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# A N A L O G U E D E S K C O .

## IDX-1 / User Manual

**Model:** IDX-1

**Batch:** 001

**Date:** 2026-03-29

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## 01 / THE CONCEPT

IDX-1 bridges the gap between the ephemeral nature of digital data and the tactile permanence of instrumentation. Whether tracking market volatility or environmental signals, you now have a physical anchor for your most important data.

Thank you for acquiring a unit from Batch 001, the Founder's Batch.

We believe in [open architecture](#).

## 02 / PRE-FLIGHT CHECK

Before powering the device for the first time, please note:

- **Power Input:** Use the provided USB-C cable. Connect to a standard 5V DC (0.5A) USB power source.
- **WiFi:** IDX-1 is designed for stability on 2.4GHz WPA2 Home Networks. It is not compatible with 5GHz-only bands or other networks requiring a secondary login (Captive Portals).
- **Mechanical Care:** The needle is driven by a precision stepper motor. Do not manually rotate the needle, as this may misalign the needle and/or damage the internal gearing.
- **Safety:** Consult and retain the supplied safety information.

## 03 / SETUP WIFI

1. **Power On:** Connect the USB-C cable to the rear USB socket. The device will glow deep blue, indicating WiFi is ready to be set up.
2. **Temporary Access Point:** On your smartphone or laptop, look for a WiFi network named **IDX-1\_setup**. Connect to it.
3. **Portal:** A configuration page should open automatically. If it doesn't, navigate to <http://192.168.4.1> in your browser.
  - a. Use the password 'analoguedeskco'.
4. **Credentials:** Select your home WiFi network and enter your password.
5. **Connect:** Once connected, the local IP address assigned to IDX-1 will be displayed. Copy this using the button provided. It is needed for step **05 / Configuration**.
6. **Finish Setup:** Press this and the device will begin initialisation.

## 04 / INITIALISATION

Once IDX-1 has a Wifi connection, the device initialisation sequence has several phases, indicated by the color of the unit:

- WHITE (5 seconds): Reset mode. In this phase, it's possible to [factory reset](#) the device. Then:
- LIGHT BLUE / CYAN: Motor zeroing. The needle will sweep through its full range. If it buzzes lightly at one extreme, this is normal behaviour.
- GREEN: Centering. Pointer moves to midpoint.

The device then enters its current operating [mode](#). By default, this is the 'clock' mode, with the 'glacier' [ambience](#).

## 05 / CONFIGURATION

- IDX-1 runs an internal configuration portal allowing excellent customization options, of both mode and ambience, accessed by your normal web browser.
- Once initialisation has completed, in a browser address bar, paste or type in the IP address from step **03 / Setup Wifi**.
  - If this address is not found, look up IDX-1 in your router device list or use a network scanner, like <http://www.fing.com>. Enter the IP address into a browser address bar.
- Create a bookmark for future convenience.
- The Configuration Dashboard will be shown.:
  - **MODE**: select a data source
  - **AMBIENCE**: modify the LED lighting effects and night mode
  - **ADVANCED**: diagnostic tools, reset options
- NOTE: The configuration dashboard is not available during the following situations.
  - Start up
  - Initialization
  - [Setup wifi mode](#)
  - Reboot

## 06 / MODE

Use this page to choose what data source IDX-1 should reference. Each option has its own parameters.

- **Air Quality Index (AQI)**
  - Uses the supplied city location
- **Alt.me crypto Fear & Greed Index**
  - Similar to the CMC Index below but no API key is required.
- **CoinMarketCap crypto price trends**

- Enter a crypto ticker (BTC, ETH, etc.) to see changes over 24h, between -5% and +5%
  - A CMC API key is required. Sign up for a free one at <https://coinmarketcap.com/api/>
  - Combine with the Sentiment ambience.
- **CoinMarketCap crypto Fear & Greed Index**
  - A CMC API key is required. Sign up for a free one at <https://coinmarketcap.com/api/>
- **Clock**
  - The hand sweeps across its range over 12 or 24 hours.
  - Timezones are supported (see [Advanced](#) configuration page)
  - The default mode when new or factory reset.
- **Demo**
  - Moves the pointer randomly
- **Finnhub Stock Tracker**
  - Enter a ticker symbol to see changes over 24h between -5% and +5%
- **Home Assistant**
  - Displays any numeric entity state from your local Home Assistant instance.
  - Enter your Home Assistant base URL, e.g. <http://homeassistant.local:8123>
  - A Long-Lived Access Token is required. In Home Assistant: open your Profile > Security > Long-Lived Access Tokens > Create Token. Paste the token into the field provided.
  - Enter the exact Entity ID of the data source you want to display (e.g. climate.hallway). Find this in Home Assistant under Developer Tools > States.
  - Optionally, specify an Attribute name to use a sub-value of the entity (e.g. `current\_temperature` for a climate entity). Leave blank to use the entity's primary state value, which must be numeric.
  - Set MIN VALUE and MAX VALUE to define the range that maps to 0% and 100% on the dial.
  - Set POLL INTERVAL (5-300 seconds) to control how frequently the device queries Home Assistant.
  - IDX-1 must be on the same local network as your Home Assistant instance.
- **Off**
  - Pointer resets to vertical position useful for [calibration](#)
- **Pomodoro timer**
  - Pointer counts down from the provided duration, defaulting to 25 minutes.
- **Temperature**
  - Uses the supplied city location, and temperature range
- **Test**
  - Pointer cycles through min and max positions

## 06.1 / MODE / TRACKING

Because the gauge face is a minimalist canvas without digits, the mapping is designed to be intuitive and glanceable.

- **Relative Tracking:** For markets like Stocks or Crypto 24h trends, the centre of the dial represents zero change. A sweep to the right indicates a rise; a sweep to the left indicates a fall. It's the vibe of the market in visual form.
- **Absolute Tracking:** For data like local Air Quality (AQI), or Crypto Fear & Greed Index, the dial maps to a fixed 0–100 scale.
- **Focus Tracking:** Use the gauge as a physical Pomodoro timer, watching your focus time sweep toward completion in a way that feels tangible and finite.

## 07 / AMBIENCE

Adjust the lighting effect, including night mode.

Any animated theme uses CYCLE DURATION to control the speed of change. We recommend long durations, eg 600 seconds, for maximum calm.

Themes:

- Static
  - A single unchanging colour. Pure mood.
- Pulse
  - A slowly undulating single colour mode. Like breathing.
- Glacial
  - Our favourite mode, breathless whites and ice blues.
- Aurora
  - Great for low-light atmospherics. Electromagnetic storms of green and blue.
- Sunset
  - Soothing colours to end a day.
- Chromatic
  - A hypnotic spectrum of colours, best enjoyed with a truly extended CYCLE DURATION.
- Sentiment
  - Central position is white, left is red, right is green.
  - Combine with price tracker modes
- Alert
  - White until pointer reaches minimum, then red.
  - Combine with Pomodoro mode

We'd love to hear your ideas for future Ambience modes: [hello@analoguedesk.co](mailto:hello@analoguedesk.co)

## 07.1 / AMBIENCE / NIGHT MODE

Adjust the lighting effect, including night mode. Ensure you have set your [timezone](#) if required.

## 08 / ADVANCED

Further capabilities and controls not needed for regular operation.

### 08.1 / ADVANCED / DIAGNOSTICS

This page provides useful troubleshooting information. You may be asked to copy and include this information in any support request. It includes things like:

- Software version
- Wifi status
- DNS name (defaults to index.local) - See [Device Name](#)
- Event log, showing control output messages including pointer position between 0 and 1

### 08.2 / ADVANCED / POINTER CALIBRATION

If the pointer is slightly misaligned, you can tweak it in software. Set the MODE to off in the [mode selection page](#). The pointer can be adjusted by  $-10^\circ$  to  $+10^\circ$ .

### 08.3 / ADVANCED / TIMEZONE

By default IDX-1 is set to UTC (universal time). To ensure [night mode](#) works as expected, adjust to match your local timezone here.

### 08.4 / ADVANCED / DEVICE NAME

If you have more than one device on the same network, the device name should be changed to make each unique. The supplied name is used as a suffix for DNS and LAN identification. Once changed you need to navigate to the new config page, eg:

- <http://index-<suffix>.local>

### 08.5 / ADVANCED / REBOOT DEVICE

Perform a simple reboot. Settings are preserved.

## 08.6 / ADVANCED / RESET WIFI

Force the device to forget its current wifi connection settings and reboot. It will enter [Setup Wifi mode](#) and show deep blue.

## 08.7 / ADVANCED / FIRMWARE UPDATE

However IDX-1 does have OTA (Over-The-Air) update capabilities via ElegantOTA.

Press select file and choose the .bin file to install.

No guarantee or support is provided for any software updates.

## 08.8 / ADVANCED / SOFTWARE FACTORY RESET

Use this option to reset the device. It will clear all settings (device name, mode, ambience) reboot and enter [Setup Wifi mode](#).

## 09 / HARDWARE FACTORY RESET

If you are unable to access the configuration portal after repeated attempts, and want to perform factory reset, follow these steps:

- Cycle the power 3 times, turning off while the device is in the White 'Reset Mode' phase of initialisation.
- When the device shows magenta colour, it has been factory reset.
- Refer to [Setup Wifi](#) to reconfigure the Wifi connection.

## 10 / CARE & MAINTENANCE

- **Acrylic Surfaces:** The case is constructed from layered, laser-cut acrylic. Clean only with a dry microfibre cloth. **Do not use isopropyl alcohol or glass cleaners**, as these can cause "crazing" (micro-cracks) in the material.
- **Hardware:** Periodically check that the M3 stainless steel bolts in the corners remain finger-tight. Do not overtighten.
- **Environmental:** For indoor use only. Keep dry.

## 11 / REGULATORY & SAFETY

- **Disposal:** This product is marked with the WEEE symbol. It must not be disposed of with household waste. Please return to a certified E-waste recycling centre.
- **Compliance:** Analogue Desk Co. declares that this device is in compliance with the essential requirements and other relevant provisions of the Radio Equipment Regulations 2017.
  - See the enclosed Declaration of Conformity for full details.

## 12 / COLOURS

IDX-1 uses colours at launch to talk to you:

WHITE	Starting up. You have 5 seconds to trigger <a href="#">reset mode</a>
BLUE	Waiting for <a href="#">Wifi setup</a>
CYAN	Initialising motor
GREEN	Moving to mid-point, then into active <a href="#">mode</a> and <a href="#">ambience</a>
MAGENTA	Hardware reset complete

## 13 / DEVELOPER GUIDE

IDX-1 is built on an open architecture. We believe you should own your own hardware and we encourage exploration. This is entirely optional as we provide carefully curated software.

Modifying the firmware does not affect your statutory rights regarding the physical hardware, though we cannot provide software support for third-party code.

Be warned that once the supplied firmware is removed, the factory reset capability is gone too. To reinstate it, contact [support@analoguedesk.co](mailto:support@analoguedesk.co).

### 13.1 / DEVELOPER GUIDE / SPECIFICATIONS:

- **MCU:** ESP32-C3-MINI-1 4MB Flash
- **Motor:** X27.168 Stepper Motor
- **LEDs:** 4 x WS2812B
- **Interface:** USB-C Serial

### 13.2 / DEVELOPER GUIDE / GPIO PIN MAPPING

Component	Function	ESP32-C3 Pin
Stepper Motor	Coil A (1)	GPIO 00
Stepper Motor	Coil A (2)	GPIO 01
Stepper Motor	Coil B (1)	GPIO 06

Stepper Motor	Coil B (2)	GPIO 07
RGB LEDs	Data	GPIO 08
Button	Reset	GPIO 09

## 14 / SUPPORT

Thank you for supporting our dream.

Contact [support@analoguedesk.co](mailto:support@analoguedesk.co) with any further issues. We'll endeavour to assist!