

How to convert a DVD to VCD

This is one of the best methods to produce excellent quality VideoCD's from DVD's. This guide will help you produce VideoCD's that can be played on PC's, PSX Movie adaptors and all standalone VCD & DVD players that can play home-burned VCD's.

Only 4 software titles need to be installed and all are relatively small in size. The best bit of all is that the software is Freeware or Demo ware with results comparable to commercially available software. The final VCD is better quality than most Original VCD's, equal or better than standard VHS and the sound is near CD quality.

Although this guide uses CladDVD to rip (remove the DVD copy protection and transfer the movie files to your Hard Drive) the movie off the DVD, other freeware rippers can also be used. These include VobDecGUI and DOD SpeedRipper. The actual encoding to VCD is done by bbMPEG, which is freeware and now bundled with the latest version of the freeware FlaskMPEG. Other commercially available Adobe® Premier Plug-in's can also be used and are detailed in the FlaskMPEG Help file.

Software you will need:

1. CladDVD 1.64 (d/l from <http://members.netscapeonline.co.uk/claddvd/>)
2. FlaskMPEG 0.594 (d/l from <http://go.to/flaskmpeg>)
3. TMPGEnc 12a & English patch (d/l from <http://www.jamsoft.com/tmpgenc/>)
4. Nero 5.x (d/l fully functional demo from <http://www.ahead.de>)
5. WinOnCD 3.6+ (can be purchased online at <http://www.cequadrat.com> unfortunately no demo version is available for download)

You will also need a Computer with:

- Windows 95B, 95C, 98, 98SE, ME, NT sp4 or 2000 installed.
- A Pentium II 300 MMX or equivalent as a minimum.
- At least 64meg memory
- An internal DVD Rom player (any speed)
- Hard drive with at least 4 gb, but preferably 10 gb FREE space in one partition.
- WinZip and WinRAR or WinAce (will handle all types; zip, rar, ace, cab..etc) to extract the files above. Fully functional demo versions can be d/l from <http://www.winzip.com/> , <http://www.rarsoft.com/> and <http://www.winace.com/>
- A CDR(W) Burner to produce the VideoCD and a box of good quality CDR's or CDRW's
- A sound card to check the finished product.

Tips before we get started:

- Turn OFF your Screen Saver, it will simply slow the conversion down by hours.
- Do not run any other program in the background while FlaskMPEG is running, especially if you have a slower computer.
- Turn the screens colour depth to 16bit colour or better.
- Re-boot the computer just BEFORE you start the ripping, in this way you have the best conditions as possible.

So you have downloaded the software and checked that you have the right stuff in your computer. Sounds good, then lets get stuck into it!

Step 1: Getting Ready.

1. Install cladDVD (or any other ripper, works somewhat in the same way)
2. Install FlaskMPEG (this also installs the bbMPEG encoder automatically)
3. Install TMPGEnc and then run the English patch, but only if you can't read Japanese!
4. Install Nero.

Step 2: Copying DVD files to hard drive.

1. Put the DVD movie into your DVD Rom player. Sounds simple so far, doesn't it?
2. Make a directory on your Hard Drive called **VIDEO_TS** (same as it appears on the DVD).
3. Run cladDVD and select the **Destination Directory** to point to the VIDEO_TS directory you just made.
4. Selecting **Decrypt Movie** to start ripping the .VOB files of the DVD to your hard drive. This can take up to 30 minutes.
5. If you are limited to 4 gig of hard drive space, then just rip the first 2 VOB files, which is about 2gb by highlighting the first two 1 gig files and select **Decrypt Files**.
6. For the rest of you who can copy the whole movie, then copy the .IFO file also to the VIDEO_TS directory. The .IFO file to copy is the one that is number-in-sequence to your .VOB file.

A typical directory of a DVD will be similar to :

VIDEO_TS BUP	16,384
VIDEO_TS IFO	16,384
VIDEO_TS VOB	43,008
VTTS_01_0 BUP	77,824

VTs_01_0 IFO 77,824 - This selects Language/Subtitles
 VTS_01_0 VOB 1,695,744
VTs_01_1 VOB 1,073,565,696 \
VTs_01_2 VOB 1,073,565,696 \ This is the Main movie
VTs_01_3 VOB 1,073,565,696 /
VTs_01_4 VOB 589,365,248 /
 VTS_02_0 BUP 18,432
 VTS_02_0 IFO 18,432
 VTS_02_0 VOB 43,008
 VTS_02_1 VOB 6,014,976

Step 3: Conversion.

1. Run FlaskMPEG. Click on **File**, then choose **Open File** if you have only copied parts of the movie. Choose **Open DVD** if you have copied the entire movie and its IFO file. For **Open Files** click on the first 1 gig VOB file (VTS_01_1.VOB) and FlaskMPEG will see all the remaining VOB's as one file. The first Audio track (one with lowest number i.e. 0x80) is normally English. For **Open DVD**, click on the IFO file. You should get a box showing all the video, language and subtitle options. Choose the options you want, normally there is only one video option, a selection of languages and subtitles, with the option for no subtitles. Highlight your choice.
2. Now go to **Options** then **Select Output Format** and make sure **bbMPEG Encoder** is the selected output format. If it is not, then click on its name.
3. Now select **Global Output Options**.
 - In **Video** tab, change the **Width** to 352 and **Height** to 288 for PAL movies @ 25fps, 352x240 for NTSC @ 29,97 or 30 fps and 352x240 for "film" @ 23.976fps. **Time Base (fps)** should be 25 for PAL etc see above. **iDTC Options** should be on **MMX iDCT** for fast encoding (assuming your computer's processor is MMX compatible)

- In **Audio** tab, for **Audio Mode** select **Decode Audio**. For **Sampling Frequencies** un-select **Same as Input** and choose **44100** Hz, this is an essential VideoCD setting.
 - In **Post Processing** tab, select **Bicubic Filtering** or **HQ Bicubic Filtering** (I recommend the latter as it gives the best quality picture, but is the slowest). Ensure **Keep Aspect Ratio** is selected. The **No Crop** and **No Letterboxing** should be selected also. These settings can be used creating a Super Video CD, where the frame size differs from a VCD.
 - In **Files** tab, pick an output file name including full path, no extension needed. (ie. D:\RIP\GLADIATOR)
 - In **General** tab, un-select **Compile Whole File** and enter the **Compiling Time** (movie length) in seconds. (I recommend you enter the Compiling time, otherwise bbMPEG assumes the movie is 3hrs, 20mins). If it suits you, select **Shut Down Computer...**
4. Now hit **OK**.
5. From the pull-down menu **Run ...**, select **Start Conversion**. The bbMPEG Encoder table will pop up. Click **Settings** and,
- a. In **General Settings** tab, for **MMX Modes** select the one that best describes your computer, under **Encoding** select both **Video** and **Audio**. Under **Multiplexing** de-select both **Multiplex Video** and **Multiplex Audio**.
 - b. In **Video Stream Settings** tab, select **PAL Defaults** if a PAL movie (otherwise it defaults to NTSC) and for **Video Type**, select **VideoCD**, hit **OK**.

All is now ready, so click **Start**. On the pop-up FlaskMPEG window, change **Priority Settings** to **Highest**, as this can speed up the conversion.

6. Now comes the easy part. The conversion process (encoding) will now starts and will take quite a long time, so do it while you sleep or at work. Some do it during both! As a guide, on a Pentium II 350 it takes about 14h to convert 1hr of movie, on an AMD K6-2 450 it takes about 10hr and on an Athlon 650 it takes about 6hr to convert 1hr of movie. I also turn my monitor off while this is all happening – no need to watch the movie in super super slow motion.
7. After it is all finished, you will have 2 new files on your HD. One ending in M1V (the Video file) and the other in MP2 (the Audio file). The Audio file is normally about a ¼ of the size of the Video file. If all is well, then we can delete the VOB files on your HD to free up some space.

Step 4: Multiplex.

1. Although bbMPEG can Multiplex (join the separate Video and Audio files together) your Video and Audio files to an MPEG stream, TMPGEnc makes 100% fully compliant MPEG files and is quicker.
2. Run TMPGEnc and click on **File** and then **MPEG Tools**. Go to the **Simple Multiplex** tab. Browse for your Video file and the Audio and Output files will automatically be named. Rename the Output file if you prefer. For **Type**, select **MPEG-1 VideoCD**. Hit **OK** to multiplex them. This just joins the separate Video and Audio files to the final VideoCD MPEG file. Exit the program.
3. Now play the new mpeg file with Windows Media Player to see if it is okay, checking for Video & Audio synchronization (lip-sync) near start and end of the movie. You have now created your first MPEG-1 video file in the VideoCD format. Easy, wasn't it!

Step 5: Cutting.

1. For those short on HD space and only converted 2 VOB files or the movie is not longer than 72min or 78min, you skip the cutting process and go to straight to Burning.
2. If you converted the whole DVD movie into a single mpeg file and the movie is longer than 72min or 78min, you will need to cut it to fit onto a 74min or 80min CDR. Most movies tend to be 1½ hrs to 2 hours long so just cut it in half to fit onto 2 standard 74min/650meg CDR's. You can get 72min onto a 74min/650meg CDR and 78min onto a 80min/700meg CDR
3. Run TMPGEnc, from **Files** select **MPEG Tools**. Then select **Cut/Join** Tab. Click **Add** and load in your new mpeg file. Double click on its name and a new window opens. Use the [**&**] to mark the Start (lead-in) and End (lead-out) of each clip. So click [to mark Start, then slide the Pointer to approx the mid-point in the movie. Click]. You can fine-tune the positions by altering the times in the **Range** box's by using the up & down arrows. Click **OK** to return to original screen. For **Type**, select **MPEG-1 VideoCD**. Give an **Output** name (eg. disk1.mpg) and click **Start**. A few minutes later you will have the MPEG file for Disk 1. Now double click the file name again so we can produce the file for disk 2. Without moving the slider, click on [to mark the new Start. Move slider to end of file and

- click]. We now have the second disk marked, but it is good idea to overlap some of the movie from disk 1 to disk 2. So in the first **Range** box, click the **Down arrow** to move the pointer about 5 seconds earlier. That way the last 5 sec of disk 1 will be the first 5 sec of disk 2 so you don't miss any of the action. Click **OK**, for **Type**, select **MPEG-1 VideoCD**. Give an **Output** name (eg. disk2.mpg) and click **Start**. It appears to be doing nothing for a while but be patient, a few minutes later you will have the MPEG file for Disk 2. Then exit the program.
4. It's a good idea to load each mpeg file into Windows Media Player (comes with all versions of Windows) and check that it's okay and that the Video and Audio are synchronized (lip movements should match with should – big problem for German and Spanish synchronized movies ☺). Check at the start and near the end of each file. If all is okay, we are ready to burn.

Step 5: Burning.

1. Run Nero (or WinOnCD). Click the **VideoCD** tab, select **Create Standard Compliant CD**. In **Volume Descriptor** tab, enter a **Volume Label**, such as THE_GLADIATOR_1 for disk 1 of the Gladiator. Click on **New** and then drag & drop the Disk1 mpg file from the right window (your HD) to the left window (the VCD disk). Nero will check through the mpeg file to confirm that it is a compliant VCD file. After it finishes checking the file, click the **Burn** Button. Select the **Write Speed** to be **4x** maximum and make sure **Disk-At-Once** is NOT ticked. Then click **Write** and sit back and watch your first VCD disk being burnt. The excitement builds. When the burning is finished, label the CD and rush to your VCD/DVD player to check it out. If all is okay, repeat this for the second or third disks remembering to change the **Volume Label**. Refer to Nero's **Help** for further info and clarification on how to use Nero.
2. Use only good quality scratch resistant CDR's. Recommendable brands are: Sony, Fuji, Verbatim, TDK, Mitsui and Ricoh. Some DVD stand-alone players will only read from CDRW's, then burn to CDRW's instead. Burning at greater than 4x speed can also make the VCD unreadable by many players, particularly the PSX.
3. You have now produced your first playable fully compliant VCD. Wasn't that fun!
4. If you only converted 2 VOB files, they will generally yield 45-52 minutes of movie. After burning the first half of the movie you will have to repeat step 3 to 5 again for the second half of the movie.

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