

### 3. Installation Equipment Required

Once you've purchased the components you require, the next step is to get some tools you're going to use for building your gaming computer. The tools you need are simple - they consist of screwdrivers (Philips and flat-head), flat-headed clippers, a flashlight and cable ties.

Screwdrivers are needed for the obvious task of installing components. Those clippers are required if you need to handle small components like jumpers. A flashlight is certainly needed to look at obscure parts of your computer case which are too dark. Finally, cable ties are very useful for organizing and securing your messy cables in the computer case so as to improve air circulation.



**Figure 13: A picture of a computer building toolkit**

Some folks I know go out to buy dedicated computer building toolkits with a wide assortment of screwdrivers and such - in my opinion, you may or may not need those, depending on your need. I think when you're building your first one or two PCs, there's no need for such equipment. When you get more experienced, then you might want to invest in such kits.

## 4. Installation Procedure

Ok, with the components you purchased in hand, along with the installation equipment by your side - you're now all ready to begin installing the hardware and software for your new gaming computer!

Let's look at an overview of the steps involved:

- Step 1: Lay Out All Components
- Step 2: Read The Manuals
- Step 3: Remove The Case Cover
- Step 4: Install The Power Supply Unit
- Step 5: Install The CPU
- Step 6: Install The Heatsink / Fan
- Step 7: Install The RAM
- Step 8: Configure The Motherboard
- Step 9: Install The Motherboard
- Step 10: Connect The Motherboard To The Case
- Step 11: Configure The Hard Drive
- Step 12: Install The Hard Drive
- Step 13: Install The Optical Drive
- Step 14: Install The Video Card
- Step 15: Install The Sound Card
- Step 16: Install The Display Monitor
- Step 17: Do A Post-Assembly Check
- Step 18: Boot Up The Computer
- Step 19: Configure The BIOS
- Step 20: Prepare The Hard Disk
- Step 21: Install The Operating System
- Step 22: Install Essential Software
- Step 23: Image Your Hard Drive.
- Step 24: Tidy Up
- Step 25: Test Your System

Holy cow, 25 installation steps? Well, not to worry. Just take each step one at a time and you will be fine. Remember, you will get better and better as you build more computers. The toughest part will be the first time – once you get past the initial “hump”, you'll get build more gaming computers and get more confident about the process.

## 4.1 Step 1: Lay Out All Components

The first step in the installation process is to lay out everything you've purchased on the floor. You need a large, flat, open space for this. The reason for laying out all your components are two-fold:

- It allows you to have an overall view and clarity as to which components you've installed and which you have not
- It serves as a mental check as to which components you have and which you don't. If you find you're missing any components at all, you need to go back to the seller and get those components.

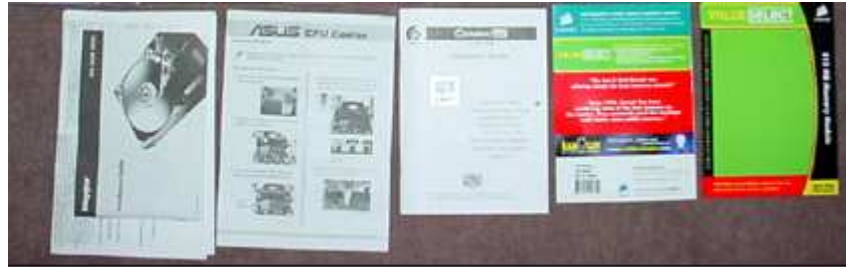


**Figure 14: Lay out all your computer components first**

Once those components are laid out, and you've checked that you've got everything you need and they all tally with what you've purchased, then we're ready to proceed to the next step.

## 4.2 Step 2: Read The Manuals

I cannot over-emphasize the importance of this step. Too many of us leap immediately into setting up the motherboard, CPU and all sorts of other stuff without reading up the manuals first. My advice to you is to read all the manuals you have - especially those for the motherboard, CPU and graphics card.



**Figure 15: Always read those PC component manuals first**

Reading the manuals is an important thing because it helps you understand your components a bit better. You'll also learn about limitations that each components has (e.g. temperature limits for the CPU), as well as best practices for taking care of those parts.

So do be patient, take a moment to read and understand those manuals before moving on to the actual installation process.

## 4.3 Step 3: Remove The Case Cover

Alrighty then. The next step is to take out your computer case and remove the case cover. You'll need to unscrew the screws that secure the case with your screwdrivers. If you have a good, solid case, this step should be a breeze.

Once the computer case has been removed, take a while to look inside the case. In particular, understand where the bays for the power supply unit, hard drives, optical drives and motherboard lie. Also take note of the various openings for ports (e.g. USB ports) and audio connectors. There should also be a connector to any LED lights on the case. Ok, that's all for this step ... let's move on.



**Figure 16: Removing the computer case cover**