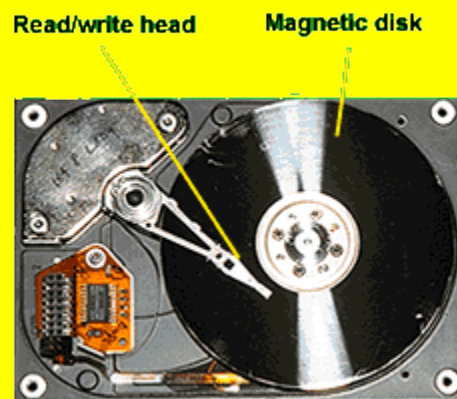


In many cases the information that has been processed is stored in machine-readable format so that it may be accessed at a later time by a computer. This data is stored in binary form in 'bits'. This practice requires the use of storage devices.

The hard disk is direct-access storage medium with a rigid magnetic disk. The data is stored as magnetised spots arranged in concentric circles (tracks) on the disk.

Each track is divided into sectors.

The number of tracks and sectors on a disk is known as its 'format'.



Hard disk showing internal mechanisms

High data rates demand that the disk rotates at a high speed (about 3,600 rpm). As the disk rotates read/write heads move to the correct track.

The disk is sealed and lubricated and the head hovers on a cushion of air just above the disk to avoid damage. These are therefore called floating heads.

The storage capacity of a hard disk can be Gigabytes (Gb), i.e. thousands of Megabytes (1000Mb), of information.

A recording medium consisting of a thin tape with a coating of a fine magnetic material, used for recording analogue or digital data. Data is stored in frames across the width of the tape. The frames are grouped into blocks or records which are separated from other blocks by gaps.

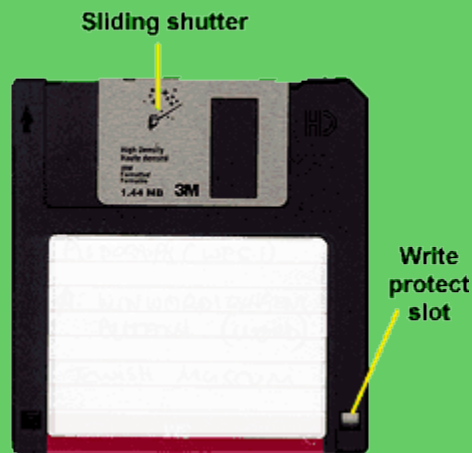
Magnetic tape is a serial access medium, similar to an audio cassette, and so data (like the songs on a music tape) cannot be quickly located.



A JAZ™ drive with cartridge -
one of the many types of magnetic storage devices available

However large amounts of information can be stored within magnetic tape. This characteristic has prompted its use in the regular backing up of hard disks.

A floppy disk is a thin magnetic-coated disk contained in a flexible or semi-rigid protective jacket. Data is stored in tracks and sectors.



A 3.5" floppy disk

The floppy disks are usually 3.5" in size. However, older floppy disks may be in use; these would be 5.25" in size.

Double sided high density 3.5" disks can hold 1.44 Mb of data.

Once data is stored on a floppy disk it can be 'write protected' by clicking a tab on the disk. This prevents any new data being stored or any old data being erased.

An optical disk is impressed with a series of spiral pits in a flat surface. A master disk is burnt by high-intensity laser beams in bit-patterns from which subsequent copies are formed which can be read optically by laser.



A CD-ROM

The optical disk is a random access storage medium; information can be easily read from any point on the disk. A standard CD-ROM can store up to 650Mb of data, with 14,500 tracks per inch (tpi).

CD-ROM stands for Compact Disk - Read Only Memory. It is now possible to have CD-ROMs where extra tracks of information can be written onto them by the user. These are called read/writable CD-ROMs and these are becoming a popular and cheap method for storage.

These are media which were popular in the past but their use required large storage space and was time-consuming. With the development of hard disks and other storage devices their use has practically disappeared.



A strip of paper tape