TAIKO AUDIO

Battery Management System (BMS) App Manual

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Description

With the Battery Management System (BMS) App, you can change the battery circuit charging cycle and check the battery voltages. Communicating directly with the server via Bluetooth, the BMS app requires no network skills and provides an easy and reliable method to connect to the server and configure its settings.

Set and Forget

By default, the Olympus Server and I/O have a pre-programmed charging cycle between 00:00 and 07:00 in your local time zone. If this works for you, then there is no need to use the app.

If desired, the charging period may be freely adjusted to precisely fit in with your personal schedule. After making this adjustment, there is no longer a need to use the BMS app.

Functionality

The Olympus Server contains two independent battery sections that appear independently in the BMS app. The Olympus I/O contains a third and fourth battery section, creating four independent battery sections in the app in total.

If you only have the Olympus server, you will see only two sections, and if you have the Extreme server with the Olympus I/O, you will only see the I/O's two battery sections.

Server BPS

The Server's first battery section powers the core system. It is configured such that the battery is constantly charged, combining the technical advantages of battery power with the practical benefits of smaller cell sizes. When the server is in standby mode with fully charged batteries, the system batteries can hold a charge for up to 6 hours. But when the server is switched on and playing music, fully charged system batteries will only provide up to 30 minutes of charge. For this reason, it is recommended to always switch the server to standby before disconnecting it from the mains power and to make sure to always reconnect the server to the mains power as soon as possible after relocating it.

The Server's second battery section powers the XDMI Output cards, and is configured to charge in cycles, like a traditional battery. The XDMI battery holds a charge for up to 36 hours, to provide more than enough pure battery power to cover the longest listening sessions.

I/O BPS

When the Olympus I/O is added, the Server's second battery section is reconfigured to power the XDMI Interface cards that connect the Olympus to the I/O.

The Olympus I/O contains 2 battery power supplies and a custom power supply for charging the battery cells. The first battery section powers the Network Card, and the second section powers the XDMI Output. The batteries are configured to charge

in cycles, like a traditional battery. They hold a charge for up to 36 hours, to provide more than enough pure battery power to cover the longest listening sessions.

Charge Cycle

To maintain ideal battery circumstances, there is a pre-programmed charging cycle between 00:00 and 07:00 for the Olympus Server's second battery section and both the Olympus I/O's sections. For these battery sections, the charging period may also be freely adjusted using the BMS App to precisely fit in with your personal schedule.

Please note that charging only occurs when the battery charge is below the value set in the Minimum SOC setting. More info can be found in the "Change the Charging Cycle" section further below.

Voltage Recommendations

System Battery

- Minimum Operating Voltage is 13.6 V.
- The system will shut down if the voltage dips lower.
- Sound Quality is not affected by higher voltages.

XDMI Battery

- Minimum Operating Voltage is 8 V.
- The cards will stop working if the voltage dips lower.
- Optimal Sound Quality is obtained from 12 V and up.

Download and Install

The BMS app can be found as a free download in the Apple App Store and Android Play Store. Just search for Taiko BMS, and you will find it. The app works on phones and tablets.

After installation, the app is called “Taiko” on iPhone/iPad, and “Taiko BMS Monitor” on Android. These names and icons will be updated and aligned in a future release.

App Use

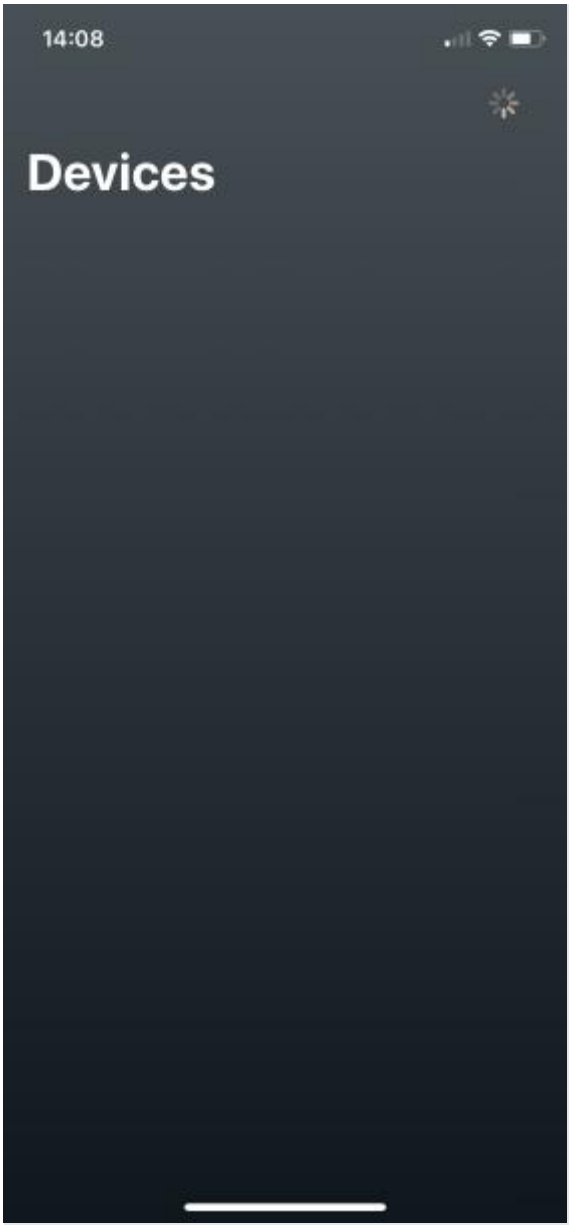
Upon first launch, the app asks for permission to use Bluetooth. Please allow this, so that it can find the server. The app will automatically find and connect to the server, after which it will prompt the user to type a PIN code. The default code is 000000 (6 times 0).

Time zone, time, and date are set automatically when the app is connected to the server via Bluetooth. Please allow a few seconds for the battery logic information to sync to the app.

Important Note

In case the PIN Code is forgotten, it can be reset to factory default, which reinstates a key known only to Taiko. To avoid support load because of the required additional steps, we kindly ask the user to take great care of their code, or simply leave it at the default 000000.

While searching, or when the server is disconnected from the AC mains, or not switched on, the app's Devices screen will show no devices, as shown below.



(Server disconnected from the AC mains or not switched on)

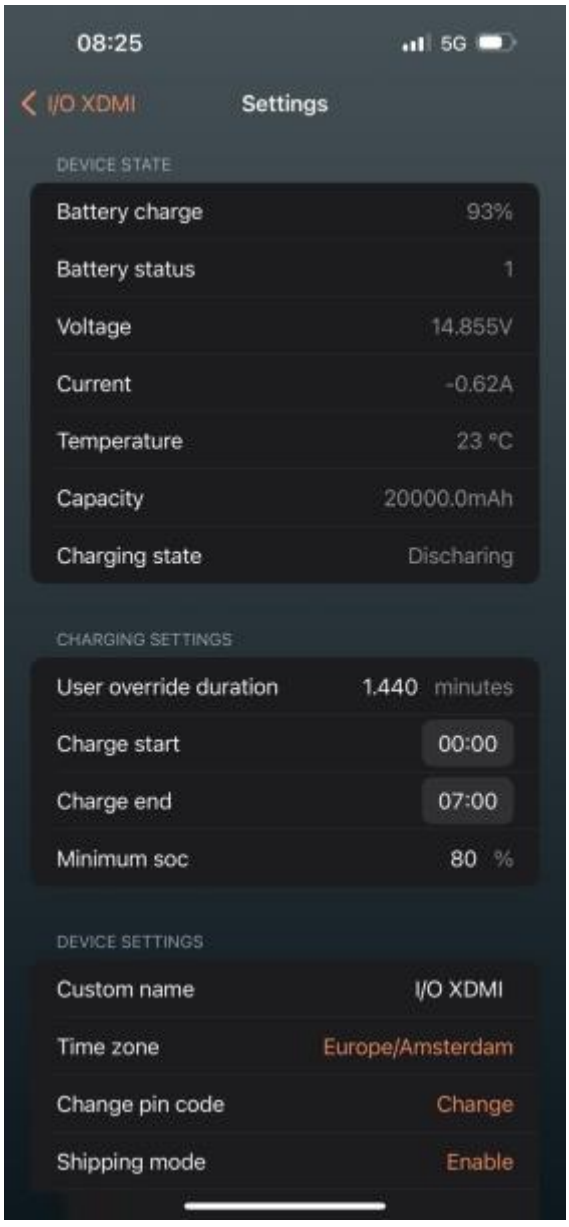
As soon as the data is loaded, the app is ready for use. In the example below, we see the two independent battery sections of an Olympus Server and Olympus I/O.

From the discovered battery sections, please tap the one you want to check or adjust. Next, the main Dashboard screen will be displayed, providing a quick view of the most relevant parameters.

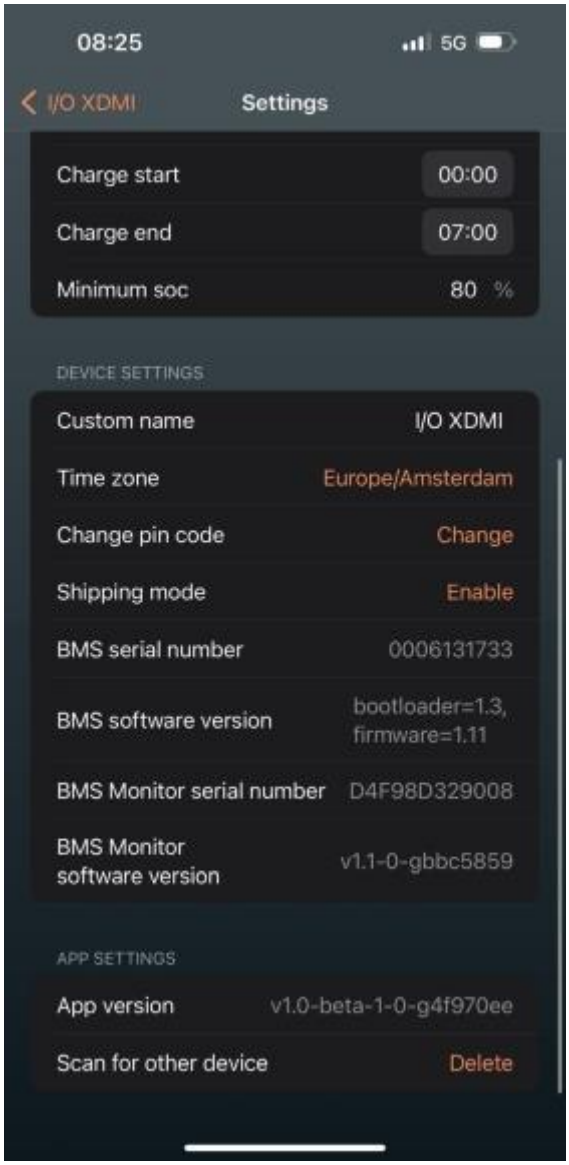
(Main Dashboard Screen)

From the main Dashboard screen, tap the gear wheel in the top right to enter the settings screen.

All settings are displayed in a continuous view, meaning that all settings can be reached by scrolling down.



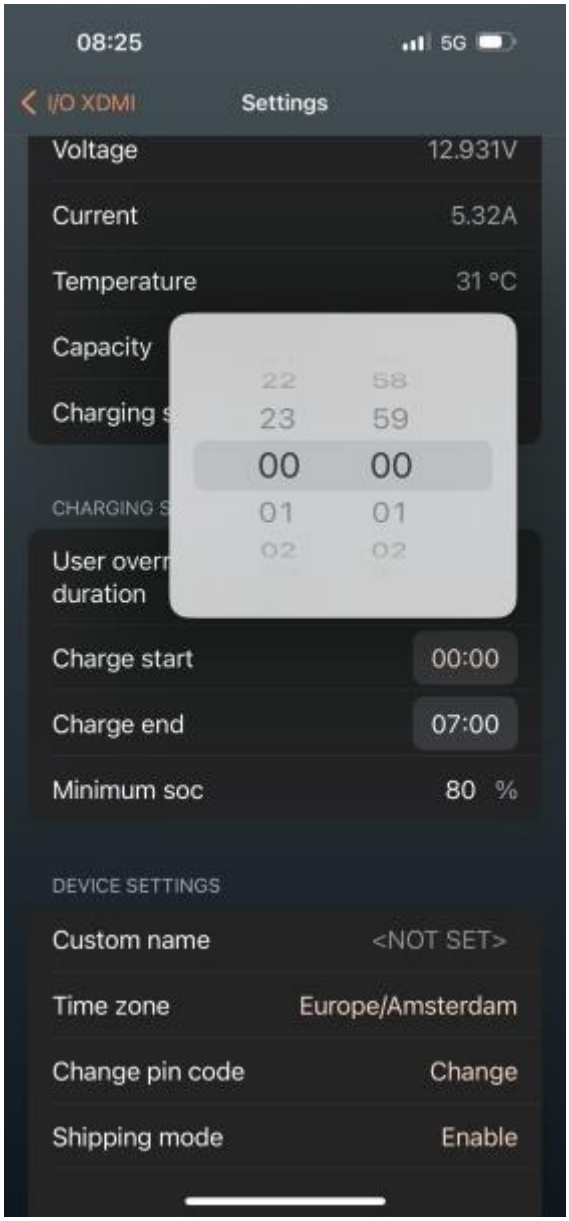
(Main settings screen, first page)



(Main Settings Screen, second page)

Change the Charging Cycle

To set the Charging Cycle, please select the Charge Start and Charge End fields, and enter your desired times. Please note that the average charging time to reach a full capacity is 7 hours. Naturally, the server can also be used with a partial charge, and it will also work while charging.



Minimum SOC

SOC stands for State Of Charge. This value refers to the battery charge threshold below which the charging circuit starts charging. By default, it is set to 80%, but it can be altered as preferred.

As an example, 80% here means the charger won't start charging if the battery is still more than 80% full. With the settings as shown in the screenshot, the battery pack will start charging if the battery charge is below 80% at 00:00. It will stop charging at 07:00 AM or if it's 100% full.

Charging Override

An override kicks in when the battery is near-depleted. In that case, the charger will always start charging, while ignoring the time window you configured.

With the charging current set at 5A, 1 hour of charging is enough for 10 hours of XDMI operation.

If desired, the user can change the PIN code. This is not required and is up to the user. The code must use 6 digits.

(Change PIN code)

Lightning Storms

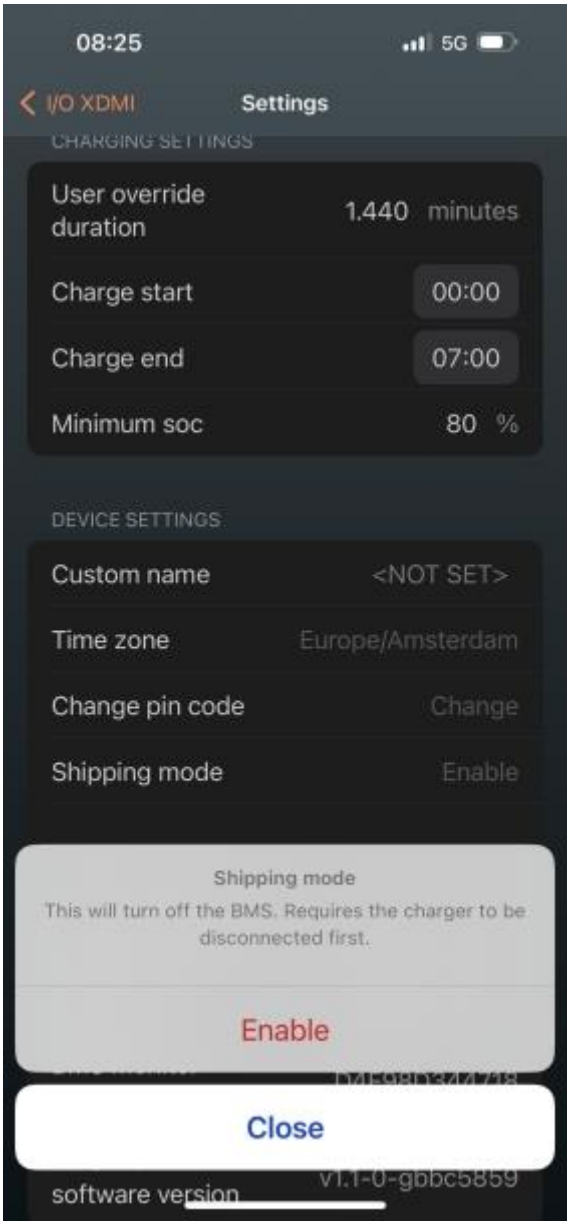
We recommend always leaving the server connected to AC mains power. ln case of concern during lightning storms, a good solution would be to install a surge protector power distributor in parallel and temporarily plug the server into it, instead of the normal power distributor. This way, the server is protected, and the batteries can still be charged.

Shipping Mode

If it is expected that the server will be disconnected from the mains power for more than 2 hours, it can be set to Shipping Mode. This will discharge the capacitors and then shut down the motherboard and XDMI cards. After this, the unit can safely be left disconnected indefinitely. This is how we ship the unit.

Power off the unit with the rear switch. Wait for approx. 40 seconds for the Battery sections to shut down. You can check this by looking through the unit's perforated top, into the front right section, where the green light will go off. Then, use the BMS app and select shipping mode for each of the unit's Battery Sections.

Upon reconnection of mains power, the server will automatically switch out of shipping mode and prepare itself for normal use.



(Shipping Mode)