



FIELD MAINTENANCE CHECKLIST

Check.

- Before Field visit ●
- At the Site ●
- End of Maintenance Visit ●
- Ecowitt Maintenance Checklist ●

2026

TAHMO

FIELD MAINTENANCE CHECKLIST - 2026

Before Field visit

- 1. Check the stations for issues under QA-QC and Station Overview
- 2. Organize the Toolbox with the required tools
- 3. Check the batteries for voltage and capacity using a battery tester and multimeter. The voltages for each (spare) battery must be above or equal to 1.22V. No battery in the set should be out of the range of $\pm 0.05V$
- 4. Charge batteries
- 5. Test the battery capacity again after re-charging. Must be over 1500mAh.
- 6. Contact Victor /Remote support team informing them about your field visit.
- 7. Contact the host to confirm their availability/access to the station
- 8. Ensure that the ZSC firmware is up-to-date
- 9. Test a spare data logger and ATMOS 41 sensor and carry them along for the visit
- 10. Prepare the travel logistics



At the Site

- 1. Take photos of the station status quo including the surrounding
- 2. Open the data logger and mark the sensor cables with corresponding port numbers using appropriate labels (e.g. using a zip tie). The port sensors should be correctly noted on the station card.
- 3. Take and record voltage readings of each battery without removing them from the data logger. The ideal voltage for all the batteries should be $\pm 0.05V$ (e.g. Battery 1 at 1.27V, Battery 2 at 1.30V, and Battery 3 at 1.24V). If their voltages match, then do not replace them otherwise replace them all with a fresh set of batteries. The voltage for each battery must be above or equal to 1.2V. No battery in the set should be out of the range of $\pm 0.05V$.
- 4. Disconnect the ATMOS connector pin
- 5. Connect the ZSC, check the sensor readings and idle current and take screenshots. The ideal idle current should not exceed 1 mA for the Gen 1 ATMOS 41 and older models, or 2 mA for the Gen 2 ATMOS. If the idle current values are out range, contact Victor/remote support immediately, and if unreachable, replace the sensor.
 - a. Note; do not perform idle current test when the sensor is wet
- 6. Disconnect the ZSC and close the data logger without plugging back the sensor.
- 7. Install the small printed circuit current sensor circuit on the top of the third battery in the ZL6 to read the current on your multimeter. Report the total current draw of the system, which should not exceed 3 mA when not sending data.
- 8. Take a photo of the sensor funnel before cleaning and after cleaning .
- 9. Clean the radiation sensor with a clean cloth.
- 10. Remove the spring and clean inside the funnel tube using a clean cotton earbud.
- 11. Take the photo of the funnel with the funnel tube clearly visible after cleaning
- 12. Re-insert the spring, place back the funnel and lock it in place.



At the Site

- 13. Clean the wind sensors and the temperature sensor with a clean cloth and a soft brush were needed (older sensors which have splash prevention spikes).
- 14. Clean the solar panel and outside the data logger with a soft cloth.
- 15. Inspect and clean the weather/rubber seals of the data logger, and if it is bad, replace it
- 16. Reconnect to the ZSC, test precipitation and take a screenshot. Remember to close the door of the data logger before the test to prevent water from entering the data logger.
 - a. If precipitation test failed to show any readings after cleaning, remove the funnel and clean the gold electrodes (using alcohol wipes is recommended)
 - b. If all is well, then connect the sensor pin back to the datalogger, maintaining the port number.
- 17. Confirm that the station firmware is up-to-date by updating it where necessary.
- 18. While connected to zentra utility, deactivate all idle ports which have no sensor connected to them
- 19. Close the data logger and lock it with zip ties to prevent accidental opening.
- 20. Check station rotational orientation with a mechanical compass. Adjust so that the N of the station is no more than 2 degrees off of true north (not magnetic north).
- 21. Check station vertical orientation by reading the electronic sensor in the station via Zentra. Adjust so that the tilt of the station is no more than 0.5 degrees off vertical.
- 22. Tidy-up the station area and ensure you leave it locked (as you found it)



End of Maintenance Visit

- 1. Take end-of site visit photos in case of any key changes
- 2. Submit TAHMO Maintenance report BEFORE STEPPING OUT OF THE FENCED AREA.

Ecowitt Maintenance Checklist

- 1. Check that all sensors are properly levelled.
 - a. Carry metal or plastic wedges if needed.
 - b. Do not use wood.
 - c. Grind the top of the pole to ensure it is flat and even, if it is not already level.
- 2. Confirm the anemometer is facing North.
- 3. Measure the voltage of all sensor batteries.
 - a. Replace all sensor batteries every 6 months.
- 4. Clean the rain gauge.
 - a. Open the funnel and inspect inside.
 - b. Remove dirt and debris.
 - c. Clean the tipping spoon mechanism.
- 5. Wipe the solar panel surface.
- 6. Ensure the WN32P and WH32P sensors are correctly positioned under the solar panel or inside the designated enclosure meant for them.
- 7. Manage solar-to-gateway cables neatly.
 - a. Ensure no cable is loose.
 - b. Seal all cable entry points.
 - c. Install insect-protection screens (e.g., under funnels).
- 8. Secure cables on sensor gateways using metal cable ties at every Ecowitt station,
 - a. Metal cable ties should always be used on sensor gateways at each Ecowitt station.
- 9. Take photos after cleaning and maintenance.

