How to Build Your Own Gaming Computer

A Step By Step installation guide to building your personal gaming computer

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Basics

Gaming Computers are the same as a regular personal computer, the only difference is a gaming computer can play more graphically demanding video games. Gaming computers are generally custom made due to many varieties of parts that can be installed. This instruction manual will help you install each component correctly step-by-step.

This process can be daunting at first. A good amount of time and research needs to go into finding what parts are compatible; however, once you have all your components picked, installation is very simple. This guide assumes that you have all your hardware available and ready to install.

Acronyms

Below is a list of acronyms that will be used throughout this guide.

- **ATA** – Advanced Technology Attachment
- **CPU** – Central Processing Unit
- **DIMM** – Dual Inline Memory Module
- **GPU** – Graphics Processing Unit
- **HDD** – Hard Disk Drive
- **I/O** – Input and Output
- **MOBO** – Motherboard
- **PSU** – Power Supply Unit
- **RAM** – Random Access Memory
- **SATA** – Serial ATA

Hardware

The Hardware listed below are required:

- CPU
- MOBO
- RAM
- HDD
- PSU
- Computer Case
- GPU
- Thermal Paste
- Philips Screwdriver

Icons

Caution

Tips

Assembling the Parts

It is essential that you have each component before assembling your computer and very important that you have read each piece of your hardware's user manuals to learn where parts are located.

1. Find a stable solid surface, preferably a desk or a non- carpeted floor, to assemble the parts.

2. Gather all the components and lay your case to the side as we will come back to that later.

Assembling the Motherboard

Your mobo is the most important part of your computer. Almost all your components are connected to it. It is easier to assemble some of the components into the mobo, before installing it into the case.

1. Lift up the lever on the MOBO to release the CPU locking mechanism.

2. Gently set the CPU chip into the socket and close the locking mechanism to set the CPU in place.

3. Apply the thermal paste directly on the CP

Figure 1 Applied the Thermal Paste

4. Place the CPU cooler on top of the CPU, screw in the CPU x-clamp to the MOBO and attach the CPU fan onto the CPU cooler.

5. Clip in the RAM card into the ram bay

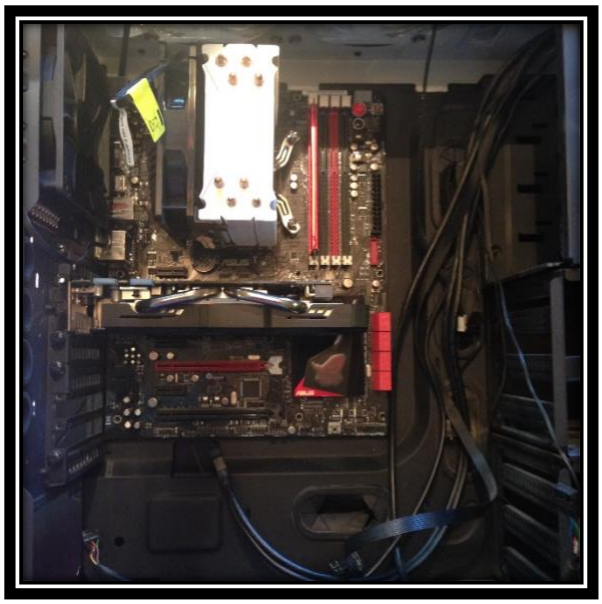

Figure 2 MOBO, RAM and CPU cooler installed

6. Clip in the GPU into the GPU bay

7. Gently set and screw the MOBO into the case.

8. Clip the wires from the fan and attach them to the MOBO that is labeled CPU fan.

Assembling the PSU, Hard Drives, and Disk Drives

1. Set the PSU at the bottom of the case with the fan facing down and use the screws provided by the case manufacture to secure it in place.

2. Drape the cables out to the other side of the case. We will come back to this later.

Figure 3 Inserting the HDD

3. Remove and attach the HDD to the hard drive capsule.
4. Insert the capsule into the case.
5. Screw the SSD onto the capsule.
6. Insert the capsule into the case.
7. Slide the disk drive into the disk drive slot.

Wiring Everything Together

As Discussed previously, the PSU provides power to all of the components. The wires that we had set to the other side of the case, we are now going to connect them to the appropriate hardware.

1. Select the 24 prong cable and bring it to the other side where the MOBO is located.
2. Securely attach the prong to the designated power outlet on the MOBO.
3. Take the SATA cords provided by your case manufacturer and attach them to the hard drives and disk drives.
4. Attach the opposite end of the SATA cord to the MOBO.
5. Choose any cable labeled SATA that is furnished by the PSU and connect them to the hard drive and disk Drives.

6. Take the 4 prong male adapter of the PSU and attach them to the 4 prong female adapter from the case fans.

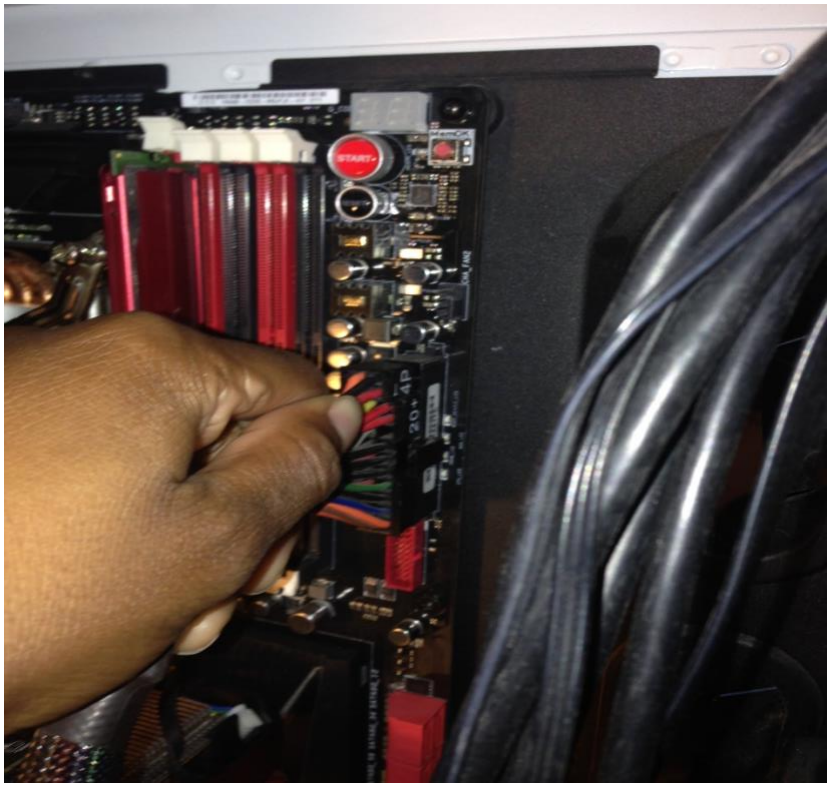

Figure 4 Attaching the MOBO power cord

7. Neatly wrap remaining cords and close the case.

8. Press the power button on the computer case. You should see the lights come on and the fans turning.

Congratulations, you have built your very own personal gaming computer. You can now connect your mouse, keyboard, and monitor and install your preferred operating system.

FAQS

How much do I need to spend to build me a gaming rig?
It depends on what you plan to do with the computer. You could build a decent rig for about $800, or more if you want top of the line hardware.

What parts should I buy to build my PC?

It depend on what parts are compatible and what kind of performance you're looking to get out of the PC. I recommend going to sites like pcpartpicker.com which is a very useful site for piecing together builds and providing price quotes.

Where can I buy computer hardware?
newegg.com, amazon.com and ncix.com to name a few.

Can I add hardware to my computer later on?
Absolutely, that is what so great about custom builds, you can add or take-a-way hardware whenever you're ready to upgrade.

Help, my computer won't turn on!
Well did you follow all my steps? Make sure all the wires are connected and the PSU is plugged into the wall.

So, now that I turned the computer on, what should I do now?
Assuming you have already installed your operating system and all your drivers, go ahead and install steam. This is a gaming computer after all.