



DVD RECORDING FORMATS

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DVD-RAM

DVD-RAM is a format originally aimed primarily as a data solution, but it is now becoming popular as a video format used by some brands of standalone (non-PC) DVD recorders. Early PC-based DVD-RAM recorders used 2.6 GB discs (or double-sided 5.2 GB discs), but current drives also use 4.7 GB discs (or double-sided 9.4 GB discs). DVD-RAM discs are traditionally housed within cartridges which cannot be opened, so that the media is well-protected. Newer Type II and Type IV cartridges can be opened however, an important feature for those who wish to read these discs in DVD-RAM compatible DVD-ROM drives or standalone DVD players. In addition, some DVD-RAM discs are now sold without cartridges.

DVD-RAM is a sanctioned format of the DVD Forum, a consortium of companies involved in the development of DVD standards. DVD-RAM is a very robust data storage solution, theoretically allowing greater than 100000 rewrites per disc. In addition to support of the usual DVD UDF formats, DVD-RAM also allows fully integrated OS-level random read/write access similar to a hard drive, in both Windows XP (with FAT32) and Mac OS X (with FAT32 or HFS+), as well as on-the-fly write verification. The main drawback of the DVD-RAM format is its limited read compatibility by DVD-ROM drives and standalone DVD players. DVD-RAM read support with these units is increasing however.

DVD-R and DVD-RW

DVD-R and DVD-RW are also both sanctioned formats of the DVD Forum. Both formats generally use 4.7 GB discs, although some DVD-R drives use 3.95 GB discs.

DVD-R is a write-once recordable format which allows excellent compatibility with both standalone DVD players and DVD-ROM drives. There are two main types of DVD-R discs: DVD-R for General Use and DVD-R for Authoring. Most consumer DVD-R burners use the cheaper General Use discs, while many higher end professional burners use Authoring discs. The correct media type appropriate for the recorder must be used when burning a DVD-R. However, once written, the discs should be able to be read in either drive type. (General Use DVD-R is designed to prevent backup of encrypted commercial DVDs.)

DVD-RW media uses rewriteable discs which are rated for more than 1000 rewrites in ideal situations. The majority of standalone DVD players will play video recorded on DVD-RW discs, but the compatibility is not as high as with DVD-R.

Current DVD-RW recorders also record to DVD-R. However, the reverse is not always true. Some DVD-R recorders are not capable of writing to DVD-RW discs (although some may be able to read DVD-RW discs burned with other drives).

DVD-RW and DVD-R have heavy penetration into the multimedia market as well as the general consumer market. For instance, the Apple SuperDrive, found in higher end Mac computers used in multimedia creation, is simply a DVD-R/DVD-RW (and CD-R/CD-RW) capable burner.

+R and +RW

These two formats are backed by the DVD+RW Alliance. While these formats are not sanctioned by the DVD Forum, several members of the DVD+RW Alliance are also members of the DVD Forum. Technically, "DVD" is not to be used in the names for these formats, since they are not approved by the DVD Forum. However, in reality, these discs are very similar to DVD-R and DVD-RW in design, usage, and compatibility.

+RW, like DVD-RW, is a rewriteable 4.7 GB format, and overall it has similar functionality to DVD-RW. One potential future advantage of the +RW format is the optional Mount Rainier drag-and-drop file access support (also known as **+MRW**) planned for future versions of Windows. However, current drives do not support Mount Rainier on +RW. The level of compatibility of +RW discs in standalone DVD players is similar to that of DVD-RW. The rewritability of +RW is also said to be similar to that of DVD-RW.

+R is a format that was introduced to consumers in early 2002. It must be noted, however, that first generation +RW recorders do not support +R recording, and likely cannot be upgraded to do so. If one wishes to have +R burning functionality, one must purchase a recent drive specifically designed to do so. +R discs currently are somewhat more expensive than DVD-R discs, but prices will likely drop with time. Compatibility of +R discs in standalone DVD players is similar to that of DVD-R.