

Macintosh DVD Duplication Tutorial

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Introduction

One of the reasons Macs are great is that most of them include a DVD burning SuperDrive. This allows the consumer to create DVDs that can contain data or contain video that can be played back in most set-top DVD players and computers.

This tutorial shows how to duplicate a DVD that has been commercially produced. However, consumer DVD burners (ie. the SuperDrive) can only burn single layer DVDs. But most Commercial DVDs are dual layer.

The difference between single and dual layer DVDs

Single layer DVDs are DVDs that can hold up to 4.7Gb of data. Whereas dual layer DVDs store up to 9.4Gb of data.

If you want to copy a DVD you must check if it is dual or single layer. To do this, insert the DVD into your Mac and when it mounts on the desktop use the *Get Info* command to look at the volume size.

If it is more than 4.4Gb (yes 4.4Gb not 4.7Gb) then it is most likely to be a dual layer DVD and you can't make a direct copy of it.



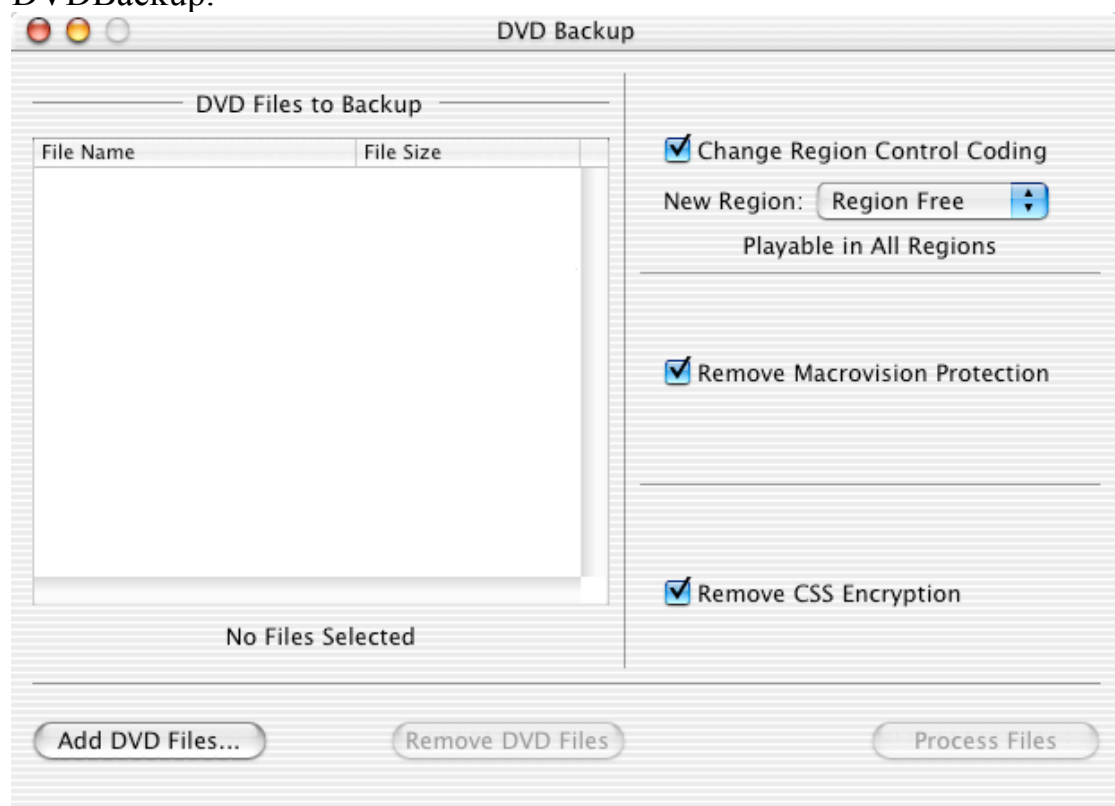
Duplicating a single layer DVD

It is unlikely that you will come across many single layer DVDs, a few rental only DVDs that contain no special features can be single layer, But if you do find one this is how to copy it.

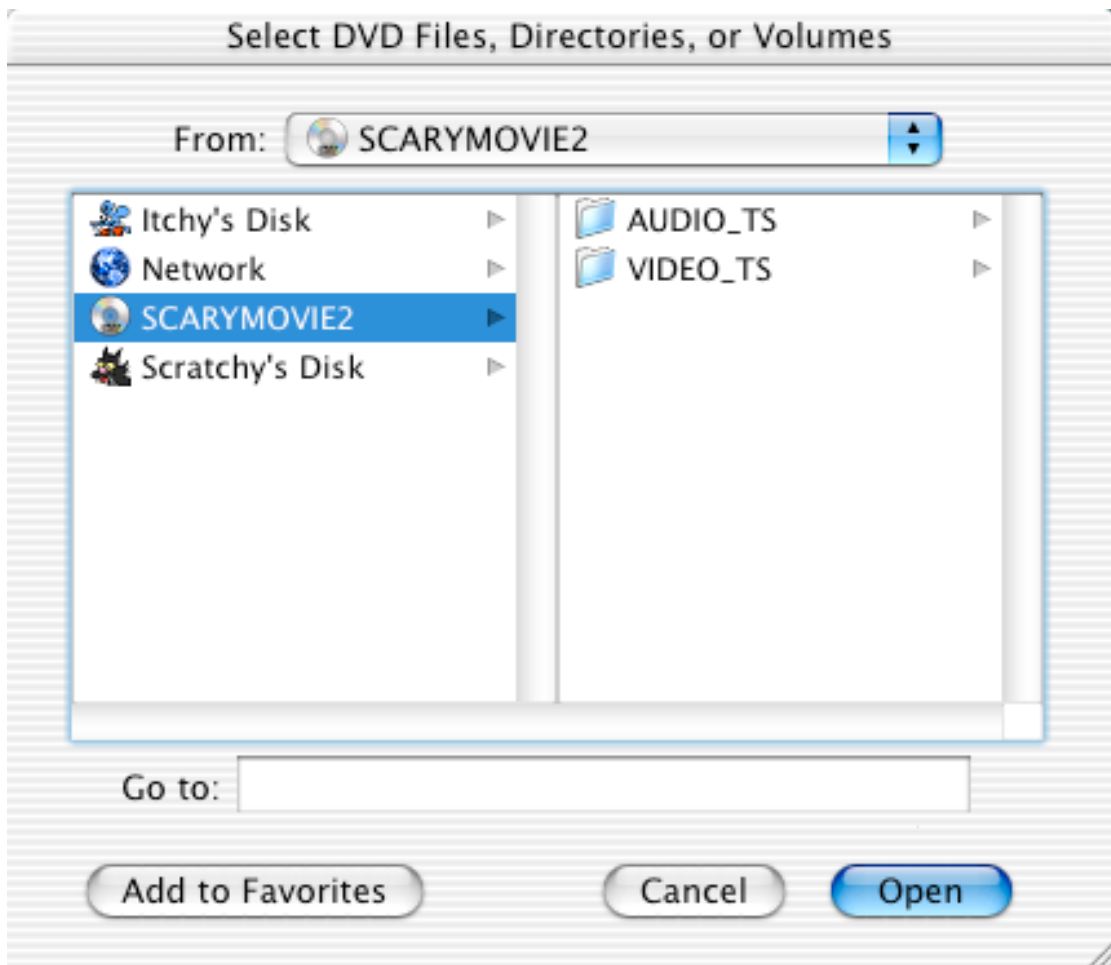
As I prefer Mac OS X this tutorial will be based mostly around this wonderful operating system.

The best way I know to copy a single layer DVD is to use DVDBackup (currently in version 1.3).

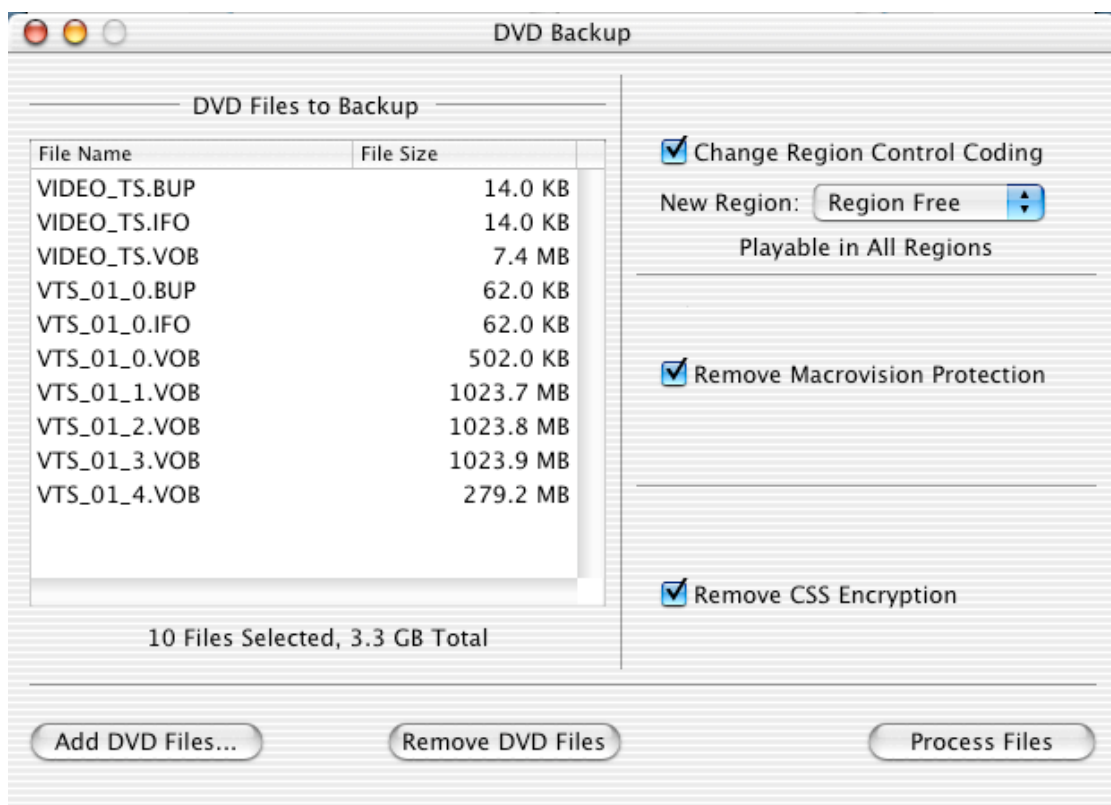
First you need to insert the DVD you wish to copy and launch DVDBackup.



Click "Add DVD Files" and select your DVD Movie.



At this stage you can be sure it is a single layer DVD if the total file size is less than 4.4Gb.



In this case it is 3.3Gb.

You now want to process the files; you probably want to have all the check boxes selected or it will not process due to encryption.

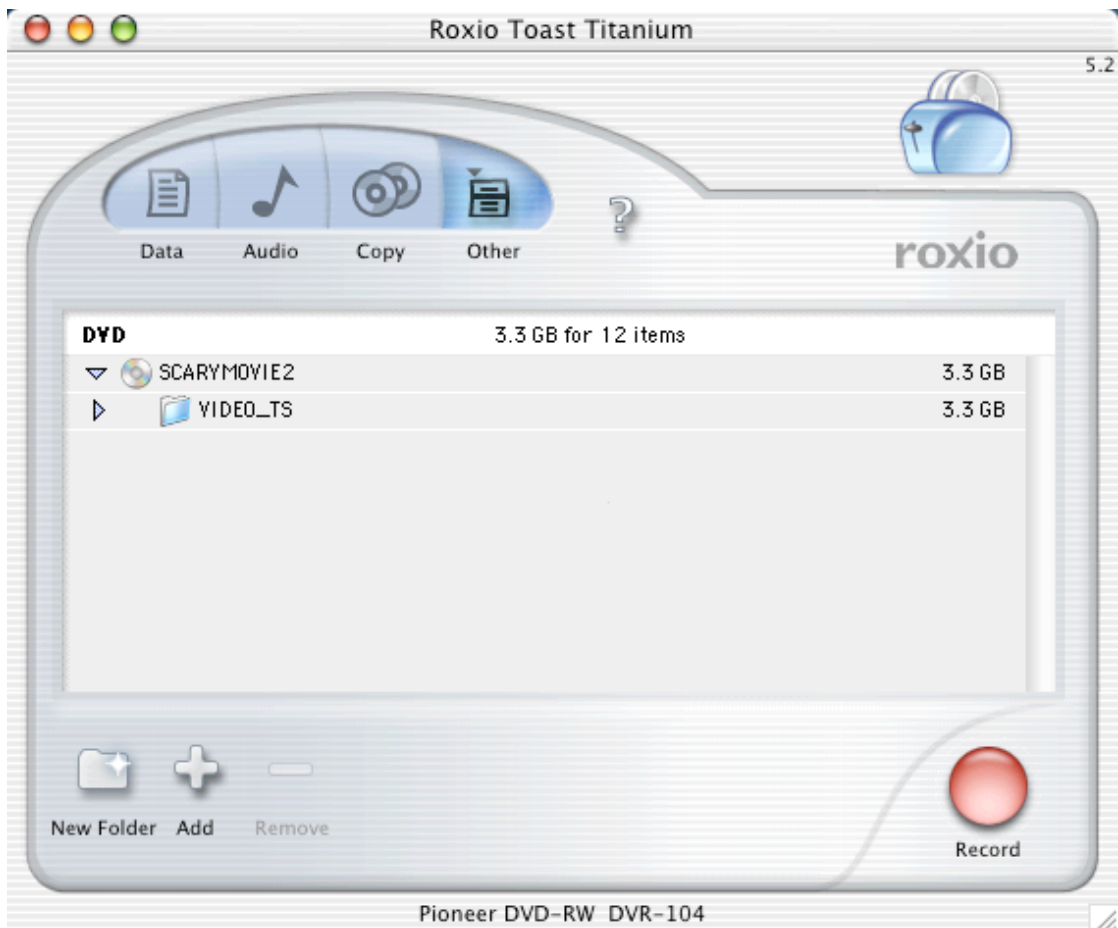


Chose a location to save the file making sure it has enough free space.

This is all the “Ripping” done and now you just need to burn the DVD on to a DVD-R.

My favourite burning software is toast so I am going to use this. You may use any.

In “Toast” chose the DVD option under “Other” and click “New DVD” button. Change the name of the DVD to what the original was called and then drag and drop your “VIDEO_TS” folder created by DVDBackup.



Click "Record" (making sure the lay-out in toast is the same as mine, certifying the folder in the DVD is called "VIDEO_TS") and insert a blank DVD-R.

Before burning you may want to check your DVD will work by checking it in the Apple DVD Player. Just use the "Open VIDEO_TS" command in the file menu.

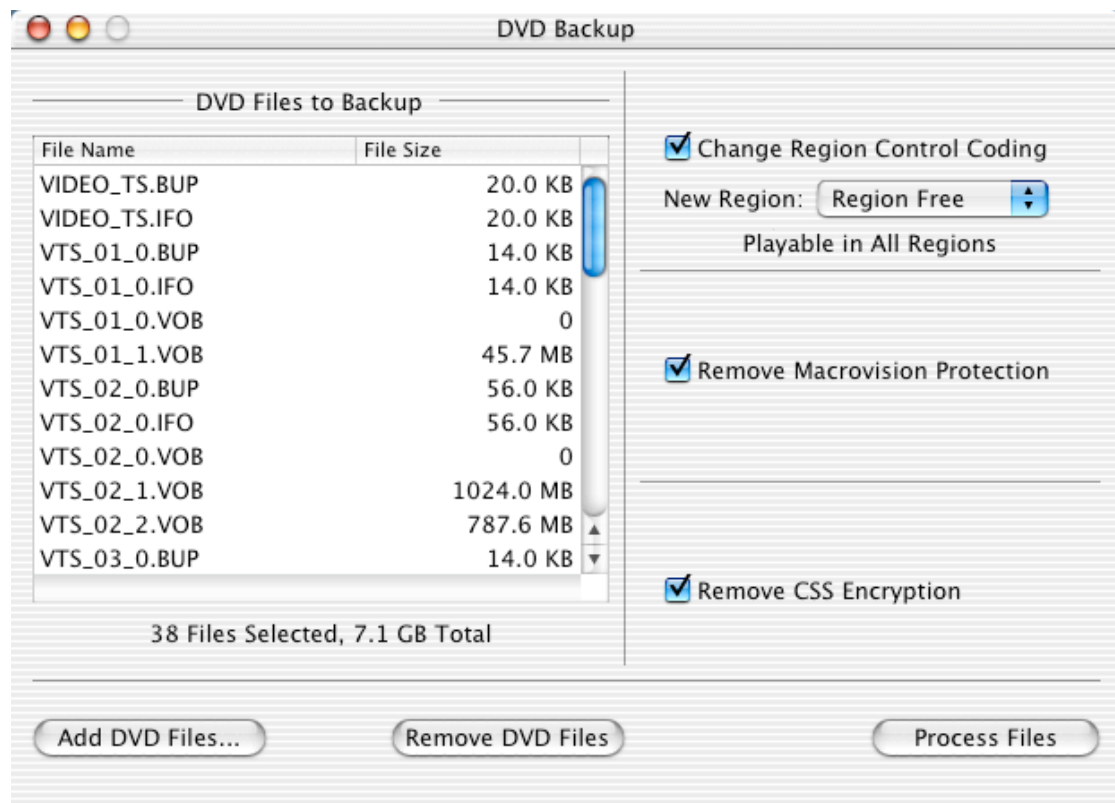
Once burnt the DVD should behave identically to the original. If you have playing it in a DVD player then the most likely reason is the DVD player doesn't like the DVD-R media you have used. I use the Apple branded DVD because they seem to work best in set-top DVD players.

Duplicating a dual layer DVD

There are three ways of duplicating a dual layer DVD, but you must accept you will never create an exact replica like you could with a single layer disk. The first method is my preferred method, then the second.

The first step is the same in all methods.

Launch DVDBackup and do the same as you would have done in creating a single layer DVD.



The total file size will be more than 4.4Gb, but you still need to copy it all to your hard disk.

Method 1

Once DVDBackup has finished copying and decrypting the DVD, launch Apple QuickTime. As long as you have the MPEG2 playback component installed on your Mac there will be no problems with this next step. It is a good idea to purchase this playback component from the Apple store if you have not done so already. (You may also be able to find this on LimeWire another Peer-to-Peer network).

Go to file open and select the one of the .VOB files you ripped from the DVD. Note down what all of them are. Eg. Menus, film parts (normally 3,4 or 5 parts), deleted scenes, making of etc.

Once you know what all the .VOB files are move on to this step. From your VIDEO_TS folder start deleting items that are not necessary, eg making of, interviews etc. until you get the folder down to 4.4Gb or less. Make sure you do not delete any other extension files, the movie parts, the DVD introduction or menus.

If you managed to get the folder down to 4.4Gb you can burn it in toast in the same way described in the single layer DVD duplication section.

Before burning you may want to check your DVD will work by checking it in the Apple DVD Player. Just use the "Open VIDEO_TS" command in the file menu.

If the folder is still not below 4.4Gb then you must use method 2 or 3.

Method 2

Once DVDBackup has finished copying and decrypting the DVD, open “DVD2One”. You may now select which option you choose, full disk copy or movie only.

Once the process has completed, burn the DVD using Toast Titanium.

Method 3

Before you start this section I must tell you there is some good news and some bad news. The bad news is that you need a DVD authoring package (DVD Studio Pro) that costs around £800, the good news is you can probably download this from LimeWire or a news group.

Once you have your "VIDEO_TS" folder check using QuickTime what .VOB file contains which video.

Chose the few .VOB files (usually around 1Gb each) that contain the movie and trash the rest. Drag these files into "bbDEMUX" to de-multiplex the files so you get the .mpg/.m2v and the .ac3/.m2a/.m2a files. The .mpg/.m2v files are the Mpeg2 movie files and the .ac3/.m2a files are the audio files for the movie. You can make all the movie files into one if you like to save agrivation.

If you want you can use DVDE extractor (currently version 0.9b) to save the files from the DVD to your hard disk, de-multiplex decrypt and merge all the video files for the movie if you want, but DVDE extractor is only available for OS 9 at the moment.

I think it is better to use DVDE extractor and combine the movie files into one to save problems later on.

Lets assume you have got only one movie file and one .ac3/.m2a (sound file). You need to create a DVD project in DVD Studio Pro. Just launch the app and you will be presented with a blank project if you have not previously saved one.

Your movie file and .ac3/.m2a (sound file) may not be more than 4.4Gb, if it is see the **Last Note**.

Set up your properties as so:



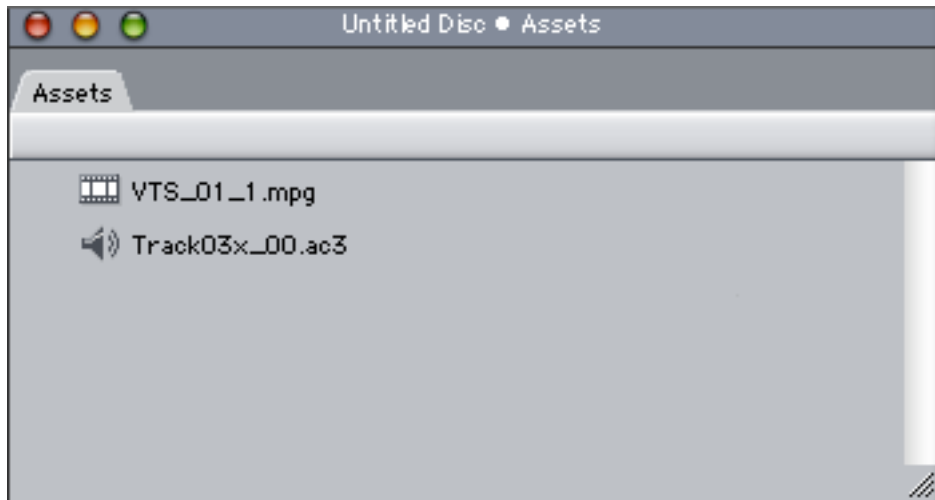
If your disk is NTSC then change the video standard from PAL to that. Your disk may also be 4:3 not 16:9 so you will need to change this to the correct Aspect Ratio as well.

You need to now import your video and audio files. DVD SP will only accept Mpeg2 video and ac3 audio. (This is all you should have anyway).

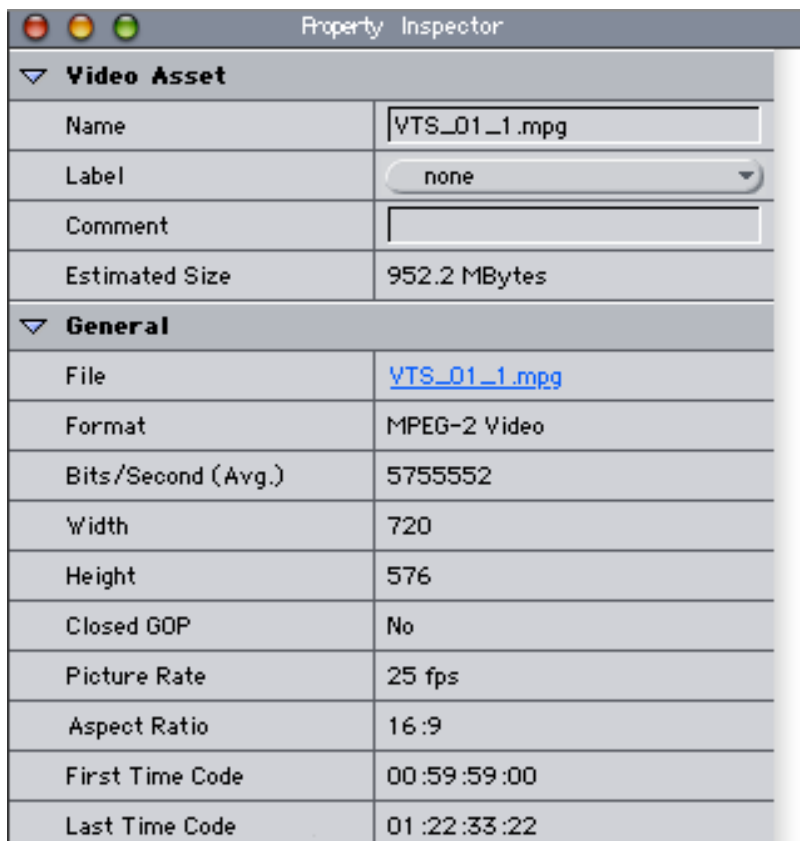
Click on the Asset palette.



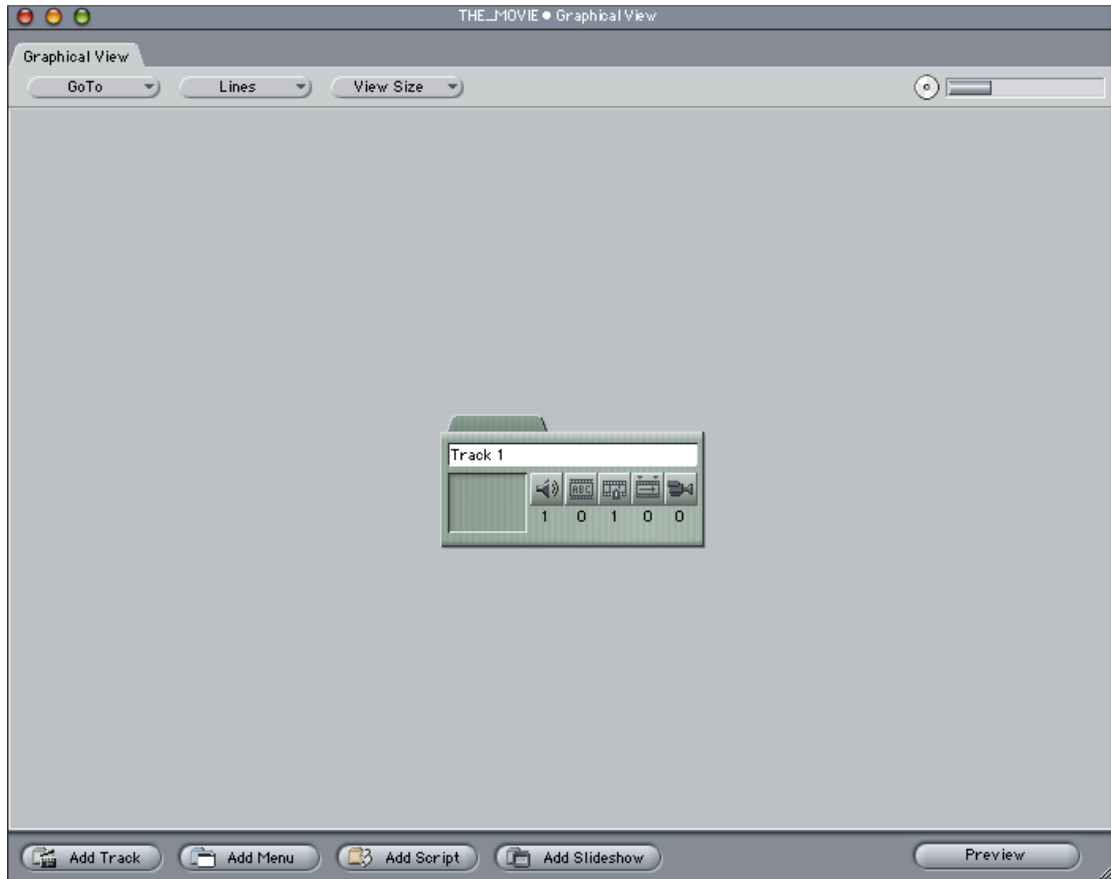
Now select New Asset from the item menu. Select your .mpg/.m2v and import it. Do the same for your .ac3 audio file.



If you click on the Movie (shown here as “VTS_01_1.mpg) your Property inspector should look like this:



Now click the “New Track button (bottom left) and drag your video assets onto the new track “folder” that appears. Give this track the name “Track 1”



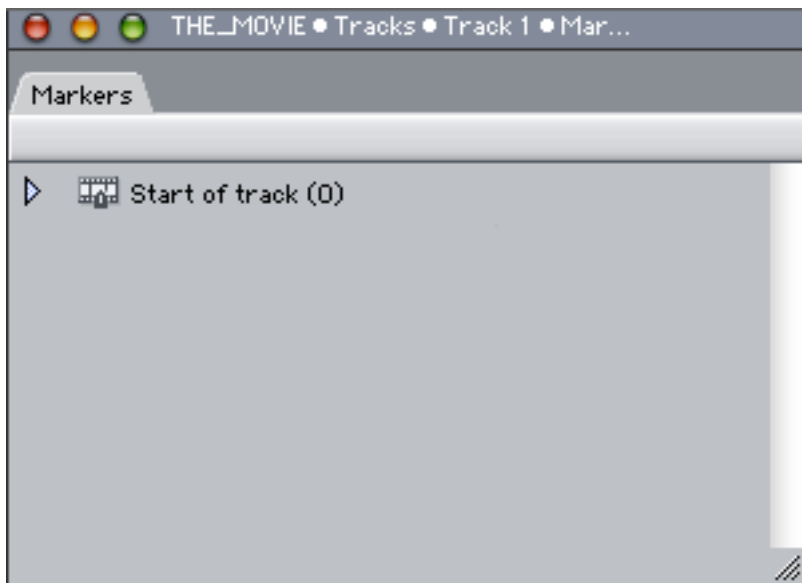
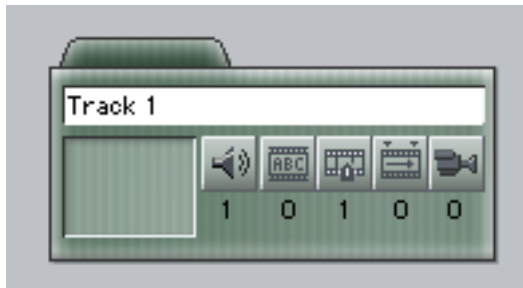
With the track folder selected the property inspector should look like this, note that your aspect ratio may be different.



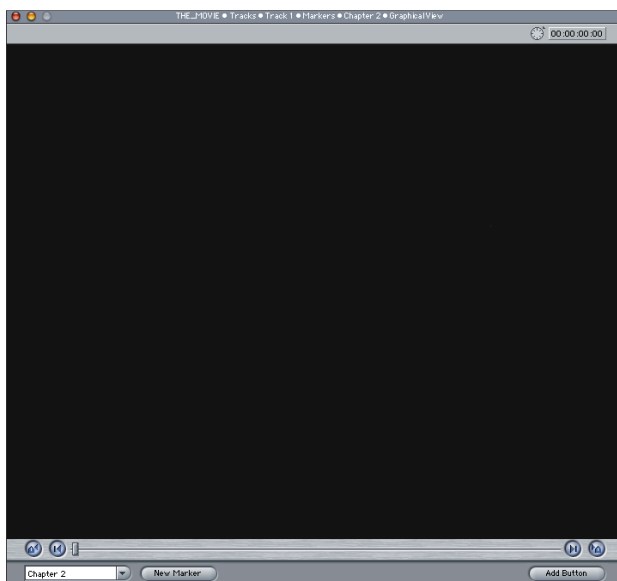
Now click the grey background behind the Track 1 folder icon, this takes the property inspector back to showing the disk settings. Now just make the “Startup Action” of the disk to “Track 1”. That way when you insert the DVD it just plays the movie, no menus or anything.

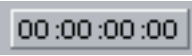
If you want you can create chapter markings on the DVD. This is quite simple.

Click the chapter markings icon (third one along shown below) to bring up the chapter markings window.

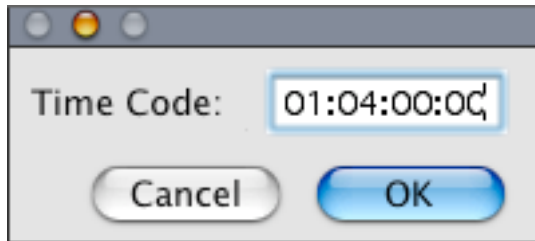


Click in the chapter markings window and from the item menu select “New Marker” Click on the new marker it creates and in the property inspector change the name to “Chapter 2”. Option double click on the marker in the markings window to bring up a new window.




Click on the top right button () and type in the time you want for this chapter.

In this example the new chapter will be 4 minutes into the movie.



For some reason the first set on numbers must be 01. This may not be true, but you can see the frame in the movie which is selected.

Once this is done click the “New Marker” button () and repeat the Time Code step for this chapter marker.

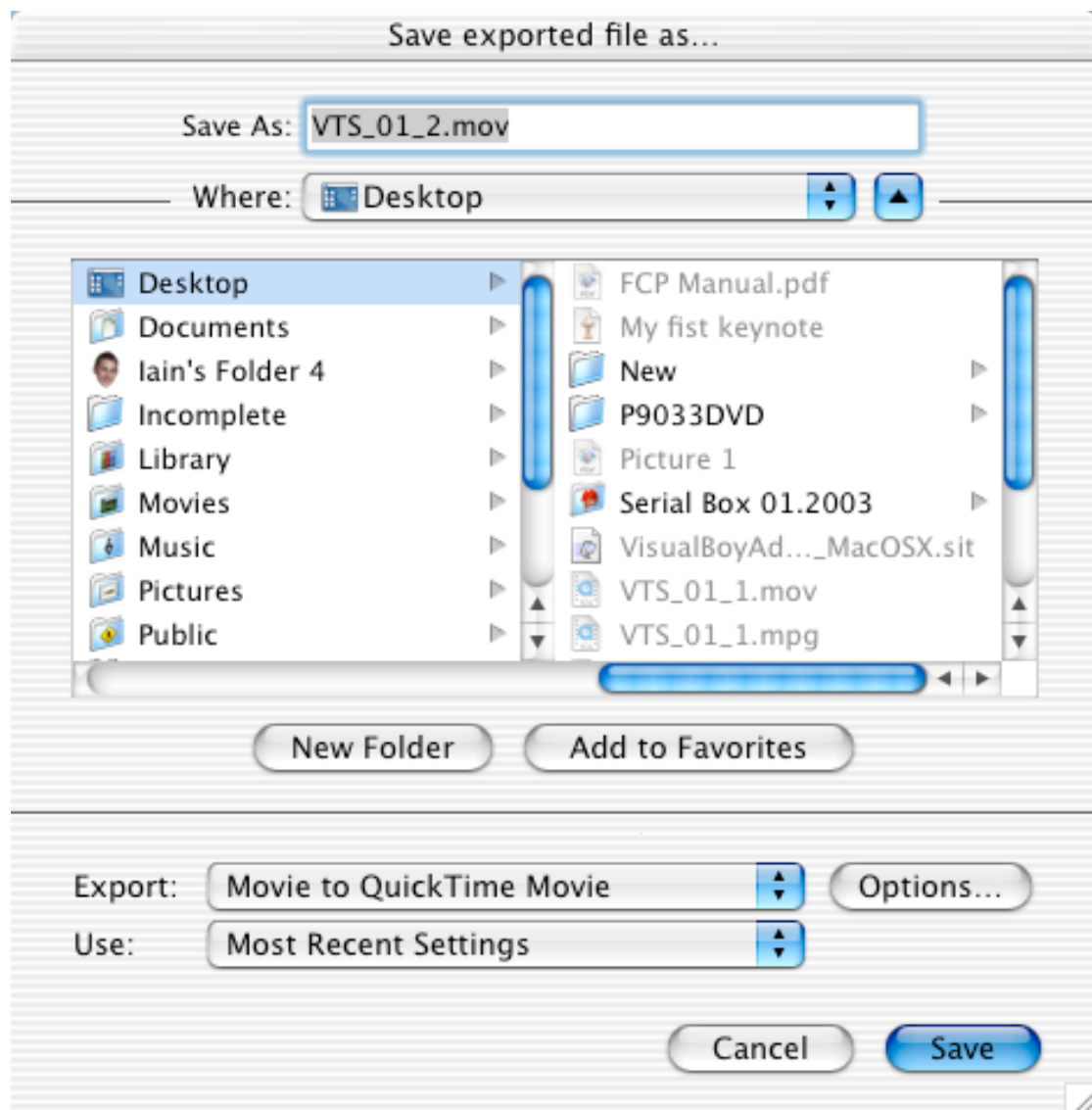
Repeat until all desired chapters are set.

Click on the preview button to make sure it works OK and then you can burn your disk. You can either do this straight from DVD SP or chose “Build Disk” from the File Menu and then use toast as described earlier.

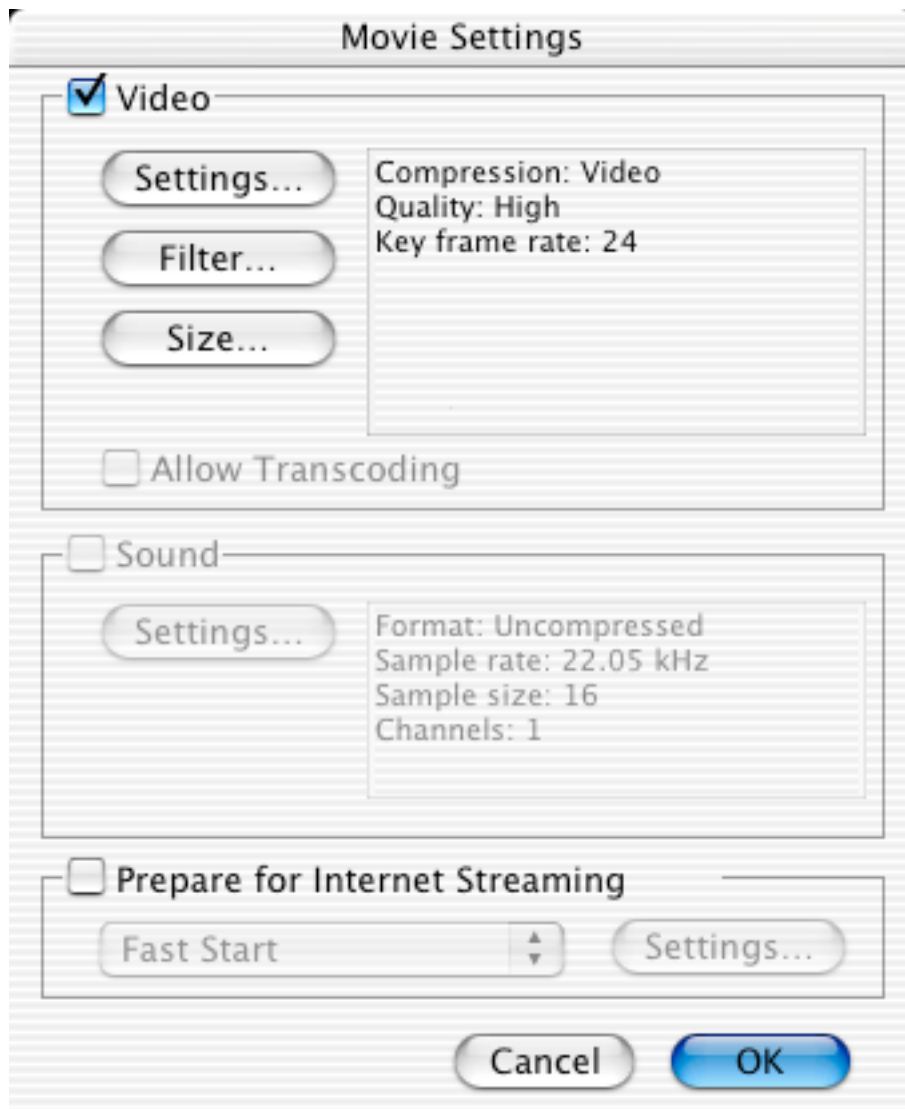
Last Note

If the combined total of your video and audio file creates a combined Estimated Size in DVD SP larger than 4.4Gb you need to do the following.

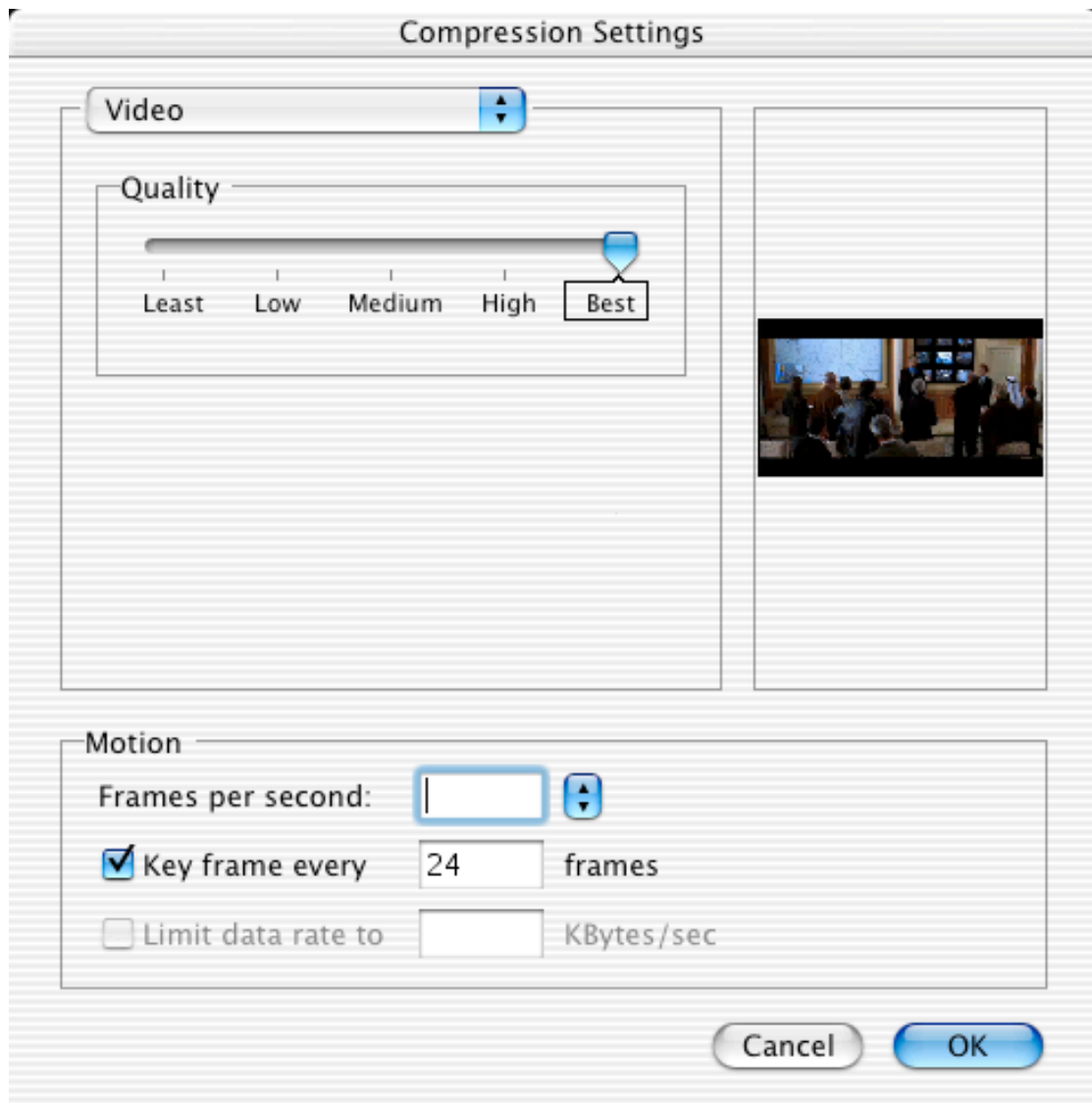
Check the size of your .ac3 audio file (lets use 300Mb as an example). Take your full length movie and open it in QuickTime. Go to the file menu and chose “Export”.



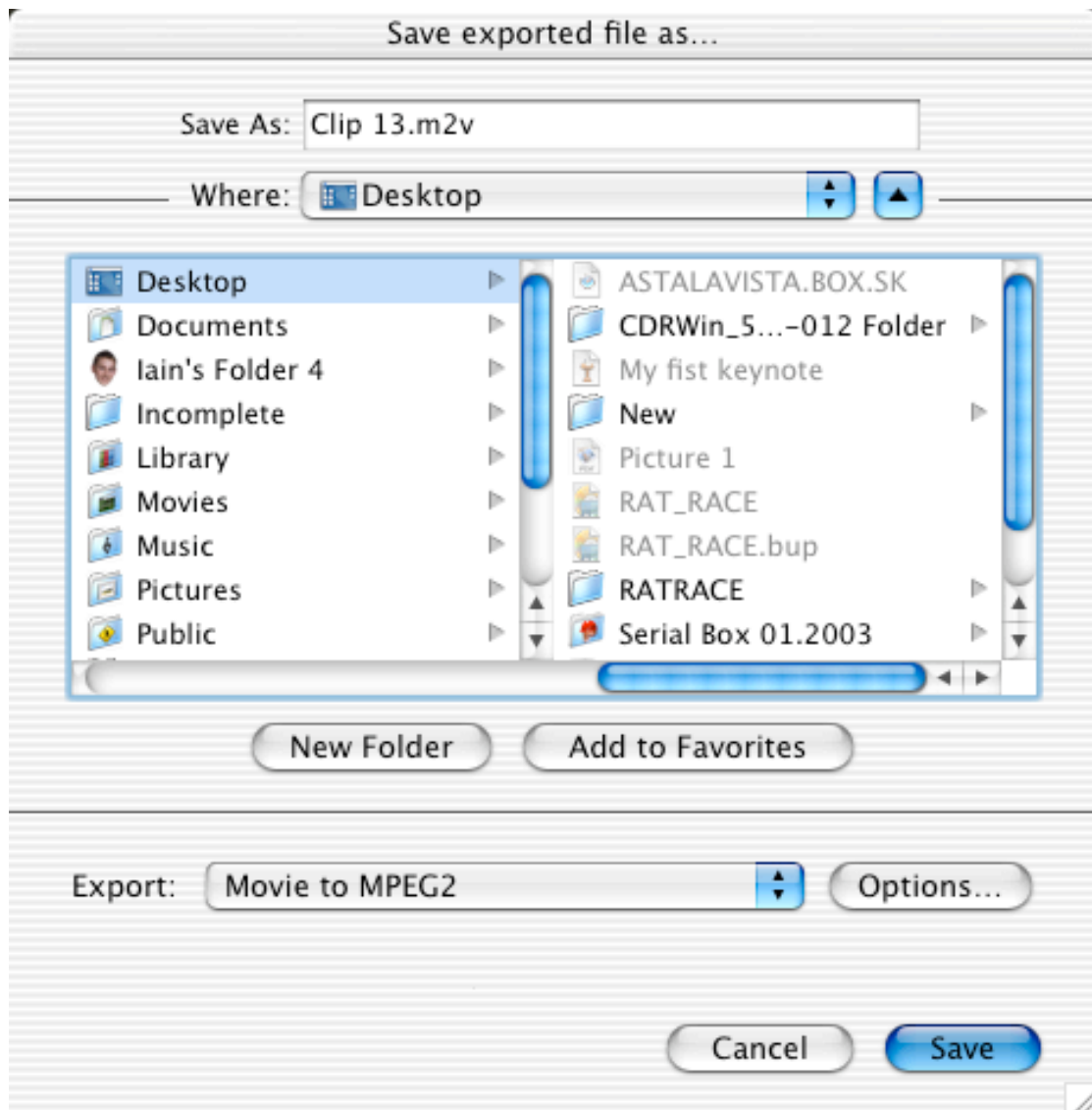
Change the file type to QuickTime movie and click on options. Then click on settings.



Make sure the quality is on best and the aspect ratio is correct.



Save the movie. This will take a lot of disk space (up to around 20Gb). After you have waited ages, probably over night, open the .mov file you created and go to “Export”. Chose the file type as MPEG2 and click on settings.



Move the bit-rate slider bar until the estimated file size is 4.4Gb take away your audio file size. (In this example the audio file was 300Mb, so I would change my bit-rate slider until the estimated file size is 4.1Gb).



Once this is completed take the new .mpg/.m2v video and .ac3 audio files into DVD SP and check the Estimated File Size is under 4.4Gb. If it is not, check how much it is over (eg. 200Mb) and re Export the .mov file in QuickTime. (In my example I first exported the movie so that the estimated file size was 4.1Gb. If it was 200Mb over in DVD SP, then this time I would aim for 3.9Gb file size).

In DVD SP the Estimated Size will now be under 4.4Gb, if it is not re Export the .mov to MPEG2 at an even lower bit-rate, until it fits.

Please note that screen shots may not match the example figures.

Summary

This is a bit of a quick and dirty method (for example we didn't make any menus on the disk) but if you just want the movie on DVD-R that can play in a DVD player this is the easiest method I've tried.

I, Iain Rauch, made this tutorial.

Please send feedback and corrections to dvdrip@drauch.demon.co.uk

If you wish to download the software, send me an e-mail and I'll sort you out.

www.iain.angelcities.com

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