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GPS Power Case Documentation



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Blue Logger and Earthmate are registered trademarks of Delorme.

User Manual

Installing the Blue Logger into the GPS Power Case.

The blue logger is installed without modification into the lid of the GPS Power Case.

1. Remove the battery and cover from the bottom of the Blue Logger. Save these for times you wish to use the Blue Logger without the case.
2. Place the Blue Logger into the case aligning the battery contacts with the case contacts. The Blue Logger LED's will flash as you make contact.
3. Screw the case lid on. You're done.



Operating the GPS Power Case

The GPS Power Case allows access to the Blue Logger button and LED indicator lights. Please refer to the manual that came with the Blue Logger for operating instructions.

When fully charged the GPS Power Case will allow up to 60 hours of continuous operation of the Blue Logger.

To charge the Blue Logger and the Case battery, attach the wall adapter to the waterproof connector.

The GPS Power Case can be left on charge indefinitely.

Technical Specifications

| | |
|-----------------------------|-----------------------------|
| Input Voltage | 10 to 30VDC (see note) |
| Operating Temperature Range | -20 to 50 Deg. C (see note) |
| Storage Temperature Range | -20 to 60 Deg. C |
| Charging Time | 5 to 7 hours (see note) |
| Operating Time | Up to 60 hours (see note) |
| Battery Capacity | 24.4Wh at C/5 rating. |
| Battery Chemistry | Li-ion |

Charging Input Detail

The charging input will accept 10 to 30VDC. This allows sources such as solar panels or automotive voltage to charge the unit.

Connector: Switchcraft EN3C4F watertight plug. Digi-key part number SC1158-ND

Connector Pinout: Contact Alti-tech for details.

Operating Temperature Notes

The GPS Power Case has 1 internal temperature sensor.

The sensor on the charging circuitry will slow charging as the temperature increases above 70 Deg C as measured on the charging IC die. This effectively stops charging at die temps over 90 Deg C.

Charging Time Notes

The charging time depends on ambient temperature and the state of charge of the Blue Logger. The GPS Power Case can be left on charge indefinitely.

Operating Time Notes

As the batteries age the total run time will degrade. Typically after 1 year you will have at least 60% of the original run time. After 2 years the batteries will have aged to 50% or less of original capacity. This aging depends on temperature and usage. Cooler storage temperatures are better.

The batteries can be replaced when the performance gets low. Contact Alti-tech for replacement batteries for the case.

GPS Signal Attenuation

The box material is Styrene which has a low dielectric constant of around 2 (two times the permittivity of free space) Almost all plastics are between 2 and 3. It's very complicated to work out exactly how much the GPS signal is attenuated, but we have tested the Blue Logger in marginal conditions (buildings, tree cover) with and without the case and not noticed a difference in performance.