

Safely using your Nano altimeter and how to dispose of it

Altimeter Cloud

The Nano V1 altimeter manual · v1.1

<https://www.altimetercloud.com/support/nano-v1/safety-disposal/>

Please read these safety instructions carefully before using your Nano V1 altimeter. Retain this information for future reference.

Intended Use

The Nano V1 is a barometric altimeter and data logger designed for use in unmanned model rockets and high-power rockets. It is not designed or certified for use in manned aircraft, safety-critical systems, or any application where failure could result in injury or loss of life. Do not rely on this device as a sole safety system.

Sensor Accuracy

The Nano V1 uses barometric pressure to calculate altitude. Altitude readings are approximate and can be affected by weather conditions, atmospheric pressure changes, temperature, and sensor drift. Do not treat altitude values as exact measurements.

Revision 4 and later units include an inertial measurement unit (IMU). On these units, tilt angles, roll, pitch, and yaw are calculated from a fusion of gyroscope and accelerometer readings. Once calibrated, these readings are accurate under most conditions, however they are not infallible. Small errors can accumulate over time during flight, and rapid or sustained motion may introduce temporary inaccuracies. Revision 3 and earlier units do not include an IMU and report altitude only.

Battery Safety

This product contains a small rechargeable single-cell (1S) lithium polymer (LiPo) battery (20 mAh) soldered to the board. Charging is managed and current-limited automatically by the onboard charge controller. The battery cell itself does not have a protection circuit, so please observe the following to reduce the risk of fire, burns, or battery damage:

- Charge the altimeter using a standard micro-USB cable only. Do not use damaged or frayed cables.
- Switch the altimeter off when not in use and recharge it promptly after a flying session. The altimeter automatically enters deep sleep when the battery falls to around 3 V to protect the cell, but deep sleep still draws a small current, so do not leave the battery in a low or discharged state for long periods.
- Do not charge the battery below 0°C or above 45°C.
- Charge the device on a hard, non-flammable surface, not on carpet, bedding, paper, or other combustible materials, and in a location where you can keep it in view. Do not leave it charging unattended, and disconnect it once the charge LED turns off.
- Do not puncture, crush, disassemble, or expose the battery to fire or extreme heat.
- Stop using the altimeter immediately if the battery appears swollen, deformed, or is emitting heat or odour, and dispose of it safely at a battery recycling point.
- If the battery becomes unusually hot, smokes, or catches fire, disconnect the charger if it is safe to do so and move the device away from people and flammable materials without touching it with bare hands. Allow it to cool and stabilise in a well-ventilated area, avoid breathing any fumes, and once it is cool and stable, dispose of it at a battery recycling point.
- The Nano V1 is supplied without a protective case. For the best protection, install it inside an electronics bay and secure it in place, which shields the board and battery from impact during flight and recovery. It can also be attached to a shock cord, but do not fly it on a shock cord in wet or damp conditions, as moisture may damage the exposed board and battery on landing.

The battery is soldered to the board and is not user-replaceable. Do not attempt to remove or replace it yourself. If your battery becomes faulty, swollen, or no longer holds a charge within 5 years of the date of manufacture, please contact us at info@modelrockets.co.uk and we will arrange to replace it free of charge.

Charging

The Nano V1 charges via micro-USB. The onboard charge controller manages the charging process automatically, limiting the charge current to suit the cell and terminating the charge when the battery is full. The charge LED illuminates while charging and turns off when charging is complete. Charge the device on a non-flammable surface where you can observe it, and do not

charge in extremely hot or cold environments.

It is good practice to fully charge your altimeter before each flying session. A low battery during flight could cause the altimeter to stop recording before the flight is complete.

Operating Environment

- Operating temperature: -10°C to 45°C. The altimeter will shut down automatically if the internal temperature exceeds 60°C to protect the battery and components.
- Do not expose the altimeter to water, rain, or excessive moisture.
- Do not use the altimeter in environments with corrosive gases or liquids.
- Avoid prolonged exposure to direct sunlight when not in use.

Children and Young People

Keep the Nano V1 out of reach of babies, toddlers, and young children. The altimeter is very small and is a choking hazard, and it contains a lithium polymer battery. It is not a toy and should never be given to a young child to hold or play with. If you think a child may have swallowed the device or the battery, seek medical help or contact your local emergency services straight away, even if the child appears unharmed.

This product is not designed to be used by children under the age of 16 without adult supervision. Use of this product involves configuring electronic systems and handling model rocket components. Flight logs can be uploaded to altimetercloud.com without an account, although users may wish to register an account to manage their devices and keep track of their logs.

Local Regulations

The user is responsible for complying with all applicable local, national, and international laws and regulations regarding model rocketry, high-power rocketry, and the use of pyrotechnic devices. Regulations vary significantly by country and region. Rocketry Ltd makes no representation that the use of this product is lawful in any particular jurisdiction and accepts no liability for any breach of local regulations by the user.

Modifications

Any modification to the hardware, firmware, or software of the Nano V1 that has not been authorised by Rocketry Ltd will void all warranties and may invalidate the product's regulatory compliance certifications. The device has been tested and certified as supplied. Unauthorised modifications may also create safety hazards.

Third-Party Accessories

Rocketry Ltd is not responsible for any damage, malfunction, or safety hazard caused by the use of non-genuine accessories, cables, batteries, or components. Use only accessories and replacement parts recommended or supplied by Rocketry Ltd.

Disposal and Recycling

This product is electrical and electronic equipment and must not be disposed of with general household waste.

The crossed-out wheelie bin symbol on the product indicates that it falls within the scope of the Waste Electrical and Electronic Equipment (WEEE) Directive. At the end of its useful life, please dispose of this product at an appropriate collection point for the recycling of electrical and electronic equipment, or return it to the retailer when purchasing equivalent new equipment.

To find your nearest recycling point:

- **United Kingdom:** Visit recycleyourelectricals.org.uk for a recycling locator with nearly 30,000 drop-off locations across the UK.
- **European Union:** Contact your local municipality or visit your local household waste recycling centre. Most EU member states provide free collection points for small electrical equipment.

The lithium polymer battery contained within this product must be recycled separately. Many local authorities and retailers provide battery recycling facilities. Do not dispose of the battery in general waste or by incineration.

WEEE Producer Registration: WEE/MM6411AA

Correct disposal helps protect the environment and human health from potential hazards arising from uncontrolled waste

disposal, and supports the recovery and recycling of materials.

Questions or Concerns

If you are unsure whether the Nano V1 is suitable for your intended application, or if you have any questions about configuring the altimeter safely, please contact us at info@modelrockets.co.uk before flying. If you have any doubt about your configuration or the suitability of the altimeter for your rocket, do not fly until your concerns have been resolved.