Aletheia Operator's Manual

Table of contents

General safety notices

⚠ WARNING! Risk of fire or serious personal injury!

- Do not place the Aletheia on any any conductive surface or let any conductive materials or liquids come into contact with the Aletheia.
- Immediately remove both the battery and any connected USB-C cable if the Aletheia is hot to the touch, but only if it is safe to do so.
- Handle the Aletheia with care as the corners of its circuit board and any protruding legs of mounted components may be sharp.
- Ensure that any connected batteries or power adapters meet local regulations on electrical safety; and that connected batteries are rated for 9 V output, and power adapters are rated for 5 V output. USB-C Power Delivery capable power adapters may be used, but must be fully compliant with the USB-C Power Delivery specifications to prevent overvoltage.
- Children should be supervised by a responsible adult when using the Aletheia.
- The Aletheia contains small parts which could present a choking hazard to children 0–3 years of age.

⚠ CAUTION! Risk of causing permanent damage to the Aletheia

- The Aletheia contains precision components which are sensitive to electrostatic discharge. Ensure that electrostatic discharge protection is used when handling the Aletheia.
- Do not drop the Aletheia as this could cause significant damage to its circuit board or exposed components.
- Do not place heavy items on top of the Aletheia as those items could scratch or damage its components.
- Ensure that the Aletheia is sufficiently protected when storing it in bags or containers. Wrapping the Aletheia in non-conductive protective materials (such as bubble wrap) can help to avoid damage during transport.
- Do not use the Aletheia in temperatures above 70 °C (158 °F) or below 0 °C (32 °F).
- While the Aletheia has protections against connecting the battery terminals in the reverse polarity, ensure that terminals are connected in the correct polarity to minimise the risk of component damage.
- If storing the Aletheia for extended periods, back up stored data and remove the battery.

⚠ CAUTION! Risk of losing data stored in the Aletheia's memory

- To prevent data loss, ensure that any data stored on the Aletheia is backed up.
- Do not remove the battery unless absolutely necessary or as part of performing the safe battery replacement process (see page 5).
- When the connected battery is low on charge, ensure that it is replaced at the earliest convenience using the safe battery replacement process.
- Do not flip the RAM bank switch while the mode select switch is in the CPU RUN mode.

Safe battery replacement process

All data is stored on the Aletheia's random access memory (RAM). This memory is volatile, which means that all data stored on it is cleared when the Aletheia is completely depowered. When replacing the Aletheia's battery, care must be taken to ensure that the Aletheia still receives a stable source of power to prevent the contents of RAM from being cleared.

The following battery replacement process significantly reduces the risk of data loss from occuring when performing a battery replacement. Finite Devices advises those replacing the Aletheia's battery to make a backup of the data stored on the Aletheia prior to battery replacement, if possible.

1. Ensure that the mode select switch is in the CPU OFF mode.
2. Connect a 5 V power source to the Aletheia via the USB-C socket using a USB-C cable. Typical phone charger power adapters are usually acceptable to ensure a stable power source.
3. Before proceeding, ensure that the red external power supply LED lamp next to the Aletheia's USB-C socket is illuminated and steady.
4. Disconnect the 9 V battery from the Aletheia's battery connector. Do this with care to ensure that the USB-C cable is not accidentally disconnected.
5. Connect a new, unused 9 V battery to the Aletheia's battery connector.
6. Disconnect the 5 V power source and USB-C cable. Ensure that the new battery remains connected.
7. Verify that the Aletheia continues to work as intended by putting the mode select switch into the CPU run mode.

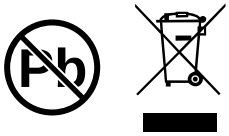
Getting started

Congratulations on becoming the owner of an Aletheia. You now own a versatile computer that is principally designed to give you full control over the software you wish to use on it. This guide helps you to become acquainted with the Aletheia — and, over time — takes you through a guided process that intends to teach you about the Aletheia's internal features, with the end goal of setting it up to become a powerful computing environment.

The Aletheia does not come with any built-in software — you, as the operator, are responsible for loading in all software for it, by hand; the only means of initially loading software onto it is through the miniature array of switches situated above the keyboard. While this may make the Aletheia appear to be critically limited from a modern computing perspective, this limitation is intentional — it ensures that the operator gains full knowledge over the Aletheia's internals; it eliminates entire classes of problems experienced with modern technology (including network security threats, and planned obselescence through software design); and it encourages operators to write their own software or build their own derivatives of the Aletheia hardware to solve their own problems.

> The Aletheia's name is a romanised form of the Ancient Greek word *ἀλήθεια*, which is commonly interpreted as meaning *the process of disclosing information*. This is fitting for the Aletheia, as it is the operator's responsibility to gradually introduce new software components to the system and get it into a usable, desired state over time.

Compliance information



United Kingdom; European Union

In line with all electronics subject to WEEE regulations, the Aletheia should not be disposed of in household waste within the United Kingdom or European Union.

RoHS 2 (Directive 2011/65/EU) has restrictions on the use of the following hazardous substances in electronics products: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE). RoHS 3 (Directive 2015/863/EU) includes additional hazardous substances: Bis(2-ethylhexyl) phthalate (DEHP), Dibutyl phthalate (DBP), Butyl benzyl phthalate (BBP), and Diisobutyl phthalate (DIBP). The maximum allowed concentration (by weight) for hazardous substances is 0.1%, save for cadmium, at 0.01%. Finite Devices hereby declares that the Aletheia does not utilise any of the listed hazardous substances during manufacturing.

United States of America

PROTOTYPE — NOT FOR SALE

This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained.