Texas Cooperative EXTENSION
The Texas A&M University System

2005 Consumer Decision-Making Contest 4-H Study Guide

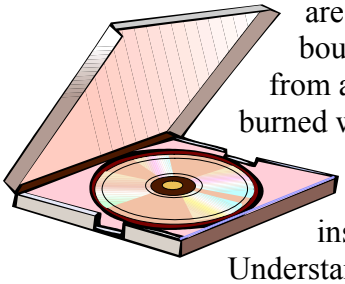
Recordable CDs

The difference between CD-R and CD-RW

CD-R is short for "CD-Recordable". Recordable CDs are WORM (Write Once, Read Multiple) media that work just like standard CDs. The advantage of CD-R over other types of optical media is that you can use the discs with a standard CD player. The disadvantage is that you cannot reuse a disc.

The other type of media would be CD-Rewritable (CD-RW) allows you to erase discs and reuse them, but the CD-RW media does not work in all players or is not easily used from computer to computer. CD-Rewritable drives are able to write both CD-R and CD-RW discs.

To understand the difference between the CDs you buy in a store and the ones you burn, you need to understand the way they are produced. A CD bought in a store is pressed from a mold. CD-R's are burned with a laser. They may look different (often green, gold, or blue instead of silver). Understand that these are more sensitive to extreme temperatures and sunlight, and they are more susceptible to physical damage.



Even though they are not physically identical, they work just the same. Beware that some older CD-ROMs and CD players' models may not read the burnt CD as well or at all. As a side note you cannot burn a DVD with a CD-burner.

Choosing the correct CD-R and CD-RW discs

CD-R discs are great for premastering and for limited data or software distribution. CD-RW media is convenient for mass storage of information that is frequently updated. Such applications demand the best possible quality. Unfortunately, confusion exists regarding media quality. You should not buy discs based on brand name alone.

There is no "best" media for all recorders. You cannot tell how well a disc will work just by looking at it; the only way to know is to put it in 'your' recorder, write a disc, then put it in 'your' reader and try it.

It is a good idea to start by selecting media

that is certified for your recorder's desired write speed. Using 8x certified CD-R media when recording at 8x is not a bad idea, but does not seem to be essential.

There is no advantage to using expensive "audio CD-Rs". There is no difference in quality between consumer audio blanks and standard blanks from a given manufacturer.

Try samples of blanks before you make a major purchase. Try them in your reader as well are your writer. They are not useful if you cannot read them in your normal CD-ROM drive.

Typical 74-minute CD-Rs are advertised as holding 650MB, 680MB, or even 700MB of data. The reality is that they're all about the same size, and while you may get as much as an extra minute or two

Speed considerations are much more important for CD-RW. Many drives refuse to record at speeds higher than the disc is rated for.

depending on the exact construction, you're not usually going to get an extra 30MB out of a disc labeled as 74-minute media.

It is ok to write or us a label on the disc. Be careful though not to use the wrong kind of ink or label can damage a disc. The adhesives on some labels can dissolve the protective lacquer coating if the adhesive is based on a solvent that the lacquer is susceptible to. Asymmetric labels can throw the disc out of balance, causing read problems, and labels not designed for CDs might bubble or peel off when subjected to long periods of heat inside a CD drive. So long as you use labels that were meant for CD-R discs, you would "probably" be okay.

References

Frequently Asked Questions About CD-R and CD-RW Discs
http://www.mscience.com/faq.html
McFadden, Andy. "CD-Recordable FAQ"
http://www.cdrfaq.org/

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