next**.

The Web Page Results page opens. This page informs you that a Web page and a RealMedia metafile have been created.

14. If you wish to preview your Web page with an Internet browser, click **Preview** on the Results page.

You must have RealPlayer installed to view your page properly.

15. Click **Finish** to close the assistant.

Keep in mind that the Web pages you create with the Web Page Assistant will initially point to files located on your local hard drive. If you upload your pages to a Web server, these local file references will be automatically updated. Therefore, you should avoid making manual changes to any file references in HTML files created by the assistant.

Alterations to these files or any file references contained in the associated .ram/.rpm metafile may cause errors when publishing Web pages to a remote server.

## About Metafiles

A metafile points a Web page link to one or more RealMedia clips located on a remote server. The function of a metafile is to point to the location where your media file actually resides and is required for your file to stream, rather than simply download and play. Typically, a metafile is located on a server and contains the URL where a RealMedia clip can be found.

Metafiles created by the RealProducer Plus Web Page Assistant reside on your local hard drive and point to files on your local file system. When you publish your files to a server, these metafiles are automatically updated to include information about the server where your media files will be sent.

## Publishing Your Files to a Server

Another assistant included with RealProducer Plus is the Publish to Server Assistant. This assistant allows you to publish your RealMedia-enhanced Web page to a remote server. The server can be either a RealNetworks RealServer or a standard HTTP Web server.

The assistant leads you through a series of prompts to help you specify the type of server and the directory where you will upload your page. You can also specify the name of the Web server and the URL directory where your Web page will be located. The assistant then allows you to preview the finished page.

When you upload your Web pages to a remote server, RealProducer Plus automatically updates your Web page and .ram/.rpm metafile to point to the appropriate server addresses, directories and files.

To avoid confusion during the publishing process, you should contact your Internet Service Provider (ISP) for the following information before you begin.

### **Note**

You must have an FTP program installed, either Anarchie or Fetch, to successfully publish your files.

## Worksheet 1: RealServer Information

If you are using a RealServer to stream your files, you will also need to obtain the following information from your system administrator or ISP. Please note that for streaming from a RealServer your Web page will be copied to a standard HTTP Web server, while your RealMedia file may be copied to a separate RealServer.

**File Server:** Name or IP address of the file server where your Web page will be uploaded. For example, ftp.server.com.

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**Directory:** Name of the directory on the file server where your Web page will be uploaded. For example, if the personal directory assigned to you by your system administrator is *public\_html*, enter public\_html as the directory name. This may be left blank.

---

**RealServer:** Name or IP address of the RealServer where you will upload your RealMedia file. For example, ftp.server.com.

---

**Media Directory:** Name of the media directory on the RealServer where your RealMedia file will be uploaded. For example, if the media directory assigned to you by your system administrator is *upload*, you would enter upload as the directory name.

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**RealServer Location:** Name or IP address of the RealServer that users will use to locate your media file. This can include the port. For example, if the full URL users will use to locate your media file on the Internet is *rtsp://real.server.com:6060/~username/file.rm* you would enter real.server.com:6060 as the RealServer name and port.

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**URL Directory:** The directory on the RealServer that users will use to locate your media file. For example if the full URL that users will use to locate your media file is *rtsp://real.server.com:6060/~username/file.rm* you would enter ~username as the URL Directory.

---

## Worksheet 2: HTTP Server Information

If you are using a standard HTTP Web server to stream RealMedia, you should obtain the following information from your system administrator or ISP. For simple HTTP streaming, your Web page and media file will be copied to the same location.

**File Server:** Name or IP address of the file server where your Web page will be uploaded. For example, ftp.server.com.

---

**Directory:** Name of the directory on the file server where your Web page will be uploaded. For example, if the personal directory assigned to you by your system administrator is *public\_html*, enter public\_html as the directory name. This may be left blank.

---

**Web Server:** Name or IP address of the Web server users will use to locate your Web page. For example, if the full URL users will use is *http://www.server.com/~username/file.htm*, enter www.server.com as the Web server name.

---

**URL Directory:** The directory on the Web server that users will use to locate your Web page. For example, if the full URL is *http://www.server.com/~username/file.htm*, enter ~username as the URL Directory.

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## Publishing to a RealServer

The following instructions are for publishing your RealMedia clip to a RealNetworks RealServer. Using a RealServer allows you to publish Web pages that have RealMedia without losing functionality (such as SureStream).

Before you begin the procedure, make sure you have all of the information described in “Worksheet 1: RealServer Information” on page 29.

- ▶ To publish a file to stream directly from a RealNetworks RealServer:
  1. Click the **Publish Web Page** button.  
The Publishing Assistant opens.
  2. Click **Next** to begin.  
The Web Page Filename page opens.
  3. Locate the name of the file you wish to publish and click **Next**.  
The Publishing Profile page opens.
  4. Choose an Internet Service Provider from the list or select **Generic - No Defaults** if your Service Provider is not listed, and click **Next**.  
The Streaming Method page opens.
  5. Click **Stream media clip from a RealServer** and click **Next**.  
The FTP Server Information page opens.
  6. Type in the name or IP address of the file server where you are uploading your files and the directory on the file server where your page will be sent. Then type in your user name and password, and click **Next**.  
The Web Page URL page opens.
  7. Type in the name or IP address of the Web server and URL Directory that users will use to locate your page on the Internet, and click **Next**.  
The RealServer Information page opens.
  8. Enter the name or IP address of the RealServer where your media file will be sent. Enter the directory where your media file will be sent, plus your user name and password, and click **Next**.  
The Media Clip URL page opens.
  9. Type in the name or IP address of the RealServer where your media clip will be referenced from.

10. Select either **Use Default Ports** or **Use Custom Ports**. If you are unsure, then use the defaults.
11. Type in the directory of the RealServer where your clip will be referenced from.  
The full URL of the clip that you are publishing appears below.
12. Check to see that the URL is correct, and click **Next**.  
The Upload Files page opens.
13. Click **Next** to begin uploading your files.  
Your files automatically upload to your Web server. If any errors occur while uploading your files, you will receive an error message describing the problem and potential solutions.
14. Click **View Now!** to view your published Web page.
15. Click **Finish** when you are done viewing your published Web page.

## Publishing to a Standard Web Server

The following instructions are for publishing your RealMedia clip to a standard HTTP Web server. While these servers may be more common, they don't allow you to fully use all RealMedia features.

Before you begin the procedure, make sure you have all of the information described in "Worksheet 2: HTTP Server Information" on page 30.

- To publish a file to stream directly from a standard HTTP Web server:
  1. Click the **Publish Web Page** button.  
The Publishing Assistant opens.
  2. Click **Next** to begin.
  3. Enter the name of the file you wish to publish and click **Next**.  
The Publishing Profile page opens.
  4. Choose an Internet Service Provider from the list or select **Generic - No Defaults** if your Service Provider is not listed, and click **Next**.  
The Streaming Method page opens.
  5. Click **Stream media clip from a standard Web server** and click **Next**.  
The FTP Server Information page opens.

6. Type in the name or IP address of the file server where you are uploading your files and the directory on the file server where your page will be sent. Then type in your user name and password, and click **Next**.

The Web Page URL page opens.

7. Type in the name or IP address of the Web server and URL Directory that users will use to locate your page on the Internet.

8. Click **Next**.

The Upload Progress page appears.

9. Click **Next** to begin uploading your files.

Your files automatically upload to your Web server. If any errors occur while uploading your files, you will receive an error message describing the problem and potential solutions.

10. Click **View Now!** to view your published Web page.

11. Click **Finish** when you are done viewing your published Web page.



## CUSTOMIZING RECORDING OPTIONS

RealProducer Plus comes with a variety of options that allow you to create RealMedia suited to your needs. This chapter discusses how to change different recording preferences and how to adjust the settings for target audiences.

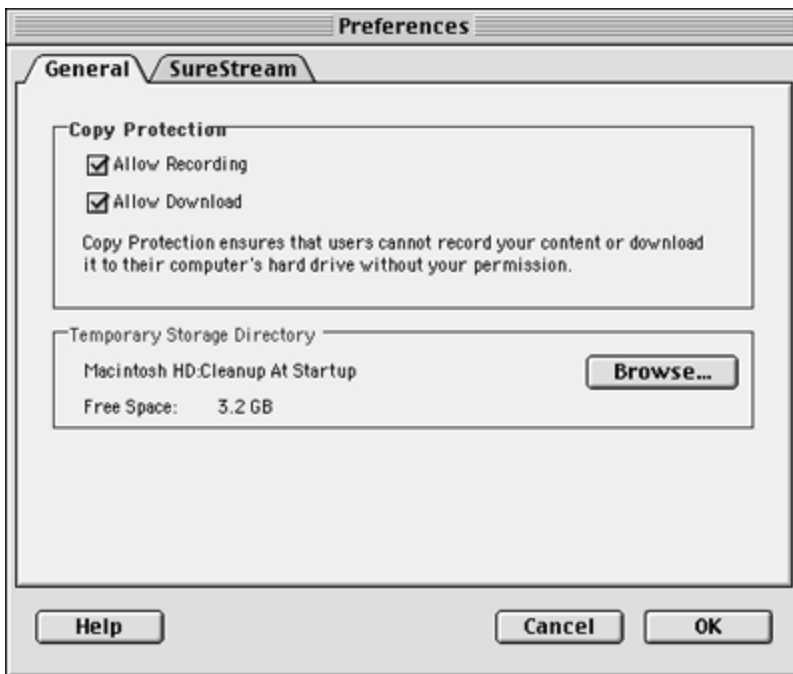
### Changing RealProducer Plus Preferences

RealProducer Plus gives you the option to modify settings that affect all recording sessions. This section shows you how to change general recording preferences and SureStream preferences. You use the Preferences dialog box to make these adjustments.

#### General Preferences

The General page of the Preferences dialog box allows you to change file permission options, the start-up options, and the temporary storage directory used by RealProducer Plus.

## The Preferences Dialog Box - General Page



## Copy Protection

By changing copy protection options, you are allowing RealPlayer Plus users to be able to record your RealMedia clip during playback or download your RealMedia clip to their hard drive.

Selecting the **Allow Recording** preference allows RealPlayer Plus users the option of recording the playback of your RealMedia clip onto their computers. When your clip is played back on a RealPlayer Plus, the user can click the Record button and your clip is saved on the user's machine. Deselecting this preference disables the Record button for RealPlayer Plus users.

Selecting the **Allow Download** preference gives any user—even those without a RealPlayer—the ability to download your RealMedia clip directly onto their hard drive.

► To allow copying of your RealMedia clips:

1. From the RealProducer Plus main window, choose **Preferences** from the **Options** menu.

The Preferences dialog opens.

2. Click the **General** tab.
3. Select **Allow Recording** if you want RealPlayer Plus users to be able to record your clip.
4. Select **Allow Download** if you want users to be able to download your clip to their hard drive.
5. Click **OK** to close this dialog.

#### Temporary Storage Directory

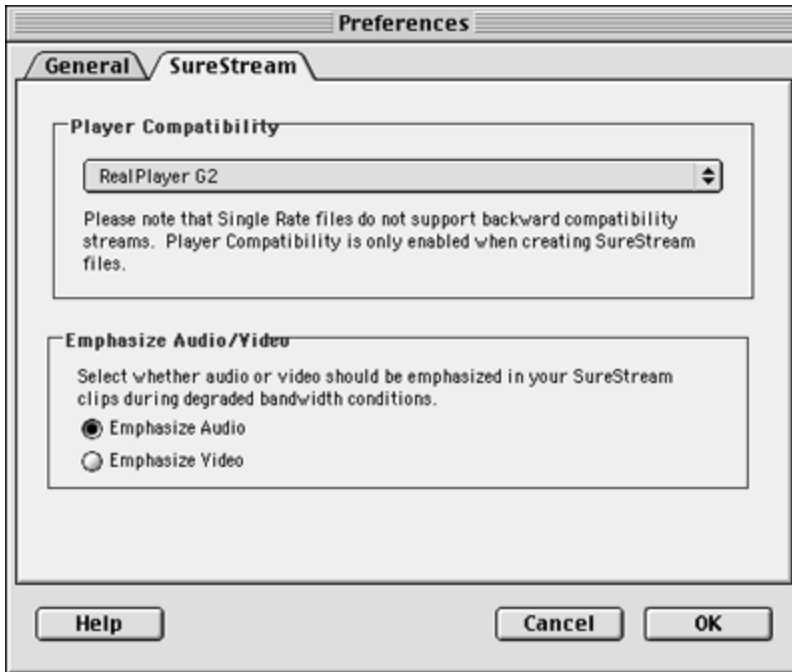
During a recording session, RealProducer Plus uses a directory to store media files prior to creating the final RealMedia clip. Using the Preferences dialog box, you can change the directory used for this purpose.

- To change the temporary storage directory used by RealProducer Plus:
  1. From the RealProducer Plus main window, choose **Preferences** from the **Options** menu.  
The Preferences dialog opens.
  2. Click the **General** tab.
  3. Click the **Browse** button, select the new temporary storage directory, and click **OK**.
  4. Click **OK** to close this dialog.

#### SureStream Preferences

The SureStream page of the Preferences dialog box allows you to change different options when you record SureStream RealMedia clips. You can create a separate stream for older versions of the Player, and you can decide whether audio or video quality should be given priority during reduced bandwidth conditions.

## The Preferences Dialog Box - SureStream page



## Player Compatibility

RealProducer Plus allows you to record RealMedia clips that can be played on both RealPlayer versions G2 and 5.0. During the recording process, RealProducer Plus creates both a G2 stream and a separate 5.0 stream. However, you will still need a RealServer G2 to stream the clip.

We recommend that you create G2-only clips to limit file size and processing time, unless you are sure you need 5.0 compatibility.

► To change RealPlayer compatibility:

1. From the main RealProducer Plus window, choose **Preferences** from the **Options** menu.
2. Click the **SureStream** tab.
3. Select the version of RealPlayer you want your RealMedia files to be compatible with from the **Player Compatibility** drop-down list.
4. Click **OK** to close this dialog.

### Emphasize Audio or Video

This option allows you to choose whether your clip will emphasize audio or video when a RealPlayer's connection degrades and must switch to a lower bandwidth stream. Choosing audio means that video quality will be sacrificed before audio quality. Choosing video means that audio quality will be sacrificed before video quality.

- To change SureStream emphasis:
  1. From the main RealProducer Plus window, choose **Preferences** from the **Options** menu.
  2. Click the **SureStream** tab.
  3. Select whether to emphasize audio or video during duress conditions.
  4. Click **OK** to close this dialog.

## Customizing Target Audience Settings

RealProducer Plus gives you the option to adjust the settings for a particular target audience. Each target audience setting is an array of various codecs (compression/decompression algorithms) and other settings that work best for that particular target bit rate.

The quality of the recorded output is affected by these settings and by the actual content (for example, fixed camera shots, amount of motion, and multiple camera shots).

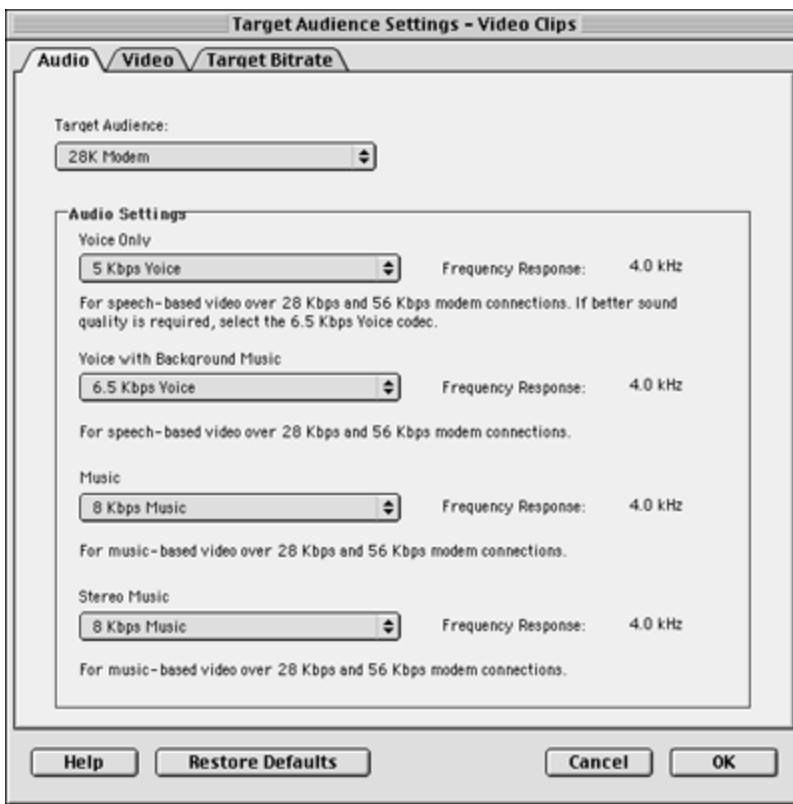
There are two types of target audience settings: settings for video clips, and settings for audio-only clips. The following sections describe how to modify each type of setting.

### Settings for Video Clips

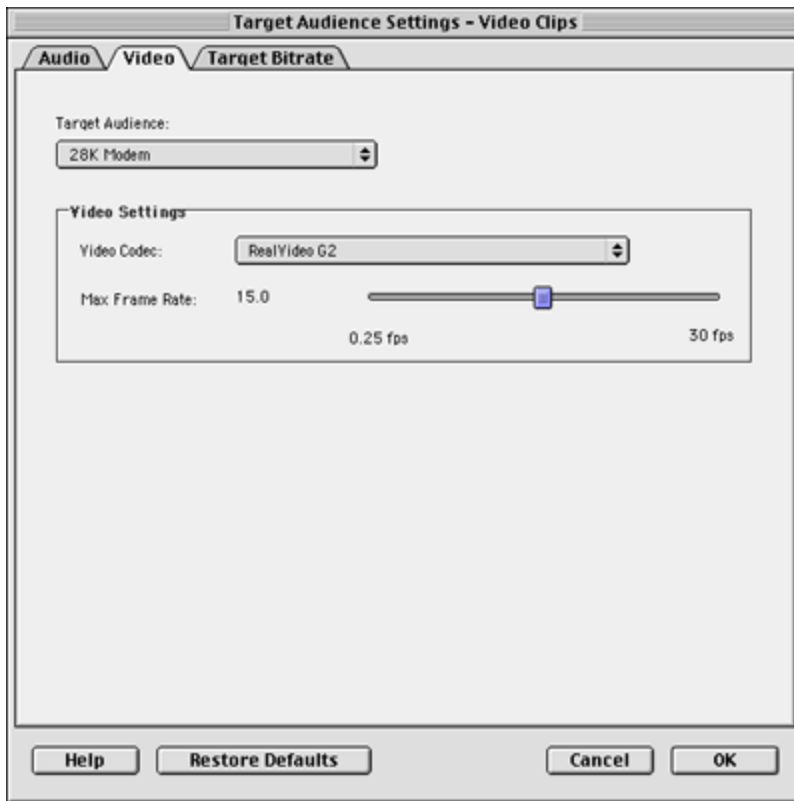
Target audience settings for video clips are used to determine how RealProducer Plus creates RealMedia from your combined audio and video input when various target audiences are selected. These settings include an audio codec, a video codec, maximum frame rate, and target bit rate.

- To modify target audience settings for video clips:
  1. In the main RealProducer Plus window, choose **Target Audience Settings>for Video Clips** from the **Options** menu.

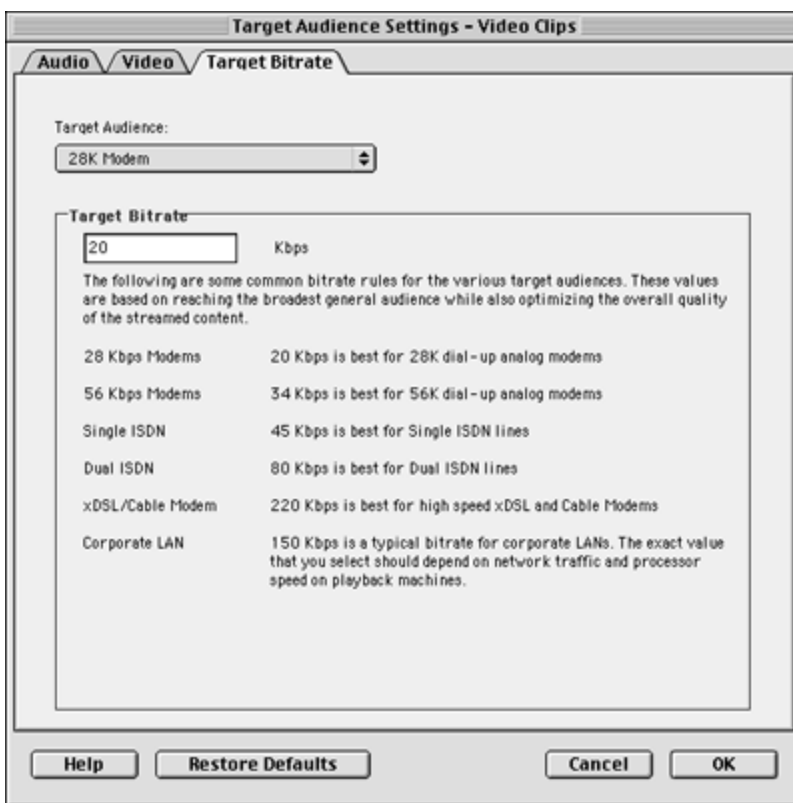
The Target Audience Settings - Video Clips dialog opens to the Audio page.



2. Select a Target Audience from the list of target bit rates. See “About Target Audiences” on page 16 for more information.
3. Select an audio codec for each type of audio format.  
When you select a codec, read the description below. This helps you determine whether the codec is appropriate for the target audience. The frequency response supported by the codec is also listed.
4. Click the Video tab.



5. Select a **Video Codec**. RealProducer Plus currently has one video codec available, RealVideo G2.
6. Choose a **Max Frame Rate** setting by sliding the bar. This sets the maximum frame rate at which you want to record video.  
At lower values, the output emphasizes image clarity at the expense of smooth-looking motion. For example, if your content contains a lot of motion and you set the slider closer to the 7.5 fps setting, the resulting video image will be clearer, but will exhibit choppier motion.  
You cannot set the frame rate higher than the input file's frame rate.
7. Click on the Target Bit Rate tab.



8. Enter the **Target Bit Rate** for the entire encoded file.  
Generally, you should reduce the expected total bit rate by 25% to compensate for connection and packet overhead. For example, choose 20 Kbps for a 28.8 Kbps modem.
9. Click **OK** to save the target audience with the new settings and return to the main window.

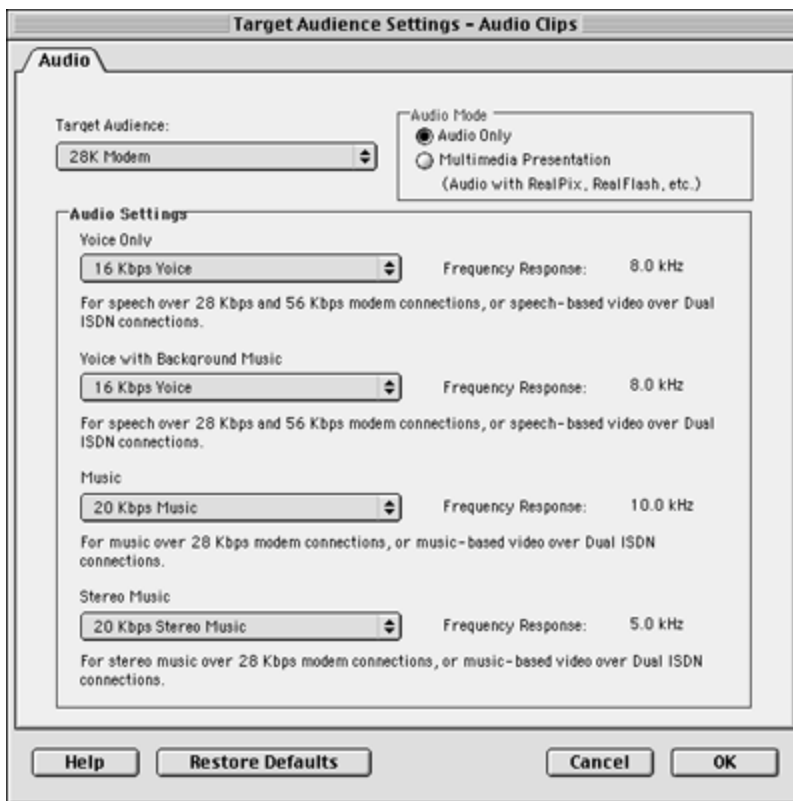
**Tip**

You can click **Restore Defaults** at any time during the above steps to delete your changes and return the target audience to its original settings.

## Settings for Audio-Only Clips

Target audience settings for audio clips are used to determine how RealProducer Plus creates RealAudio from your audio-only input when various target audiences are selected. These settings include an audio codec and whether you are creating a stand-alone clip, or for use in a multimedia presentation with other RealMedia (RealVideo, RealPix, RealText, and RealFlash).

- To modify a target audience for audio-only clips:
  1. In the main RealProducer Plus window, choose **Target Audience Settings>for Audio Clips** from the **Options** menu.  
The Target Audience Settings - Audio Clips dialog opens.



2. Select a Target Audience from the list of target bit rates.
3. Select an audio codec for each type of audio format.

When you select a codec, read the description below. This helps you determine whether the codec is appropriate for the selected target audience.

4. Select the **Audio Mode**:
  - Choose **Audio Only** if the RealAudio clip is to be played by itself.
  - Choose **Multimedia Presentation** if the RealAudio clip is to be played as part of a multimedia presentation, such as a SMIL presentation.
5. Click **OK** to save the target audience with the new settings and return to the main window.
6. You can click **Restore Defaults** at any time during the above steps to delete your changes and return the target audience to its original setting.

# Chapter 5

## RECORDING TIPS

Because there is no single best process for delivering all types of streaming audio and video, this chapter shows you various tips on how to get the most out of your RealProducer Plus recording session.

This chapter discusses how to:

- improve RealProducer Plus performance
- use RealProducer Plus more effectively
- produce high-quality audio
- produce high-quality video

### Improving RealProducer Plus Performance

A number of factors can influence how much of your system's resources are used during a recording session. Use these tips to get the best performance possible.

#### Multiple Streams

Generally, the more streams you create in a SureStream clip, the more processing power you need. Recording for more than two or three customized target audiences that each use a broad range audio codecs, or creating a 5.0 compatible stream can all effect performance.

Use the Statistics dialog to monitor performance, and then adjust target audience settings to get the performance you want. See "Monitoring Real Time Performance" on page 19 and "Customizing Target Audience Settings" on page 39 for more information.

## Disabling Viewers

By disabling the input source window, the output source window, and the audio level meter, you can lower the amount of processing power needed to record. Consequently, you can decrease the time it takes to record your clip.

- ▶ To disable viewers during recording:
  1. Choose the **View** menu from the main RealProducer Plus window.  
Viewers that are currently active are designated with a checkmark:
    - Input Source
    - Encoded Output
    - Audio Meter
  2. Select a viewer to disable it.

## Using RealProducer Plus Effectively

RealProducer Plus has features that allow you to more easily use RealProducer Plus and increase efficiency while recording your media clips. Here you will learn how to drag-and-drop clips into RealProducer Plus.

### Drag-and-Drop Recording

RealProducer Plus supports drag-and-drop recording. This feature allows you to quickly convert an input audio or video file into RealMedia.

- ▶ To use drag-and-drop with RealProducer Plus:
  1. Click an input file icon and drag it onto an open RealProducer Plus window.  
This opens a new session with path and file name information entered appropriately.
  2. Enter any descriptive information (title, author, and copyright) and customize recording settings before clicking **Start**.

You can also record multiple files at once using RealProducer Plus. Select all input files that you want to convert to RealMedia, and drag them onto the RealProducer Plus main window.

## Producing High-Quality Audio

This section describes how to successfully create quality sound for RealMedia clips. It gives you overall audio tips, describes audio sampling rates, and shows you how to use the audio level meter.

### General Audio Tips

Follow these tips in order to get the best quality from your audio files.

- Use high-quality source files.
- If your original audio file signal exceeds the acceptable amplitude range, the file may be “clipped.” Clipping can give rise to clicks or pops on playback. If your source file contains a clipped signal, your final RealMedia file will have high-frequency background noise or static. Lowering the input volume will help reduce clipping.
- Cut any unnecessarily long silences from the beginning or end of the output file to conserve space.

### Audio Sampling Rates

The following sampling rates for your source audio are supported for this version of the product. For fuller sound, use the higher sampling rates and a better audio codec.

- 8000 Hz
- 11025 Hz
- 16000 Hz
- 22050 Hz
- 32000 Hz
- 44100 Hz

### Using the Audio Level Meter

While you record RealMedia clips, you can monitor the Audio Level to be sure you are encoding the optimal dynamic range. Green indicates a normal reading. Red warns that you are close to an over-modulated input. The best sound quality will occur when the top red bar is often lit but the clipping indicator (the red light above the meter) is never lit.

Clear the clipping indicator during recording by clicking on it. This allows you to track if audio clipping is occurring without watching the audio level constantly.

## Producing High-Quality Video

This section describes how to successfully create quality video for RealMedia clips. Follow these tips in order to get the best quality from the different types of video sources.

### Sizing the Image

RealProducer Plus supports any size image from video files, but it will automatically crop the height and width to multiples of 4. The most common video image sizes are 160 x 120, 176 x 144 pixels, or 320 x 240 pixels.

### Cropping the Image

RealProducer Plus's cropping feature allows you to record any portion of a video image that you wish. By cropping an image, you can reduce the overall bit rate of your recorded clip while removing unnecessary image space.

The smallest size that you can crop an image to is 32 x 32.

► To crop a video image:

1. To edit the image cropping settings, select **Crop Settings** from the **Options** menu.

The Image Cropping window opens showing the current coordinates of the cropped clip.

2. In the main window, click and drag the mouse pointer over an area of the Input Viewer.

A white rectangle appears designating the cropped area. The new coordinates appear in the Crop Settings window.

3. You can also use the Crop Settings buttons to adjust the size and location of crop lines. All dimensions will automatically adjust to a multiple of 4.
4. Click **OK** to close the Crop Settings window.
5. Select **Crop Enabled** from the **Options** menu.

6. Click the **Start** button to start the recording process using the crop settings.

The cropped image appears in the Encoded Output viewer.



# Chapter 6

## USING APPLESCRIPT

RealProducer Plus is installed with an AppleScript version that allows you to create streaming media files (.rm files). You should be completely familiar with AppleScript and RealProducer Plus before you read this chapter.

### Commands

The following tables describe the different commands necessary to create a recording session. See “Examples” below to see how to use them in an AppleScript file.

#### Session Parameters

Sets the input and output parameters for the recording session.

Parameter Descriptions

Parameter	Accepted Values	Description
Input	any valid file name	file to be encoded; either Input or Input Folder parameter is required
Input Folder	any valid folder	folder containing files to be encoded
Output	any valid file name	name of the output .rm file; either Output or Output Folder parameter is required
Output Folder	any valid folder	folder for the output files

## Encoding Parameters

Sets the encoding parameters for the recording session.

### Parameter Descriptions

Parameter	Values Accepted	Description
Target Audience	Modem_28k Modem_56k Single_ISDN Dual_ISDN xDSL_Cable_Modem Corporate_LAN	target audiences used for encoding; you may use more than one if File Type is set to SureStream (default: last selected)
Audio Format	Voice Only Voice with Background Music Music Stereo Music	type of audio used (default: last selected)
Video Quality	Normal Motion Smoothest Motion Sharpest Image Slide Show	type of video used (default: last selected)
File Type	Single Rate SureStream	type of file to be encoded (default: last selected)
Audio Encoding	true or false	whether or not the audio input will be encoded (default: true)
Video Encoding	true or false	whether or not the video input will be encoded (default: true)
Clip Title	any string	title of the clip (default: name of the encoded file)
Clip Author	any string	name of the clip's author
Clip Copyright	any string	copyright date and owner
Emphasize Audio	true or false	whether or not you want audio to be emphasized during limited bandwidth conditions; cannot be used with Emphasize Video
Emphasize Video	true or false	whether or not you want video to be emphasized during limited bandwidth conditions; cannot be used with Emphasize Audio
Show Input Source	true or false	whether or not the input window is shown (default: true)

(Table Page 1 of 2)

**Parameter Descriptions (continued)**

Parameter	Values Accepted	Description
Show Encoded Output	true or false	whether or not the output window is shown (default: true)
Show Audio Meters	true or false	whether or not the audio meter is shown (default: true)

(Table Page 2 of 2)

**Configure Video**

Sets video settings for a target audience.

**Parameter Descriptions**

Parameter	Values Accepted	Description
Target Audience	Modem_28k Modem_56k Single_ISDN Dual_ISDN xDSL_Cable_Modem Corporate_LAN	choose one target audience to set
Max Frame Rate	any real number (up to 30)	the maximum frame rate of the output clip

**Configure Audio**

Sets audio settings for a target audience.

**Parameter Descriptions**

Parameter	Values Accepted	Description
Target Audience	Modem_28k Modem_56k Single_ISDN Dual_ISDN xDSL_Cable_Modem Corporate_LAN	choose one target audience to set
Audio Format	Voice Only Voice with Background Music Music Stereo Music	choose one audio format to set; if not specified, will use the Encoding Parameters setting

(Table Page 1 of 2)

## Parameter Descriptions (continued)

Parameter	Values Accepted	Description
Audio Codec	Voice6_5 Voice8_5 Voice5 Voice16 Voice32 Voice64 Music6 Music8 Music11 Music16 Music20 Music32 Music44 Music64 StereoMusic20 StereoMusic32 StereoMusic44 StereoMusic64 StereoMusic94	the actual audio codec used during encoding; use either this parameter or Audio Codec ID plus Audio Codec Flavor parameters
Audio Codec ID	string	name of the codec; with Audio Codec Flavor, an alternative to Audio Codec
Audio Codec Flavor	integer	bit rate of the codec; use with Audio Codec ID

(Table Page 2 of 2)

## Configure Bit Rate

Sets bit rate settings for a target audience.

## Parameter Descriptions

Parameter	Values Accepted	Description
Target Audience	Modem_28k Modem_56k Single_ISDN Dual_ISDN xDSL_Cable_Modem Corporate_LAN	choose one target audience to set
Bit Rate	any real number	the target bit rate of the output clip

## Crop

Crops the output video to dimensions that you set.

### Parameter Descriptions

Parameter	Values Accepted	Description
Width	any integer	the width of the output video (in pixels)
Height	any integer	the height of the output video (in pixels)
Left	any integer	left offset of the output video (in pixels)
Top	any integer	top offset of the output video (in pixels)

## Start

Starts encoding. (No parameters needed.)

## Examples

The following AppleScript example records `foo.mov` into a RealMedia file for 28 and 56 Kbps audiences, audio set to voice only, video set to normal, file type set to SureStream, and “The Title” as the title of the clip. The output file is called `foo.rm` and is cropped.

```
tell application "Real Producer Plus"
    activate
    Session Parameters Input file "MyComputer:Movie Files:foo.mov" Output-
file "MyComputer:Movie Files:foo.rm"
    Encoding Parameters Target Audience {Modem_28K, Modem_56K} Audio-
Format Voice Only Video Quality Normal Motion Clip Title "The Title"
    Crop Left 39 Top 88 Width 112 Height 84
    Start
end tell
```

The following example configures video, audio, and bit rate target audience settings for 28 and Dual ISDN modems, then it encodes all files within the Movie Files folder using these settings.

```
tell application "Real Producer Plus"  
    activate  
    Configure Video Target Audience Modem_28K Max Frame Rate 15.0  
    Configure Audio Target Audience Modem_28K Audio Format Voice Only-  
    Audio Codec Voice6_5  
    Configure BitRate Target Audience Modem_28K Bit Rate 20.0  
    Configure Video Target Audience Dual_ISDN Max Frame Rate 15.0  
    Configure Audio Target Audience Dual_ISDN Audio Format Voice Only-  
    Audio Codec Voice8_5  
    Configure BitRate Target Audience Dual_ISDN Bit Rate 80.0  
    Session Parameters Input Folder "MyComputer:Movie Files" Output Folder-  
    "MyComputer:Movie Files"  
    Encoding Parameters Target Audience {Modem_28K, Dual_ISDN} Video-  
    Quality Normal Motion Clip Title "The Title"  
    Start  
end tell
```



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