

NO2 and CO Device Guide

Welcome to the Air Aware equipment guide! The monitoring devices you use in the field are precision instruments designed to capture real-time, accurate carbon monoxide (CO) and nitrogen dioxide (NO2) levels. Because these sensors are highly sensitive, following proper handling and power-down procedures is essential to ensure accurate data and protect the equipment from permanent damage

Section 1: Series 500 Monitor Kit Inventory & Inspection:

Overview: Our team uses the Aeroqual Series 500 monitor kit, which comes safely packaged in a custom box containing the base unit, sensor heads, and power components required for field deployment. Before leaving for any site visit, testers must perform a quick inventory inspection to ensure all required components are present, undamaged, and fully charged.

Inventory Checklist:

- ☐ **Series 500 Monitor Base:** Check that the screen, buttons, and casing are clean and free of cracks.
- ☐ **Sensor Head(s):** Confirm that you have both the CO and NO2 sensor heads packed securely.
- ☐ **11.1V Lithium Polymer Battery Pack:** Installed inside the base unit or packed safely.
- ☐ **12 VDC AC/DC Smart Charger:** Complete charger unit with international/wall adapter plugs.
- ☐ **USB to Monitor Cable:** Data transfer cable used to connect the Series 500 to a computer.
- ☐ **Two-Way PS2 Adapter Cable:** Auxiliary connection cable for external accessories.



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The following components are supplied with each monitor:

Component	Series 200	Series 300	Series 500
Monitor base			
Sensor head (If ordered)			
12 VDC AC/DC Lithium Smart Charger			
Battery pack – 11.1V Lithium Polymer			
USB to monitor cable			
Two-way PS2 adapter cable			

Section 2: Battery Charging & Power Safety

Power & Charging Guidelines

- **Power Off First:** Always switch off the monitor before attaching or removing the sensor head.
- **Approved Equipment Only:** Use only Aeroqual-approved batteries and recharge the device exclusively using the supplied AC/DC adapter.

Charging LED Status Guide

- **Red LED:** Battery is actively charging **OR** the battery is fully charged while the monitor is switched ON.
- **Green LED:** Battery is fully charged and the monitor is switched OFF.

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Section 3: Sensor Head Handling & Warm-Up Protocols

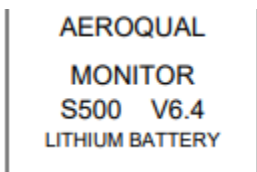
1. Critical Handling Rules:

- **Power Off Before Removal/Insertion:** Do NOT insert or remove the sensor head while the monitor is switched on. Doing so can permanently damage the unit. (Note: If a sensor head is disconnected while powered on without the AC/DC adapter plugged in, the monitor will force an automatic emergency shutdown).
- **Keep Device Upright:** Do not shake or invert the monitor while a sensor head is attached to prevent internal sensor damage.
- **Correct Positioning:** Always place and hold the sensor head **perpendicular** to the gas appliance during testing to ensure safe, accurate air sampling and avoid thermal damage.

2. Sensor Warm-Up Process:

When the Series 500 monitor is switched on, the sensor head undergoes an automatic warm-up cycle to stabilize readings.

- **Stage 1 — Warming Up (First 3 Minutes):**
 - The screen will display “WARMING UP”.
 - The sensor is burning off contaminants; no gas measurements are taken during this phase.
- **Stage 2 — Stabilizing (Next 10 Minutes):**
 - The sensor is actively stabilizing its calibration.
 - Real-time measurement numbers will flash on the display screen. Wait for the flashing to stop/stabilize before recording baseline data.
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Section 4: Monitor Interface & Power Controls



Powering On/Off

- **To Power On:** Press and hold the Power Button until the screen activates. The display will turn on and show the startup information, battery status, and warm-up countdown.
- **To Power Off:** Press and hold the Power Button for roughly 5 seconds until the monitor beeps. The display screen will turn completely blank, indicating operation has ceased.

CRITICAL REMINDER: SENSOR HEAD SAFETY Never pull off or put on sensor heads unless the device is COMPLETELY powered off. Always confirm the display screen is totally blank and operation has ceased before touching or swapping sensor heads. Handling sensor heads while the unit is on can permanently damage both the sensor and base unit.

Section 5: Field Application Step-by-Step Guide

Step 1: Inspect & Verify Hardware

1. Ensure the Series 500 monitor is fully charged before heading out.
2. Inspect the monitor base, display, cables, and sensor heads to double-check that everything is attached correctly and free of physical damage or cracks.

Step 2: Attach Initial Sensor Head (Power OFF)

3. Confirm the monitor is **completely powered off** (screen is blank).
4. Securely attach the required sensor head (CO and NO2) to the base unit.

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Step 3: Power On & Complete Outdoor Warm-Up Cycle

5. Press and hold the power button until the screen activates.
6. Allow the unit to complete its full 10-minute warm-up before taking indoor measurements:
 - a. **First 3 Minutes:** Sensor shows WARMING UP (burning off contaminants).
 - b. **Next 10 Minutes:** Sensor displays flashing measurements while stabilizing.

Step 4: Position the Device Correctly

7. Bring the device into the testing area and hold/place the monitor so the sensor head is **perpendicular to the gas appliance**.
8. Keep the unit upright—do not shake, invert, or place the sensor directly into open gas flames.

Step 5: Monitor & Record Data

9. Observe real-time gas readings once the numbers stop flashing on the screen.
10. Record the readings accurately on your field testing worksheet or online form.

Step 6: Power Off & Pack Away (or Swap Sensor)

11. Press and hold the power button for 2 seconds until the display goes completely blank and the device beeps.
12. To Switch Sensors (CO & NO2): Once powered off, carefully swap sensor heads, power the unit back on, and allow it to complete its warm-up before testing again.
13. When Finished Testing: Power down completely. Carefully pack the monitor in its protective plastic, place it in the box, and gently wrap the cord neatly without pulling or bending wires tightly.