



**WARZONE**  
**CONTROL**

# USER MANUAL

Launcher, optimizer and monitor for Warzone

**Version 1.21.36 · Updated: October 20, 2026**

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# Contents

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1. Getting started
  1. Installation (one time only)
  2. Opening the app
  3. The system tray
2. The main window
3. Home
4. Optimization
  1. Optimize and profiles
  2. BIOS version
  3. BIOS guides
  4. RendererWorkerCount
  5. PC balance
  6. Tools
5. Lightweight Windows
6. Live
  1. Performance panel
  2. Route quality to the server
  3. What affects your performance
  4. Dashboard mode and overlay
  5. Details and streaming
7. Analyzer
  1. Recording a capture
  2. Reading a capture
  3. Compare, delete and export
8. Help
  1. Updates
9. Troubleshooting
10. Security and privacy
11. Contact and credits
  1. Did you like WZ Control?



WZ Control is a launcher, optimizer and performance monitor for **Call of Duty: Warzone** on Windows. It checks your PC, applies the settings that help the game (with a backup so you can undo them), shows you live what's happening while you play and records captures so you can compare before and after each change.

This manual covers version **1.21.36** (October 20, 2026) and is updated with every version of the app. You can download it as a PDF with the **Download PDF** button.

## Getting started

### Installation (one time only)

1. Unzip the `WZControl` folder wherever you like (for example `C:\WZControl`).
2. Double-click `Instalar.bat`. It asks for administrator permission and installs everything in one step: Python and its libraries, **.NET 10**, **PawnIO** (the driver used to read sensors), **PresentMon** (measures FPS) and **LibreHardwareMonitor** (temperatures). Anything you already have is skipped.
3. **WZ Control** shortcuts are created on the Desktop and in the Start menu, and they always open the app **as administrator**.

### Opening the app

- Open **WZ Control** from the shortcut. Windows will ask for administrator permission: it's needed to measure FPS and apply settings.
- The app runs **without a console window** and leaves its icon in the system tray, next to the clock. If you don't see it, it's under the ^ hidden-icons arrow.
- If the app is already open, the shortcut just brings the existing window to the front: two windows never open.
- **The first time**, a **getting started tour** guides you through 6 steps: check your hardware, measure your controller, analyze your PC, optimize, lighten Windows and monitor your results. You can skip it and replay it anytime from **Help**.

### The system tray

- **Double-click** the icon: opens the window (a single click does nothing).
- **Right-click**: Show / Hide the window, turn the **overlay** on or off, **Open WZ Control when Windows starts** and **Quit WZ Control**.
- Closing the window with the **X** doesn't close the app: it keeps measuring, with the overlay and hotkeys active. Use **Quit** to exit.
- **Open WZ Control when Windows starts** (checkbox on Home or in the icon menu): the app starts with Windows straight to the tray, without asking for permission each time. Untick it to remove it.

## The main window

Above all tabs is the header:



- App **version** next to the name (major.minor.build format).
- **Basic / Expert**: basic mode hides technical data (0.1% low, frametime, per-core CPU, process tables, Analyzer curves and green rows in Optimization).
- **ES / EN**: changes the language of the whole app, including this manual.
- **Detected game**: shows whether Warzone (or Modern Warfare 4) is open.
- **PLAY WARZONE**: launches the game with Battle.net or Steam (detected automatically).
- **Quit**: closes WZ Control completely.

Below it is the **metrics capture bar** (see [Analyzer](#)).

## Home

When the app opens it only shows **information about your PC**; nothing is analyzed and no monitor is turned on.

- **PC, processor, graphics card and RAM**: model, specs and a gaming rating.
- **Storage**: each drive with its type, health, temperature and free space. **Measure speed** runs a real read and write test.
- **Monitors, network and installed Call of Duty**: information about each one (monitors are informational only).
- **Controller · polling rate**: pick your controller under **Your controller** (USB, receiver or Bluetooth), press **Measure controller** and rotate both sticks for 5 seconds. The result feeds the **full input lag** in Live.
- **Optimization profile** and the **Optimize** button (see the next section).

**Opens instantly**: your PC information is saved the first time it's read. After that, the saved info shows right away and WZ Control re-reads it in the background. If it detects a change (a different video driver, BIOS, RAM, drive, monitor, Windows or Warzone version...) it shows **"Changes were detected in your PC's configuration"**; the **View changes** button lists the previous and new values. Temperatures, free space and power-on hours don't count as changes. ↻ **Refresh** forces a full read.

## Optimization

Press **ANALYZE MY PC** to check everything. You'll see:

- **Warzone readiness**: a 0–100 score and the 3 actions with the most impact.
- **Full checkup by category** with traffic lights: green (good), yellow (worth reviewing) and red (problem). Each row explains what it is, what you have and what's recommended, and has a button when it can be fixed from Windows.
- ↻ **Scan again** re-checks with a single click.
- **The analysis is saved**: next time you open Optimization you'll see the last analysis instantly while it re-scans in the background (the button says "Checking for changes..."). If something changed, the



"The following changes were detected" screen lists each setting with its previous and new value.

## Optimize and profiles

**Optimize** applies everything that can be fixed automatically in one go: Windows settings, the video driver's global settings and Warzone's config file. There are three profiles:

| Profile                 | What it's for                                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------------------------------------|
| Max competitive FPS     | Graphics at the lowest that doesn't hurt visibility, Reflex with Boost, no blur or frame generation and no FPS caps. |
| Competitive + streaming | The same, but keeps (or sets) an FPS cap to leave headroom for the stream encoder.                                   |
| Balanced                | Only what lowers latency and removes annoying effects; keeps visual quality.                                         |

- Before applying you see the **exact list of changes** (current and new value) and a **liability disclaimer** you must accept by typing **ACEPTO** (or I ACCEPT).
- Game files are only written with **Warzone closed**, always with a backup copy.
- **Revert changes** puts everything back: Windows, driver and game files.
- What can't be changed from Windows (BIOS, some NVIDIA App or AMD Software options) stays as **manual pending**, with its guide.
- If a Windows, driver or game update changes something after optimizing, Home warns you with a **Reapply** button.

## BIOS version

The checkup shows your motherboard's BIOS version and date and tells you whether there's a newer one:

- **ASUS and MSI**: the manufacturer's support page is checked. Green = you have the latest; yellow = there's a newer one (with its number and date).
- **Other brands, or if the manufacturer doesn't respond**: it's judged by age (over 9 months = there's probably a newer one).
- **Intel Core 13th/14th gen** with a BIOS from before September 2024: red, because it lacks Intel's fix for the instability of those processors.
- **See your board's BIOS** opens your model's support page in the browser.

## BIOS guides

When TPM 2.0, Secure Boot or XMP/EXPO aren't right, the **See instructions** button opens a step-by-step guide for your motherboard brand (ASUS, MSI, GIGABYTE/AORUS and ASRock), with illustrations, warnings, **Restart to BIOS** and **Save as PDF**.

## RendererWorkerCount

It's the number of threads Warzone uses to prepare each frame. WZ Control reads your processor's real topology and calculates **N = your most powerful threads** (those on the fastest cores with the most cache; with Hyper-Threading/SMT each core counts as 2).



- **Green** with N, N – 1 or a lower value. If it's lower or on automatic, a note suggests N or N – 1.
- **Red** if it exceeds your powerful threads: it can cause stuttering and irregular frametimes.

## PC balance

Shows how well your processor, graphics card and memory complement each other in Warzone:

- **Word grades: Excellent, Good, Fair or Poor**, for the whole PC and each component.
- **CPU ↔ GPU gauge**: where your PC falls between "CPU limits" and "GPU limits". The white marker is your PC at native resolution; the blue one, with your current game settings.
- **Estimated FPS by resolution and graphics quality**: pick the quality (Minimum, Basic, Balanced, Ultra or Extreme) and you'll see a table by resolution and DLSS/FSR mode. Under each figure it says what holds it back (GPU or CPU). Green = fills your monitor's Hz, yellow = close, red = far.
- **Recommended resolution**: the highest one that fills your monitor's Hz.

Figures are estimates of average in-match FPS. Every capture of 60 s or more you record on your PC adjusts the table to what your PC actually measures.

## Tools

- **Network and upload**: measures your real upload and download and *bufferbloat* (how much ping rises when the connection is full). Uses about 100 MB.
- **Monitor**: detects whether your display has G-SYNC/FreeSync and whether HDR is on, and tailors the V-Sync and FPS cap advice.
- **Share report**: saves an image to Downloads with your hardware, score and pending items, to ask for help on Discord or forums.

## Lightweight Windows

The **Windows** tab reduces background processes **without touching what Windows needs**: network, audio, security, Windows Update, drivers, anti-cheat, launchers and peripherals never appear in the list.

- **Apply recommended**: only items marked *Safe*.
- **Maximum**: *Safe* + *Moderate* (each item explains which feature you lose).
- **What you do use**: tick printer, Xbox / Game Pass, remote desktop, Windows Hello, etc., and they'll never be touched.
- **Pause while you play**: stops Windows Update, the indexer and other services when Warzone opens and resumes them when it closes.
- **Background apps while you play** (optional, off by default): while the game is open, browsers, launchers, cloud sync, animated wallpapers and Adobe apps get lower priority and Windows **efficiency mode**; optionally, the RAM they aren't using is freed when the match starts. Nothing is closed and everything goes back to normal when you close the game. Music and chat/voice (Discord) come unticked so audio and voice aren't cut.



- The **Benefit on this PC** label (high, medium or low) is calculated from your hardware and what you have open. It helps mostly on PCs with **16 GB of RAM or less** and **6 cores or fewer** (e.g. RTX 2060 / 3050 machines): fewer stutters and a steadier 1% low. Average FPS changes little and it **doesn't free VRAM**; with 6 GB cards or less it's best to close the browser with video.
- **File cleanup**: temp files, dumps, error reports and the Recycle Bin (shader caches are not deleted).
- **Restore all** puts every item back as it was.

## Live

Monitors **only turn on with this tab in view** (or while recording a capture or with the overlay on), so they don't take resources from the game.

**Not just Warzone:** if Warzone isn't open, WZ Control measures the **app you have in the foreground** that's drawing frames: another game, an emulator, a benchmark, Blender... The panel, dashboard mode, overlay and captures work the same (Warzone-only features, like the server and its config file, only apply to Warzone). At the top you'll see "Measuring: name.exe". Warzone always takes priority.

## Performance panel

Eight live figures; the color shows the state (green = good, amber = review, red = problem):

| Figure               | What it means                                                                              |
|----------------------|--------------------------------------------------------------------------------------------|
| FPS                  | Frames per second, compared with your monitor's Hz.                                        |
| 1% low               | FPS of the slowest frames: measures smoothness.                                            |
| Input lag            | Total time from moving the controller until you see it: controller + PC Latency + monitor. |
| PC Latency           | The PC latency reported by NVIDIA Reflex (or "~" estimated if the game doesn't report it). |
| What limits your FPS | Graphics card, processor or an <b>FPS cap</b> (game, driver, V-Sync or Reflex).            |
| Warzone server       | Ping to the server, its location and the game's traffic: ↓ download and ↑ upload.          |
| CPU and GPU          | Usage, temperature and power.                                                              |

- **Input lag** = controller (½ of the polling interval measured on Home) + PC Latency + monitor (½ of the refresh time + 2 ms of panel response).
- **↓/↑ traffic**: counts only Warzone's connections, not the rest of the PC. If your network card doesn't expose outgoing packets, upload is measured with Windows network events (the tooltip says so).



## Route quality to the server

The **Warzone server** card shows **Route to server: Good / Fair / Bad** and how many ms your connection takes over what's expected for the distance. Click it for details.

- **When it's measured:** at the start of each match (a few seconds after joining) and every 5 minutes, since every match can land on a different server. **Analyze again** repeats it right away. It pings each router along the way (like a traceroute), in the background and without touching the game.
- **What it tells you:** minimum ping vs. expected, **where the delay appears** (your network or Wi-Fi, your ISP's access, an intermediate segment or the server's network), whether the route **takes a detour** (e.g. Mexico City → Los Angeles → Dallas) and whether there's packet loss that reaches the server.
- **Would an ExitLag-type route optimizer help?** The answer comes from the above: **yes** when the problem is in an intermediate segment another route can avoid; **no** when the route is already good or the problem is in your home, your ISP's access or the server (every route goes through there). You'll also see how many of your recent matches in that data center had a bad route: if it repeats, it's worth trying.
- The table marks in red the hop where the delay **appears and stays**. A router that answers slowly or not at all isn't a problem if the next ones are fine: many routers give ping low priority. Router locations are approximate.
- You can also show it in the **overlay** and **dashboard mode** (the **Route** item, unticked by default).

## What affects your performance

The **Live diagnosis** says in plain words what limits your FPS and warns if a background app uses a significant share of the GPU, CPU or RAM (an animated wallpaper, a video recorder, a browser playing video, the antivirus...), if VRAM or RAM is full or if a component is overheating. Each warning comes with a short tip.

## Dashboard mode and overlay

- **Dashboard mode:** switches to a small window ("WZ Dashboard") with just the metrics you chose for the overlay, as big cards. It's made for **OBS or Streamlabs**: add it as a **Window Capture** source; it keeps updating even when another window or the game covers it. Opening it **closes the normal window** to use less.
  - It's very light: it only changes the numbers that move and stops polling if you minimize it. The **1 s / 2 s** button sets how often it refreshes (2 s uses even less).
  - Resize it as you like: columns and text size adjust on their own.
  - The **diagnosis** at the bottom shows in full over several lines; if it doesn't fit at that size without covering the cards, it switches by itself to the overlay's short form (e.g. "▲ OBS Studio · 11% GPU").
  - **↶ Normal mode** (top right; shows on mouse hover) goes back to the usual window.
- **Overlay:** a box with your metrics on top of the game, like RTSS. Turn it on with its button or the **Ctrl+Shift+L** hotkey (configurable).
  - It isn't injected into the game: it's its own transparent, click-through window. Turning it on in-game doesn't take focus away from Warzone.



- It shows with Warzone in **Borderless fullscreen** or windowed; in exclusive fullscreen Windows doesn't allow drawing on top.
- **Optional overlay items** (unticked by default): **Server location** (city and country of the match server) and **Route** (route quality to the server).
- **Overlay settings**: metrics, position, size, shape (list or row), opacity, logo, whether it shows only with the game open, and the hotkey.

## Details and streaming

- **Per-core CPU**: each bar shows Warzone's share and that of other processes.
- **GPU, memory, processes and apps using the GPU**: Warzone is always highlighted.
- **Streaming**: detects OBS, Streamlabs, TikTok LIVE Studio and other streaming apps, warns if they encode on the CPU and, on demand, suggests codec, resolution and bitrate for each platform.

## Analyzer

### Recording a capture

1. In the **Metrics capture** bar choose the duration (20 s to 10 min, or Manual; **30 s by default**). The app remembers the duration and delay you chose, also for the in-game hotkey and, if you want, a delay to get back to the game. Give it a name (for example, "low shadows").
2. Press **RECORD** or, in-game, the hotkey (**Ctrl+O** by default; click the hotkey button to change it). A beep sounds when it starts and another when it ends.
3. The capture stores every frame, the sensors, the game settings and the detected problems with the exact time.

### Reading a capture

- FPS (max, average and min per second), 1% and 0.1% low, input lag, stutters, frametime, curves, sensors, per-core usage and the game settings at recording time.
- **Verdict**: a summary in words and a list of findings with the cause and what to do. **Detected** = cause confirmed with the data; **Possible** = probable cause based on the pattern.
- If FPS were stuck at an **FPS cap**, the verdict says so and doesn't confuse it with a processor limit.

### Compare, delete and export

- Tick 2 to 4 captures and press **Compare**: % differences and which game settings changed.
- Each capture's **×** deletes it; **Delete ticked** deletes the selected ones; **Delete all** empties the list. It always asks for confirmation.
- **Export CSV** to open the frames in Excel or CapFrameX.

To know whether a change helped: record a capture, change the setting, record another in the same spot of the map and compare them. What matters is that the 1% low goes up, not just the average.



## Help

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This tab shows the manual in the selected language (ES / EN) and is updated with every version of the app. ► **Getting started tour** replays the guided walkthrough. **Download PDF** saves the manual to your Downloads folder, with the app's logos and the author's signature.

## Updates

- When the app opens (once a day) WZ Control checks **wzcontrol.app** for a new version. If there is one, a **green bar** appears at the top: **What's new** shows what changed, **Update now** installs it and **Later** hides the notice until the next version.
- **Update now** downloads the version, checks that the author published it (**digital signature**) and that the file arrived complete, closes WZ Control and reopens it already updated within a few seconds. Your settings, captures and history ( **data** folder) are kept. **It never updates without your click.**
- You can't update while the game is open or while you're recording a capture.
- The **Updates** card in this tab shows the installed version and the last check; you can **Check for updates** any time and turn off the automatic check.
- If something fails while installing, the previous version is restored and the app tells you when it opens. You can also update by hand: download the .zip from wzcontrol.app, close WZ Control from the icon next to the clock and copy the **WZControl** folder to **C:\** replacing files.



## Troubleshooting

| Problem                                                | What to do                                                                                                                                                                                                                                 |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FPS don't show up                                      | Keep Warzone in front (minimized, it doesn't draw frames). PresentMon restarts by itself; details are in <code>data/presentmon.log</code> .                                                                                                |
| When optimizing: "Photo mode and game filters... -104" | With the NVIDIA App, the driver doesn't allow changing that setting from outside. It stays as a manual item: in the NVIDIA App go to <b>Settings → Features</b> and turn off <b>Game Filters and Photo Mode</b> (or Alt+Z → ⚙ → Features). |
| The overlay isn't visible                              | Use <b>Borderless fullscreen</b> or windowed in the game. If you're not using Warzone, keep the game in front for a few seconds so WZ Control detects it.                                                                                  |
| Instalar.bat keeps asking for administrator permission | Fixed in 1.20.35. In older versions: right-click <code>Instalar.bat</code> → <b>Run as administrator</b> .                                                                                                                                 |
| "Couldn't check for updates"                           | Check your connection or that something (firewall, antivirus) isn't blocking Python. You can always download the new version from <code>wzcontrol.app</code> and copy it to <code>C:\</code> .                                             |
| The green bar says it can't be installed from the app  | This happens with versions older than 1.21 or if the signature isn't valid: download the .zip from <code>wzcontrol.app</code> and update by hand once.                                                                                     |
| CPU temperature is missing                             | Open LibreHardwareMonitor (installed by <code>Instalar.bat</code> ).                                                                                                                                                                       |
| Upload (↑) shows "-"                                   | Your PC doesn't allow measuring the game's outgoing packets; all other metrics keep working.                                                                                                                                               |
| A setting changes back                                 | An update changed it: use <b>Reapply</b> on Home.                                                                                                                                                                                          |
| Something went wrong after optimizing                  | Use <b>Revert changes</b> in Optimization.                                                                                                                                                                                                 |

To see the engine's messages use `Iniciar con consola (diagnostico).bat`; without a console they're saved in `data/wzcontrol.log`.

## Security and privacy

- WZ Control **isn't injected into the game** and doesn't read its memory. FPS come from PresentMon (Windows events, the same method used by the NVIDIA App and HWINFO), and the overlay is its own window.
- The interface runs only on your PC ( `127.0.0.1` ) and actions require a per-session code.
- The app only goes online to locate the match server (IP geolocation), to check the manufacturer's site for a newer BIOS for your board (once a day, when analyzing) for the ping and speed tests you run, and to check `wzcontrol.app` for a new version (once a day; can be turned off in Help). That check sends no data about you. **It never installs an update without your click**, and only accepts versions signed by the author.



- Before changing any setting the original value is saved; **Revert changes** and **Restore all** bring it back.

## Contact and credits

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### Did you like WZ Control?

I built WZ Control in my spare time, after many nights of testing, so anyone can get the most out of their PC in Warzone. It's free and it will stay free. If it helped you gain FPS, get rid of stutters or win a match or two, consider buying me a coffee: every donation, however small, keeps me motivated to keep improving it. Thanks for playing with WZ Control!

☕ **Donations:** [click here to donate](#) (secure card payment via Stripe)



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WZ Control v1.21.36

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☕ **Donar / Donate**