

PC Assembly Guide

This playbook provides a detailed guide on assembling the various components of a desktop computer. It includes essential steps for component selection, assembly, and cable management.

Step 1: **Preparation**

Gather all necessary components such as the motherboard, CPU, RAM, graphics card, power supply, storage, case, and any additional peripherals. Also, prepare a clean workspace with sufficient lighting.

Step 2: **Case Prep**

Open the PC case and remove any panels or accessories that may obstruct the installation of components. Install standoffs for the motherboard if they are not pre-installed.

Step 3: **Motherboard Setup**

Place the motherboard on a non-static surface. Install the CPU, apply thermal paste, and attach the CPU cooler. Insert the RAM into the appropriate slots and install the I/O shield to the back of the case.

Step 4: **Motherboard Installation**

Carefully place the motherboard into the case, aligning it with the standoffs. Secure it with screws and ensure no cables are trapped underneath.

Step 5: **Power Supply**

Install the power supply unit (PSU) into the case, making sure that the fan is facing the correct direction for ventilation. If modular, attach only the necessary cables for your build.

Step 6: **Storage Devices**

Install any hard drives or solid-state drives (SSDs) into their respective bays or mounting areas, and secure them with screws. Connect them to the motherboard using SATA cables and to the power supply with SATA power connectors.

Step 7: **Graphics Card**

Insert the graphics card into the appropriate PCIe slot on the motherboard. Secure it to the case with screws and connect any required power connectors from the power supply.

Step 8: **Cable Management**

Route and organize cables neatly to ensure proper airflow within the case. Use zip ties or Velcro straps to bundle cables together and avoid obstructing any fans or components.

Step 9: **Final Checks**

Double-check all connections and fastenings. Make sure every component is properly seated and secured, and all cables are connected to the right headers and power sockets.

Step 10: **Power On**

Close the case panels, connect your monitor, keyboard, mouse, and power cable. Turn on the power supply switch and press the power

button on your case to boot up your new PC. Enter the BIOS to ensure all components are recognized and configure settings as needed.

General Notes

Static Safety

Always work on a non-static surface and consider using an anti-static wrist strap when handling components to prevent damage from electrostatic discharge.

Component Handling

Handle each component by the edges to minimize the risk of damage. Avoid touching its connectors and circuitry.

Thermal Paste

When applying thermal paste to the CPU, a pea-sized amount is typically sufficient. Excess paste can cause poor thermal performance.

BIOS Update

Check motherboard manufacturer's website for the latest BIOS updates before beginning the assembly. An updated BIOS can ensure hardware compatibility and stability.