

JOE'S TECH

BIOS & UEFI Basics

Safe settings, boot order, XMP/EXPO, updates and recovery.

Use this guide as a safe starting point. Back up important data before repairs, and disconnect power before opening a computer.

Before changing anything

- Photograph current settings.
- Connect stable power. Never interrupt a firmware update.
- Download firmware only from the exact motherboard or laptop support page.

Common settings

Boot order

Select the drive containing Windows or Linux. USB should usually be temporary for installation or recovery.

XMP/EXPO

Enables the memory kit's rated profile. If instability appears, disable it and retest.

Secure Boot and TPM

Needed for some Windows 11 security features. Changing them can affect encrypted drives.

Fan control

Use conservative curves first. Confirm each fan responds before saving.

Recovery

- Use Load Optimized Defaults when a setting prevents booting.
- Desktop boards may have a clear-CMOS method; follow the board manual exactly.

When to stop

Stop and seek professional help if you smell burning, see damaged power connectors, find liquid damage, or are unsure about working around electrical components.