CD- ROM

What is it?

Another useful storage device is the CD- ROM. CD-ROM stands for Compact Disc - Read Only Memory. A CD is a silver colored plastic disk, coated with aluminum alloy. The "plastic" base is made of a polycarbonate wafer. It uses the laser technology, i.e. it is written to and read by a laser. The information is read from pits and lands, like 1s and 0s so computers can read it. An optical reader reads the patterns of pits that stands for bytes.

The CD-ROMs are based on the same technology as audio CDs. They are called as compact because these can store or "compact" large amounts of information. One CD can hold 650MB of data or 300,000 pages of text. Most CDs are read only, which means you cannot save data to the disk. This device is usually not used as a primary storage device for data. You will need other storage devices to save your work. Some CDs are Writable, but you need a special CD-ROM to use them called a CD-R, Compact Disc Recordable. This device allows the computer to record data on a CD-R disk using a special recording device. These disks can be used on your computer, but the disk cannot be erased or changed.

The CD-ROM disks are for reading information only. We cannot save to a CD-ROM unless we have a special device and special software. Once a CD is written to, that's it. We can even listen to our audio compact disks on our computer if we have a multimedia computer with a sound card, but we cannot record or erase it.

Size and Capacity

A CD usually is 4.72 inches (120 mm) in diameter, 1.2mm thick, and has a 15mm hole in the center for mounting in the drive.

A Compact Disk can store up to 650M (larger CDs can store up to 20 Gb) of data. It can contain text, graphics, video and sound as well. This content cannot be erased or modified hence the name, Read only.

The CDs are available in 63 and 74-minutes versions.

Types of CD-ROM Drives

CD-ROM drives can be both internal and external. The external drive is more expensive, but can also be used on other computers since it is portable. The CD-R (Compact Disk - Recordable) and DVD-ROM (Digital Video Disk-ROM) both prove to be alternatives to CD-ROM.

- **Read Only** drives can retrieve data from the CD-ROM but cannot save new data to it. It cannot be used as the primary storage for the computer. The CD-R is a technology that allows writing on a compact disk using your own computer.

- **Compact Disc-Recordable** (CD-R), allows the computer to record data on a CD-R disk using a special recording device. The disks can be used on a computer just like a regular CD-ROM disk, but they cannot be erased or changed.

- **DVD-ROM** (Digital Video Disc- ROM) is just like a CD-ROM drive, but has a larger storage capacity. It stores data starting at 4.7 GB. It can hold full length movies, and can also read CD-ROM disks. Of course it is the most expensive of the devices. The DVD-ROM is an extremely high-capacity compact disk that can be used to store video items such as Motion picture movies.

Applications

A CD can contain Music, Games, Programs, Installation CDs, Multimedia Applications, Video, Images etc. The CDs can be used for:-

- Distribution of massive quantities of data, for e.g. encyclopedias, document archiving, manuals, statistics and software packages.

- While working at your computer you can use the CD-ROM Drive to play your audio CDs.

- Since, the CD-ROM has a vast storage capacity, thus it is ideal for installing new programs and software on your computer.