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How to Build a Desktop Computer From Scratch

by **Jack Gorman**

Introduction

So you want to build a desktop computer from scratch? With the general transition from desktops to laptops, the prices on desktop computers have taken a dive in recent years and the individual bits of hardware diving with them. However, desktop computers give you a wider array of options, including bigger hard drives and generally more powerful equipment for a smaller price. Of course, building your own gives you more control over the options, and will usually score you better parts. A bonus is once you learn how to do this, you will also never need to pay for servicing again. This article will go through the ins and outs of constructing your computer, from buying the parts to your first boot-up.

Instructions

Difficulty: Challenging

Things You'll Need

- [Motherboard](#)
- [CPU with fan](#)
- [RAM](#)
- [Computer case with power supply](#)
- [CD or DVD-ROM.](#)
- [Hard drive](#)
- [Monitor](#)
- [Speakers](#)
- [Windows XP or Vista, full edition](#)

Steps

1 Step One

Buy your parts. The quickest and most cost-efficient way to do this is to visit a local computer show. These shows are advertised on television and on the Internet. Take the shopping list provided above, and come home with everything. You'll want to purchase last year's parts, rather than the latest and greatest thing in order to save money. For the most part, the best thing costs twice as much as the next best thing, and then everything else costs roughly the same. Buy the second or third best part; it's usually an older model that's just as good as the newest, but maybe a tad slower or missing a feature you wouldn't use anyway. Purchase your CPU, RAM and motherboard all from the same place and ask advise when you do; this will avoid having incompatible parts.

2 Step Two

Install them all into the case. First, mount the CPU into the motherboard. Consult the directions before doing so, but this is a relatively easy process, and most CPUs can only be installed one way. Then, mount the fan above the CPU according to directions. Follow the directions precisely. If you don't, your CPU will overheat and your computer might catch fire. Finally, mount the RAM into its slot. Like the CPU, these can only be mounted one place, one way. Then screw the motherboard into the case. Then mount the hard-drive, DVD-ROM and the power supply, if it isn't already mounted.

3 Step Three

Hook everything up. First, connect your hard drive to the motherboard by hooking it into the primary IDE slot, followed by the DVD-ROM into the secondary spot. Your case will have several tiny wires that each need to be individually hooked into the motherboard. These wires will be labeled, but the slots will not be labeled directly on the motherboard. Consult your motherboard's manual; there will be a chart you can use as your guide. If you get one wrong, flip it over and try again; don't worry, you can't blow anything up if you get any of these wrong.

4 Step Four

Connect your power supply to everything in the computer. First, there will be a unique plug of 20 or 24 connections; connect this to your motherboard. You might need to purchase an adapter if it doesn't work right; some power supplies use 20 connections and some motherboard use 24, and vice versa. You can purchase this at any local computer store. There might be another motherboard plug which has four connections; find this and connect it if necessary. Next, connect power to the hard drive and DVD-ROM. Any of the remaining plugs should work for these purposes.

5 Step Five

Connect your monitor and speakers. Look for the appropriate plugs on the back of your computer. Then turn on your monitor and speakers.

6 Step Six

Plug in your computer and boot it up for the first time. You will need to enter the computer's setup, which is fairly easy to navigate. Change the settings to accommodate the hardware, if it hasn't detected the settings already. Reboot the computer with the Windows CD installed in the DVD-ROM. Follow the on-screen instructions to complete installation.

Tips & Warnings

This article provides you with a basic computer. You may want to add upgrades like a high-end video or sound card for games and movies, a CD or DVD burner or a firewire card to hook up video equipment. Simply follow the manufacturer's directions as to how to install these; once you've got your computer up and running, it's no big deal to add on and upgrade.

Make sure your initial hard drive is very large; for just a bit more money you can usually double your space. Installing new hard drives is a pain.

Build your computer with 4 GB of RAM or more; this is the cheapest way to keep your computer fast.

Do not work on your computer while it is plugged in. Ensure all power connections are unplugged before even opening your case.

Resources

* [Market Pro Computer Shows](#)

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