

ULTIMATE PC GAMING OPTIMIZATION KIT

PRO EDITION • Practical performance tuning, troubleshooting & tracking

Make informed changes. Measure results. Keep what works.

A hands-on guide for Windows PC gamers who want a cleaner setup, steadier frame rates, and a repeatable way to diagnose performance problems.

Digital guide • Worksheets included separately • No guaranteed FPS claims

Start Here

This kit helps you diagnose performance issues methodically instead of applying random “FPS boost” tweaks. Results depend on CPU, GPU, RAM, storage, drivers, game engine, resolution, and background activity.

IMPORTANT: No setting guarantees more FPS on every PC. Change one variable at a time, record the result, and reverse any change that causes instability or worse performance.

Recommended workflow: (1) record a baseline, (2) identify the symptom, (3) change one setting, (4) repeat the same test, and (5) keep or revert the change.

1. Establish a Reliable Baseline

Restart the PC and allow startup activity to settle. Close unnecessary launchers, browser tabs, downloads, recording tools, and overlays for the test. Use the same game scene, route, save, resolution, graphics preset, and test duration each time. Record average FPS, 1% low if your tool reports it reliably, visible stutters, CPU/GPU temperatures, RAM and VRAM use. Repeat the test twice.

Average FPS describes general frame rate but can hide freezes. Frame time is the time needed to render a frame; uneven frame times often feel like stutter. 1% lows estimate slower moments, but measurement methods vary by tool. Compare results only when using the same tool and method.

Example: a game may average 90 FPS but freeze when entering an area. Possible causes include asset streaming, storage, memory pressure, shader compilation, or network activity—not simply graphics quality.

2. Windows Setup: Safe, Reversible Changes

DISPLAY AND POWER

- Settings → System → Display → Advanced display: confirm the intended monitor refresh rate.
- Settings → System → Power: choose a suitable performance mode when gaming, if available. Test laptops while plugged in.
- Settings → Gaming: review Game Mode and test it enabled; behavior varies by system.
- Settings → System → Display → Graphics: where supported, select the high-performance GPU for the game.

BACKGROUND ACTIVITY

- Task Manager → Startup apps: disable only apps you recognize and do not need at startup.
- Pause large downloads or cloud sync during testing when practical; do not permanently disable security protection.
- Check Task Manager for sustained CPU, memory, disk, or GPU use from an unexpected process.
- Keep enough free storage for updates, game files, shader caches, and temporary files.

UPDATES

- Install Windows and GPU updates through official Windows, NVIDIA, AMD, or Intel support channels.
- Create a restore point before major system changes when available.
- Avoid unofficial driver packs and unknown “debloat” scripts.
- If an issue began after an update, check official release notes and consider a supported rollback.

AVOID

Do not disable Defender, firewall protection, Windows Update, or essential services to chase FPS. Do not delete random system folders, run unknown scripts, or apply registry tweaks you cannot explain.

3. Diagnose the Bottleneck

Observe GPU utilization, CPU utilization per core if possible, RAM, VRAM, temperatures, and frame time during the same repeatable scene. Total CPU usage can mislead: one saturated game thread may limit performance while overall CPU usage looks moderate.