

# Maximize the Quality of Your DVD Content for Long-Form Programs

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[www.EventVideographer.com](http://www.EventVideographer.com)

This guide is to be used to maximize the available space on a DVD-R so long programs will look their best. After running through the guide a few times it will feel like a natural progression of events; FCP for editing, a bit rate calculator to determine the optimum bitrate of your video file, Compressor to maximize the quality of the MPEG-2 file, AC3 for audio compression and DVDSPP to author.

Some background and tips first:

There are visible benefits of encoding files for projects that are exported directly from an FCP timeline (as opposed to a program that has been captured from tape or printed to tape to be encoded on another computer). Making the DVD when the project is self-contained or reference movie with DVDSPP Markers attached from a FCP timeline is a step towards getting the best quality on your DVD. When you export your project from FCP with DVDSPP Markers attached you are including a compression marker at every transition and fade. This tells DVDSPP to pay extra attention to these spots when it comes to allocating encoding resources. By taking a project to tape and then bringing it back in you lose all those invisible compression markers that DVDSPP uses to create the best possible quality. Encoding with DVDSPP's encoder, natively in QuickTime, or with iDVD does not take advantage of these Compression Markers. There is also another level of quality available in Compressor that is not available in the other QuickTime based methods, that of the Two Pass VBR **Best** setting. Native Quicktime, iDVD and DVDSPP MPEG2 settings do not have this setting of highest possible quality.

## Special note for smaller programs:

For a program less than 75 minutes encode with a Target Bit Rate of 6.5 and a maximum of 8.0 with Two Pass VBR Best and Best Motion Estimation.

After completely rendering the timeline and setting your chapter markers so they appear in the Canvas window:

1.) (Take note of the length of your project - you'll need to know that later.) Make your master sequence active>Export > Quicktime Movie > Current Settings/Audio and Video/DVD Studio Pro Markers/Recompress All Frames and Make Movie Self-Contained **UN**checked. Send this file to a folder that will hold all your DVD resources.

2.) Open Compressor\*. Drag the file you just exported to the Batch window. Under Setting choose Audio formats>Dolby 2.0.

(It's beneficial to encode your audio for two reasons: The space taken by AC3 encoded audio is much smaller, which leaves more space for video, which means a higher bitrate, which means better quality. Also, AC3 encoded audio, being smaller and operating at a lower bit rate, means that the overall total bitrate for audio and video combined will be lower. This can lead to better compatibility with DVD players that may choke on higher bitrates causing stuttering, freezes and pixillation.)

\*At present (early 2006) I'm still using Compressor 1.2.1 because of pixelation problems I've experienced with Compressor 2. I boot into a partition loaded with OS10.3.9 and encode overnight.

3.) Open your internet browser and go to [www.EventVideographer.com/bitrate.html](http://www.EventVideographer.com/bitrate.html). In the fields of the calculator input your projects length, the number of menus and sub-menus you plan to create and select Dolby AC3 (192K) for the Audio format. Hit Tab. Remember the Recommended Bit Rate that is generated. (\*See the explanation below details about the actual available space on a 4.7 gb recordable DVD.)

4.) Back in Compressor go to Window>Presets>Apple>DVD: Best Quality 120 Minutes 4:3 (if your project is 16:9 there is an option for that too). Drag the file in that folder labeled MPEG-2 6.2 Mbps 2-pass 4:3 to the Custom folder at the bottom of the window. Double click on it. rename it as the length of the program you're encoding, i.e. 113 minutes. (This allows you to use the preset again if you have a program of similar but not longer length.) Open the Quality tab. In the Average Bit Rate field enter the the Recommended Bit Rate from the online bit rate calculator. In the Maximum Bit Rate field enter 8.0. You will be prompted to save the changes. Do so.

5.) In the Batch window click the button in the Settings column for your project. Choose the preset you just created and saved in the Custom folder. (Custom presets are represented below the line at the bottom of the setting selection window.)

6.) Set your destination where you want the m2v and ac3 files to be saved. Submit.

Other assets you may want to prepare for DVDSPP are :20 - :30 menu movies for your menu drop zones and a corresponding length of music for the menus. Prepare the menu movies with fades from and to black or white, depending on the menu template you are going to use.

\* A special note about the reported size of your completed DVD: DVDSPP's meter that displays how much data your project is going to contain is based on a DVD-R capacity of 4.7gb, not 4.3+gb, which is how your assets are represented outside of DVDSPP. The difference is caused by a mathematical inconsistency in the way data is totaled. So when you add your assets outside of DVDSPP you're shooting for a total, with menus and formatting, of 4.37gb, but the meter in DVDSPP will top out at 4.7gb. The following link provides more information on this confusing situation:

<http://www.wiebetech.com/pressreleases/BillionEqualBillion.pdf>

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