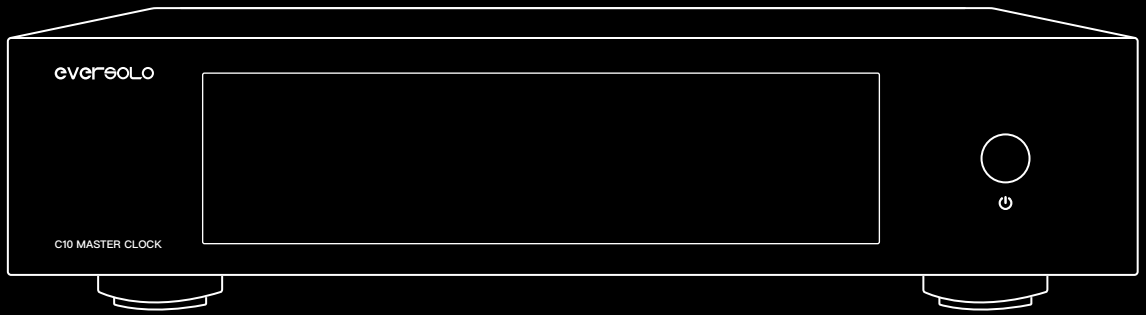
eversolo C10



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产品简介

感谢您购买艾索洛 C10 主时钟。

C10 高精度主时钟旨在为数字音频系统提供稳定可靠的参考时钟基准。产品采用高稳定度 10MHz 恒温时钟架构，结合低噪声电路设计与精密温度控制技术，实现良好的频率稳定性与低相位噪声表现，为数字音频设备提供精准的时钟同步基础。

C10 配备 4 组独立时钟输出接口，可同时连接数字转盘、DAC、流媒体播放器等设备，构建统一的系统时钟环境，提升数字信号传输与处理的一致性。产品支持 1PPS 输入功能，可接入外部高精度时间参考源进行同步校准。

前面板搭载 8.8 英寸 LCD 高清触控显示屏，可直观显示运行状态、时钟参数及系统信息。

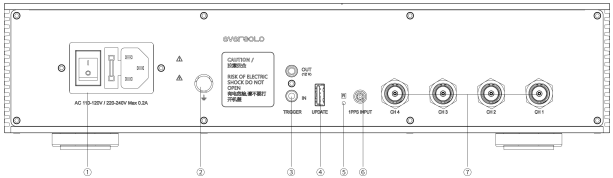
使用本机器之前，建议先阅读本说明，以便正确使用产品功能。

产品基本参数

屏幕	8.8 英寸 IPS 触控显示屏
机身材质	铝合金
USB 接口	USB 2.0 x 1，仅用于升级
1PPS 输入	SMB × 1,支持外部 1PPS 授时信号输入
时钟输出接口	4 x BNC，独立驱动缓冲
时钟源	10.000MHz SC 切超低噪声恒温控制晶体振荡器
出厂频率偏差	< ±0.01ppm @ 10MHz, 25°C
环境温度范围 频率稳定度	< 0.003ppm，-20°C 至 +60°C
短期频率稳定度	< 9E-13 @ Tau = 1s
预热时间	25℃环境温度下约5分钟达到拐点温度，15-20分钟达到最佳工作状态
输出波形	方波
输出频率	10 MHz、25 MHz、100 MHz、11.2896 MHz、22.5792 MHz、 45.1584 MHz、12.288 MHz、24.576 MHz、49.152 MHz
输出幅值	1.8Vrms @ Square wave
输出阻抗	50Ω
相位噪声	1Hz: <= -115dBc/Hz；10Hz: <= -129dBc/Hz；100Hz: <= -139dBc/Hz； 1000Hz: <= -145dBc/Hz；Noise Floor: <= -170dBc/Hz
电源电压	AC 100V-120V 50/60Hz 或 AC 220V-240V 50/60Hz 自适应
最大功率	≤ 20W
待机功耗	≤ 0.8W
尺寸	宽 365mm × 深 310mm × 高 88mm（含脚垫）/ 78mm（不含脚垫）
净重	5.85kg
毛重	8.4kg

面板与接口

后面板



后背板接口说明

1、AC 电源开关及插座
2、接地柱
3、触发输入 / 输出
4、USB 接口，仅用于更新
5、复位按钮
6、外部时钟同步接口
7、时钟输出接口，请使用 50Ω 阻抗同轴线连接

前面板

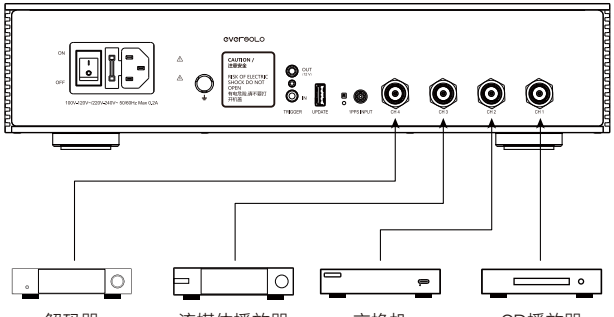
电源功能按键：关机状态下短按开机；开机状态下短按待机



前面板与电源功能按键

连接

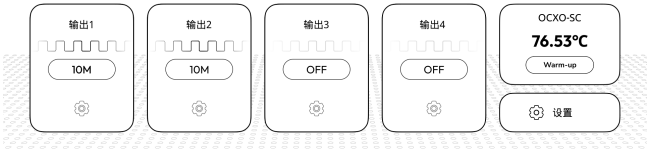
可参考下图，使用50欧姆阻抗的同轴线缆将本机对支持外置主时钟的设备相连



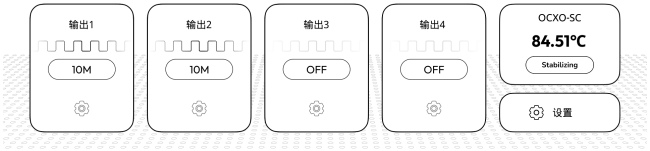
基本操作与主界面

开机与预热

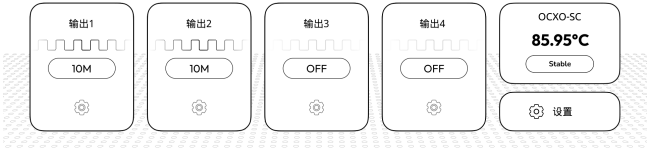
设备开机后，系统进入恒温晶振预热过程。
主界面右侧 OCXO-SC 状态卡显示晶振温度和状态，状态会随温度变化从预热、稳定中逐步进入稳定



设备开机预热恒温晶振



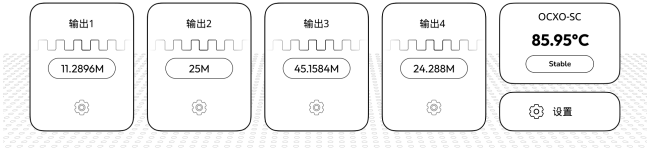
温度稳定中



晶振温度稳定

通道显示

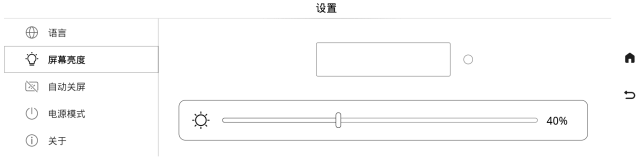
主界面显示 4 个输出通道。每个端口的输出频率或关闭状态会显示在对应通道卡片上，便于用户快速确认当前输出状态



不同频率通道显示

屏幕亮度

屏幕亮度默认 40%。
拖动亮度条可实时调节屏幕亮度，上方设备图标亮度会同步变化



屏幕亮度设置

系统设置

语言

进入设置页面后，默认显示语言菜单。
当前语言会高亮显示。选择语言项可切换系统语言，设置立即生效并在掉电后保存



语言设置

自动关屏

默认无操作 2 小时后自动关屏。
关屏仅将屏幕熄灭，轻点屏幕即可唤醒。切换配置后立即生效，并在掉电后保存



自动关屏设置

电源模式

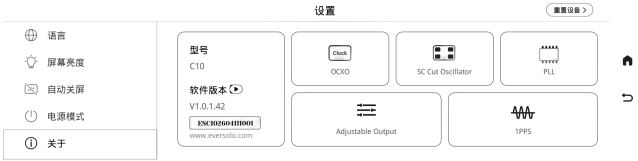
电源模式默认为接通电源时开机。
当前菜单项会高亮显示，切换配置后立即生效并掉电保存



电源模式设置

关于与软件升级

关于页面可查看设备型号、序列号与软件版本



关于页面

请点击“软件版本”可进行升级操作，点击“升级”按钮开始升级检测。
可通过官网下载EVERSOLO C10固件升级包至U盘中，将U盘连接到机器 USB A端口，再打开本机 设置—> 关于 —> 升级，选择升级文件包，按照屏幕提示完成升级操作，升级完成等待机器自动重启即可



系统升级说明

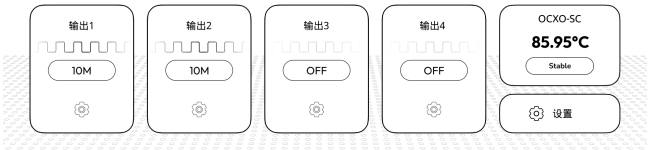


系统升级中

注意：升级过程中请勿将机器断电

通道配置

点击对应输出端口，即可修改该端口配置。
通道详细输出页支持关闭或开启当前输出



点击对应输出端口进入配置

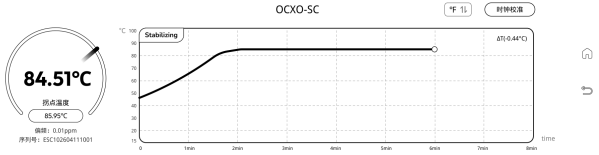
在开关开启的情况下，可选择当前通道不同的输出频率。
频率设置立即生效，并在掉电后保存



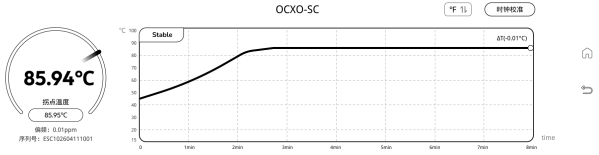
通道详细输出页：关闭



通道详细输出页：开启



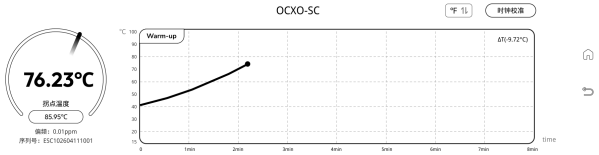
温度界面：稳定中



温度界面：稳定

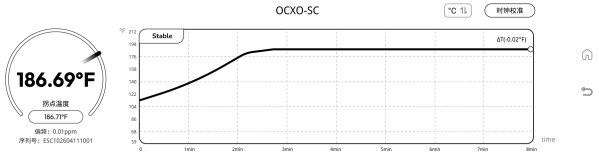
温度界面与单位切换

C10 的温度显示界面可直观显示 OCXO 的实时温度、拐点温度、偏频、序列号及温度变化曲线



温度界面：预热

温度界面默认单位为 °C。
轻点仪表盘温度或温度切换图标，可在 °C / °F 之间切换温度单位。



温度单位切换

“时钟校准”按钮仅在温度稳定状态下变亮可选中；未稳定时按钮呈灰黑色不可点击。

点击 “时钟校准” 可进入时钟校准流程。

注意：当温度传感器读取失败，或晶振温度过高触发过温保护时，
温度字段显示 -.-°C，数据不再更新，并显示错误代码提示。

时钟校准流程

检测外部时钟

点击 “时钟校准” 进入校准流程后，系统会检测外部时钟。
检测期间除仪表盘外，其余页面置灰，并屏蔽其他位置点击事件，直到检测超时、失败或成功。



正在检测外部时钟

检测失败

当未检测到有效外部时钟时，系统会显示失败提示。点击 X 可退出校准；
点击重新检测可再次检测外部时钟信号。



检测失败

检测成功与开始校准

检测到参考时钟后，可点击取消退出校准，或点击开始校准进入时钟校准。
校准期间其余位置点击事件会被屏蔽。



检测成功



时钟校准中

校准结果

校准成功：点击完成保存此次校准结果并结束本次校准；
点击重新检测可回到检测流程。



校准成功

校准失败：点击完成结束本次校准；点击重新检测可重新开始检测流程。

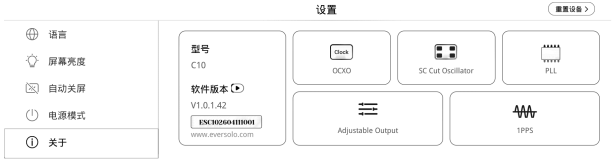


校准失败

重置设备

检测外部时钟

点击“设置 - 关于”右上角的重置设备，可进行重置操作。



关于页面：重置设备入口

进入重置设备页面后，点击重置设备，界面会弹出确认提示。
Home / 返回键可返回首页或上级菜单页。



重置设备页面

点击重置执行重置操作；点击取消返回上一级。



重置确认提示

特别说明与安全警示

特别说明

为了提升用户体验，艾索洛会不定期对产品固件进行升级。
本说明内容可能与产品实际使用存在差异，本机功能或参数如有调整，恕不另行通知。更多使用方法，请访问官方网站 www.eversolo.com 查阅。

安全警示

- 本设备不得遭受水溅，不得在设备上放置类似花瓶一类装满液体的物品。
- 本产品断开电源装置为输入插座或背部面板的开关。配备给本产品使用的插座应安装在本产品附近，且应便于操作，不能被其他物体阻挡。
- 本产品为 I 类产品，使用此产品必须有良好的接地措施。
- 本产品仅适用于海拔 2000 米以下正常使用。

Product Overview

Thank you for purchasing the Eversolo C10 Master Clock.

The Eversolo C10 high–precision master clock is designed to provide a stable and reliable reference clock for digital audio systems. It uses a high–stability 10MHz temperature–controlled clock architecture, together with low–noise circuitry and precise temperature control, to deliver excellent frequency stability and low phase–noise performance for accurate clock synchronization.

The C10 provides four independent clock output interfaces. It can connect to digital transports, DACs, streamers, and other compatible digital audio devices to build a unified system clock environment and improve the consistency of digital signal transmission and processing. The product also supports 1PPS input for synchronization and calibration with an external high–precision time reference.

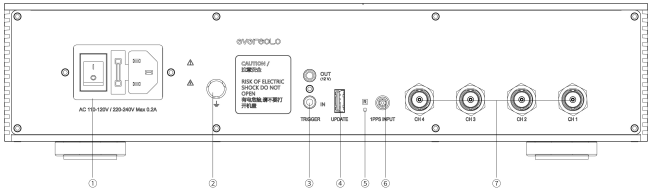
The front panel features an 8.8–inch LCD HD touch display for viewing operating status, clock parameters, and system information. Read this manual before using the product to ensure proper operation.

Specifications

Display	8.8-inch IPS touch display
Chassis Material	Aluminum alloy
USB Port	USB 2.0 x 1, for firmware upgrade only
1PPS Input	SMB x 1, supports external 1PPS timing signal input
Clock Outputs	4 x BNC, independently driven and buffered
Clock Source	10.000MHz SC-cut ultra-low-noise temperature-controlled crystal oscillator
Factory Frequency Offset	< ±0.01ppm @ 10MHz, 25°C
Frequency Stability over Operating Temperature	< 0.003ppm, -20°C to +60°C
Short-Term Frequency Stability	< 9E-13 @ Tau = 1s
Warm-Up Time	At 25°C, it takes about 5 minutes to reach the inflection point and 15–20 minutes to reach optimal operating conditions.
Output Waveform	Square wave
Output Frequency	10 MHz、25 MHz、100 MHz、11.2896 MHz、22.5792 MHz、45.1584 MHz、12.288 MHz、24.576 MHz、49.152 MHz
Output Level	1.8Vrms @ Square wave
Output Impedance	50Ω
Phase Noise	1Hz: <= -115dBc/Hz; 10Hz: <= -129dBc/Hz; 100Hz: <= -139dBc/Hz; 1000Hz: <= -145dBc/Hz; Noise Floor: <= -170dBc/Hz
Power Input	AC 100V-120V 50/60Hz or AC 220V-240V 50/60Hz, adaptive
Maximum Power	≤ 20W
Standby Power	≤ 0.8W
Dimensions	365 ×310 × 88 mm (incl. feet) / 78 mm (excl. feet) (W × D × H)
N/W	5.85kg
G/W	8.4kg

Panels and Connections

Rear Panel



Rear panel connections

1. AC power switch and power inlet
2. Ground terminal
3. Trigger input / output
4. USB port, used for firmware update
5. Reset button
6. External clock synchronization interface
7. Clock output interfaces. Use 50Ω coaxial cables for connection.

Front Panel

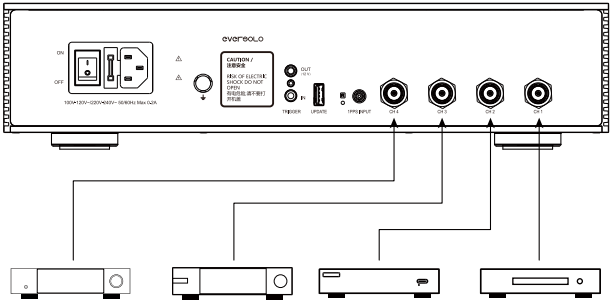
Power function button: when the device is powered off, press briefly to power on. When the device is powered on, press briefly to enter standby.



Front panel and power function button

Connection

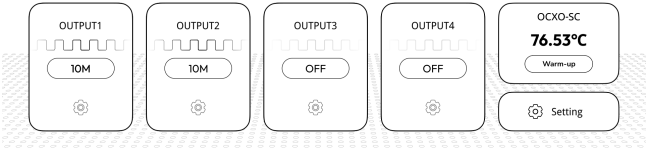
As shown below, connect the C10 to a device with an external clock input using a 50 Ω coaxial cable.



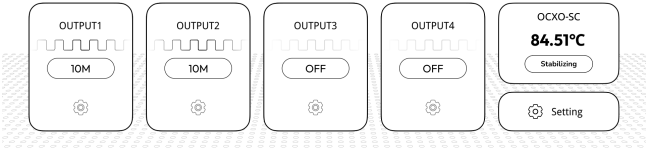
Basic Operation and Main Screen

Power-On and and Warm-Up

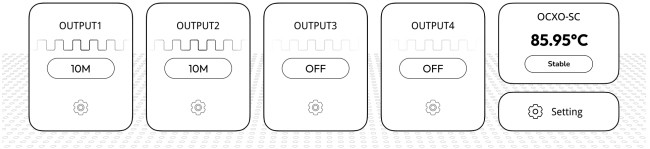
After power-on, the device starts the warm-up process for the temperature-controlled crystal oscillator. The OCXO-SC status card on the right side of the main screen shows the oscillator temperature and status. The status changes from Warm-up to Stabilizing and then to Stable as the temperature settles.



Main screen: oscillator warm-up



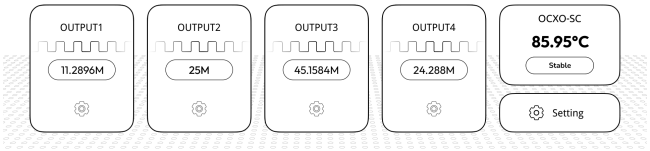
Main screen: stabilizing



Main screen: stable

Channel Display

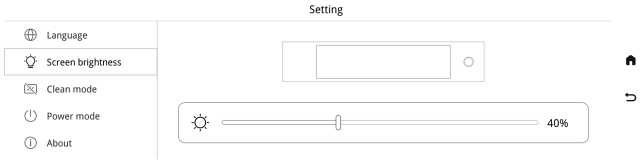
The main screen displays four output channels. Each channel card shows the current output frequency or off status, allowing users to quickly confirm the output state of each port.



Main screen: output channels with different frequencies

Screen Brightness

The default screen brightness is 40%.
Drag the brightness bar to adjust brightness in real time. The device icon above the bar changes accordingly.



Screen brightness settings

System Settings

Language

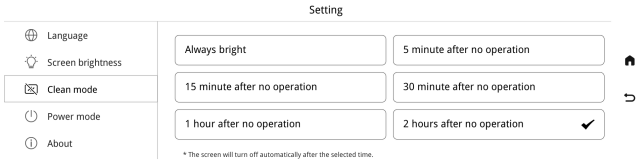
When the Settings page is opened, the Language menu is displayed first. The current language is highlighted. Select a language to change the system language. The setting takes effect immediately and is saved after power-off.



Language settings

Auto Screen Off

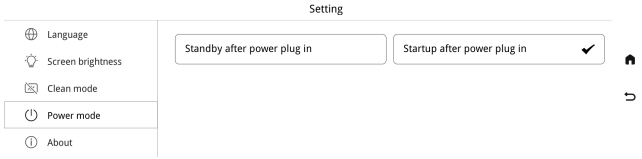
By default, the screen turns off after 2 hours without operation.
This function only turns off the display. Tap the screen to wake it. Changes take effect immediately and are saved after power-off.



Auto screen off settings

Power Mode

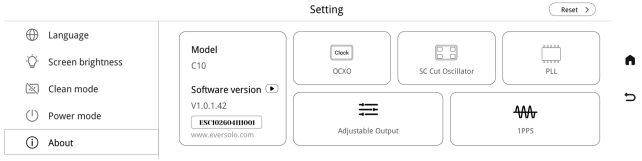
The default power mode is Power On When AC Is Connected.
The selected menu item is highlighted. Changes take effect immediately and are saved after power-off.



Power mode settings

About and Software Upgrade

The About page displays the model, serial number, and software version.

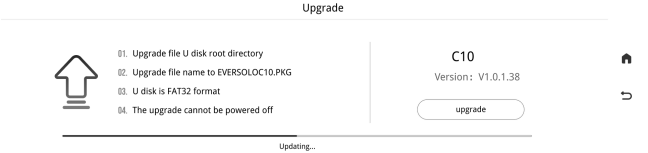


About page

Tap Software Version to access the update options, then tap Update to check for available updates.
To update via USB, download the Eversolo C10 firmware package from the official website and copy it to a USB drive. Connect the drive to the C10's USB-A port, then go to Settings > About > Update and select the firmware package. Follow the on-screen instructions. Once the update is complete, wait for the C10 to restart automatically.



System upgrade instructions

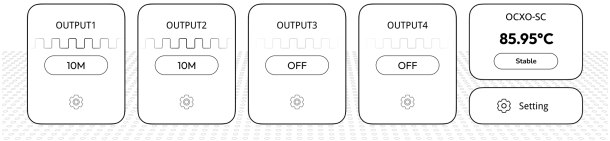


System upgrading

Important: Do not disconnect power during the upgrade process.

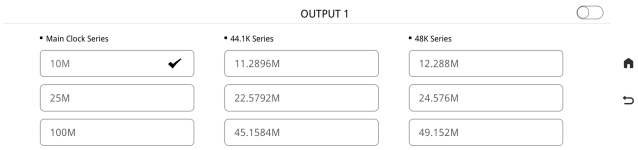
Channel Configuration

Tap an output channel to modify the configuration of the corresponding port.
The channel detail page allows the selected output to be turned on or off.

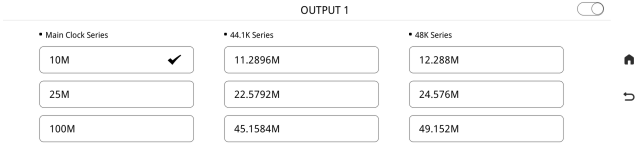


Tap an output channel to enter configuration

When the output is enabled, select the required output frequency for the current channel.
The setting takes effect immediately and is saved after power-off.



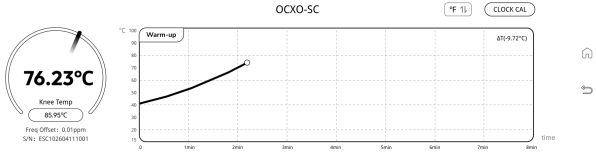
Channel detail page: output off



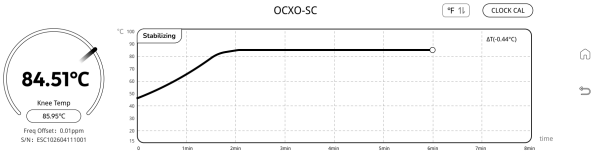
Channel detail page: output on

Temperature Display and Unit Selection

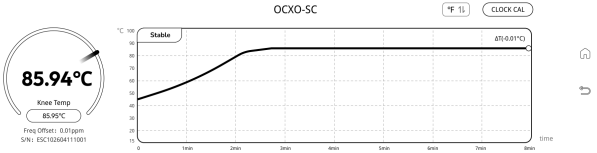
The C10 temperature display page shows the real-time OCXO temperature, inflection-point temperature, frequency offset, serial number, and temperature curve.



Temperature display: warm-up

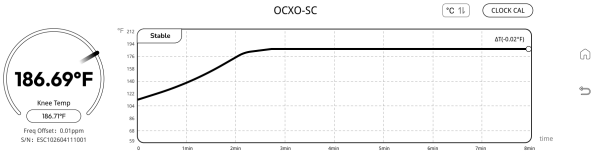


Temperature display: stabilizing



Temperature display: stable (°C.)

The default temperature unit is °C.
Tap the temperature gauge or the temperature unit icon to switch between °C and °F.



Temperature display: stable (°F)

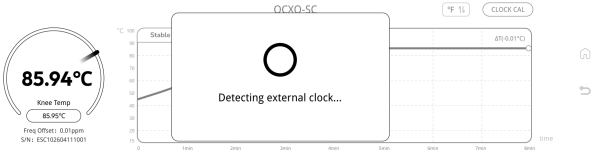
The CLOCK CAL button is available only when the oscillator temperature is stable.
Before the temperature is stable, the button is disabled. Tap CLOCK CAL to enter the clock calibration process.

Note:
If the temperature sensor fails to read data, or if over-temperature protection is triggered, the temperature field displays -.-°C. Temperature data will no longer be updated, and an error code prompt will be displayed.

Clock Calibration

Detecting an External Clock

After tapping CLOCK CAL to enter calibration, the system detects the external clock signal.
During detection, all pages except the gauge area are dimmed, and touch operations in other areas are disabled until detection times out, fails, or succeeds.



Detecting an external clock

Detection Failed

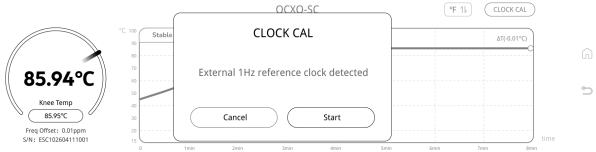
If no valid external clock is detected, a failure prompt is displayed.
Tap X to exit calibration. Tap Retry to detect the external clock signal again.



Detection failed

Detection Successful and Calibration Start

When a reference clock is detected, tap Cancel to exit calibration, or tap Start to begin clock calibration. Touch operations in other areas are disabled during calibration.



Detection successful



Clock calibration in progress

Calibration Result

If calibration succeeds, tap Finish to save the calibration result and end the calibration process.
Tap Retry to return to the detection process.



Calibration successful

If calibration fails, tap Finish to end the current calibration process.
Tap Retry to start detection again.

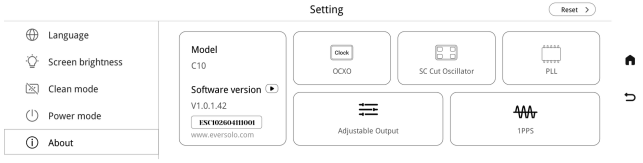


Calibration failed

Resetting the Device

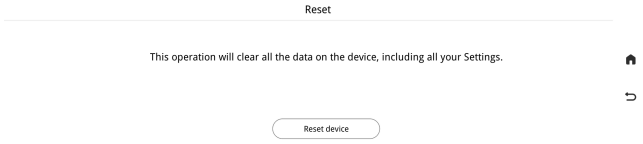
Detect External Clock

To reset the device, open Settings - About and tap Reset in the upper-right corner.



About page: Reset Device entry

After entering the Reset Device page, tap Reset device to open the confirmation prompt.
Use Home or Back to return to the home screen or the previous menu page.



Reset Device page

Tap Confirm to reset the device, or tap Cancel to return to the previous page.



Reset confirmation prompt

Notes and Safety Information

Notes

To improve the user experience, Eversolo may update product firmware from time to time. The content of this manual may differ from the actual product operation. Product functions and specifications may be adjusted without prior notice. For more information, visit www.eversolo.com.

Safety Information

- Do not expose this device to dripping or splashing. Do not place objects filled with liquid, such as vases, on the device.
- The power inlet or the rear-panel power switch is used as the power disconnect device. The power outlet used for this product should be installed near the product, be easy to access, and not be blocked by other objects.
- This product is a Class I device. It must be used with a proper protective earth connection.
- This product is intended for normal use only at altitudes below 2000 meters.