



SERVICE PROCEDURE

MasterMind TCU/TCD Internal battery charging

AFFECTED PART:

YEAR	DESCRIPTION
2022-2023	S216800020 ELE HMI, MASTERMIND TURBO CONNECT UNIT DISPLAY (TCU 2)
	S216800041 ELE HMI, MASTERMIND WIRED TURBO CONNECT DISPLAY (TCD-W 2), W/ WIRED REMOTE

AFFECTED MODELS:

YEAR	DESCRIPTION
2022-2023	ALL BIKES EQUIPPED WITH MASTERMIND TCU or MASTERMIND TCD

SUMMARY:

When turning on a bicycle for the first time (during unboxing) or when installing a service part, it can be possible that the internal MasterMind display battery is drained, if it was shipped with a low charge level from the factory. This means the bike will not power on directly.

Connecting the display directly to Turbo Studio will ensure that the MasterMind display receives power by connecting it to the USB-A to USB-C port. This connection will automatically power on the bike/display.

During the updating process, it is necessary to update both the MasterMind display and the motor, which should take approximately 5 minutes. However, please note that this duration will not allow the internal MasterMind display battery to be fully charged.

To ensure sufficient battery charge, it is recommended to keep the MasterMind display connected to Turbo Studio for approximately 30 minutes. This will allow the internal battery to reach a minimum charge level of 50%. By following this procedure, the internal battery should last for about 6 months (assuming the bike is not turned on during regular use).

Alternatively, you have the option to charge the internal MasterMind display battery using a USB-C cable connected to an external power source, such as a mobile phone charger with a maximum output of 2 amps.

If preferred, you can also leave the bike powered on to charge the display battery once it has been initially charged. It's important to note that the bike will automatically turn off after 10 minutes. To continue charging the internal MasterMind display battery beyond this timeframe, you will need to turn the bike back on.

To fully charge internal MasterMind display battery it may take up to 1.5 hours.

STARTING UP PROCEDURE:

- Follow these steps to start up a bicycle with a depleted MasterMind display.
- Verify that the MasterMind display and main battery are properly connected.
- Connect the MasterMind display to a USB-C power supply using a suitable source such as a computer or mobile phone charger (max 2A output).
- The MasterMind display will automatically power on once connected.
- **IMPORTANT: Perform a power cycle on the MasterMind display a couple of times while the USB cable remains connected. This can be done by turning it off and on again using the power button.**



TOOLS REQUIRED : (MASTERMIND TCU)

- T10 Torx bit
- Torque wrench
- Turbo Studio Account

SERVICE PROCEDURE: (MASTERMIND TCU)

- To access the USB-C port on the MaterMind TCU it has to be removed from the frame.
- To remove the MasterMind TCU use a T10 driver and unscrew the screw securing it to the frame.
- Once the battery is sufficiently charged , insert the MasterMind TCU back into the frame.
- Use a torque wrench and T10 Torx bit to torque the bolt to 1 Nm / 9 in-lbf.

