

Experimet No. : 01

Date – / / 2020

Aim :

Name :

Roll no. :

Procedure :

Step 1: Unplugging



The first thing you do, is unplug every cable that's plugged in to your computer. That includes the following cables:

- Power ,USB, Firewire, Mouse, Keyboard , Internet , Ethernet , Modem ,AM\FM Antenna , Cable TV , etc...

So just unplug **every** cable from your computer.

Step 2: Outer Shell/Casing

Now that your computer is fully unplugged, move your PC to a clean work space, preferably a carpet. The carpet is better than tile, because screws and other small parts will roll around.

1) First off, unscrew the four screws on the back of the computer. On most computer cases, there will be large knobs that you can unscrew by hand or by screw driver on the back-right side of the computer. The left side has small screws because on that side you can't access much on the inside.

Once the screws are removed, you can remove the side panels.

2) On most computers, they just slide off. Start with the left side panel (the side that once had the knobs), slide it towards the back of the computer. Now you can remove the left panel. Just like the other one, slide it towards the back of the computer.

Step 3: Outer Shell/Casing (cont.)



In the last step we removed both side panels. In this step, we will be removing the front and top panels.

1) Just like the side panels, the top panel slides off. Also like the side panels, the top one slides toward the back of the computer. The front panel clips on to the metal frame with four tabs, so you must push them in and slide the whole panel forward.

Step 4: System Fan

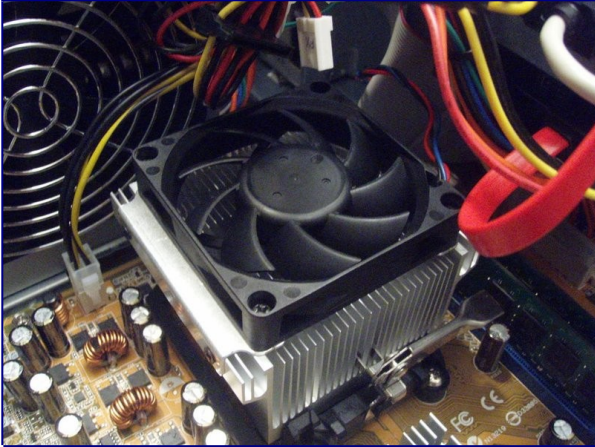


Now that the case is off, begin to remove the internal components.

1) Most computers have two fans: the system fan, the one blowing air into the computer, and the CPU fan, the one blowing air onto the CPU heat sink. We will start by removing the system fan first. It is located at the back side of the computer, the side with all the component plugins.

2) Unplug the fan from the motherboard. You can find the plug by following the wire from the fan. It should be labeled "SYS_FAN1". Next, you will have to unscrew the fan from the outside. You should now be able to lift the fan out of the PC.

Step 5: CPU Fan



Now that the system fan is out, we can remove the CPU fan.

The CPU fan is located right on top of the CPU heat sink, which is a large piece of metal with fins on the top. The CPU fan plugs into the motherboard in an awkward place, that is hard to access. But just follow the wires and you should easily find it. It is labeled "CPU FAN1". To remove the fan from the heat sink, remove the four screws securing it in place.

Step 6: Power Supply



The power supply manages all the power for the machine.

The power supply is a large metal box located at the upper-back part of the computer. They sometimes come with an on/off switch that is accessible from the back of the computer. The main power cord also plugs into the back of the power supply.

The power supply supplies power to every component in a computer, therefore it has the most wires out of every other component in the computer. The first thing we should do is unplug every wire coming from the power supply. The list below is every thing that I had to disconnect:

- Motherboard (very large connector/plug)
- CD/DVD drive[s] power
- Internal hard drive power
- Portable hard drive slot power

Once everything is unplugged, unscrew the four screws holding the power supply in place, on the back of the computer. Next, push the power supply from the outside, then lift it out.

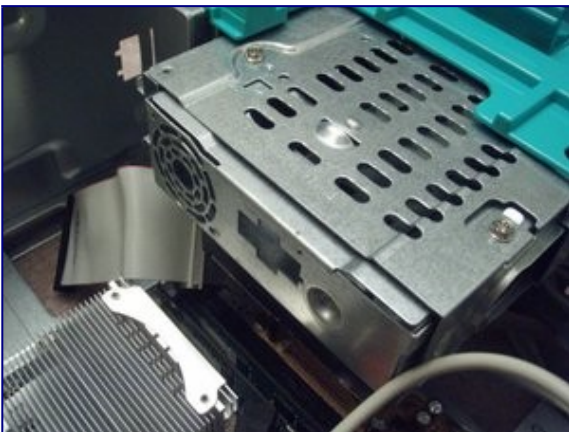
Step 7: CD/DVD Drive[s]



If you have one CD/DVD drive, but you might have two. If so, follow this step twice! The CD/DVD drive is one of the easiest components to remove. First, unplug the ribbon from the back of the drive. Once that is completed, pull on the tab securing the drive in place, then push it out from the inside.

If you don't have a second drive, there should be a flat piece of metal covering the drive slot. Follow the inscribed instructions to remove it.

Step 8: Hard Drive ; Portable Hard Drive Slot



In order to remove the hard drive, you must remove the portable hard drive slot first.

First off, de-attach the connector at the back of the slot, and unplug the other end from the motherboard. Also unplug the SATA cable from the motherboard and the hard drive. The portable hard drive slot is secured the same way the CD/DVD drive is, with a tab. Pull on the tab, then slide the slot out.

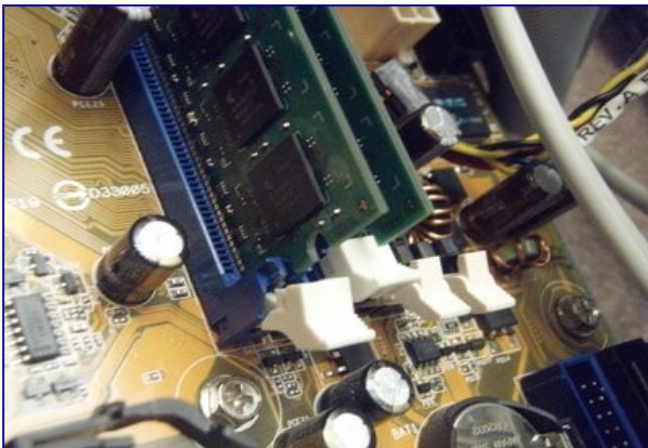
To remove the hard drive from the side of the slot, unscrew the four screws securing it in place. You must be very careful to not drop the hard drive, as it is very delicate!

Step 9: Connectivity Center Cables



The connectivity center is the area on the front of the computer where there is many input sections, like usb, firewire, microphone, headphones, video, etc.. We won't remove the whole connectivity center in this step, but we will unplug all the cables coming from it. Do that (unplug all cables), then unplug the wires leading from the power button, hdd light, and power light.

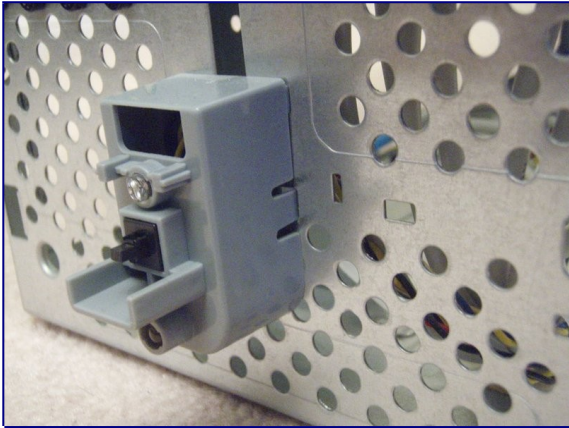
Step 10: RAM (Random Access Memory)



RAM allows for the near instantaneous transfer of information to and from the CPU.

More RAM you have, the faster your computer runs. Most computers have 4 RAM slots, and two RAM chips. To remove the RAM, push down on both tabs holding the RAM in place, which are located at both ends of the RAM.

Step 11: Power Button, Power LED + HDD LED



The power button, power LED, and hard drive LED are all within a plastic "chasis".

- 1) There is a zip tie holding the wires/cables for the front connectivity center and front power button/LEDs. Cut it.
- 2) To remove the chasis, press in on the tabs that are located on the chasis' side. Once the tabs are being pressed in, pull the whole chasis out of the computer.
- 3) To remove the LEDs from the "chasis", push them from the front with a screw driver. To remove the button, you will need to push it from the back, the side with the wires. For clarification, see the pictures.

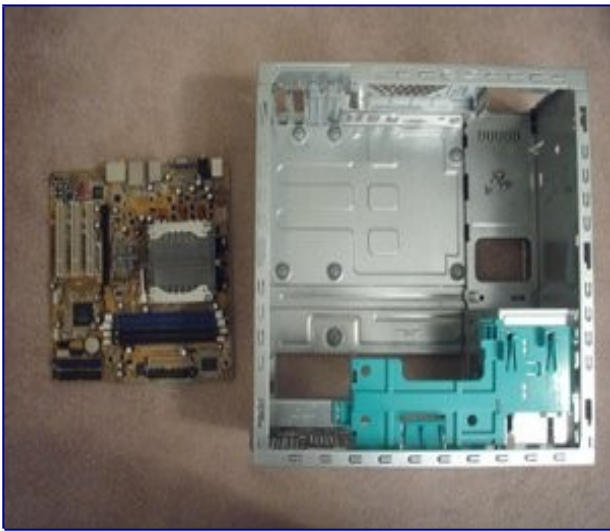
Step 12: Connectivity Center



Not every computer has a connectivity center, but most new ones do.

"The connectivity center is the area on the front of the computer where there is many input sections, like usb, firewire, microphone, headphones, video, etc.". But this time, One should remove the whole component, not just unplug the cables\wires!

First thing, unscrew the single screw holding it in place. There might be a different amount of screws, in different locations on your computer, but just unscrew them all! Once the screw[s] are removed, the whole component should slide into the inside of the computer, which can then be removed.



Step 13: Motherboard

The motherboard is well, the mother of the computer! It is what links every component in the computer together.

The motherboard links every component in the computer together. The CPU, RAM, and expansion cards are attached directly to it, and every other part of the computer is in one way or another attached to it.

The motherboard has seven screws holding it to the frame, which are indicated by large white circles around them. Remove those seven, then lift the motherboard out of the frame.

Step 14: Done!



In this step, let us have an overview of every component you get out of a computer with a motherboard.

Case:

- Metal Right Panel
- Metal Left Panel
- Plastic Front Panel
- Plastic Top Panel
- Metal & Plastic Frame

Hardware:

- Hard Drive
- CD/DVD Drive
- Power Supply
- Card Reader
- Expansion Cards
- RAM Chips
- Connectivity Center

Cables\Wires:

- SATA Cable (Hard Drive to Motherboard)
- Portable HDD Dock and Wires (Power and Data from Portable HDD to Motherboard)
- Accessory Wire (Connected Card Reader to Motherboard)
- Drive Ribbon (CD/DVD Drive to Motherboard)

Miscellaneous:

- 33 Screws
- Drive Slot Cover
- 2 Expansion Card Slot Covers
- Plastic Piece (I referred to it as a "chasis" for a button and LEDs in step 13)
- Large System Fan
- Small CPU Fan
- Portable HDD Slot

Conclusion: