



# Computer Assembly Procedures

Building a computer from scratch is an exciting and rewarding process. This guide will walk you through each step, from gathering components to troubleshooting. With patience and attention to detail, you'll have a custom-built PC in no time.



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# Introduction: Overview of the Process

1

## Planning

Research and select compatible components for your build.  
Consider your budget and intended use.

2

## Assembly

Follow a step-by-step process to put components together. Pay attention to proper connections.

3

## Setup

Install the operating system and necessary drivers. Test all functions thoroughly.







# Gathering the Necessary Components

1

## Core Components

CPU, motherboard, RAM, and storage are essential. Choose compatible parts for optimal performance.

2

## Power and Cooling

Select an appropriate power supply and cooling solution. Consider future upgrades when choosing.

3

## Peripherals

Don't forget the case, monitor, keyboard, and mouse. These complete your build.

# Setting Up the Workspace

## Anti-Static Precautions

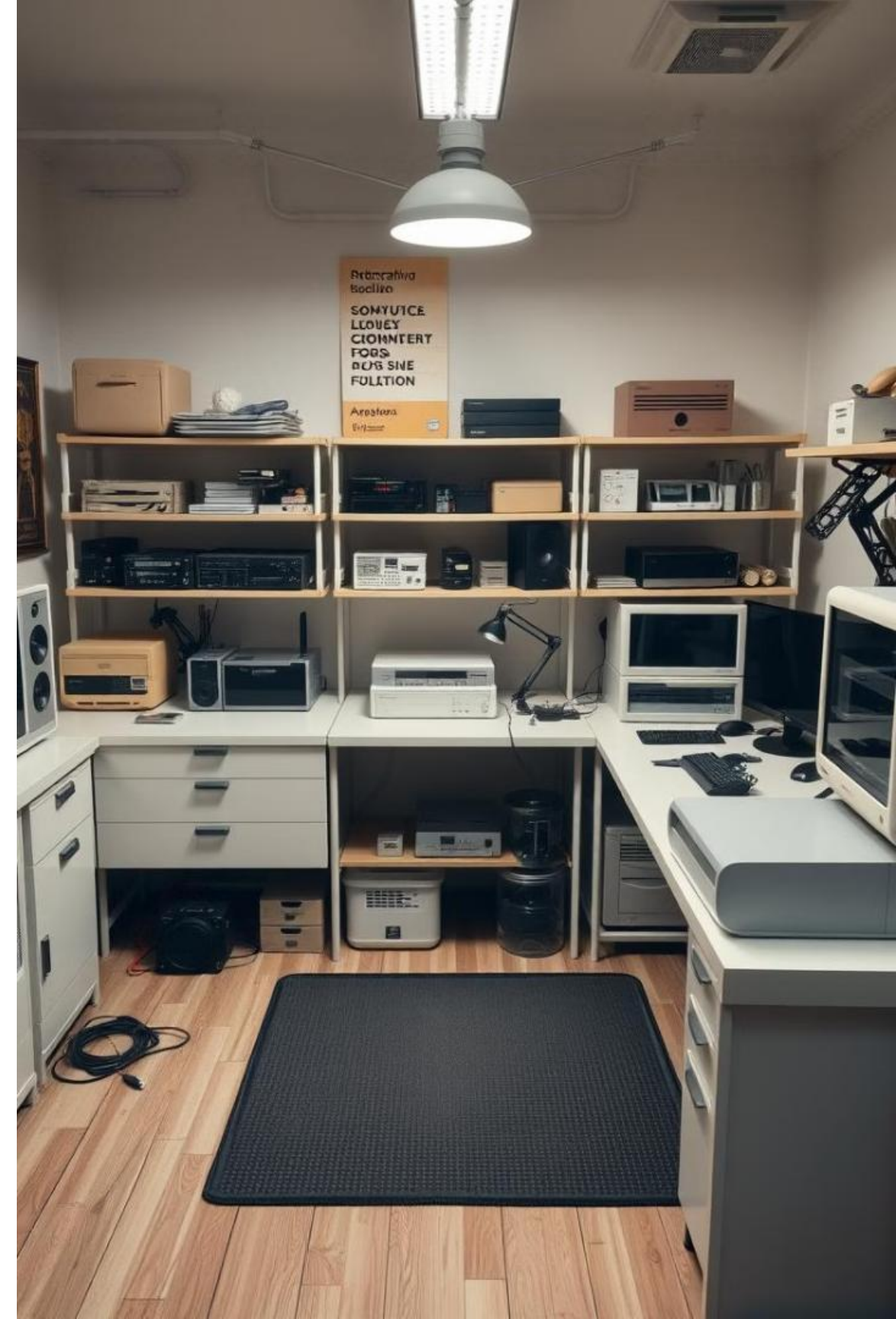
Use an anti-static mat and wristband. These protect sensitive components from electrostatic discharge.

## Proper Lighting

Ensure good overhead and task lighting. Clear visibility helps prevent mistakes during assembly.

## Tool Organization

Keep screwdrivers, thermal paste, and zip ties handy. An organized workspace speeds up assembly.







# Installing the Motherboard and Processor

1

## Prepare the Case

Install standoffs in the case. These provide proper spacing for the motherboard.

2

## CPU Installation

Carefully place the CPU in the socket. Align notches and avoid touching pins.

3

## Secure Motherboard

Lower the motherboard onto standoffs. Secure with screws, being careful not to overtighten.

# Installing RAM and Storage Devices

## RAM Installation

Align RAM with slots. Press firmly until it clicks into place.

## SSD Mounting

Secure SSD in drive bay. Use proper screws to prevent vibration.

## HDD Connection

Connect SATA and power cables.  
Ensure snug fit for reliable data transfer.

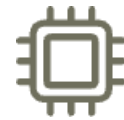


# Connecting the Power Supply



## 24-Pin Connector

Connect main power to motherboard. Ensure it's fully seated and locked.



## CPU Power

Locate and connect CPU power. Usually 4 or 8-pin connector near CPU socket.



## SATA Power

Connect power to storage devices. Use cable management for neat appearance.



# Connecting Peripheral Devices

| Device         | Connection Type  | Notes                               |
|----------------|------------------|-------------------------------------|
| Monitor        | HDMI/DisplayPort | Connect to GPU if available         |
| Keyboard/Mouse | USB              | Use USB 2.0 ports if available      |
| Speakers       | 3.5mm jack       | Color-coded for easy identification |





# Installing the Operating System



1

## BIOS Setup

Enter BIOS and set boot order. Ensure installation media is first priority.

2

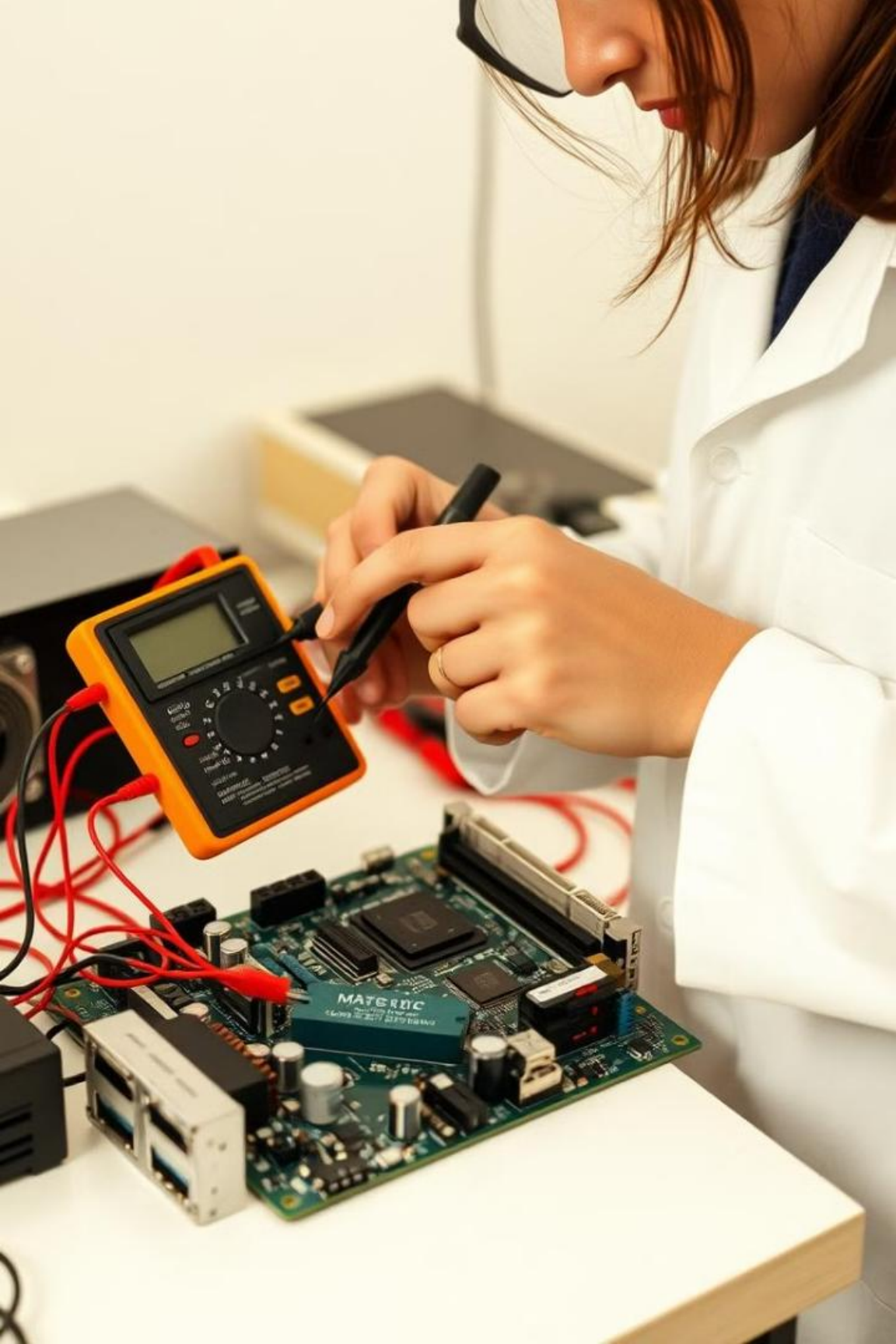
## OS Installation

Follow on-screen prompts to install OS. Choose custom settings for more control.

3

## Driver Updates

Install latest drivers for all components. This ensures optimal performance and compatibility.



# Troubleshooting and Problem-Solving

1

## No Power

Check all power connections. Ensure PSU switch is on and outlet is working.

2

## No Display

Verify monitor connection and power. Reseat RAM and graphics card if necessary.

3

## Boot Errors

Listen for beep codes. Consult motherboard manual to interpret and resolve issues.