## Disk drives are picking up speed

BY BARRY JENSEN STAFF WRITER

You can now buy compact disk drives for your home computer that run eight times as fast as the original CD players. This means even smoother simulated motion on moving graphics. The fastest CD-ROM drives until now have run at six times the speed of the original drives.

The audio compact disk was devel-

The audio compact disk was developed to replace the phonograph record. Some computers come equipped with carphone jacks or even stereo speakers to reproduce the audio CDs.

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Although most computers with CD-ROM drives will play audio CDs, the speed and accuracy of data reproduction made compact disks a natural for their computer reproduc-

storing computer programs.

The full name of a computer's compact disk drive is a compact disk-read-only-memory drive. Such a drive will read a compact disk. Because it will only read a compact disk, the drive is called mod-only.

The big advantage of a faster CD-ROM drive on your computer is the speed and smoothness of the compact disk images.

Two characteristics of a CD-ROM drive determine its speed. One is the access time, which is the length of time it takes the CD-ROM drive to go from one part of a disk to another. The other is the speed of rotation of the disk (1 to 8 times the speed of the audio CD drives). The images are smoother with a faster CD-ROM because the disk is turning faster on an 8X drive than on, and 6X drive.

say, n 6-X drive.
Without a CD drive in your computer, you are limited when you look for new software. Some is only available in CD form - there is so much data in newer programs that they would have to be written on a half dozen (or more) 14 mogrably diskettes.

1.4 megabit diskettes.
In addition, CDs are hardier than floppy disks, Because CDs record their

data optically, they ignore magnetic fields caused by magnets or electrical

equipment.

If you have a slower CD-ROM drive in your home computer, you can replace it with a newer, faster drive.

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An 8X CD-ROM drive comes for as little as \$180, said Bryan Meyer of Computer City in Troy. This price is for just the CD-ROM drive and an interface that connects the CD-ROM drive with the computer. For a full-blown package that includes a "sound card," 8X CD-ROM, speakers and software such as an encyclopedia, the price is many like \$380.

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"If your computer already has an older, slower CD drive, you can just replace it with a newer, faster drive," Meyer said. Or, if you feel uncomfortable plugging anything into your computer, you can take your computer to a professional, who will make the exchange.

IBM-compatible computers usually do need an interface to hook up CD-ROM drives, said Tom O'Keefe of Computize in Farmington Hills. "Most of the newer Macintosh computers have an interface built into them, so you may need just the drive."

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"Macintosh prices now are about the
same as IBM-compatible prices. This
wasn't true a few years ago, but they
might even be lower because of their
built-in interface."
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He gave one warning about the of drives that have just come onto the market. "Some of them aren't as fast as they seem. I saw the results of a test recently in which an 8X drive was slower than the average 6X drive and no faster than the best of the 4X drives."

O'Keefe's advice was to check out the reviews you frequently find in computer magazines before you buy an 8X drive. "The bigger companies often wait until the technology has settled down a bit before they introduce their version of devices such as the 8X drive."

## Garden school classes set

The Michigan School of Gardening, a pilot program, offers comprehensive training for professional gardeners and serious amateurs.

The program, sponsored by McFarland's and Perennial Favorites, was founded by Janet Macunovich, author and freelance gardening columnist for the Detroit News.

Receive more than 400 hours of training lectures, demonstrations, discussion, projects, hands-on work in test gardens and supervised apprenticeship. Graduates will earn Michigan School of Gardening recognition as "certified gardener, GFA (gardening fine arts).'

Applications are now being accepted for classes to begin in September. Call McFarland's at (810) 442-7336 for an application and complete prospectus. McFarland's is at 28915 Grand River, Farraington Hills.

Primary instructors are Macunovich, Sue Goulla, professional gardener and landscape designer, and David Michener, professional garden designer and assistant curator at the University of Michigan's Matthaei Botanical Gar-

