BUILDING A PC

USER GUIDE

FAN COOLING EDITION (2022)

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BEFORE YOU START...

Make sure that you have the following components to build a PC tower. It is essential that you have at least some version of these as forgetting even one component will result in the PC being unable to load up correctly or at all.
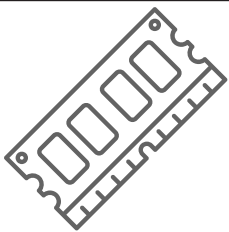
CASE

Make sure that your case is able to fit the motherboard that you are trying to put into it. A full tower case should be able to contain any sized motherboard. Also, make sure that your case is wide enough to fit in the GPU.

Make sure that your motherboard is able to fit inside your case. There are four different types of motherboard sizes to be aware of (listed from smallest to largest): Mini-ITX, Micro-ATX, ATX, E-ATX. Also, make sure that your motherboard is specificed to work with your CPU.
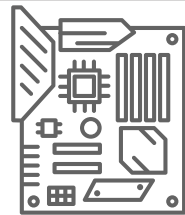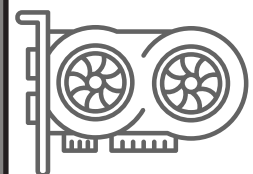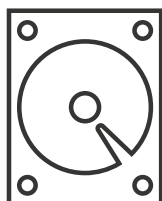
MOTHER-BOARD

RAM

Make sure that your motherboard is compatibile with the RAM stick that you give. Factors to look for include its type (DDR4 & DDR5) and the speed limit.

Make sure that your GPU is able to fit into the case itself. It doesn't matter if you use an AMD / NVIDIA / INTEL GPU on a motherboard.

GPU

STORAGE

Be considerate of what type of storage unit to use. You can use an SSD for faster storage at the cost of being very expensive. You can also use a Hard Drive for a cheaper expense at the cost of slower speeds.

Make sure that there is enough wattage being supplied to all parts of the tower when picking out a specific wattage. The higher the wattage you can go, the higher the performance!
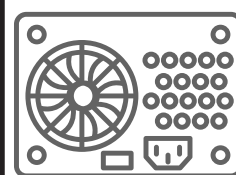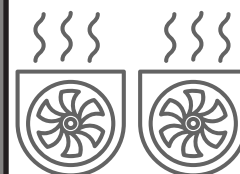
POWER SUPPLY
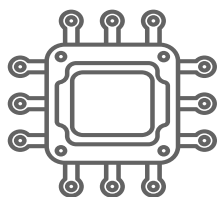
CPU

Make that the CPU is able to be inserted into the motherboard. Nowadays, manufactures provide different kinds of motherboards for different brands. There are even ones that are tailored to a specific CPU socket.

Make sure that your PC case has a decent amount of fans to properly cool off your PC. The higher amount of fans the better!

INTAKE & EXHAUST FANS

For more additional information about the compatibility of various computer parts, be sure to visit https://pcpartpicker.com/ before picking about any parts that might not be compatible with one another. If unable to, please consult a PC expert/technician instead.

Even though this is just a general guide to building a PC tower, make sure that you also have an external monitor alongside an HDMI cable to verify that the PC actually boots up. Other than that, you are ready to begin!

HOW TO BUILD A PC
STEP BY STEP

NOTE: Before you begin assembling your PC parts together, it is highly advised that you use a Philips-head screwdriver to make screwing in parts a lot easier.

## PART 1: SETTING UP THE MOTHERBOARD
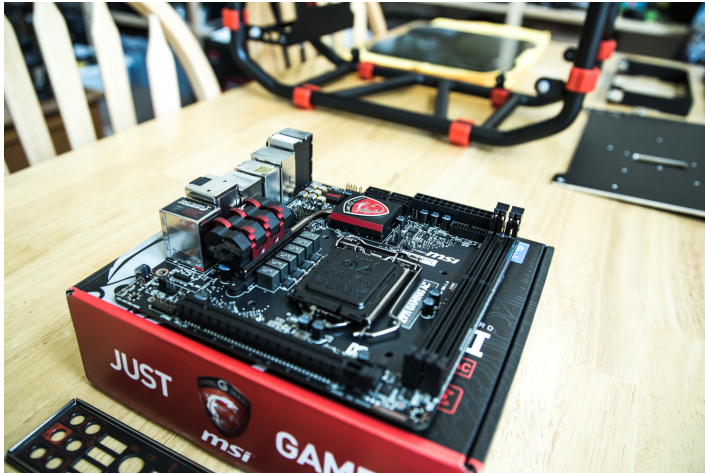
First, Take the motherboard out of the box that it came in and place it on top of somewhere safe. This place can be a clean desk mat or simply the surface of the motherboard box.

Next, take out the CPU out of its original packaging and put it inside the motherboard's CPU socket. To do this, lift up the little lever on the side of the socket to remove the shield and gently place the CPU in accordance to the bottom-left triangle.
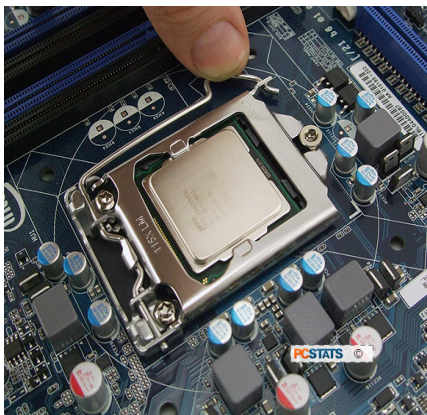
Then, unscrew the retention clips that are present outside of the CPU socket. This is necessary in order to mount the CPU fan cooler on to the holes that were covered by the clips.
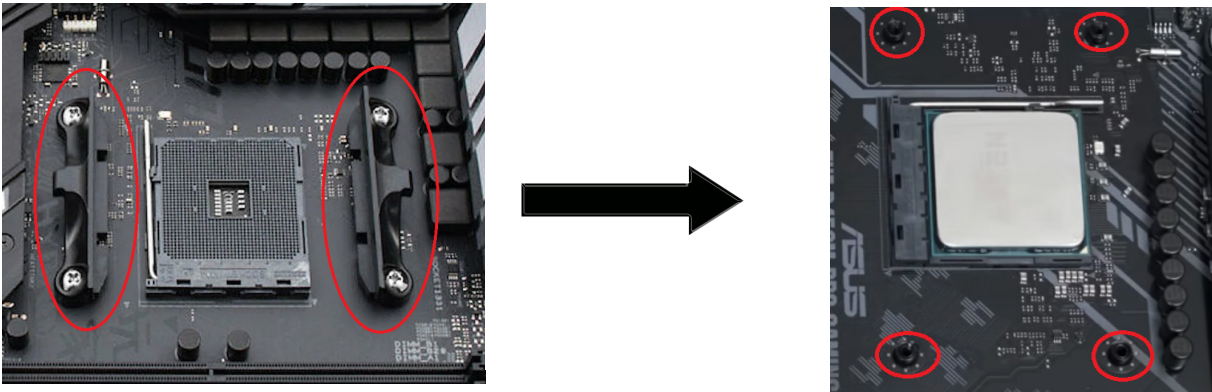
Afterwards, take out the CPU fan cooler (doesn't matter if it is stock or from third party, such as Noctua) and screw it into the four holes. Make sure that you don't screw it in too hard or else the motherboard will break. Also don't worry about applying thermal paste if you are using a fan that already has it applied. If not, be sure to that before proceeding. At this point, it wouldn't hurt to plug in the power connector attached from the fan onto the labled "CPU FAN" connector on the motherboard.
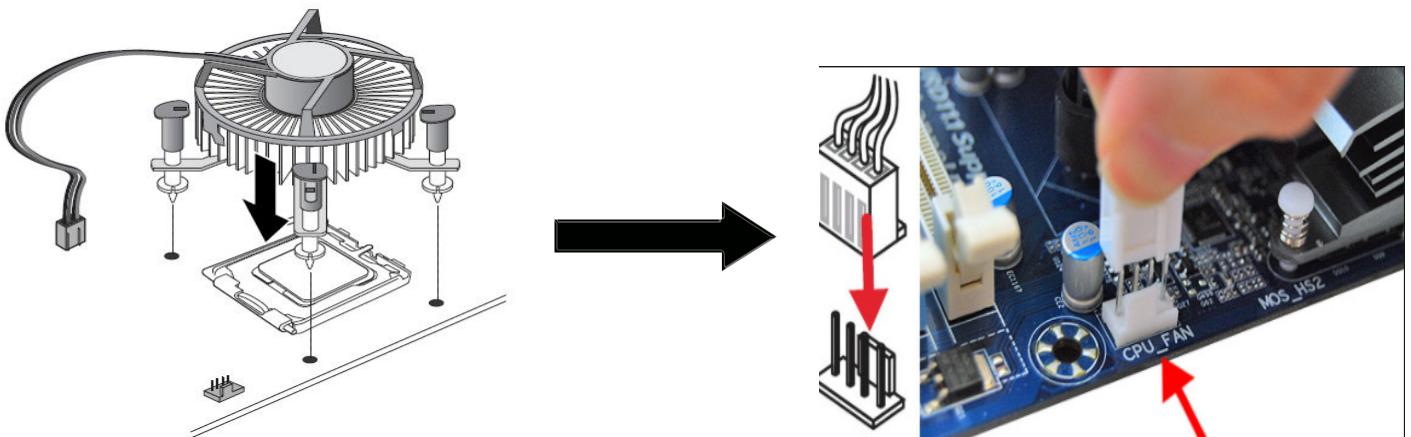

Following the completition of the cpu cooler installation, we'll need to install the RAM sticks onto the motherboard. Before doing that, make sure you know where exactly each stick should be placed within the slots. For instance, if there are two sticks, then they would usually be in slots 2 & 4 as indicated on the motherboard. Double check the motherboard's manual section about RAM sticks just to be sure. Anyways, unclip the RAM slot and use the notch on the bottom of the stick to lighlty press it into the slot position until the clips close themselves.
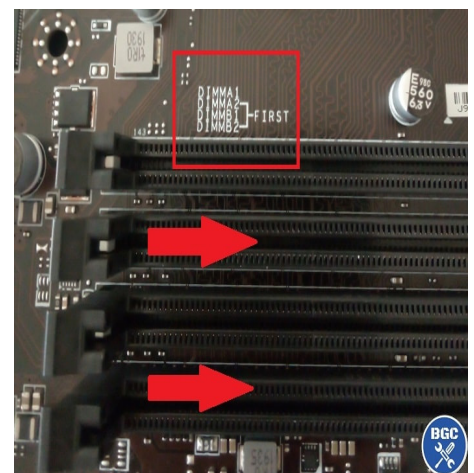
Before mounting the motherboard directly onto the case, it would be a good time to strip of the panels of your case and insert the I/O shield onto the rear of the case. You don't need to screw it in as you can simply push it into that big empty rectangle spot with the shield's edges jutting out. The design might also give you a hint as to what side should be sticking out from the rear.

Finally, we would need to screw down the motherboard directly into the case itself. First of all, make sure that there are motherboard standoffs on the case itself. These are essentially little knobs that push the motherboard a bit further from the insides of the case. If not, be sure to do so in the appropriate holes as indicated by the case itself. Afterwards, gently insert the motherboard into the case. Be sure that it is placed in a way were the I/O ports are able to show themselves just behind the I/O shield. Then, look at the standoff circles on the motherboard as indicated and lightly screw them in to ensure that it is tightly on there.
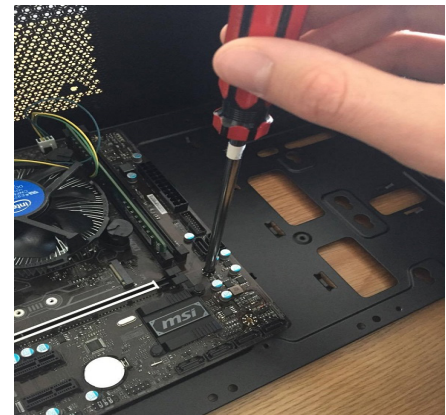

PART 2: INSTALLING REMAINING PARTS

If not using an APU, the next thing we need to install is a GPU. This step is relatively similar to installing RAM, but you would only need to insert it into the PCIe slot. Don't forget to remove a slot on the side bracket prior to installation so that it can fit in! Afterwards, screw in the GPU into the bracket.
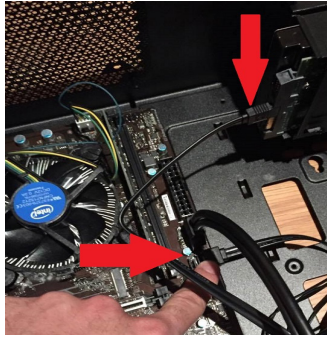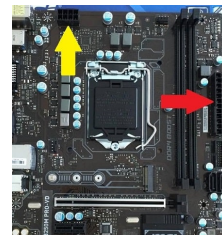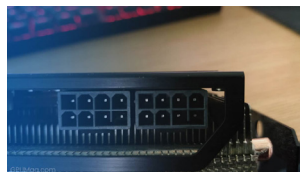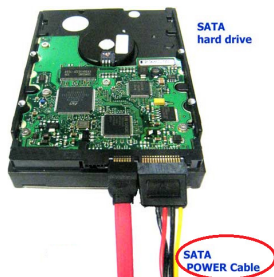
Next on the chopping block is the storage unit. Depending on the case, you might end up finding yourself screwing it horizontally or vertically. Either way, you need to screw its four corners onto the surface that it is attached to. At this time, you should use the SATA port on the unit to connect it to the motherboard.

Before we move onto the last part, we need to set up the intake & exhaust fans. When installing each fan, take notice of the arrows that are on the top side. These are to let you know of which direction that the fan is blowing air out of. To install intake fans, you can screw them in the case's front panel. To install exhaust fans, you can install them to the rear or even top of the case. Afterwards, plug in the fan connectors onto the ones on the motherboard. If there aren't any more fans onto the motherboard, you can use a fan splitter for two or more fans.
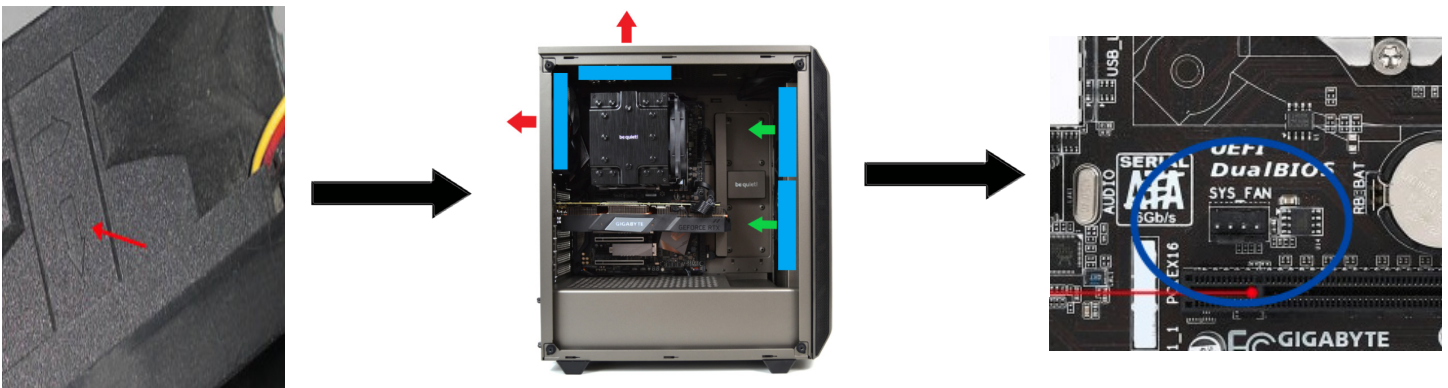
The last component that we need to set up is the power supply. Simply, screw it to the rear of the case connect its extending cables to the power ports on the storage unit, GPU, and motherboard (Pictures displayed below in the following order..

THE END