

## Chapter 8 – Writing to CD

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At each step in doing a clean-up, I listen to the resulting stereo file using a good sound reproduction system. DO NOT try to get by with using the little speakers that are sold for a few bucks with sound cards. They have a poor response to both low and high frequencies and this can easily mislead you!

I have found that recording mono records in stereo and not converting them back to mono is better practice. In fact, a stereo CD copy of some mono LPs seems to have some stereo content. This is perhaps explainable by considering that both sides of the groove of a mono recording are not identical. So when a stereo playback cartridge is used, the left and right channels are also not identical. Not all mono LPs exhibit this, but some do and I can demonstrate it.

Previously, I normalized individual tracks (songs) to the same volume – about 95% of the full sound card output. After a lot of listening, I now prefer to normalize the whole side of an LP as a unit before breaking it into tracks. This means that you have to do serious click and pop removal on the “side” recording or the loud clicks and pops will not let you normalize correctly. Any of the audio editors (*Cool Edit*, *Audio Audition*, *DC Six*, *DC Millennium*, *Sound Forge*, etc.) contain normalization routines. After I’ve separated the side into tracks, I finish the clean-up and then I’m ready to record to CD (or DVD).

Today, there are several programs for writing music to CDs, such as: *Roxio Easy Media Creator 8*, *Nero 7* and *Musicmatch Jukebox 10*. Most of the audio editors listed above can also write audio CDs. However, not all programs support “disc at once” writing, which is now the preferred method as it conforms to the “Red Book” standard for CDs. Some programs still use “track at once” which works OK most of the time because most individual “tracks” (that is, songs) have some silence at one or both ends. So the fact that track-at-once writing inserts another small length of silence between tracks is of no practical importance. However, if you are copying one of your CDs that was recorded at a live performance (for example) you need to use disc-at-once to create a true image of the original CD. Track-at-once adds a little silence at each “event” marker which is what your CD player uses to find (and jump to) individual songs. Hearing a bit of silence in the middle of the applause or in the start of the next song sounds kind of bad!

The fanciest CD authoring program I’ve seen is *Sony’s CD Architect 5* which comes bundled with *Sound Forge 8*. Its printed “Quick Start Manual” is 120 pages and it does have a rather steep “learning curve.” It is, however, very powerful and I use it quite a bit.

All CD authoring programs (that I’ve seen) are based on creating a track list or play list. But just how you do that depends on the program. So read your User Manual or use the on-screen help. As you add tracks, the program will tell you one way or another how much CD space you have used and how much you have left. A total of 74 minutes used to be the norm but, as far as I know, all currently manufactured CD-Rs have an 80 minute capacity. A fast CD writer is not an advantage when making music CDs. I record at 2X to minimize jitter which can show its ugly face as distortion when you listen to the CD on a good sound system. If you always listen on a “boombox”, I expect it doesn’t matter.

Is there any difference between audio and data CD-Rs? Yes, companies charge more for audio CDs because they can get away with it. There is no difference between them that I can detect or hear. There is, I think, a difference between brands. I prefer *Verbatim*, *Memorex*, *Sony* and *TDK*, not necessarily in this order – I’ve had good results with them all.

If you watch sales you can buy CD-Rs for around 20 cents each in spindle packs of 50 or 100. So what about the so-called “premium CDs” that sell for ten times that amount, such as *Mobile Fidelity Sound Lab’s Ultradisc* CD-R? I don’t know, but I have some on order. As soon as I’ve had time to evaluate them I’ll update this Chapter and let you know.

I bought some *Mobile Fidelity Gold Ultradisc CD-Rs* for evaluation and so far the results are mixed. They do seem to be more “rugged” and scratch resistant but they hold only 74 minutes of audio and I’ve gotten some peculiar distortion at about 60 minutes in that doesn’t show up when the same music is recorded on an “ordinary” CD-R. More work is needed...

In the December 2005 issue of *Sound & Vision* magazine, Contributing Technical Editor Ken C. Pohlmann wrote a scathing editorial on black CDs (“The Dark Side of the Disc,” page 22). Black and other color CDs were evaluated by Gary Koh, Managing Director of *Genesis Advanced Technologies*. In his report: “In Quest of Absolute Fidelity: The Saga of the Black CD,” he concludes that color does make a difference. Although it’s a rather large file (about 2 MB), this 15 page report is worth reading. You can download a copy in *Adobe Acrobat* (pdf) format by clicking [here](#).

Commercial CDs that you buy from a music store are actually CD-ROMs. The music information is molded into them when they are manufactured and then the surface is sealed with lacquer to help protect it from scratches and dust. CD-ROMs are fairly rugged and will withstand quite a bit of handling. The CD-Rs that you and I record are not very rugged. They scratch rather easily and fingerprints don’t do them any good either. Pick them up by the edge of the disc and handle them gently and they’ll last pretty well.

Labeling your newly recorded CD with a *Magic Marker* is, in my view, tacky. Free labeling programs can be downloaded from *Memorex* and others and fancier programs are inexpensive – just do a *Google* search and take your pick. Most companies offer free trial downloads so you can evaluate your choice for up to 30 days. I’m currently using *Sure Thing CD Labeler* ver 4.3 -- it works pretty well and cost about \$20 if I remember correctly.

## RESOURCES

You can get product details (and buy online if you want to) on *Roxio Easy Media Creator 8* at <http://www.roxio.com>.

(I have version 5 and it supports “disc-at-once” CD writing. Version 7 does too and it is still available but there is a good reason to go to version 8 as you will read about in Chapter 9 on Writing to DVD. You may have guessed that I like the *Roxio* software.)

For information on *Nero 7*, go to <http://www.nero.com>.

And for details on *Musicmatch Jukebox*, go to <http://www.musicmatch.com>.

For info on the other audio editors listed above, please see Chapter 7 on Restoration Software.

Click [here](#) to download this chapter in *Adobe Acrobat* (pdf) format.

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