

TORP TC1000 CONTROLLER.

User Manual for Surrón
Ultra Bee



INTRODUCTION.

TC1000 controller is compatible with:

- SurRon Ultra Bee
- Torp Motor TM25
- SurRon Ultra Bee.

TC1000 is not compatible with Segway X160.

TC1000 controller is compatible with both versions of the stock display (L1 E & the off-road version). Both speed and the distance are displayed on it. For the additional options, like battery monitoring and settings, you will have to use your smartphone or buy a Torp Display, that is sold separately.

This is a plug&play controller that needs no previous knowledge of electronics and programming for installation and setup. Everything needed for a successful installation is included in the box.

IMPORTANT: While Torp products are designed for ease of installation, we highly recommend enlisting the services of a qualified professional for installation. This ensures that all components are connected correctly and functioning as intended. Improper installation may lead to damage to the product and could result in the voiding of the warranty. Ensuring a professional installation not only safeguards the integrity of the product but also maintains your warranty coverage.

Torp controllers and engines are non-stock SurRon/Talaria/Segway parts. Installing non-stock parts on your motorcycle will transform it from a stock to a non-stock bike. This modification may render the motorcycle non-compliant with road safety regulations, potentially making it illegal for street use. It's your responsibility to be aware of and adhere to all relevant local laws and regulations. Modifications may also affect insurance coverage and warranties.

THE BOX CONSISTS OF:

- TC1000 controller
- Wiring harness
- 5 phase screws with washers
- 2 hex keys and 12 bolts
- 4 stickers
- Heat sink
- Short instructions

Use only tools and screws that came with the controller. **Using the tools and screws that were not included in the parcel, not following these instructions, or not using the circuit breaker, can cause serious damage to you and your bike, and voids your 2-year warranty.**



All the settings and diagnostics are managed through an intuitive and easy-to-use smartphone app for Android and IOS. The users can use their smart-phone as a display during the rides and to set up all the controller`s features through the app.

INSTALLATION.

Before starting with the installation, drain the bike`s capacitors and unplug the battery.



Now you can start removing the stock SurRon controller and lower the skid-plate that covers the wiring.

FOR MOUNTING THE CONTROLLER ON THE HEAT SINK

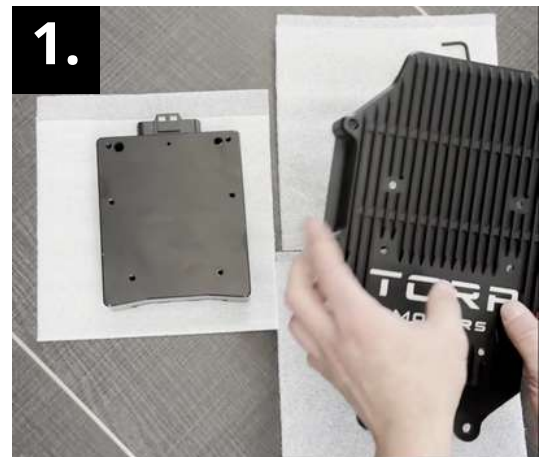
you will need:

- 6 M5x12 bolts
- A smaller hex key



STEP 1:

Rotate the controller so its front side faces down, and then position the heat sink on the back side.

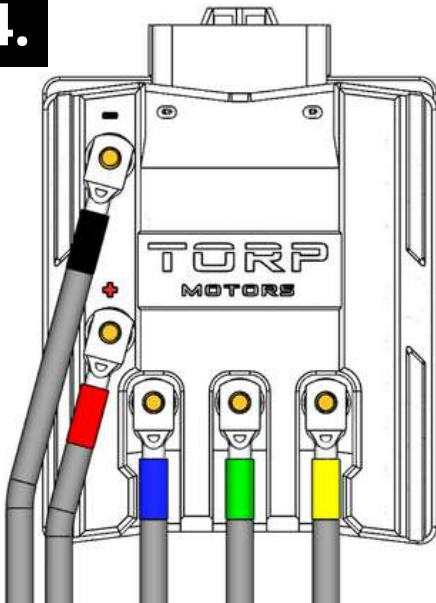


STEP 2:

Insert each bolt in one hole and fasten them by using a smaller hex key.

STEP 3:

There are 5 bolts with washers already on the controller. Remove them from the controller and start connecting the controller to the phase motor wires.

**4.****DON`T MESS THIS ONE UP!****STEP 4:**

Connect the power and phase motor wires as shown in the picture using the bolts with washers that you have removed from the controller in the previous step:

Power Wires:

- The **red** battery wire to the positive (+) electrode
- The **black** battery wire to the negative (-) electrode

Phase Motor Wires:

- The **Blue** motor wire to the letter **B**
- The **Green** motor wire to the letter **G**
- The **Yellow** motor wire to the letter **Y**

STEP 5:

Use a larger hex key to gently fasten the bolts with washers. The Max Torque that should be used is 4.5 Nm! Only tools included in the package must be used for installation! **Any damage caused by exceeding the max torque of 4.5 Nm and/or using tools different from the ones included in the package, is not covered by warranty!**

**STEP 6:**

Use the wire harness that came with the controller to connect the controller to the bike. Connect the largest connector to the controller and the three smaller connectors to the bike`s wiring, in the same way the stock controller has been connected. **Click sound indicates secure connection.**

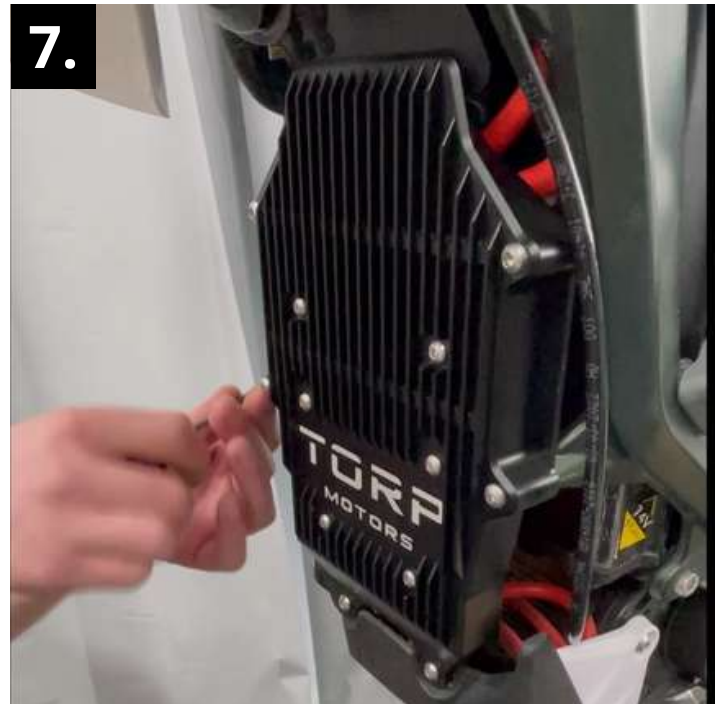
There is also a 4th connector with a cap on it. To which the Torp Display is connected. See page 20.



STEP 7:

Once everything is connected, find the best way to fasten the lid back to the bike using:

- Large hex key
- 4 M6x40 (2 go on each side)
- 2 M6x12 (bottom two holes)



STEP 8:

When you're done, plug in the battery and turn on the key.





IMPORTANT!

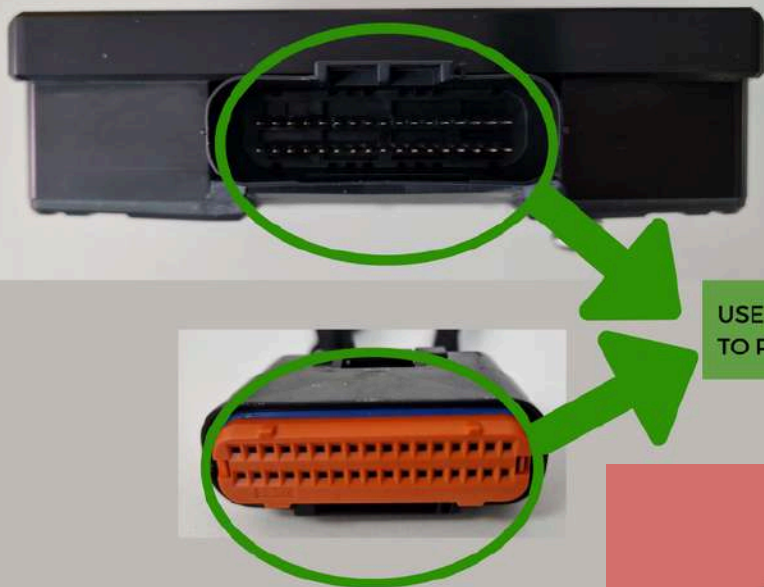


When pressed together, all connectors **must** make a **clicking sound**. Especially make sure that **the main connector is pressed hard and clicks when pressed**.

If connectors are not properly pressed together and connected, dirt and moisture can enter and cause the controller **irreparable damage**.

A USEFUL TIP.

Apply silicone grease to the controller and the main connector for additional protection from dirt and moisture.



USE SILICONE PASTE TO PROTECT THE CONNECTOR



CONNECT THE CONTROLLER TO THE APP for further setup.

HOW TO CONNECT?

To connect the TC1000 controller with the Torp Controller App, first go to the [Google Play Store](#) (Android) or [AppStore](#) (IOS) and download the App to your smartphone.

-Allow the App to access the phone's location, photos and media and accept the Terms & Conditions.

-Put the key into the ignition and turn on your bike.

-The App will automatically detect your controller.

-Choose your controller from the list. The Bluetooth ID can be found on the label on the side of the controller.

-Now you are connected and can start setting up your controller.



IMPORTANT: After the installation make sure to calibrate the throttle and Hall sensors! Go to the 5th screen of the Torp App and click the CALIBRATION button. Then follow the setup Wizard. CALIBRATION must be repeated after each firmware update!

We suggest you always ride with the app set to the 1s screen. This is how the Torp Controller App will be able to recognize potential errors which will help our support team with detecting and solving any problems that might occur with the controller.

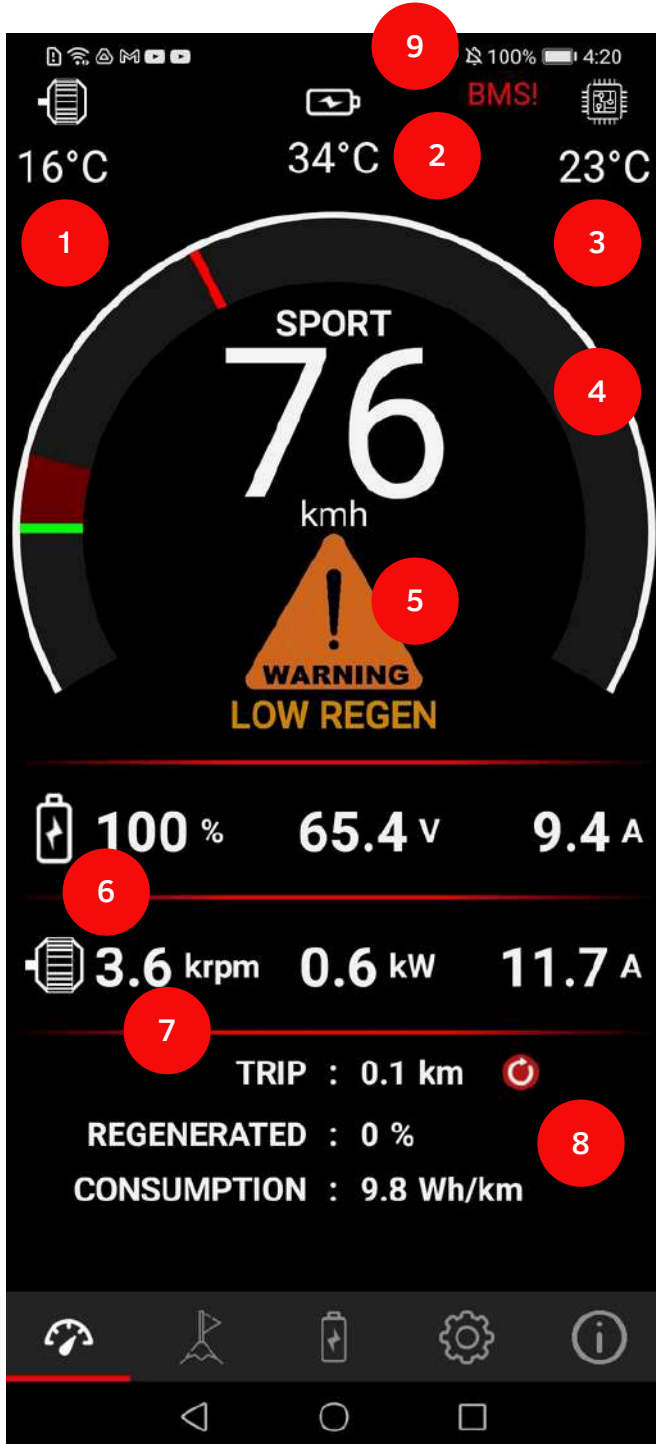
THE APP OVERVIEW.



1st Screen: GAUGE

The TC1000 controller is compatible with the stock SurRon display, where you will be able to track your speed and distance. However, we recommend using your smartphone as the display during the rides.

The first screen serves as a gauge, showing all your riding information in real time. Here are also displayed all the potential errors and warnings.



1-Motor Temperature: Monitor the Motor Temperature in real-time.

2-Battery Temperature: Monitor the battery temperature in real-time.

3-Controller Temperature: Monitor the battery temperature in real-time.

4-Power Gauge: Displays the power.

5-Warnings & Errors: All Warnings and Errors are displayed here. More details on their meaning can be found in a table below.

6-Battery Info: State of charge (SOC), battery voltage, and battery current.

7-Motor Info: Motor RPMs, Motor Power and Motor Current.

8-Predict your Trip: Check the distance you have passed, the amount of regenerated energy, and the consumption of the battery. You can plan your trip based on this information.

9-BMS!: There is a problem with BMS communication. Please check the wiring!

THE LIST OF WARNINGS AND ERRORS

Connect to the controller with the Torp App to see the Warning and Error messages on the 1st screen in the app.



-KICKSTAND: Your kickstand is lowered. Lift it to start riding.

-CRASH SENSOR: Crash sensor activates in case of a fall. Turn the bike off and turn it back on after a few seconds to continue riding.

LIMIT:

-TEMP CONTROLLER: The temperature of the controller has reached the top limit value. The power will be gradually reduced.

-TEMP MOTOR: The temperature of the motor is rising. To prevent overheating, the power will be gradually reduced. The motor temperature limit is set in the "Motor Temp Cutoff" settings on the "Settings" screen.

-MOTOR TEMP SENSOR: Motor temperature sensor is not connected. Power is limited.

-LOW VOLTAGE: The battery is almost drained or there is a voltage sag due to the acceleration. The power will be gradually reduced.

-LOW REGEN: The battery is nearly full. The regen will be reduced.

-BATTERY TEMP: Battery temperature has reached limit values so the power will be reduced.

-BMS TEMP: Discharge mosfets in BMS have overheated. Power will be gradually reduced.

CUTOFF:

-CUTOFF LOW VOLTAGE: The battery is completely drained and the bike will not start. You can set the cutoff value in Voltage Min setting in the App (3rd Screen) . Charge the battery to continue riding.



-OVERVOLTAGE: Battery voltage is above 90V.

-UNDERVOLTAGE: Battery voltage dropped under the values set in the controller`s settings. Charge the battery.

-OVERCURRENT: Motor Current is above permitted limit.

-CONTROLLER OVERTEMP: Controller has overheated. Wait for it to cool down to continue riding.

-MOTOR OVERTEMP: Motor has overheated. Wait for it to cool down to continue riding.

-PHASE FET: MOSFET error: Controller`s phase is in short-circuit. Contact the manufacturer.

-HALL SENSOR: Motor Hall Sensor connector is not connected, or there is a problem with the Hall Sensor itself. Check the wiring.

-THROTTLE PROBLEM: The problem with a throttle wiring was detected, that has been solved in the meantime. Turn your bike off and on again to continue riding.

-THROTTLE #1: Throttle ADC rises too fast. Throttle plus(+) short on gnd(-).

-THROTTLE #2: Throttle not connected. Probably throttle plus(+) wire is broken.

-THROTTLE #3: Throttle plus(+) and gnd(-) shorted.

-THROTTLE #4: Throttle gnd(-) not connected or broken.

-THROTTLE #5: Throttle plus(+) shorted on signal.



-CUTOFF THROTTLE: The throttle has been activated while the bike is being turned on.

-1st solution: Release the throttle when turning on the bike;

-2nd solution: Re-calibrate the throttle (see the "Setting up the Throttle" section of this document) ;

-3rd solution: Check the wiring.

-CUTOFF BATTERY TEMP: The battery has overheated. The bike will stop until it cools down.

-HALL PROBLEM: The Hall sensor disconnected during the ride. Check the wiring.

-HALL DISCONNECTED: The Hall sensor disconnected during the ride. Check the wiring.

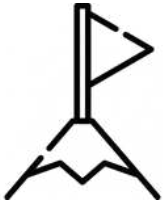
-CUTOFF BMS TEMP: The BMS mosfet temperature has reached the limit. The bike will stop until it cools down.

-WATER IN CONNECTOR (works with HW version 1.4 and higher): Water entered the main connector. Turn off the bike immediately, disconnect the main connector, and dry it out.

WATER IN CONNECTOR!



WARNING: Water in the main connector! Turn off the bike immediately, disconnect the main connector and dry it out!



2nd Screen: PEAKS

Check all the minimal and maximal values that occurred during your ride.

	MIN	LIVE	MAX
Voltage	59.3V	59.5V	59.8V
Cell Volt	3.69V	3.72V	3.71V
Motor current raw	0.0A	0.0A	0.0A
Motor current	0.0A	0.0A	0.0A
Battery current	0.0A	0.0A	0.0A
Power	0.0kW	0.0kW	0.0kW
Speed	0kmh	0kmh	0kmh
Rpm	0.00krpm	0.00krpm	0.00krpm
Motor temp.	12°C	12°C	15°C
Controller temp.	22°C	22°C	22°C
Bat. temp.	21°C	21°C	21°C
Wh consumption		0Wh	
Uptime		00:15:11	

Reset

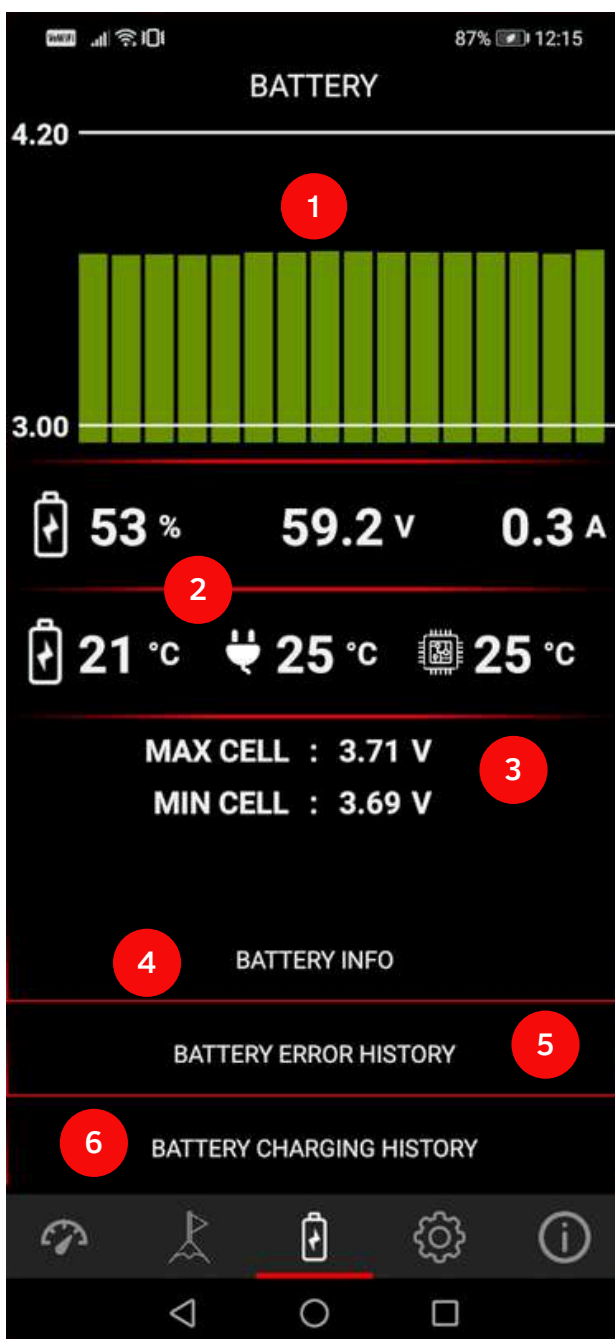
Bottom navigation bar icons:



3rd Screen: BATTERY INFO

You will be able to see all the functions of this screen only with the stock SurRon battery and stock BMS. It also works with the bypassed battery but with a limited display of data (battery current, cycles, and SOH will not be displayed correctly).

Use this screen to determine the health of your stock SurRon battery. The screen shows you the state of health of each of the battery cells and can serve as a useful tool to check the health of the battery or to determine the cause of battery malfunctions.



1 - Battery Cell Voltage: Check the voltage of each battery cell. The more the columns are aligned, the healthier the battery.

2- Battery Overview: Check the SOC, battery voltage, battery current, battery temperature, charging MOSFET temperature, and discharging MOSFET temperature in real-time.

3-Min & Max Battery Cell Voltage: Minimal and maximal battery cell voltage. Lesser the difference, healthier the battery.

4-Battery Info: Check the current stats of battery cells, charge cycles, battery estimated mileage, including errors, warnings, battery cell temperature,...

5-Battery Error History: An overview of all-time battery errors.

6-Battery Charging History: Check the charging history information of your battery.

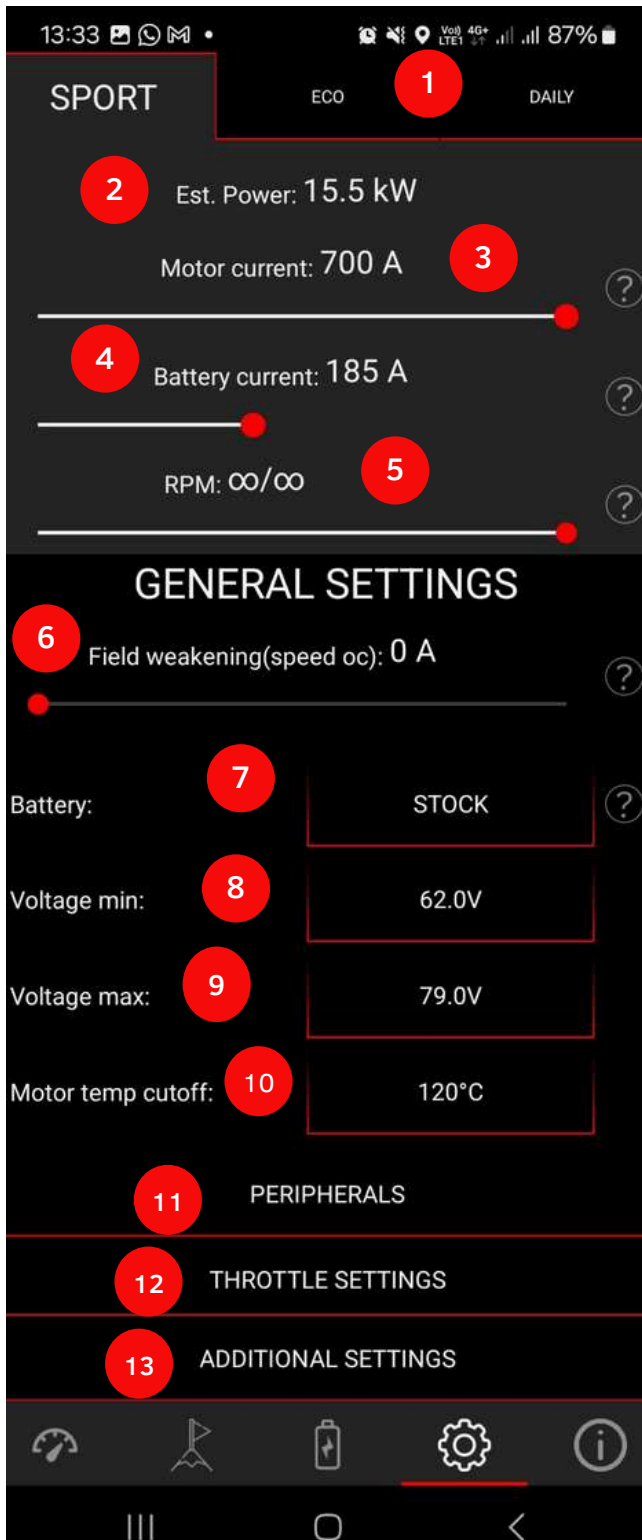
4th Screen: CONTROLLER SETTINGS



Before your first ride you should tune your controller according to your riding preferences and the battery you are using.

The app allows the user to enter certain values that can potentially harm the battery, motor or other parts. We suggest you to use the settings that have been preset in the app by default.

Note that the TC1000 controller is not an original SurRon/Segway part, therefore you are using it strictly at your own risk. The damages that are caused by using the controller are solely your responsibility.



1-Sport / Eco /Daily Mode: You can switch between modes using Torp Display or by pressing the mode button on the handlebar of your bike.



After that, set the parameters in a tab according to the chosen mode (Sport/Eco/Daily).

2-Estimated Power: Power estimate sets itself automatically, according to the chosen settings. It is calculated by taking into account the battery current, motor current, and voltage (voltage is set according to the battery type). For exact values check the 3rd screen.

3-Motor Current: Motor Current affects the torque of the motor. It is most noticeable at a lower speed.

4-Battery Current: Battery Current affects the maximum power. It also affects torque, which is most noticeable at medium and higher speeds.

5-RPM/Speed: Set the maximum speed limit. In case you choose ∞ your speed is not limited.

6-Field Weakening: This option will increase the top speed of your bike, but it comes with its own set of advantages and disadvantages:

Advantages: more speed, more torque on high speed
Disadvantages: less range, increased motor temperature.
We recommend setting the current to below 50 A to minimize potential drawbacks.

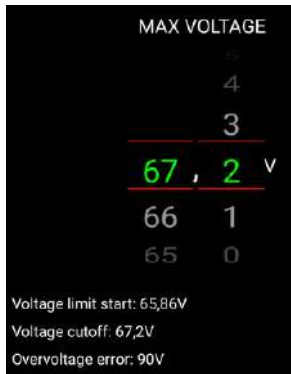
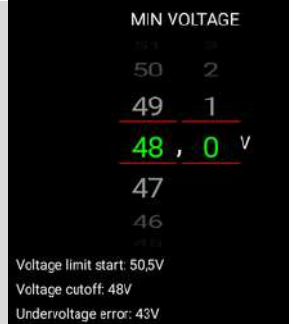
7-Battery Type: TC1000 controller is compatible with:

- stock Surron Ultra Bee
- custom 72V battery and,
- custom 80V battery

Select the battery you use and the Controller will set the minimal and maximal voltage to the optimal values. The selected Battery Type affects the limits that can be set within the App. The controller is compatible with a max 22s battery setup.

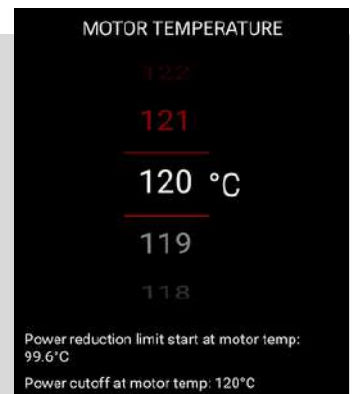
8-Min Voltage: Minimal and maximal voltages are set automatically, according to the battery type you choose from the menu above. You can also customize the voltage values for each Battery Type, but we recommend you use the controller within the limits of preset values.

Customize the settings carefully, while setting the "Min Voltage" too low can cause the battery to over-discharge. When reaching the "Voltage cutoff value", the power will be gradually reduced. Once the "Voltage cutoff value" is reached, the motor will stop and a UNDERVOLTAGE error will be displayed on the 1st screen of the App.



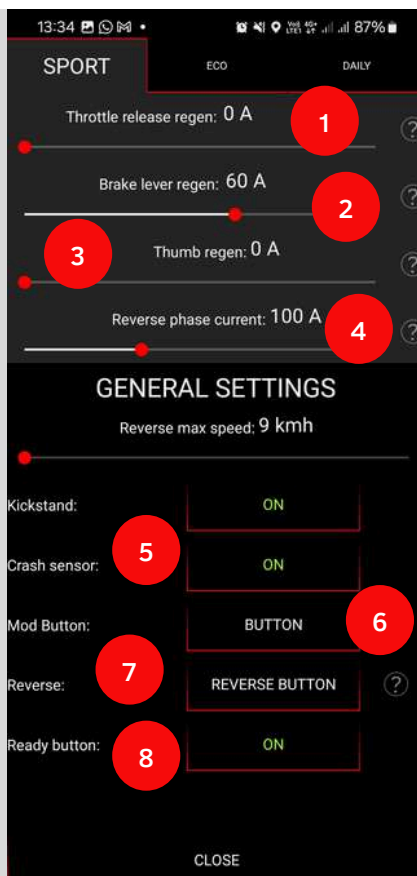
9-Max Voltage: Max Voltage affects the regen. If the voltage of the battery is between the "Voltage limit start" value and the "Voltage cutoff" value, the regen is reduced. If the voltage of the battery is above the "Voltage cutoff", the regen is automatically disabled. If the battery voltage is above 90V, the "Overvoltage error" is displayed and the bike stops.

10-Motor Temperature Cutoff: Set the max temperature at which you would like for the controller to limit the power. The controller will gradually limit the power before reaching the max motor temperature. The temperature at which the controller starts limiting the power is indicated at the bottom of the screen. Setting the motor temperature to the red values can cause the motor to overheat and fail.



11-Subscreen: PERIPHERALS

Here you will find the settings for Throttle release regen, Brake lever regen, Thumb regen, and Reverse, as well as other stock SurRon Ultra Bee features (Kickstand, Crash sensor, Mode button and Ready button).



1-Throttle release regen: It defines the strength of the regenerative braking that is activated when the throttle is released. With this setting a small dead zone is applied to the throttle.

2-Brake lever regen: It adjusts the strength of the regen, which is activated when the brake is pressed. This option can only be used on stock brakes that have a sensor.

3-Thumb regen: Adjust the strength of the regen that is activated when the thumb throttle is pressed.

4-Reverse phase current: Adjust the strength of the torque when you go in reverse.

5-Kickstand&Crash sensor: Use these options to activate or deactivate Kickstand and Crash sensors.

6-Mode button: Selec how you want the mode button to be activated:

-NONE: No switching between modes. Sport mode is always active;

-BUTTON: Use the stock mode button to switch between modes

-TORP DISPLAY: Use the Torp display to switch between modes, using the M button on the display.

7-Reverse: Use different options to activate the reverse option:

-MODE BUTTON: Use the stock SurRon Ultra Bee button to active reverse

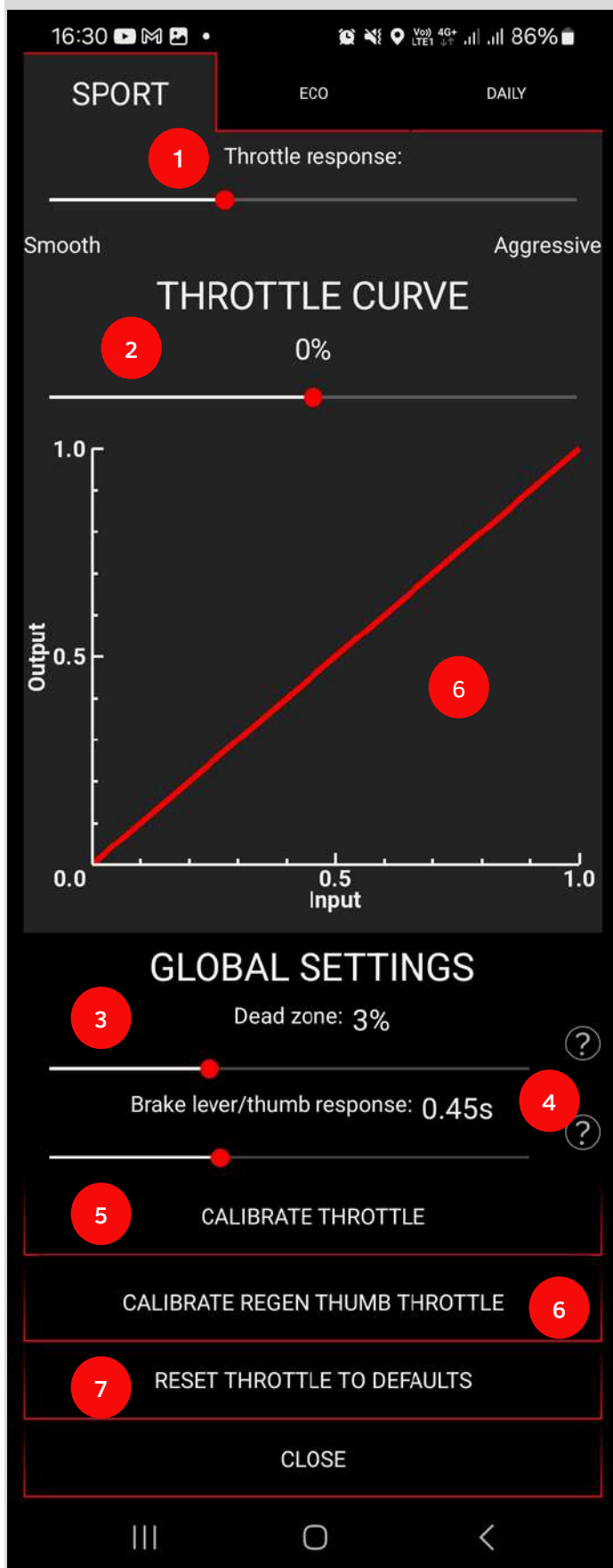
-THUMB THROTTLE: Thumb throttle can be used both for the reverse and regeneration

-TORP DISPLAY: Press & hold the "down" button on display to activate reverse.

8-Ready button: Turn the ready button on and off

12-Subscreen: THROTTLE SETTINGS

Set the throttle response according to your preferences and calibrate the throttle.



1-Throttle Response:

Use the slider to adjust the throttle response. Slide the slider to the right, for a more aggressive throttle response.

2-Throttle Curve: Slide the slider and adjust the throttle input and output values, which affect the throttle behavior.

-Slide right for the Degressive Throttle curve: As you increase the throttle, the power output grows faster. This means the bike responds more quickly even when a little throttle is used. This setting is recommended for high-powered trial rides and jumps.

-0% for a Linear Throttle Curve: This type of curve is simple and provides a predictable throttle response.

-Slide Left for the Exponential Throttle curve: Choose this setting for better control and sensitivity at high throttle levels, while keeping a gentle power delivery at low throttle levels. It offers precise control with a small throttle and strong power boosts at the higher throttle. This setting avoids sudden power jumps, making the bike easier to handle. It's perfect for beginners.

3-Dead Zone:

Set the range of the throttle twist that will be ignored by the controller.

4-Brake lever response:

Adjust the brake lever regen response. Slide the slider to the right for a smoother regen response.

5-Calibrate Throttle:

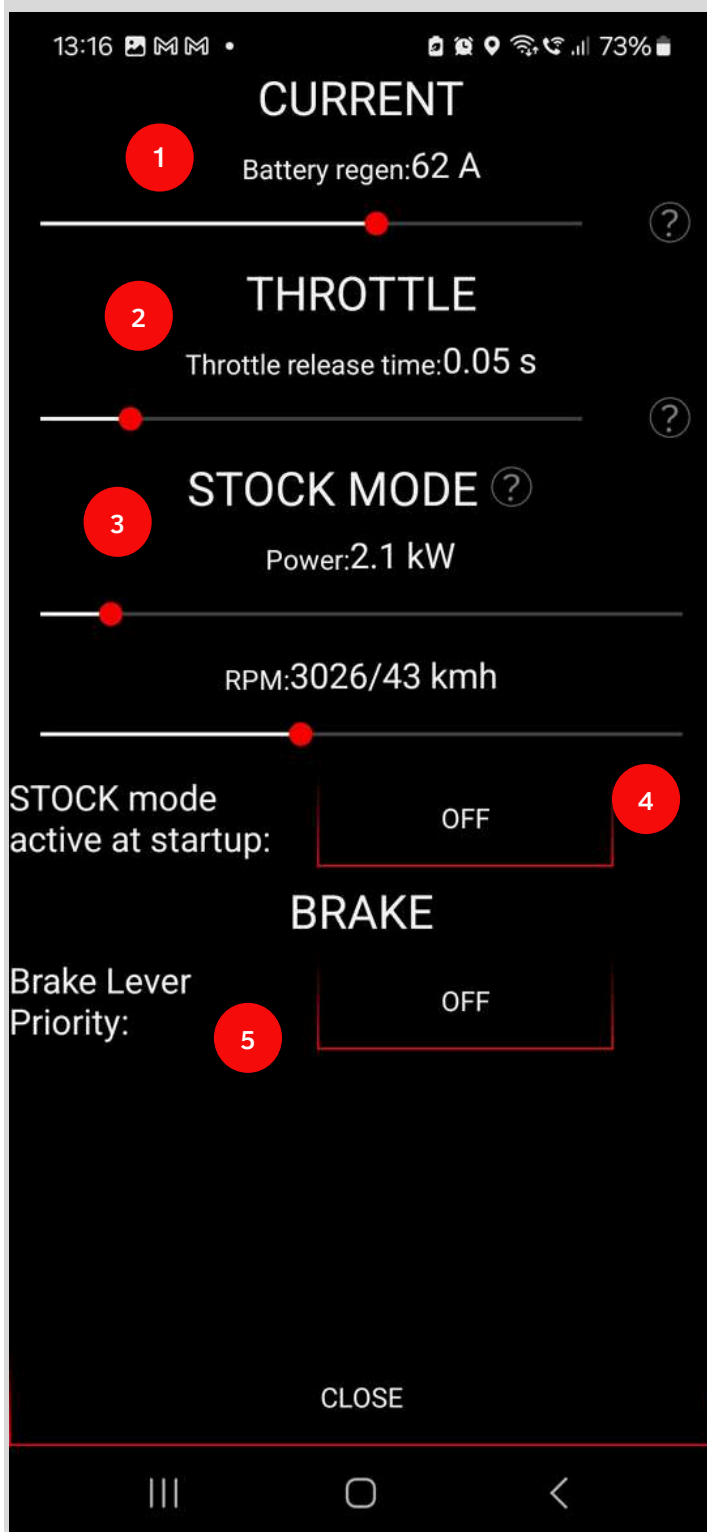
Throttle calibration is required after the controller is installed for the 1st time or in case you have switched the stock SurRon throttle for another brand. Follow the instructions in the Throttle Calibration window and in the "Setting up the Throttle" section of this document on page 19.

6-Calibrate regen thumb throttle: Press the button to calibrate

7-Reset throttle to defaults: Press to reset your throttle to default settings

13-Subscreen: ADDITIONAL SETTINGS

Fine-tune your controller.



1-Current-Battery regen:

It limits the max amount of current flowing back into the battery during regeneration. Adjust it based on your battery and its charging power capabilities. To have the same regen at low and high speeds, adjust the slider to higher A.

2-Throttle-Throttle release time:

The time from when the throttle lever is released until the value drops to 0. Reduce it if you want a quicker throttle release response.

3-Stock mode-Power and RPM:

The STOCK mode is used to activate stock power permanently, until deactivated. Activate it using the Torp Display by holding the “M” button for 3 seconds. Deactivate it by holding the “M” button for 6 seconds.

Use the sliders to set the desired power output or speed.

4-Stock mode active at startup:

In case you have STOCK mode activated on startup, you can turn it off using the first screen of the APP by pressing the “STOCK” text.

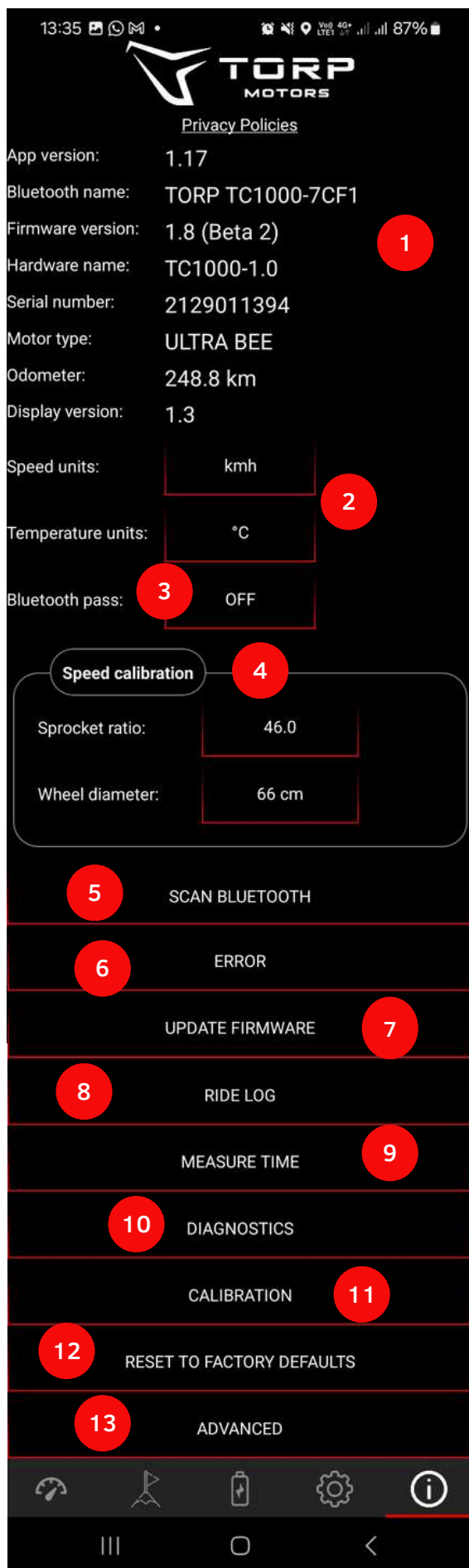
You can also deactivate it with a brake lever: In the 1st minute after the startup press the brake lever quickly 5 times, followed by a long press on the 6th attempt.

5-Brake-Brake lever priority: When this option is activated, you can not add power once the brake lever is pressed.



5th Screen: APP SETTINGS

Use this screen to identify your controller and to adjust the general settings. This screen is also useful in case of controller malfunctions, since it allows you to share errors and ride logs with Torp support team.



1-General Information: Check the App and Controller Firmware versions and update them in case there is a newer version available. The App can be updated through the Play Store or App Store (depending on whether you are using Android or IOS). You can also see the identification parameters of your controller, like Bluetooth name, Hardware name, and Serial number, as well as a version of the display.

2-Speed and Temperature Units: You can choose between Metric and US Standard units. The chosen units will be applied to other sections of the App.

3-Bluetooth pass: In case you want additional protection for your controller, enter a Bluetooth password, which can be found on the controller's label. Bluetooth pass will be required every time you will connect to the App with a new device.

4-Speed calibration:

Sprocket ratio: Change the sprocket tooth count or ratio. This function comes in handy in case you are using sprockets that are not the same size as the stock Surron/Segway sprockets. This option will affect the displayed speed, both on the stock LCD and in the App.

Wheel Diameter: Choose the values that correspond to your wheel. Wheel diameter will affect the displayed speed.



5-Scan Bluetooth: Use it for connecting to your device.

6-Error: The list of all controller errors since the last time it was disconnected from the battery. This list is useful in determining the causes for controller malfunctioning.

7-Update Firmware: Check whether a new Firmware is available. In case it is, press the button to update.

8-Ride log: You can check your ride on the map or send your ride-log file with all the stats to the chosen email address.

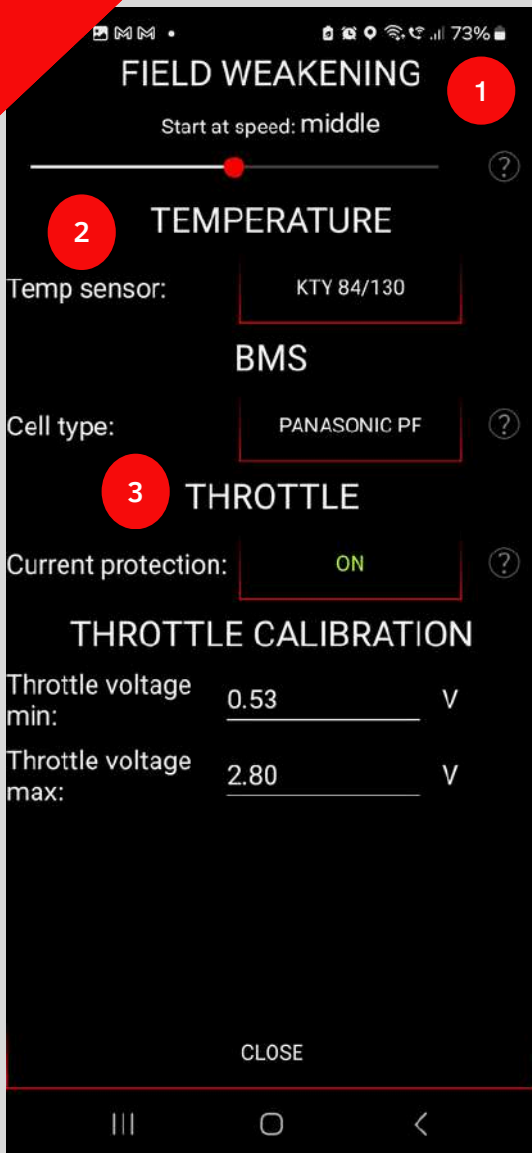
9-Measure Time: Measure the acceleration of your e-bike.

10-Diagnostics: An overview of all technical characteristics of the Controller that can help with determining the cause of potential errors.

11-Calibration: IMPORTANT: Calibration must be done before each first use of the controller and after each firmware update! Click on the calibration button and follow the wizard to calibrate the motor and throttle.

12-Reset to factory defaults: Reset your controller to the factory settings. By pressing this button you will lose all the settings you have made previously. After you reset your controller to the Factory Defaults, you will need to re-calibrate the throttle and HALL Sensors.

13-Subscreen: ADVANCED

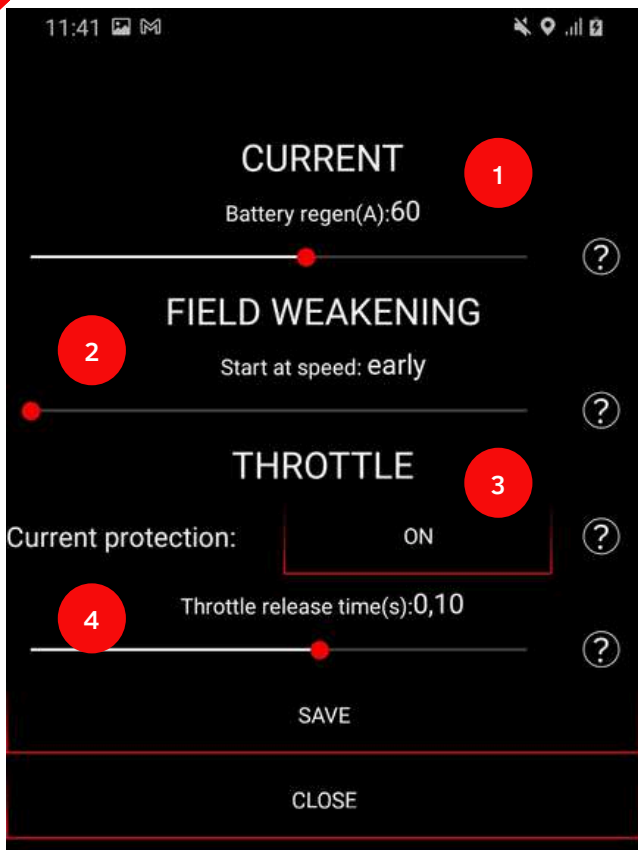


1-Field weakening: Set at which speed the FW is activated. It impacts motor efficiency and FW performance. For max efficiency set it to “late”.

2-Temperature: Not yet implemented

3-Throttle: Some throttles might consume more current than expected. If throttle errors 3 or 5 arise, this might be the reason. Disabling this option will also deactivate the short-circuit on throttle handle.

ADVANCED



1-CURRENT-Battery regen: This option limits the max amount of current flowing back into the battery during regeneration. Adjust this setting based on your battery and the charging power capabilities of the battery.

2-FIELD WEAKENING-Start at speed: Use the slider to set the speed at which field weakening will activate. This option impacts motor efficiency and field weakening performance. If you want maximum efficiency, set it to 'late'.

3-THROTTLE-Current protection: Some throttles might consume more current than expected. If throttle errors 3 or 5 arise, this might be the reason. Disabling this option will also deactivate the short-circuit detection on the throttle handle.

4-THROTTLE-Throttle release time: The time from when the throttle lever is released until the value drops to zero. Reduce if you want a quicker throttle release response.

ADDITIONAL SETTINGS.

SETTING UP THE CONTROLLER ACCORDING TO THE BATTERY TYPE

Before using the Controller, you should fine-tune its settings according to the Battery you are using. The TC1000 Controller supports*:

- SurRon Stock 60V Battery
- SurRon Stock Bypassed 60V Battery
- Custom 60V Battery
- Custom 72V Battery
- Custom 80V Battery

The app will adjust the parameters to optimal values based on your Battery Type. You can adjust Motor and Battery Current according to how much torque you prefer. You can also customize the voltage values for each Battery Type, but we recommend you use the controller in the limits of preset values.

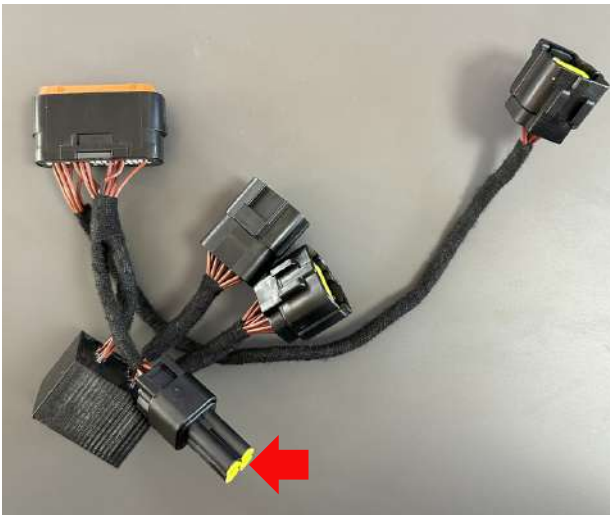
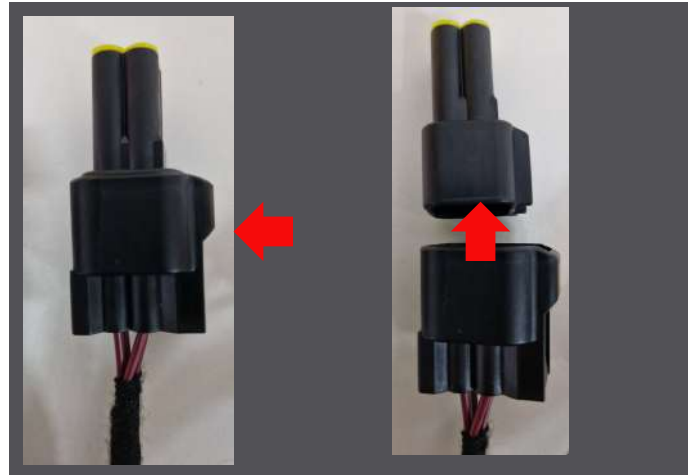
*A Torp Controller can be also used with other batteries, but you should keep in mind that in this case, the voltage of the fully charged battery should not be above 92,4V, and minimal battery voltage should not be less than 36V.

TORP DISPLAY.

Torp Display allows you to track your controller and battery data in real-time and to switch between the riding modes. Additional options will be added through regular firmware updates.

INSTALLATION

First, remove the protective cap from the connector by pressing firmly to its side and pulling it out of the connector.



The Torp Display is being installed directly to the controller`s wiring harness, as shown on the photo.

You will need controller Firmware version 1.4 or higher in order for the display to function. In case you are using the 1.3 version of the Torp App, follow the following steps:

1. Go to the App Store and update the Torp App to the latest version
2. When the update is complete, go to the 5th screen in the Torp App and press the UPDATE FIRMWARE button. Once the update is complete, re-calibrate the throttle and Hall Sensors.

TORP DISPLAY AS A MODE BUTTON

To use the Torp Display as a MODE BUTTON, you should go to the Peripherals Screen in the Torp App (4th screen) and tap on the MODE BUTTON option at the bottom of the screen. There you should choose TORP DISPLAY as your mode button option.

MAIN PAGE



- BATTERY VOLTAGE
- BATTERY STATE OF CHARGE
- CURRENT MODE
- CURRENT SPEED
- EFFICIENCY
- TRIP (KILOMETERS/MILES FROM STARTUP)



- SELECT/ CHANGE BUTTON
- MAIN PAGE
- MODE BUTTON
- MAIN PAGE BUTTONS (up and down arrows)

TORP DISPLAY FUNCTIONALITIES

Use the up and down arrows on the display to move through the screen of the display, and the ON/OFF button for changing the sub screen.

Use the M button to change modes. Make sure that the Torp display is set as a Mode button in the Torp app.

TORP DISPLAY SETTINGS SCREEN

Once you reach the settings section you would like to change, hold the ON / OFF button on the top of the display to select the item to change. By tapping the ON/OFF button change the settings off the selected item.

Here you can set up your preferred speed units (mph/kmh), temperature units (C / F), mode button modes and mode change button.



MODE BUTTON MODES

To use 3 modes (Eco, Sport and Daily) instead of 2, hold ON/OFF button until you reach the 2/2 page. Choose number 3 by tapping the ON/OFF button.

MODE CHANGE BUTTON

To change the modes with the up and down arrows, instead of the M button, hold ON/OFF button until you reach "M" and tap the ON/OFF button. Once set, use the "M" button to change the screen.



STOCK SURRON MODE

SurRon mode allows you to ride your bike in the stock road-legal configuration. This option is functional with the Torp Display. To activate it, you should hold the MODE button on the Torp Display for 3 seconds until the STOCK sign appears. To deactivate it, hold the MODE button for 6 seconds.

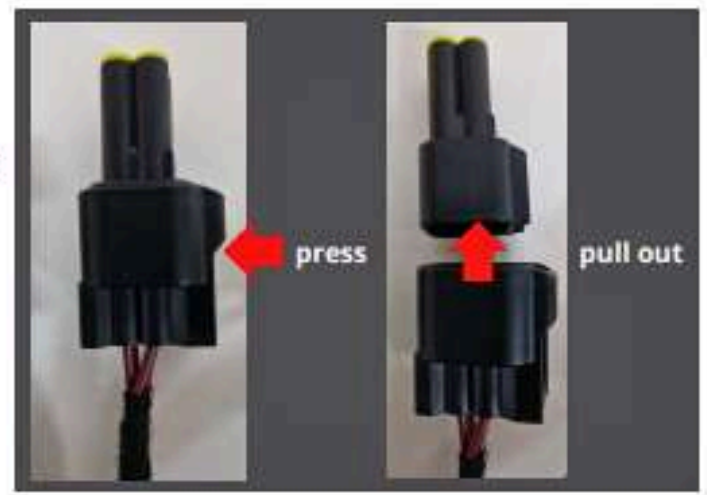
3 s to activate
6 s do deactivate

TORP FULL-COLOR DISPLAY.

Torp Display allows you to track your controller and battery data in real-time and to switch between the riding modes. Additional options will be added through regular firmware updates.

INSTALLATION

First, remove the protective cap from the connector by pressing firmly to its side and pulling it out of the connector.



The Torp display is being installed directly to the controller's wiring harness, as shown on the photos.

TORP DISPLAY FUNCTIONALITIES

Use the +/- buttons to change pages on the display, the M button to change modes and the ON/OFF button for changing the sub screen (from 1/2 to 2/2).

Make sure that the Torp display is set as a Mode button in the Torp app.

TORP DISPLAY SETTINGS SCREEN

Here you can set up your preferred speed units (mph/kmh), temperature units (C / F), mode button modes and mode change button, color theme.

Once you reach the item you would like to change in the settings screen by tapping the ON/OFF button, hold the ON / OFF button to change the item.



MODE BUTTON MODES

To use 3 modes (Eco, Sport and Daily) instead of 2, tap the ON/OFF button until you reach the Modes. Choose 3 modes by holding the ON/OFF button.

MODE CHANGE BUTTON

To change the modes with the +/- buttons, instead of the M button, tap ON/OFF button until you reach Mode change, then hold the ON/OFF button. Once set, use the "M" button to change the screen.



3 s to activate

6 s do deactivate

STOCK MODE

Stock mode allows you to ride your bike in the road-legal configuration. This option is functional with the Torp Display. To activate it, you should hold the MODE button on the Torp Display for 3 seconds until the STOCK sign appears. To deactivate it, hold the MODE button for 6 seconds.

BAUD RATE

The CAN BAUD RATE should be set to 500K.

REVERSE

Make sure that the reverse is set to be changed with Torp display, in the Torp app. Hold the down button and twist the throttle.

For additional support contact us at:

support@torp.hr

with:

-your Serial Number (S/N)

-a detailed description of the error, with photos and videos

and our team will get back to you with the solution.

