

HOW TO INSTALL AN Optical Drive

GOT A DVD? MOVE UP TO DVD-R! BY RUSSELL SHAW

Change is the only constant in the PC universe, and optical drives are the perfect example. If your PC is fairly new, it's probably equipped with at least a non-recordable DVD-ROM drive. Wouldn't you like to be able to record to a DVD? And if your machine does have a recordable DVD drive, wouldn't you like to move up to one of the new dual-layer recordable DVD-R drives that pack a whopping 8.5 gigabytes of data onto a single disc?

Before we dive into this topic, let's get some terminology out of the way. In the early days of recordable DVD drives, manufacturers split into two camps offering incompatible technologies: DVD-R and DVD+R. Nowadays, nearly all recordable DVD drives are what's known as "all-format" drives, meaning they support

by swapping components, versus throwing the whole thing on the scrapheap. We'll show you how to add a new optical drive to your PC. The only tool you need to bring to this upgrade party is a screwdriver.

IS YOUR PC UP TO THE JOB?

It's always good to know what you're upgrading. If you bought your PC within that past five years, it almost undoubtedly has a CD-ROM drive (can read CDs) and it might even have a CD-R drive (can record to a CD once, like cutting a vinyl record) or even a CD-RW drive (can record to a CD many times, like a cassette tape).

Any PC capable of running Windows XP should be capable of handling a DVD-R drive. Although manufacturer's system requirements vary, these are the typical specifications your machine should possess:

- 800MHz Pentium III (or an equivalent AMD Athlon)
- 256MB of memory
- Windows XP (although you can get by with Window Me)
- At least five gigabytes of free hard-drive space
- A vacant IDE (Integrated Drive Electronics) connector

TIP Take a Look Backward

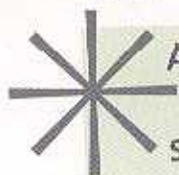
Manufacturers go to great lengths to ensure that newer drives are backward compatible with older technology. Any state-of-the-art optical drive will recognize any 15-year-old CD.

Since all the changes and improvements occur internally, you shouldn't have to worry about a new drive physically fitting into your old PC. All optical drives are 5.25 inches wide, and they all use the same types of data and power cables. Most PCs have empty drive bays inside their case, and most have spare IDE and power connectors. If yours doesn't, you might have to remove your existing optical drive and replace it.

I'M GOIN' IN!

Now it's time to get your screwdriver and perform the actual installation of your new drive. Although it's not absolutely necessary, we recommend wearing an anti-static wrist strap as insurance against static discharge that could damage your PC. Once you have that on, shut down your PC and disconnect its power cable along with any other cables that are plugged into it (printer, mouse, keyboard, etc.).

Remove both of the PC's side access panels and, if necessary, its front bezel. As added protection against static discharge, touch the inside edge of the PC's case. If you're replacing an existing drive, disconnect its power



Although not absolutely necessary, we recommend wearing an anti-static wrist strap as cheap insurance.

both technologies. History is repeating itself with dual-layer drives, but we predict that it won't be long before all dual-layer drives are also all-format drives. Unless otherwise noted, we'll use DVD-R as a generic term for recordable DVD.

One of the coolest things about computers is that you can usually take advantage of the newest technology

cable (the white D-shaped shell with four color-coded wires emerging from it) and its IDE cable (the gray, broadly flat ribbon). The drive will be secured into its bay with four screws. If you're adding a new drive to an empty bay, you might also need to remove the front cover panel for the appropriate drive bay.

Before you insert the drive into your PC's case, take a close look at the back of your new optical drive. Do you see that small block with three pairs of pins emerging from it? These are known as "jumpers."

You'll need to "set" the jumpers by placing a "shunt" (a tiny metal block encased in plastic) over the pins to configure the drive as a "master" device. (Note: If you're keeping your existing optical drive, you'll need to set its jumpers to reconfigure it as a "slave" device.) Refer to the documentation that came with your drives to determine how their jumpers should be set. If you can't find the documentation for your old drive, look for this information on a label on the drive itself.

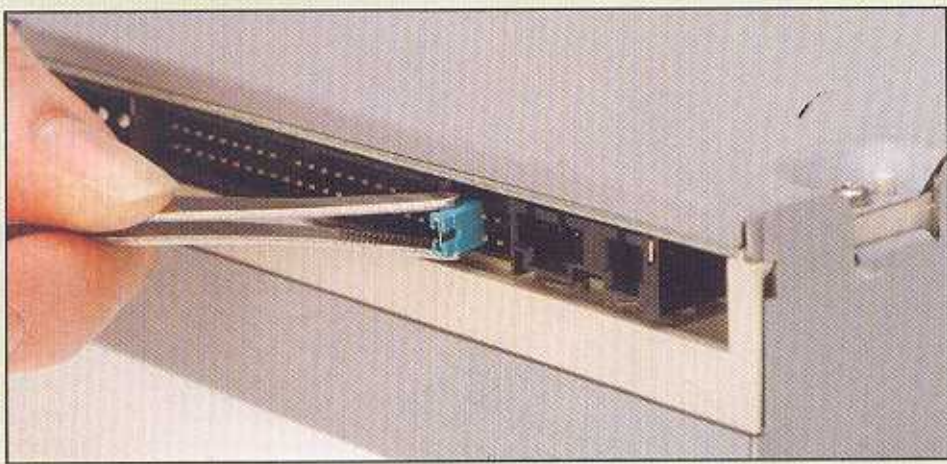
The next step is to mount the drive in an empty drive bay (one with front access, so the drive tray can extend). Gently slide the drive into the bay. Align the face of the drive so that it's flush with the front of your PC's case and secure the drive to the bay.

CABLE UP!

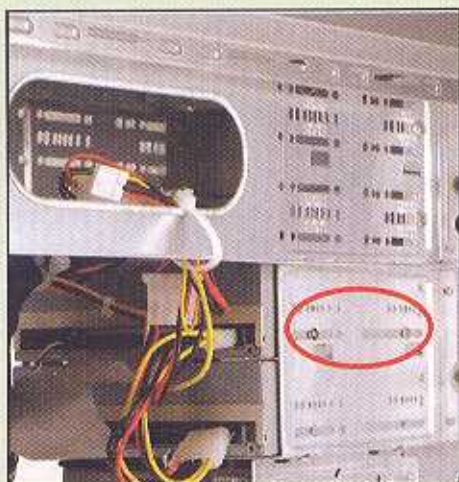
Once the drive is secured in the bay, all that's left is to connect the cables. Take a look at the ribbon cable that's plugged into the back of your existing optical drive. Nearly all these types of cables are

INSTALL A NEW OPTICAL DRIVE

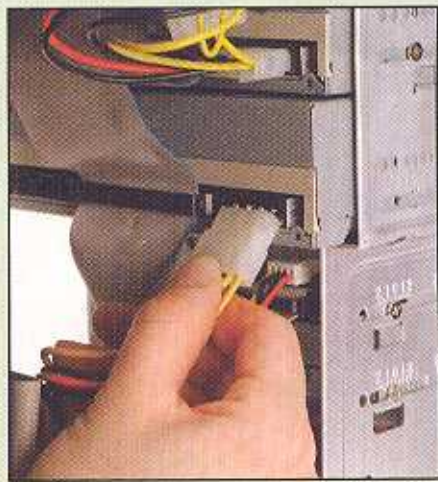
The EasyWay



1 Set the jumper on your new optical drive to configure it as the "master" device. If you're keeping your existing optical drive, set its jumpers to configure it as the "slave" device.



2 Slide the new optical drive into the drive bay and fasten it in place using four screws (two on each side).



3 Plug the IDE ribbon cable into the interface on the back of the drive, and then plug in the power connector.

designed for two devices, so you should see a second unused connector about midway down the cable (the other end of the cable will be plugged into your motherboard). If you're keeping your existing optical drive, unplug the IDE cable from the back of it and plug it into the back of your new drive. The cable is keyed so that it fits only one way.

Take the second connector (the one midway down the cable) and plug it into your existing optical drive. If you're not

keeping your existing optical drive, this second connector won't be used. Next, locate a spare power plug and plug this into the back of the new drive. You're almost finished!

Re-attach your PC's cover, insert all the cables you pulled out, and plug in the power cord. Power your computer back on. Once it's restarted, double-click on My Computer. You should see your new drive listed under the category "Devices With Removable Storage." ■