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Manufacturer: CHONGQING QIULONG TECHNOLOGY CO., LTD
Address: No.30 Xinkang Road, Dadukou District,
Chongqing City, China
Post Code: 400082 Tel:+86-023-68905603
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This manual will help you better understand your Light Bee 2 electric motorcycle. Please take your time to read this manual and all safety labels carefully before riding. This manual contains the most current product information available at the time of printing, your motorcycle may look and setup differ from the information supplied in this owner's manual. Please visit our website www.surron.com for updates and additional information about your motorcycle.

Surron®

LightBee2

Series Electric Motorcycles
Owner's Manual

This manual applies to the following motorcycles:

(X)

This motorcycle is designed for off-road use.
It is equipped with an off-road headlight.
Do not ride it on public roads.

(L3)

This model is equipped with headlights,
turn signals, tail lights, rearview mirrors,
and a license plate bracket.
The motorcycle may be operated on public roads only after it has been properly registered.

The illustrations in this manual depict the Light Bee 2 electric motorcycle (L3 version).

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Important Notice

Congratulations on purchasing your SURRON electric motorcycle. Welcome to the SURRON rider community.
Please read this manual carefully before operating the motorcycle and ensure that you understand its features and operating characteristics. This manual is designed to provide you with a better understanding of the operation, inspection and basic maintenance of Light Bee 2 electric motorcycles.
You can also find this manual on our official website. The latest version of this manual is available at www.surron.com. Updated information will be released online in a timely manner, you can download the latest version on the official website.
If you want to resell your motorcycle, please make sure this manual is delivered with the motorcycle or let the buyer understand where to get the latest online manual.
If you have any questions regarding the operation or maintenance of your motorcycle, please contact your authorized SURRON dealer at:

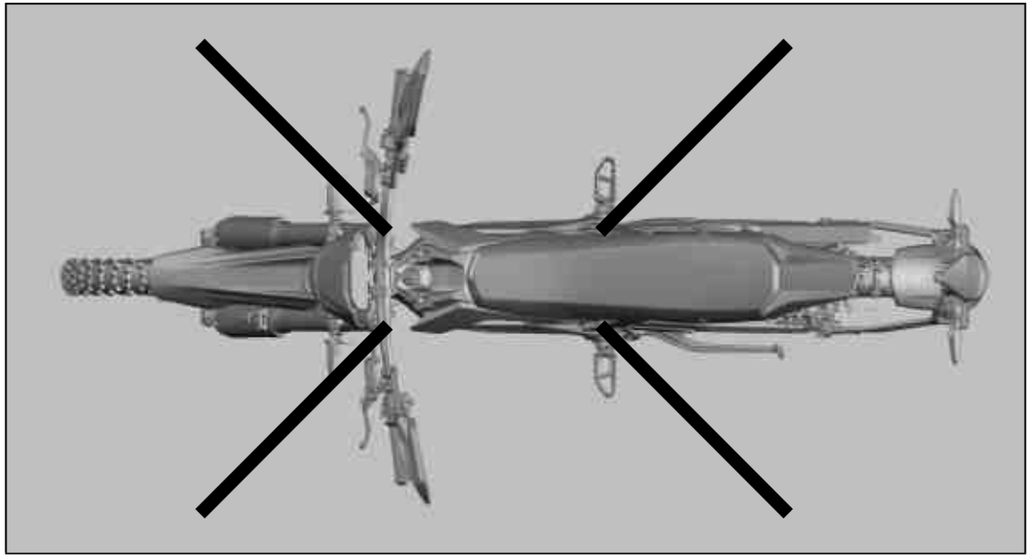
///service@surron.com///

⚠ Warning

If the controller, battery pack, motor, or charger malfunctions, contact your authorized SURRON dealer immediately for replacement or repair.

Transporting

It is highly recommended to secure the Light Bee 2 firmly on the transport frame using ratchet straps during transportation. It is recommended to use soft straps to reduce scratches or other damage.
It is recommended to fix the ratchet straps according to the points shown in the figure. The front two are tied to the handlebar and the back two are tied to the left and right swing arm. Avoid the chain and brake line when tying the straps. The straps should be fixed at a 45° angle to the motorcycle. Follow the manufacture's instructions for the ratchet straps you are using.



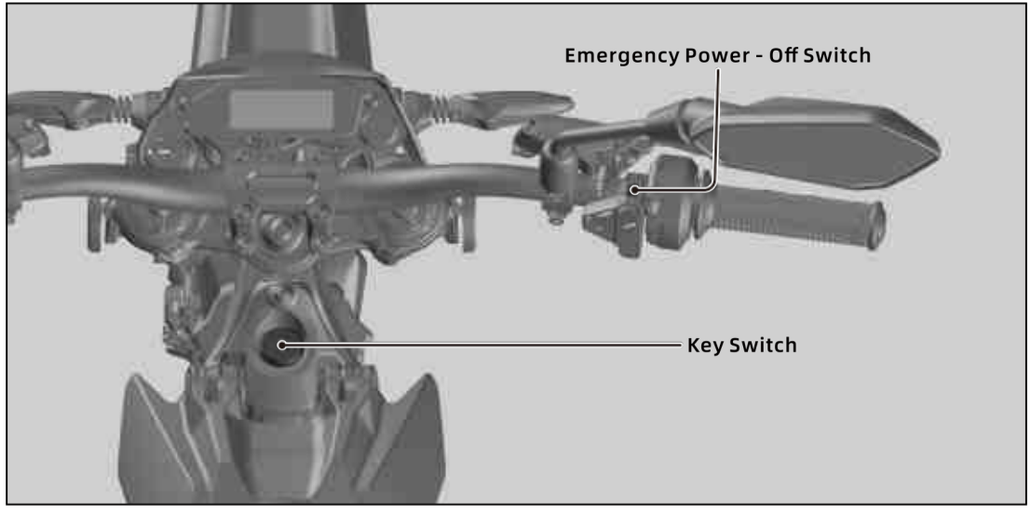
Safe Riding Requirements

• Light Bee 2 is a high performance electric motorcycle and should be treated with extreme caution.
• Please comply with local laws and regulations. The Light Bee 2 X version is not approved for use on public roads.
• Always wear proper safety gear while riding, including a helmet, eyewear, riding boots, gloves and protective clothing approved by local/national regulations, while riding to reduce the risk of potential injury. Full-height motocross boots are highly recommended, as leg and foot injuries are the most common in motorcycle accidents.
• Please read and ensure that you are aware of all warnings and instructions as well as safety labels in this manual before operating the Light Bee 2 electric motorcycle.
• Never allow others to ride the Light Bee 2 electric motorcycle without proper guidance.
• Before operating the Light Bee 2 electric motorcycle, make sure you are legally qualified to ride an electric motorcycle.
• Never operate the motorcycle under the influence of alcohol, drugs, or medication that may impair your ability to ride safely.
• Always ride responsibly when operating the Light Bee 2 electric motorcycle. Please do not ride dangerously and recklessly. Please do not ride in a way that affects the safety of the public and yourself.
• Prior to each use, the rider must check everything described on page 7.1 and the battery level indicated on the battery indicator.
• Your safety depends on the good condition of the Light Bee 2 electric motorcycle. Ensure compliance with the periodic maintenance table and adjustment requirements contained in this manual. Make sure you understand the importance of all items that need to be thoroughly checked before riding.
• Modifying a Light Bee 2 electric motorcycle may make it unsafe and may cause serious injury.
SURRON is not responsible for any unauthorized modifications.
• Do not load heavy objects or add accessories on the Light Bee 2 electric motorcycle. Large, bulky items can adversely affect the safety and performance of a Light Bee 2 electric motorcycle.

Safety Information

Important Information

Several important operation considerations are listed below:
• Always turn the key switch to the OFF position and make sure the motorcycle is turned off when not actively riding. It is extremely easy to forget that the motorcycle is still in standby mode because the Light Bee 2 electric motorcycle is completely silent. An accident may occur if the motorcycle is left powered on while mounting or dismounting.
• When pushing or moving the Light Bee 2 electric motorcycle, press the emergency power-off switch and ensure the READY indicator on the dashboard is off.
• Always apply the brakes when parking on a slope. Do not attempt to stop the motorcycle by gently applying the throttle, as this may trigger stall protection and cause it to roll backward.



• Please charge the battery pack of the Light Bee a electric motorcycle after each use. Disconnect the charger and power supply after charging. Make sure that charging is done in an open area or under supervision.
• Disconnect the battery pack discharge plug when the motorcycle is turned off the Light Bee 2 electric motorcycle is turned off. The motorcycle's electrical system will consume very little power and the battery pack will discharge very slowly. If you don't ride for a long time (30 days or more), you may need to charge the battery pack first to ensure that it is fully charged. The battery pack will be damaged if it is stored for a long time at a low battery level.

⚠ Caution

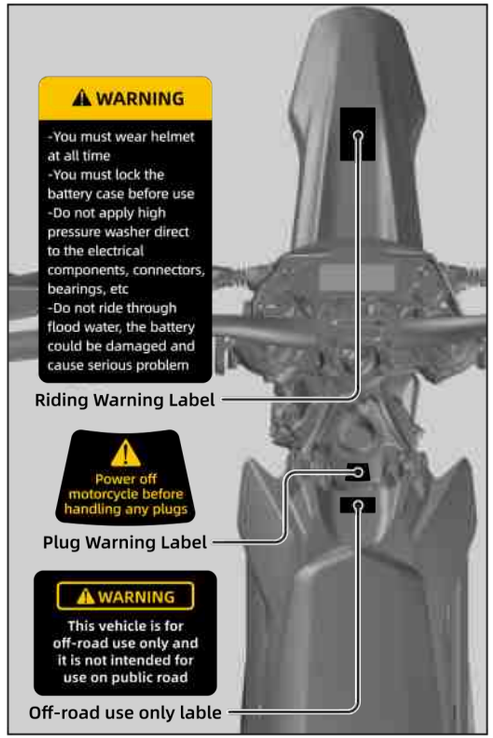
Only charge the Light Bee 2 electric motorcycle's battery pack with the original or manufacturer approved charger.
• Avoid deep discharging the battery pack. To maximize the battery life, charge the battery pack immediately after each ride. Frequent deep discharging will adversely affect the battery life.
• Failure to follow the battery pack storage and charging instructions described in this manual may void the warranty of the Light Bee 2 electric motorcycle. These guidelines have been rigorously tested to ensure maximum battery pack efficiency and service.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

You and the Environment
Owning and riding a motorcycle can be enjoyable, but you must do your part to protect nature. When you show respect for the land, wildlife, and other people, you also help preserve the sport of off-road riding.

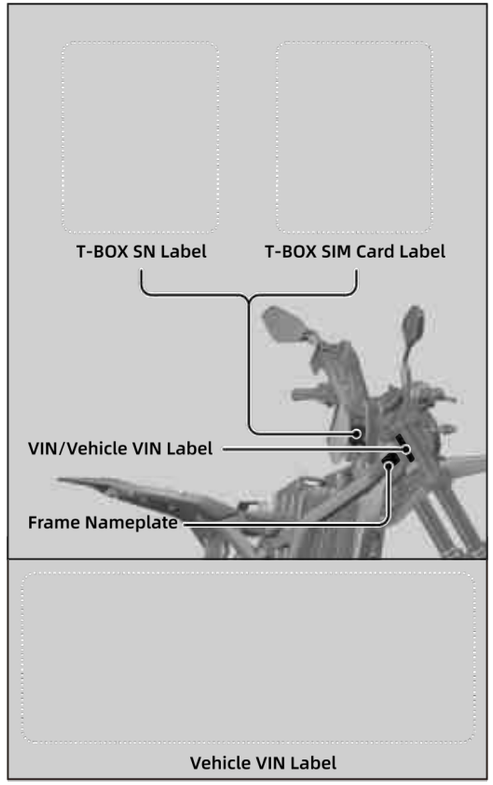
Following are tips on how you can be an environmentally responsible motorcycle owner.
1. Choose sensible cleaners. Use a biodegradable detergent when you wash your Light Bee 2. Avoid aerosol spray cleaners that contain chlorofluorocarbons which damage the atmosphere's protective ozone layer. Don't throw cleaning solvents away; see the following guidelines for proper disposal.
2. Recycle Waste. It's illegal and thoughtless to put used lubricants, brake fluid, and cleaning solvents in the trash, down a drain, or on the ground. Use coolant, and cleaning solvents contain poisons that can hurt refuse workers and contaminate our drinking water, lakes, rivers, and oceans.
3. Put hazardous waste in separate sealed containers and take them to a recycling center. Call your local or state office of public works or environmental services to find a recycling center in your area and get instructions on how to dispose of non-recyclable wastes. Improper disposal of drained fluids is harmful to the environment.

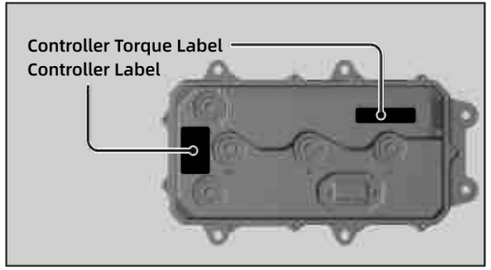
Location of Important Labels







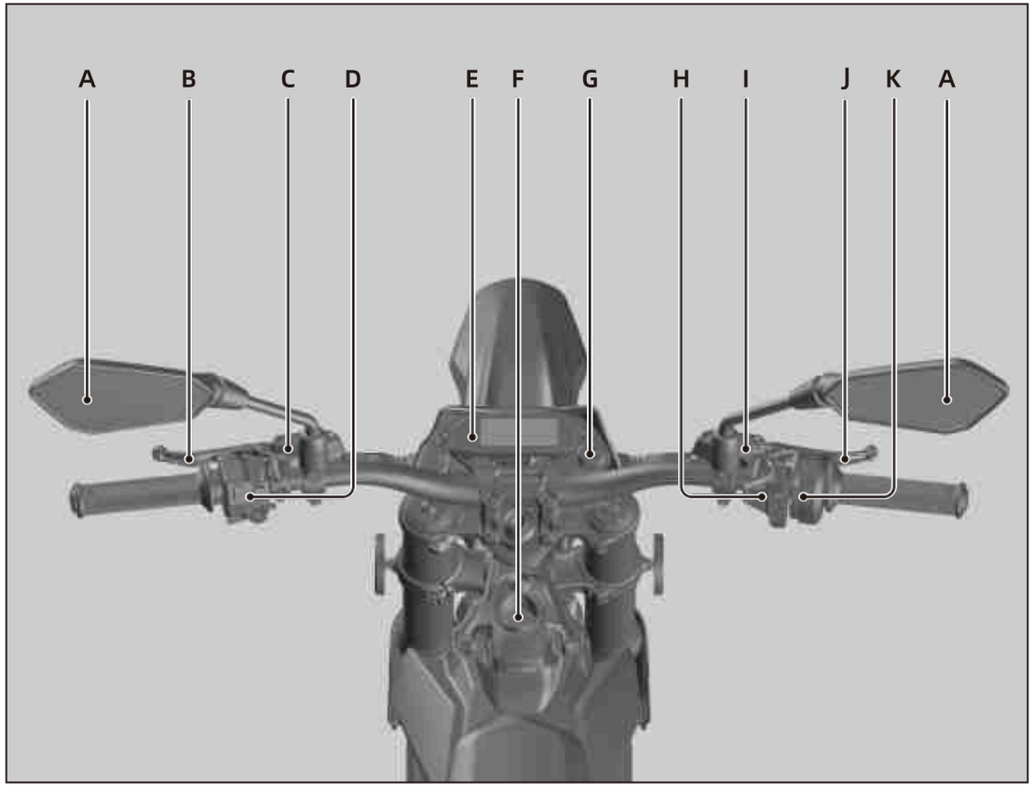




If your motorcycle is equipped with a T-Box, download and install the SURRON app from the official SURRON website, and then pair it with your motorcycle to activate the device.

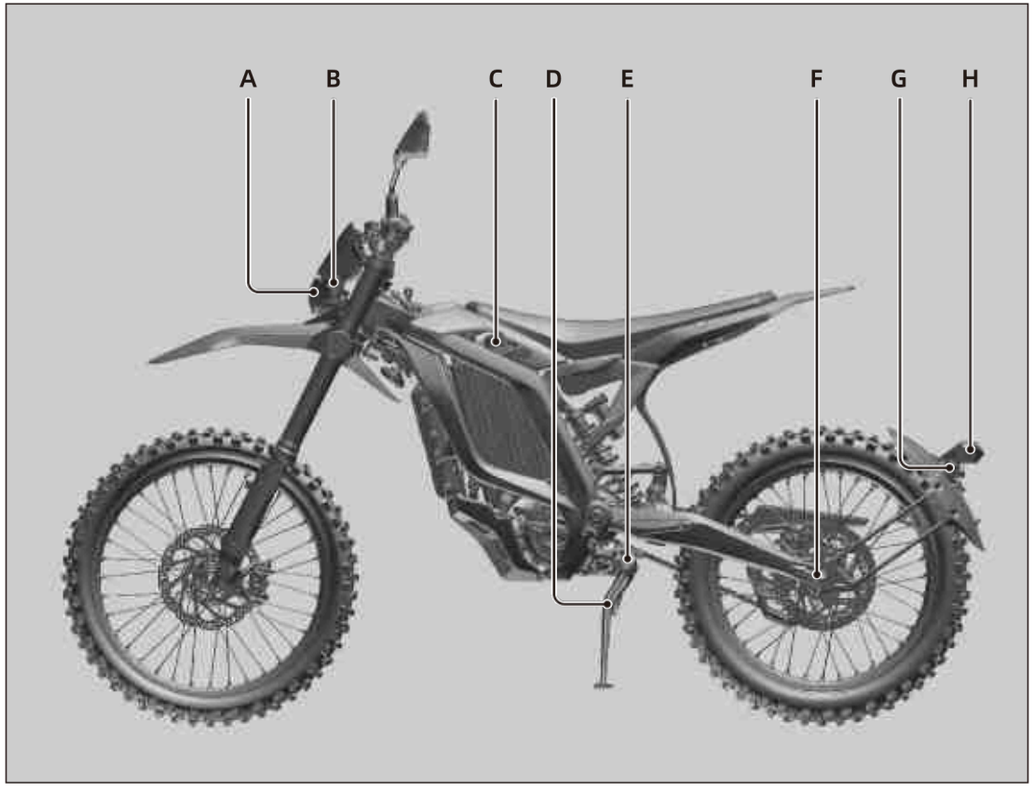
Scan the QR code to access the Download Center.

Please recharge your SIM cards that remain inactive for more than one month may be permanently deactivated and require replacement month will be permanently deactivated and must be replaced with a new one.



Functional Part Overview

A. Rearview Mirror
The Light Bee 2 electric motorcycle is equipped with convex rearview mirrors, which provide a wider field of view. Objects in these mirrors appear farther away than they actually are. Riders should account for this difference when judging distance.
Caution: This component and its function are not available on the Light Bee 2 X version.
B. Rear Brake Lever
Refer to page 6.1 for its description and operation.
C. Rear Brake Cylinder
Refer to page10.7 for its description and operation.
D. Left Combination Switch
Refer to page 6.1 for its description and operation.
E. Dashboard
Refer to pages 4.1-5.14 for its description and operation.
F. Key Switch
Refer to page 7.2 for its description and operation.
G. USB-C Port
5 V/3 A (15 W), 9 V/2 A (18 W), 12 V/1.5 A (18 W)
Standard USB-C port.
H. Right Combination Switch
Refer to page 6.4 for its description and operation.
I. Front Brake Cylinder
Refer to page 10.7 for its description and operation.
J. Front Brake Lever
Refer to page 6.4 for its description and operation.
K. Throttle
Refer to pages 5.5, 5.7, and 6.5 for its description and operation.



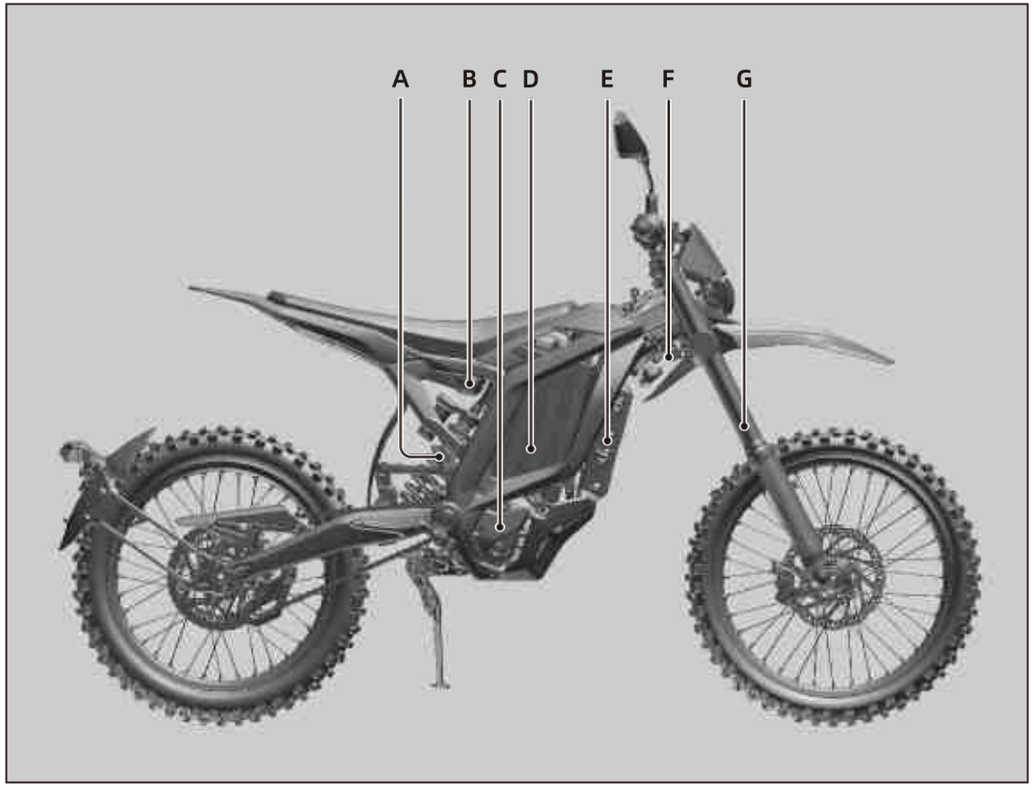
Functional Part Overview

A. Headlight
Refer to page 6.1 for headlight operation.
Refer to page 10.14 for headlight beam height adjustment.
Refer to page 10.15 for headlight replacement.
B. Front Turn Signal
Refer to page 6.2 for front turn signal operation.
Refer to page 10.15 for front turn signal replacement.
Caution: This component and its function are not available on the Light Bee 2 X version.
C. Battery Pack Charging Port
Refer to page 8.3 for its description and operation.
D. Side Stand
The side stand supports the motorcycle when it is parked. The key switch should be in the OFF position when the motorcycle is parked.

⚠ Caution

Park the motorcycle only on a firm, level surface. Otherwise, the motorcycle may tip over and cause damage.

E. Side Stand Switch
This switch is a safety device that helps prevent improper operation when the side stand is down. Refer to page 5.9 for its description and operation.
F. Chain Adjuster
The chain adjusters are located on both sides of the motorcycle. Refer to page 10.13 for their description and operation.
G. Rear Turn Signal
Refer to page 6.2 for rear turn signal operation.
Refer to page 10.15 for rear turn signal replacement.
Caution: This component and its function are not available on the Light Bee 2 X version.
H. Tail Light/License Plate Light
Refer to page 10.15 for tail light/license plate light replacement.
Caution: This component and its function are not available on the Light Bee 2 X version.



Functional Part Overview

A. Rear Shock Absorber
Refer to pages 7.9-7.10 for its description and operation.
B. Seat Lock
Refer to page 7.4 for its description and operation.
C. Motor
Refer to page 9.1 for its description and operation.
D. Battery Pack
Refer to page 8.1 for its description and operation.
E. Controller
Refer to page 9.1 for its description and operation.
F. Steering Lock
Refer to page 7.3 for its description and operation.
G. Front Fork
Refer to page 7.7 for its description and operation.

Display and Indicator

Dashboard Overview

The dashboard features two display modes: Daily Riding and Track Riding. Riders can switch between them as needed.

Press the Settings button on the right handlebar switch to switch between the two modes.



Daily Riding Mode



Track Riding Mode



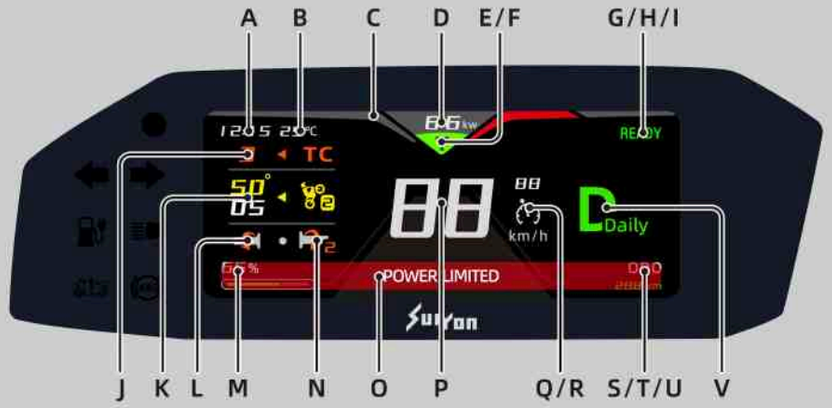
A. Left Turn Signal Indicator
When the left turn signal is activated, the indicator flashes green until the turn signal is canceled.
Caution: This component and its function are not available on the Light Bee 2 X version.

B. Right Turn Signal Indicator
When the right turn signal is activated, the indicator flashes green until the turn signal is canceled.
Caution: This component and its function are not available on the Light Bee 2 X version.

C. Charging Indicator
This indicator flashes when the battery level is low and the motorcycle is not charging. It stays on when the motorcycle is charging.

D. High Beam Indicator
This indicator lights up when the high beams are on.

E. System Warning Indicator
This indicator stays on if a system fault is detected.



A -Clock
B -Ambient Temperature
C -Real-Time Power Bar
D -Real-Time Power Value
E -Turbo Icon
F -Power Limit Icon
G -READY Icon
H -Side Stand Icon
I -Parking Icon
J -TC Mode Status
K -SURRON Wheelie Control System Icon
L -RBS Function Indicator
M -Battery Level Indicator
N -Throttle Range Icon
O -Popup Notification Bar
P -Speedometer
Q -Cruise Control Icon
R -Auto Hold Icon
S -Odometer
T -Power System Temperature Gauge
U -Trip Meter
V -Riding Mode Icon

A. Clock

12:15 This is a 24-hour clock showing the current time. The time can be adjusted (refer to page 5.13 for details). If the clock shows an incorrect time after the battery pack enters sleep mode or after the discharge plug is reconnected, check the clock battery and replace it if necessary (refer to page 6.14 for details)

B. Ambient Temperature

25℃ This icon indicates the current ambient temperature around the motorcycle.

C. Real-Time Power Bar



This icon indicates the real time power of the motorcycle. The green bar on the left represents regenerative braking power, and the red bar on the right represents riding power.

D. Real-Time Power Value

6.6kw This icon indicates the real-time riding and Regen power values of the motorcycle. Riding power is shown as a positive value, while Regen power is shown as a negative value.

E. Turbo Icon

T This icon indicates the operating status of Turbo mode. Icon turns off = Turbo unavailable; Icon lights up = Turbo available; Icon slow flash = Turbo in use; Icon fast flash = Turbo about to end.

F. Power Limit Icon

This icon indicates the operating status of the power system. A flashing icon means power will soon be limited, while a steady-on icon means power is currently limited.

G. READY Indicator

READY This Indicator lights up when the motorcycle is in Ready state.

H.Side Stand Icon

This icon stays on when the side stand is down and is off when it is up. When Side stand protection is turned off, this icon stay on white colour .

I. Parking Icon

P This icon lights up when the motorcycle is not in READY state.

J. TC Mode Status

3 TC This icon indicates the status of the motorcycle's traction control (TC). It lights up when TC is activated and the current TC mode is displayed. Icon turns off when TC is deactivated.

K. SURRON Wheelie Control System Icon

50° 05 This icon indicates the current status of the motorcycle's Wheelie Control system. The yellow icon on the right shows the current Mode of the SWC. The yellow angle at the top-left indicates the pre-set angle for the current mode. The white angle at the bottom-left indicates the motorcycle's actual angle.

L. RBS Function Indicator

This icon indicates the status of the RBS Trigger on the left combination switch. When the icon is off, the RBS function is deactivated and the lever is unresponsive.

This icon indicates that the RBS Trigger is in throttle mode, allowing riders to control the motorcycle's acceleration similar to right handlebar throttle.

RBS This icon indicates that the RBS Trigger is in regenerative braking mode, allowing riders to control the motorcycle's deceleration.

These two functions can be switched in the System Function Settings menu.

M. Battery Level Indicator

65% This icon displays the remaining battery level in the motorcycle's battery pack.

N. Throttle Range Icon

This icon indicates the current level of the Throttle Range. The higher the level, the shorter the effective throttle travel. Level Setting can be adjusted in the System Function Settings menu. Refer to page 5.5 for details.

O. Popup Notification Bar



The bar appears in blue, green, or red. Blue and green indicate function reminders, while red indicates motorcycle status reminders.

P. Speedometer

88 This icon indicates the motorcycle's current speed in kilometers per hour (km/h) or miles per hour (mph).

Q. Cruise Control Icon

88 This icon lights up when the motorcycle is in cruise control mode and if off when the mode is disengaged.

The number above indicates the maximum cruise control speed. When cruise control is engaged, this speed can be adjusted using the + and − buttons on the right combination switch.

When the motorcycle is in cruise control mode, riders may press the emergency power-off switch, apply the brakes, or activate the RBS kinetic energy recovery function to disengage cruise control.

R. Auto Hold Icon

This icon stays on when the Auto Hold brake is engaged.

S/T/U. Odometer/Power System Temperature Gauge/Trip Meter

This icon can appear in three states:



Press and hold the button on the right combination switch to switch between ODO, Power System Temperature and TRIP.

Odometer: ODO indicates the total distance traveled by the motorcycle in kilometers or miles.

Power System Temperature Gauge: indicates the current temperature range of the motorcycle's power system. Green means normal temperature, red means high temperature, and blue means low temperature.

Trip Meter: TRIP indicates the distance traveled since the last trip meter reset, in kilometers or miles. Riders may press and hold the button on the "Daily Riding Mode" or "Track Riding Mode" interface to manually reset the trip meter. Riders may also reset it by long pressing the button on the "Riding Data Statistics" page. Refer to page 5.2 for details.

V.Riding Mode Icon

The Riding Mode Page displays four different Modes in the following order:



Press and hold the Riding Mode + − button on the right combination switch to switch through the Modes sequentially. (The sequence is not circular)

⚠ Caution

If the power system temperature is too high or too low, the Power Limit icon and a fault pop-up may appear in any riding mode.

Display and Indicator

Dashboard Special Mode Display

Turbo Mode Page



When the Turbo icon T on the dashboard stays on and the Riding Mode is set to Custom (M), Sport (S), or Daily (D), press twice the T/R button on the left combination switch to engage the Turbo mode. The dashboard will then show the Turbo page, with the Turbo icon in the center.

Turbo Mode Countdown Page



Once the Turbo mode is engaged, a 10-second countdown will appear where the Turbo icon was previously. After the countdown ends, Turbo mode will be automatically disengaged, and the dashboard will return to the previous Riding Mode page.

Reverse (R) Page



When the motorcycle is in the READY state, press and hold T/R the button on the left combination switch to activate the R mode. The dashboard will display the R page. While on this page, twist the throttle to move the motorcycle backward at low speed. Release the T/R button to deactivate the R mode, and the dashboard will return to the previous Riding Mode page. The motorcycle will vibrate briefly when R mode is activated or deactivated.

Crawl Mode (L) Page



When the motorcycle is in the READY state, press and hold GO the button on the right combination switch to engage the crawl mode. While on this page, twist the throttle to move the motorcycle at low speed, and the dashboard will display the crawl mode (L) page. Press the GO button twice switch the crawl mode level. press and hold the GO button again to disengage the crawl mode and the dashboard will return to the previous Riding Mode page.
Crawl Mode can also be configured in the System Function Settings menu (refer to page 5.9 for details).
For more information about the crawl mode, please refer to page 6.7.

Display and Indicator

Track Riding Mode Page



In Track Riding Mode, the dashboard shows lap number, top speed, lap time, and other related data in the center.

1. When the motorcycle is in READY state, press the TC button on the left combination switch to start lap recording. Press the TC button again to complete the recording of the current lap, update all recorded results, and automatically start recording the next lap. This process repeats for each subsequent lap.

2.During lap recording, press the emergency power-off switch on the right combination switch to stop recording the lap and exit the READY state. Any lap data collected from the end of the previous lap until recording is stopped will not count as official lap data. Riders may press the buttons to scroll through the top speed and duration of each recorded lap. Riders may also delete all lap records by press and hold the emergency power-off switch.

Record Display Page:

The page displays a stopwatch icon, the current lap number, the total time, and the shortest time. Below this, each lap's number, top speed, and lap time are displayed.

Stopwatch Icon and Current Lap Number:

The stopwatch icon remains displayed, and the current lap number is displayed in sync. A triangle appears on the bottom right corner of the stopwatch icon when lap recording begins.

When the first lap is recorded, the current lap number is "1", indicating that the first lap is being recorded; when the second lap is recorded, the current lap number is "2", indicating that the second lap is being recorded. This process repeats for each subsequent lap.

When stop recording, a square icon will displayed on the bottom right corner of the stopwatch icon .

Total Time:

It displays the cumulative time of all completed laps. The maximum value shown is 99:59:59, any value exceeding this limit will be displayed as 99:59:59;

Shortest Time:

It displays the time for the fastest lap among all completed laps. The maximum value shown is 99:59:59; any value exceeding this limit will be displayed as 99:59:59;

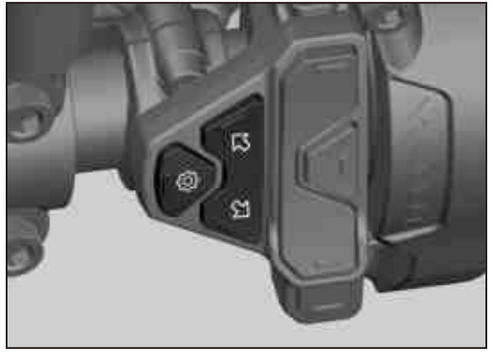
Lap Number:

It displays the number of all completed laps (1, 2, 3...), with the most recent laps appearing first. Only the latest 100 laps are displayed per page. The current lap number updates to match the completed lap: lap 101 shows 101, lap 102 shows 102, and so on. The maximum value shown is 999, and any value exceeding this limit will be displayed as 999;

Top Speed: Displays the highest speed recorded during completed laps;

Lap time: Displays the elapsed time for each completed lap. The maximum value shown is 99:59:59, and any value exceeding this limit will be displayed as 99:59:59;

System Function Settings Menu



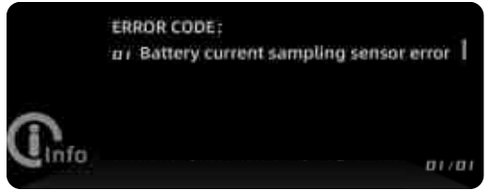
When the motorcycle is in parking P, press and hold the SET button on the right combination switch to enter the Dashboard Settings Menu.
Once in the Dashboard Settings menu, press the UP and DOWN buttons to switch between settings on the top. Press the SET button to change the setting.
Press and hold the SET button to exit or the menu will automatically exit if there is no activity for one minute, In addition, when the motorcycle meets the READY-state requirements, press the GO button to return immediately to the Riding mode page and enter the READY state.

Informations



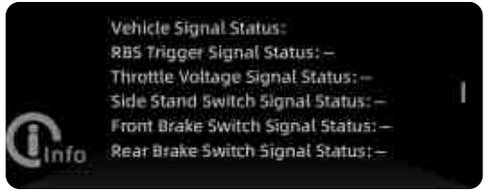
When Motorcycle "Informations" is selected, press the SET button to enter Motorcycle Information page. Press the buttons to scroll through the current motorcycle status information. Press and hold the SET button to return to the previous page.





The Motorcycle Information page displays the following sections: "Riding Statistics," "FRROR CODE," "T-Box Status," and "Vehicle Signal Status."
On the Riding Statistics page, press and hold the button to manually reset the "Trip" and the "Top Speed for This Trip."
The FRROR CODE page displays real-time system faults detected by the motorcycle.
The T-Box Status page displays the operating status and positioning information of the T-Box.

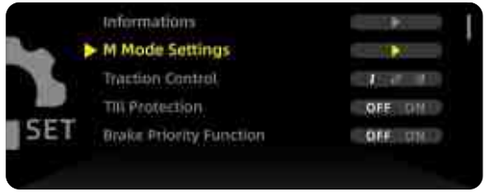




The "Vehicle Signal Status page displays the real-time status of signals from the electrical components, allowing riders to check if the functions are working properly.

Function Settings

M Mode Settings





When “M Mode Settings” is selected, press the SET button ⚙ to enter the M Mode Settings page, where riders can adjust the settings. Use the UP and DOWN buttons to switch between functions, press the SET button ⚙ to change the setting, and press and hold the SET button ⚙ to return to the previous page.
Once all the M Mode settings are saved, the M mode settings will apply when riding in M mode. These settings apply only to M mode. If M mode is not activated, the system will operate under default settings.

Traction Control



When "Traction Control (TC)" is selected, press the SET button ⚙ to change the TC level.
On the normal Riding Mode, riders can also press and hold the **TC** button on the left combination switch to activate/deactivate TC function, and press it twice to change the TC level.
TC level indicates the motorcycle's traction control status, with Level 3 as the highest.

Tilt Protection

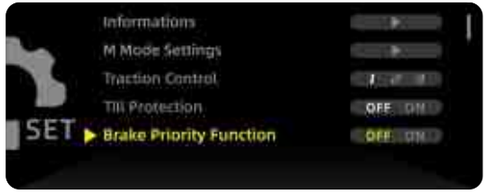


When “Tilt Protection” is selected, press the SET button ⚙ to activate or deactivate the Tilt protection function.
When this function is activated, the motorcycle's power output will be cut off if the motorcycle tilts while riding.

⚠ Warning

When riding on trails, tracks, or other terrain with significant changes in motorcycle attitude, it is recommended to disable Tilt Protection beforehand to prevent accidental activation.

Brake Priority Function



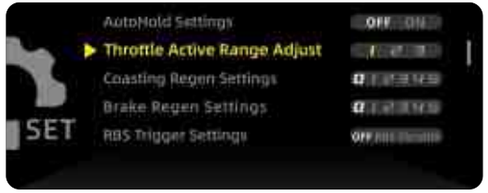
When “Brake Priority Function” is selected, press the SET button ⚙ to activate or deactivate the brake priority function.
When this function is activated, if riders apply the brake lever while twisting the throttle, the motorcycle's power output will be cut off first.

Auto Hold Settings



When “Auto Hold Settings” is selected, press the SET button ⚙ to activate or deactivate the Auto Hold function.
Please refer to page 6.13 for detailed operation and description of this function.

Throttle Active Range Adjustment



When “Throttle Active Range Adjust” is selected, press the SET button ⚙ to adjust the Throttle Range level. At higher levels, less throttle travel is required to achieve the same speed.

Function Settings

Coasting Regen Settings



When the “Coasting Regen Settings” is selected, press the SET button ⚙ to adjust the coasting energy recovery level.
Coasting Regen can be set from levels 0 to 5. The higher the level, the stronger the regenerative braking effect.
Level 0 means the function is deactivated.

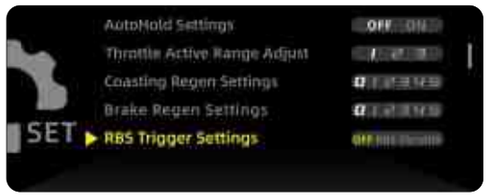
Brake Regen Settings



When the “Brake Regen Setting” is selected, press the SET button ⚙ to adjust the braking energy recovery level.
Braking Regen can be set from levels 0 to 5. The higher the level, the stronger the regenerative braking effect.
Level 0 means the function is deactivated.

Function Settings

RBS Trigger Settings



When "RBS Trigger Settings" is selected, press the SET button ⚙ to configure the RBS Trigger function.
When in the OFF state, the RBS Trigger on the left combination switch is deactivated.
When in the RBS state, the RBS Trigger on the left combination switch is in RBS regenerative braking mode, allowing riders to control the motorcycle's deceleration.
When in the Throttle state, the RBS Trigger on the left combination switch is in throttle mode, allowing riders to control the motorcycle's acceleration.

⚠ Warning

When the RBS Trigger is set to Throttle mode, carefully manage the lever position to ensure safe riding.

Throttle free play Adjustment



When "Throttle free play Adjustment" is selected, press the SET button ⚙ to configure the zero clearance (idle travel) of the throttle.
Throttle Free Play can be set from level –2 to level 2, with Level 2 representing the maximum throttle travel. At this level, the throttle should be twisted further than usual to get the motorcycle moving.

Charging Power Settings



When "Charging Power Setting" is selected, press the SET button ⚙ and then the Up/Down buttons to adjust the charging power. Press the SET button ⚙ again to confirm the setting.
Charging Power can be set from level 400W to MAX (9 levels in total; MAX represents the maximum output of the charger.). Riders can configure the charging power according to the maximum output available from the power outlet.

⚠ Caution

If the selected charging power level exceeds the actual charger's output power, the actual charging power will not be the same as selected charging power level.

Wheelie control system Setting





When "Wheelie control system Settings (SWC)" is selected, press the SET button ⚙ to enter the SWC page, where riders can switch between SWC levels N1 and N2, configure preset angles for each wheelie mode level.
Select "Restore Default" to restore the factory SWC settings.
On the SWC Settings page, press the Up/Down buttons to switch between preset angles. Press the SET button ⚙ to switch SWC level and press and hold SET button ⚙ to save the setting and return to the previous page. Please refer to pages 4.4 and 6.8-6.12 for a detailed description of the SWC system.

Crawl Mode Settings



When “Crawl Mode Settings” is selected, press the SET button ⚙ to switch between the crawl mode levels.
In Crawl mode, twist the throttle and the motorcycle will move at low speed. The lower the level, the slower the speed.
Please refer to pages 4.8 and 6.7 for a detailed description of the Crawl Mode.

Side stand protection Settings



When “Side stand protection Settings” is selected, press the SET button ⚙ to enable or disable Button Function Hints.
This function is activated by default. When the side stand is down, the motorcycle's power output will be cut off and the motorcycle cannot enter READY mode.

⚠ Caution

The side stand protection function is automatically activated every time the motorcycle is started.

Button Function Hints



When “Button Function Hints” is selected, press the SET button ⚙ to activate or deactivate the Button Function Hints function.
This is activated by default. Press a button on the combination switches, and the dashboard will execute the corresponding function and display a pop-up message indicating the function. If this function is deactivated, no pop-up notification will appear when any button is pressed.

Units



When “Units” is selected, press the SET button ⚙ to configure the speed and distance units displayed on the dashboard.

Function Settings

Language



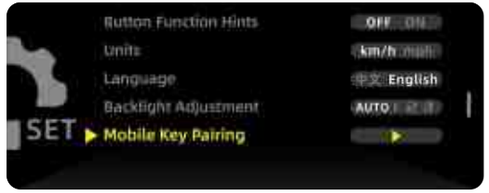
When the “Language” is selected, press the SET button ⚙ to select the display language (Chinese or English)

Backlight Adjustment



When “Backlight Adjustment” is selected, press the SET button ⚙ to adjust the backlight brightness on the dashboard. The higher the value, the brighter the dashboard.
If set to "Auto", the dashboard automatically adjusts the backlight brightness according to the ambient light level.

Mobile Key Pairing





When “Mobile Key Pairing” is selected, press the SET button ⚙ to enter the Mobile Key pairing page. The Mobile Key can be paired with the motorcycle via the APP. After successful pairing, press and hold SET button ⚙ to return to the previous page. Pairing information and Hints will appear in the APP.
Once the Mobile Key is paired and connected within range, press and hold the Start button ⏻ to start or shut down the motorcycle.
Once the Mobile key is successfully paired, the start-up

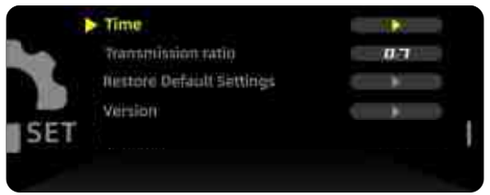


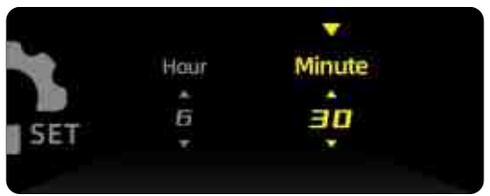


PIN code can be set in the APP. After start-up PIN code were successfully saved and when the Mobile is not connected, press and hold the Start button ⏻ to enter the PIN code input page. Press the Up/Down buttons ↖ ↘ to select number digits, press the SET button ⚙ to confirm them, and press and hold SET button ⚙ to return. Enter the start-up PIN code to start the motorcycle. After five consecutive failed PIN code attempts, the system will be locked and will not allow any further PIN code entry attempts.

Function Settings

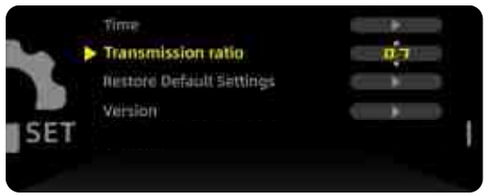
Time





When "Time" is selected, press the SET button to enter the Time Setting page and adjust the time displayed on the dashboard.
On the Time Setting page, press the Up/Down buttons to adjust the time values, press the SET button to switch between "Hours/Minutes", and press and hold the SET button to return to the previous page.

Transmission ratio

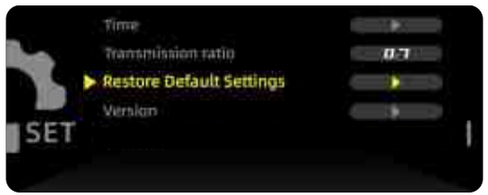


When "Transmission ratio" Adjustment is selected, press the SET button and then the Up/Down buttons to adjust the Transmission Ratio. Press the SET button again to confirm the setting. The Transmission Ratio can be set between 0.7 and 1.5. The higher the value, the higher the speed displayed on the dashboard.

⚠ Warning

Do not change the Transmission Ratio unless necessary. The system default Transmission Ratio is set at 1.0.

Restore Default Settings



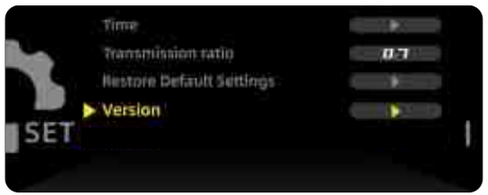


When "Restore Default Settings" is selected, press the SET button to enter the Restore Default page, press the Up/Down buttons to switch between "Yes" and "No", and then press the Set button to confirm. Select "Yes" to restore all settings to their factory defaults.

⚠ Caution

This function does not change the current M Mode or Language settings

Version

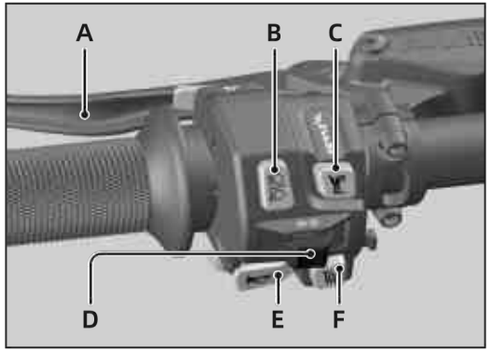






When "version" is selected, press the SET button to enter the version information page and view the motorcycle's version details.

Handlebar Controls



A. Rear Brake Lever

Pull the lever to apply the rear brake.

When braking, the throttle should be in the closed position, and the brake light should come on for L3 version .

B. Headlight High/Low Beam Switch

This switch is a trigger-type auto-reset switch. On the L3 version, the switch icon is ; short press to switch between high and low beams. On the X version, the icon is , which is used to adjust headlight brightness in a cycle of levels 1, 2, 3 (with decreasing brightness). Press and hold this button to turn off the headlight. Note that on the L3 version, the position light cannot be turned off.

C. Wheelie Control System (SWC) Switch

This switch is a trigger-type auto-reset button with icon . It is located on the front of the left combination switch and used to control the SURRON Wheelie Control (SWC) system.

SWC Activation/Deactivation:

press and hold the SWC system switch to activate/deactivate the SWC system.

SWC System Level Switching:

Press the switch twice to cycle through the available levels.

Wheelie Control System Angle Setting:

Method 1: Short press the switch , and the SURRON Wheelie Control System Icon will flash, indicating entry into angle settings for the current Level. Short press the Up/Down buttons to cycle through angle settings . Once the target angle is set, short press the wheelie control switch again or wait 5 seconds without operation to exit the angle settings and restore the icon display. If riders accelerate the motorcycle before exiting, the set angle will be automatically saved.

Method 2: Configure the settings in the System Function Settings menu (refer to page 5.8 for details).

For detailed information on the wheelie control system, refer to pages 4.5 and 6.8 to 6.12).

D. Turn Signal Switch (Not available on Light Bee 2 X version)

Move the turn signal switch left or right, and the corresponding front and rear turn signals will flash. When the turn signal switch is turned on, the turn signal indicator on the dashboard will flash green. Press the turn signal switch inward to manually turn off the turn signals. For your and others' safety, always follow traffic law and regulations when turning or performing other operations.

E. Horn Button

When the Key Switch is in the ON position or the motorcycle is turned on by PIN code or Mobile key, press the horn button and the horn will sound immediately. Because electric motorcycles operate quietly, so riders can use the horn to alert pedestrians and drivers or other vehicles nearby.

F. Multi-Function Button (Reverse and Turbo Settings)

Reverse Mode Operation: When the READY indicator lights on, the throttle returns to zero and the motorcycle is stationary, press and hold the multi-function button T/R, and the dashboard will display the R page, indicating that the motorcycle enters Reverse mode. Once in reverse mode, release the multi-function button T/R, and the power will be cut off. The motorcycle will only enter Forward mode after the multi-function button T/R is released and the throttle is returned to zero. When entering or exiting Reverse Mode, the motorcycle will produce a slight vibration to alert the rider.

Turbo Mode Operation: In Mode M/S/D, when the icon T on the dashboard stays on, short press the button T/R twice to activate Turbo mode.

⚠ Caution

Turbo is a special riding mode that allows the motorcycle to deliver the maximum power. Each activation lasts 10 seconds. In Turbo mode, the 10-second countdown starts automatically once the throttle is opened beyond one-third of its travel.



G. TC (Traction Control) Switch

The traction control function is adjusted via the TC switch on the left combination switch.

Activating/Deactivating TC: Press and hold the TC switch to activate or deactivate the TC function.

TC level Switching: Press the TC switch twice to cycle through TC levels.

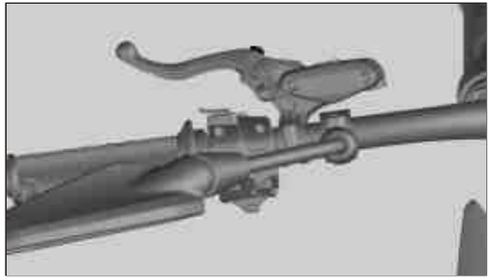
H. RBS Trigger

This is an auto-reset trigger that can be configured for different functions. Refer to pages 4.5 and 5.7 for its description and operation.

In RBS mode, the RBS Trigger on the left handlebar switch controls the motorcycle's regenerative braking, allowing the rider to decelerate.

In Throttle mode, the RBS Trigger on the left handlebar switch functions as a throttle, allowing the rider to accelerate.

In Off state, the RBS trigger on the left handlebar is disabled.

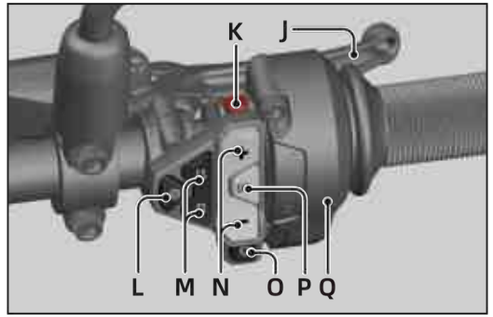


⚠ Warning

When the RBS Trigger is in Throttle mode, read this section carefully and fully understand the RBS Trigger before using Throttle Mode to ensure safe riding.

I. Brake Lever Adjustment Knob

Rotate the knob to adjust the distance between the brake lever and the handlebar (Turn clockwise to increase the distance, counterclockwise to decrease it) to better suit your riding habits.



J. Front Brake Lever

Pull the lever to apply to control the front brake system. When braking, the throttle should be in the closed position, and the brake light should come on.

K. Emergency Power-Off Switch

This is a trigger-type auto-reset button. When pressed, it will cut off power to the running power system. The motor controller will stay in a no-power output state. This switch does not disconnect all electrical circuits, only the power output of the power system.

L. Dashboard SET Button (SET)

When the motorcycle is in Parking Mode (P), press and hold this button to enter the System Function Settings Menu. Please refer to page 5.1 for its description and operation.

M. Button

This is a trigger-type auto-reset button used to configure related system functions. Please refer to pages 5.1 to 5.14 for its description and operation.

N. Riding Mode + − Button

This is a trigger-type auto-reset button used to switch between Riding Modes. Please refer to pages 4.6 and 6.6 for its description and operation.

O. Start Switch / Cruise Control Switch

This is a trigger-type auto-reset button. When the rider's Mobile key is successfully paired and within about 1 meter of the motorcycle, press and hold this button to turn on the power and illuminate the dashboard. When the motorcycle is powered on, press and hold this button to turn off the power.

When the motorcycle speed exceeds 10 km/h, double-press this button to enter cruise control mode, and press the button again to exit cruise control mode. Please refer to pages 4.5 for its description and operation.

P. GO Button

This is a trigger-type auto-reset button. When the motorcycle is not in READY state, press the GO button to enter Riding Mode. This button can also be used to activate Crawl Mode. Please refer to page 6.7 for its description and operation.

Q. Throttle
The throttle controls the motorcycle's acceleration. The throttle range and free play can be configured individually (refer to pages 5.5 and 5.7 for details).

Feature Introduction

Riding Modes



The motorcycle provides the following riding modes: M (Custom), S (Sport Mode), D (Daily), and E (Eco). You can switch between these modes while riding, by following the prompts displayed on the dashboard. There are also special modes for specific situations: Turbo, Crawl (L), and Power Limit mode is activated automatically under specific conditions.
Press and hold the + or − button on the right combination switch to sequentially switch between different modes (the sequence is non-circular).

M Mode (Custom Mode)
Riders can configure and save torque, power, top speed, and auxiliary functions (e.g., Coast Regen, Tilt protection etc.) based on the riding skills and preferences. Refer to page 5.3 for its settings.

S Mode (Sport Mode)
In this mode, the motorcycle offers strong performance, suitable for unpaved roads such as tracks and trails. It is recommended for experienced riders only after they are familiar with the motorcycle.

D Mode (Daily Mode)
In this mode, the motorcycle delivers relatively gentle power and acceleration, suitable for daily riding.

E Mode (Eco Mode)
In this mode, the motorcycle delivers more gentle power and acceleration, recommended for new riders or energy-efficient riding or for long-distance rides.

Crawl Mode (Mode L)



In this mode, the motorcycle's top speed is significantly reduced, with torque maintained at a high level, making it suitable for specific riding conditions such as slippery steep slopes or trails. Crawl mode features three speed levels: L1, L2, and L3.

Entering/Exiting Crawl Mode:

When the motorcycle is in the READY state, while the motorcycle is stationary (0 km/h), press and hold the GO button on the "Daily Riding Mode" or "Track Riding Mode" page to enter or exit Crawl Mode.

Switching Crawl Mode Levels:

Method 1: When the speed is 0 km/h, press the GO button briefly on the L Crawl Page twice to switch between Crawl Mode levels.

Method 2: Configure the settings in the System Function Settings menu (refer to page 5.9 for details).

Crawl Mode Display:

When the motorcycle enters Crawl Mode, the dashboard will display the L Crawl Page. Refer to page 4.8 for display details.

SURRON Wheelie Control (SWC) system

This system is a dedicated rider-assistance feature that requires the rider to have appropriate motorcycle control skills. The SURRON Wheelie Control (SWC) System is an intelligent system that senses the motorcycle's posture via a Inertial Measurement Unit (IMU) to regulate wheelie angles, protect the rider, and support training. Maximum acceleration power depends on throttle position. When the motorcycle's wheelie angle approaches the preset limit, the system adjusts the forward torque and, if necessary, applies reverse torque to keep the angle within the preset range and prevent potential hazards caused by excessively large angle.

⚠ Caution

1.It is recommended to deactivate the TC and Brake Priority functions to avoid interference with the SWC system.

2. The Regen functions is not affected by the SWC system.

3. All electronic control systems operate within the motorcycle's design mechanical parameters.

4. SURRON Wheelie Control System is only a safety assistance system with operational and control limits. It is not a substitute for rider skill, judgment, or responsibility, judgment, or sense of responsibility. Riders should ensure they completely understand the system's functional limitations and exercise caution according to their abilities and the surrounding conditions, including terrain and weather.

5. Once the SWC system is deactivated (e.g. motorcycle is powered OFF), the Wheelie Control function is disabled, and riders should exercise extra caution.

6. The SWC system assists the motorcycle in operating within physical limits but cannot exceed them.

⚠ Caution

7. Compared to conventional gasoline compared with conventional motorcycles, electric motorcycles are more prone to wheelies because of their instant torque when experiencing instant high torque. Configure the SWC system level and angle appropriately, and avoid excessive large angles to prevent accidents.
8. If the electric motorcycle does not meet the conditions for the SWC system, the system will automatically disengage. The power limit indicator will illuminate, and the red background pop-up notification will appear on the dashboard. The rider should either switch to SWC system Level 1 or deactivate the system.
9. The Light Bee 2 electric motorcycle features reverse protection. When the motorcycle moves backward, the SWC system is temporarily deactivated.
10. When the motorcycle is stationary, the system automatically calibrates the IMU, enabling more precise wheelie angle control.

⚠ Warning

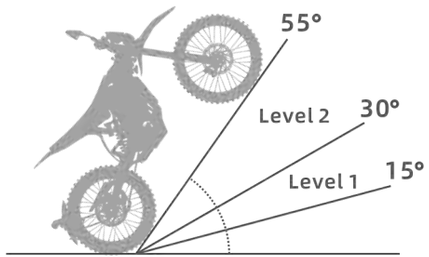
1. Do not use the horn while operating the Wheelie Control System, as high-frequency electromagnetic signals may interfere with the IMU and reduce the accuracy of angle control.
2. The SWC system should be deactivated during aggressive riding conditions, such as off-road riding or jumping, to avoid interfering with the rider's operation.
3. The rider must wear proper protective equipment and use the Wheelie Control System only in straight, enclosed, flat tarmac and safe areas. They must always follow local laws and regulations and never ride unsafely on public roads.
4. The Wheelie Control System does not alter the fundamental risk associated with motorcycle operation. SURRON is responsible only for manufacturing or design defects as defined in the warranty. Any use of it for practicing riding skills or competitive techniques is at the rider's own risk. SURRON will not be liable for any injuries or property losses arising from such use.

The Wheelie Control System provides two selectable levels, as described below:

Level 1 (Learning Mode)
The angle can be set between 15° and 30°, which helps control front-wheel lift during quick starts.
Level 2 (Advanced Mode): The angle can be set between 30° and 55°, which helps control front-wheel lift at higher angles but demands stronger skills from the rider.

⚠ Caution

Level 2 (Advanced Mode) is unavailable unless the battery pack meets the required temperature and capacity level.



Once the SWC system is activated, The dashboard displays the  icon indicating that the system is operational.
Level and angle settings can only be adjusted when the Wheelie Control System has been activated.
Wheelie Control System Activation/Deactivation:
Press and hold the Wheelie Control System switch  to activate/deactivate the Wheelie Control System.
Wheelie Control System Level Switching:
Press briefly the Wheelie Control System switch  twice to cycle through the available levels.
Wheelie Control System Angle Setting:
Method 1:
Press briefly the Wheelie Control System switch  , and the SURRON Wheelie Control System Ico  will flash, indicating entry into angle settings for the current Level. Press briefly the  button to cycle through the available angle settings  . After the angle is set, either press briefly the switch  again or wait 5 seconds without operation to exit current angle setting and restore the icon display. If the motorcycle is accelerated before exiting, the the selected angle is saved automatically.
Method 2:
Configure the settings via the System Function Settings Menu (refer to page 5.8 for details).

The Wheelie Control System is an optional, assistive feature. SURRON explicitly states: The system does not prevent accidents or injuries. SURRON shall not be liable for propertydamage resulting from:

1. Wheelies performed with the SWC system deactivated.
2. Gross negligence in disregarding warnings
3. Unauthorized modifications without SURRON's approval.
4. Operation under conditions explicitly warned against.

⚠ Caution

1. Liability for personal injury is excluded only to the extent permitted by applicable law. This exclusion does not apply to damages caused by defects in the product.
2. The rider must fully read, understand, and accept all cautions, warnings, and functional limitations described in this manual before using the Wheelie Control System. Any misuse or incorrect configuration resulting from failure to properly understand the system instructions shall be the sole responsibility of the rider.
3. SURRON Wheelie Control System should not be used as a justification for riding at excessive speeds, beyond the rider's capabilities, or riding recklessly under conditions that violate terrain, weather, load, or regulatory requirements. The system is designed to control wheelie angle but cannot ensure safety under all aggressive riding scenarios. Riders should always be aware of potential risks. Any personal, property, psychological harm resulting from violations of warnings or unsafe riding practices—including, but not limited to, riding at excessive speeds,

Feature Introduction

⚠ Caution

riding recklessly, riding under the influence of alcohol, failing to wear safety gear, or ignoring system alerts—is the sole responsibility of the rider, and SURRON disclaims liability for such damages to the fullest extent permitted by law. Nothing in this clause shall waive liability for personal injury to the extent prohibited by law.
4. To ensure the best performance and safety, the Wheelie Control System must be used with manufacturer-certified components, including tires and chains. Non-certified accessories may compromise system performance and pose safety hazards, for which the user shall assume full responsibility.
5. Wheelie Control levels are compatible with all Riding Modes except Crawl. It is recommended to select the Level and Riding Mode according to your riding style and the terrain.

⚠ Warning

1. Failure to follow the prescribed operating procedures may result in accidents or damage, for which SURRON assumes no liability.
2. Riders should always ride within their own abilities, rather than relying entirely on the Wheelie Control System to attempt advanced riding maneuvers in dangerous conditions.
3. The Wheelie Control System may not function optimally in environments like loose sand, deep mud, or steep inclines.

Auto Hold Function



To enhance the riding experience, the Light Bee 2 electric motorcycle is equipped with an Auto Hold function Ⓗ. This function can be activated and deactivated via the System Function Settings Menu (refer to page 5.5 for operation details).

Auto Hold Function Activation: When the motorcycle comes to a stop, short press the brake twice quickly to engage Auto Hold mode. The Auto Hold icon Ⓗ will light up on the dashboard and the rear wheel will be locked to prevent the motorcycle from rolling (the motorcycle remains in READY mode).

Auto Hold Function Deactivation: While in Auto Hold mode, you can exit Auto Hold mode by: quickly pull the brake lever twice, twisting the throttle to start, or turning off the key switch.

⚠ Caution

1. It is highly recommended to deactivate this function during aggressive riding, such as racing, trail riding, or jumping, to avoid unintended activation.
2. This function cannot be activated when the power system is malfunctioning.
3. This function operates independently of the Emergency Power-off Switch.

Dashboard Clock Battery



To ensure the dashboard clock continues to function properly when the battery pack is in sleep mode or removed, the Light Bee 2 electric motorcycle is equipped with a CR2032 button cell battery in the wiring harness beneath the Key Switch cover. If this battery runs low or malfunctions, the clock settings may not be saved correctly, or significant time deviations may occur. In such cases, the button cell battery should be replaced promptly.

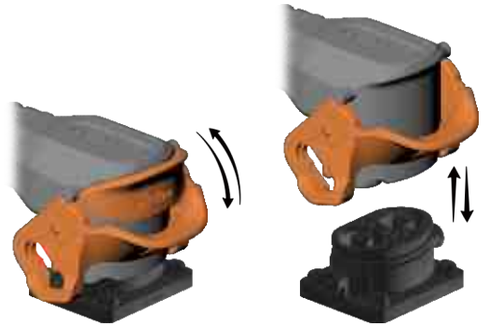
T-BOX Binding

1. Visit the official SURRON website → Download Center, download the APP, and bind your device.
2. Manually enter the T-BOX SN Label/Card Label code or scan the barcode/QR code (refer to page 2.5 for details).

Scan the QR code to access the Download Center.

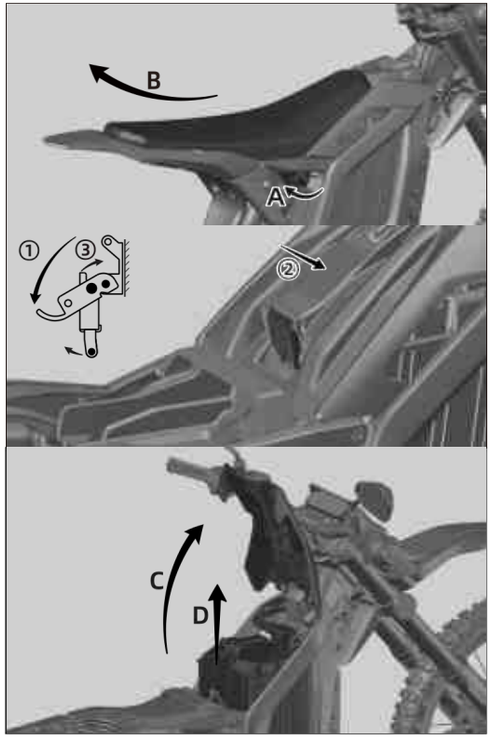
Battery Pack Removal

1. Ensure the motorcycle is powered off before removal. Insert the key into the seat lock and turn in the direction according to arrow A to unlock;
2. Lift the seat, then push it backward along arrow B and remove the seat.
3. Pull back the latch plate of the battery compartment lock (①), press the battery compartment cover (②), and push the top of the battery compartment cover latch forward (③) to release it from the hook. Then rotate the battery compartment cover along arrow C to lift open it.
4.Unlock and disconnect the battery pack discharge connector (see diagram below).
5. Lift the battery pack along arrow D to remove it.



Unlock/Lock Discharge Connector

Plug/Unplug Discharge Connector



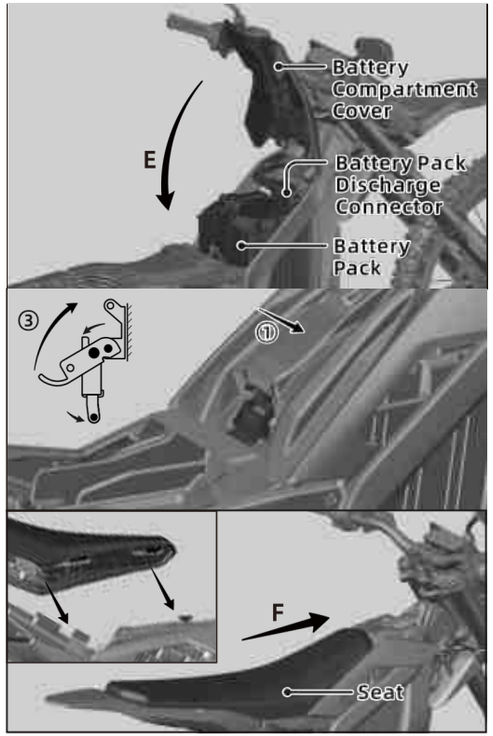
Feature Introduction

Battery Pack Installation

1. Install the battery pack into the battery compartment;
2. Plug the battery pack discharge connector and lock it (refer to page 6.15 for operation details);
3. Rotate the battery compartment cover along arrow E, press down the cover at point ①, push the top of the compartment lock latch backward (②) to engage it with the hook, and then push the lock plate forward up(③) to lock the cover;
4. Align the front seat limit slot with the front seat limit sleeve on the battery compartment cover, and align the middle hook of the seat with the limit plate on the subframe. Push the seat forward along arrow F until the front limit slot and middle hook are properly engaged, then press down on the rear of the seat to lock it.

⚠ Warning

Always power off the motorcycle before installing or removing the battery pack.
Ensure the motorcycle is powered off before plugging or unplugging the battery pack discharge connector; Failure to do so may result in equipment damage or personal injury.



How to Use Storage and Charger Compartments



To enhance the user experience, the Light Bee 2 electric motorcycle features a storage compartment for the charger or other items. By default, it is set up as a general storage compartment; to use it as a charger compartment, the bottom plate must be removed.

⚠ Caution

When using the compartment for storage, do not leave valuables inside.

Storage Bottom Plate Removal:

1. Remove the seat (refer to page 6.15 for details).
2. Lift the bottom plate and remove it from the mounting pin.

Storage Bottom Plate Installation:

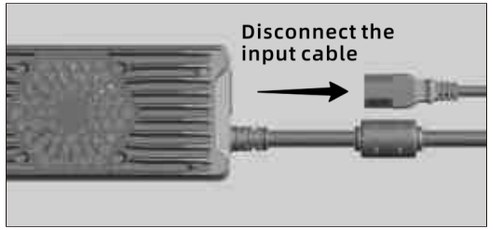
1. Align the front latch of the bottom plate with the charger compartment edge and secure it.
2. Align the mounting pin of the bottom plate with the mounting hole in the charger compartment, then press down to secure.

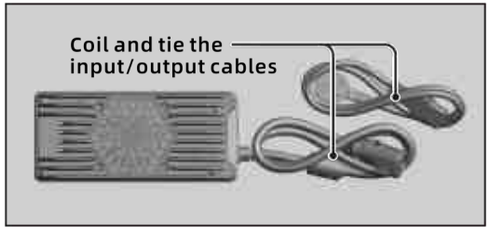
When Used as a Charger Storage Compartment:

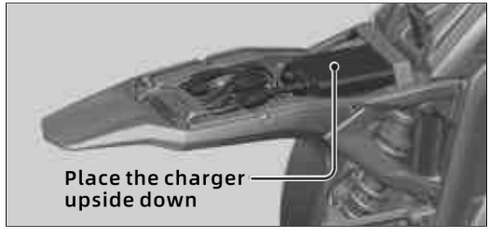
1. Unplug the input cable from the charger.
2. Coil the charger input and output cables neatly and secure them for easy storage.
3. Remove the seat and the storage bottom plate (refer to pages 6.15 and 6.17 for operation details).
4. Place the charger upside down as shown in the storage compartment, with its input and output cables neatly coiled behind it. The compartment is equipped with restraining structures to secure the charger.
5. Finally, reinstall the seat on the Light Bee 2 electric motorcycle, and ensure that the cushioning foam under the seat presses firmly against the charger. Refer to page 6.16 for the seat installation instructions.

⚠ Caution

Make sure the charger and cables are properly positioned when installing the seat to prevent damage to the charger or cable.
Remove the charger and the input cable before cleaning the motorcycle.







Pre-ride Check

Before operating the Light Bee 2 electric motorcycle, please check the following items to ensure that the motorcycle is in a safe condition:

• Battery Pack

Check that the battery level displayed on the indicator (see illustration on page 8.1) or dashboard to ensure it is sufficient for your riding. Actual range may vary depending on actual riding environments, so the displayed battery level is for reference only. We recommend charging the battery pack before use.

• Chain

Check the chain tension and wear condition. Adjust or replace it if necessary. Refer to pages 10.12 to 10.13 for details.

• Sprocket

Check the wear condition of the Front drive sprocket and Rear driven sprocket. Adjust or replace them if necessary.

• Brake System

Pull the brake lever and push the motorcycle to see if the front and rear wheels can be fully locked. Under normal conditions, you should be able to lock the wheels completely using the brakes.

• Throttle

When the motorcycle is turned OFF, twist the throttle and release it to check whether the throttle rotates smoothly and returns to idle freely.

• Electrical System

Check whether the headlight, turn signals, and brake light/tail light are functioning properly.

• Tire

Check the tire pressure and tread depth of the tires. Check the cold tire pressure, maintain the correct tire pressure. Check for damage and abnormal wear of the tire. As described on page 10.11, when the tread depth reached the warning mark on the tire, please replace the tire immediately.

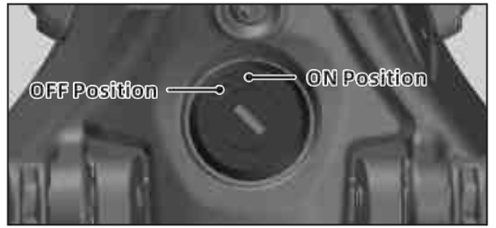
⚠ Warning

Improper tire pressure is a common cause of tire failure, and may cause severe tire ruptures, tread separation and loss of control of the motorcycle, which may result in serious personal injury. Check the tires regularly to ensure proper tire pressure and condition.

Starting and Operating

Key Switch

This is a two-position switch located at the rear of the Head tube. Its functions are as follows:



OFF Position

This position is to power off the Light Bee 2 electric motorcycle to disable all the electrical system. The key can also be removed from this position.

ON Position

This position is to power on the Light Bee 2 electric motorcycle. The following changes occur when switch to this position:

• Dashboard Display ON

• Headlight ON

• Tail Light ON (Not available on the X version)

How to Operate the Key Switch:

1. Insert the key into the key switch and turn clockwise to switch the key from OFF position to ON position to power on the Light Bee 2 electric motorcycle.
2. When the Light Bee 2 electric motorcycle is powered on, turn the key counterclockwise to switch the key from ON position to OFF position, then the Light Bee 2 electric motorcycle is powered off. Remove the key when parking the motorcycle to prevent theft.

⚠ Caution

When parking the Light Bee 2 electric motorcycle, remove the key and keep it in your possession to reduce the risk of theft.

Steering Lock

This is a two-position switch located behind the lower triple clamp. Its functions are as follows:



Caution

The Light Bee 2 (X version) is not equipped with a steering lock.

Engaging the Steering Lock:

1. Turn the handlebar fully to the left.
2. Insert the key into the steering lock and rotate it clockwise from the unlocked position to the locked position to lock the motorcycle.
3. Remove the key.

Releasing the Steering Lock:

1. Insert the key into the steering lock and turn it counterclockwise from the locked position to the unlocked position to unlock the motorcycle.
2. Remove the key.

Caution

Engaging the steering lock when parked helps prevent unauthorized use and theft.

Seat Lock

This is a two-position auto-reset switch located to the right of the rear shock. Its functions are as follows:



How to Operate the Seat Lock:

1. When in the locked position, insert the key into the seat lock and turn it clockwise to the unlocked position. Once the key is in the unlocked position, the seat can be removed.
2. When released, the key automatically returns to the locked position, where it can be removed.

How to Riding the Light Bee 2 Electric Motorcycle

Starting

1. Turn on the bike by using the Mobile Key, PIN Code or turn the key switch to ON position.
2. Verify that all information on the dashboard is displayed normally.
3. After confirming that there are no obstacles or passing vehicles nearby, fold up the side stand, short press the GO button on the right combination switch, wait for the READY indicator to light up, and then twist the throttle to begin riding.

Braking

The brake levers are located on both sides of the handlebars.
The right brake lever controls the front brake.
The left brake lever controls the rear brake.

Parking

1. Turn the throttle to the idle position and press the emergency power-off switch to exit READY mode.
2. Put down the side stand to prevent the motorcycle from tipping over.
3. Press and hold the Start Switch ⏻ to turn off the bike or turn the key switch to the OFF position, remove the key, and keep it safe.

⚠ Warning

Excessive force on the brake levers may lock the wheels, resulting in loss of control of the Light Bee 2 electric motorcycle and serious injury.
Use the brakes progressively and control the force to gradually stop the motorcycle without locking the wheels.
The Light Bee 2 electric motorcycle delivers strong performance, so we strongly recommend practicing emergency braking in a safe, enclosed space until you can do them safely.

⚠ Caution

Please check the battery level and recharge the battery pack promptly after each ride.

Feature Introduction

Riding Tips for Maximum Range

The Light Bee 2 electric motorcycle has a range comparable to that of a fuel-powered motorcycle. The range depends on riding style after each full charge. In addition to riding habits, energy consumption is influenced by environmental factors, such as extreme heat or cold and riding on steep roads. To maximize range on a single charge, reduce speed appropriately and maintain a steady pace.
To achieve optimal range, please follow these guidelines:

- Avoid frequent or aggressive acceleration and deceleration.
- Slow down using regenerative braking when it's safe to gain extra range.
- Keep tires inflated to the recommended pressure (refer to page 10.11 for details)
- Remove any unnecessary cargo to reduce load.
- Range may vary slightly between winter and summer.

You can estimate your motorcycle's range based on the factors above and your own riding habits.

⚠ Caution

Actual riding range may vary depending on riding conditions and ambient temperature.

Front Fork Adjustment



Preload

Adjust the preload by turning the preload adjustment knob on the top of the left front fork. The symbol "+" means increasing the preload, and the symbol "-" means decreasing the preload.

• Turn the preload adjustment knob clockwise in the "+" direction to increase the preload;

• Turn the preload adjustment knob counterclockwise in the "-" direction to decrease the preload.

Compression Damping

Adjust the compression damping by turning the compression damping adjustment knob on the top of the right front fork. The symbol "+" means increasing the compression damping, and the symbol "-" means decreasing the compression damping.

• Turn the compression damping adjustment knob clockwise in the "+" direction to increase the compression damping;



• Turn the compression damping adjustment knob counterclockwise in the "-" direction to decrease the compression damping.

Rebound Damping

Adjust the rebound damping by turning the rebound damping adjustment knob at the top of the right front fork. The symbol "+" means increasing rebound damping, and the symbol "-" means decreasing rebound damping.

• Turn the rebound damping adjustment knob clockwise in the "+" direction to increase the rebound damping, resulting in slower rebound speed;

• Turn the rebound damping adjustment knob counterclockwise in the "-" direction to decrease the rebound damping, resulting in faster rebound speed.

Feature Introduction

⚠ Caution

The appearance of the front fork may vary depending on the configuration, please refer to the actual product.

The damping and preload should be adjusted properly according to the road conditions and the weight of the rider; otherwise, it may result in front fork malfunction or even a crash.

Rear Shock Adjustment



Compression Damping

Adjust the compression damping by turning the compression damping adjustment knob at the top right of the rear shock. The symbol "+" means increasing compression damping, and the symbol "-" means decreasing compression damping.

• Turn the compression damping adjustment knob clockwise in the "+" direction to increase the compression damping;

• Turn the compression damping adjustment knob counterclockwise in the "-" direction to decrease the compression damping.



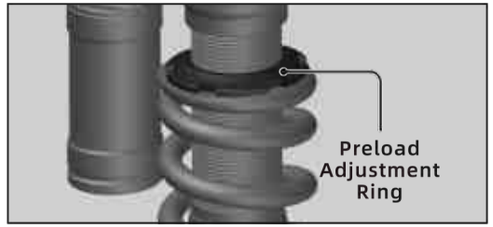
Rebound Damping

Adjust the rebound damping by turning the rebound damping adjustment knob at the bottom right of the rear shock. The symbol "+" means increasing rebound damping, and the symbol "-" means decreasing rebound damping.

• Turn the rebound damping adjustment knob clockwise in the "+" direction to increase the rebound damping, resulting in slower rebound speed;

• Turn the rebound damping adjustment knob counterclockwise in the "-" direction to decrease the rebound damping, resulting in faster rebound speed.

Feature Introduction



Preload

Turn the adjustment ring counterclockwise to decrease the spring preload; turn the adjustment ring clockwise to increase the spring preload.

⚠ Caution

The appearance of rear shock may vary in different specifications , please refer to the actual product.

The damping and spring preload should be adjusted properly according to road conditions and the weight of the rider. Avoid setting the damping to its maximum setting, otherwise it may cause the rear shock malfunction or even a crash.

Battery Pack

This motorcycle comes with a high-performance, high-performance lithium battery pack, which can be used in temperatures from -20°C to 45°C, with optimal performance between 10°C and 30°C. Extremely low or high ambient temperatures may affect the battery pack's performance and lifespan. Do not use the battery pack outside the specified temperature range, and do not charge it if its internal temperature is below -5°C.

At an ambient temperature of 25°C, charge the battery pack with the original charger. When the charging power is set to "MAX", the battery pack will be fully charged in approximately 4 hours.

When the ambient temperature is too low, the battery pack's performance may be affected, causing a slight reduction in range. It will recover once temperatures return to normal.

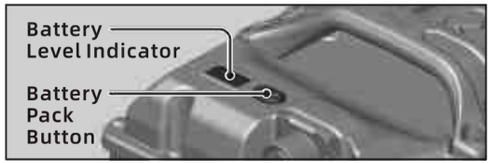
When the battery pack's internal temperature is below 5°C and the battery level is under 20%, aggressive throttle twisting while riding may result in reduce power output. Exercise caution under these conditions. In case of power loss, restart the motorcycle and gently twist the throttle to continue riding a short distance.

If the motorcycle will not be used for an extended period, charge the battery pack to 60%-80% before storage and check the remaining charge once a month. Recharge the battery pack whenever the charge level drops below

⚠ Caution

If the battery level falls below 30% and the battery pack remains unused for more than 7 consecutive days, it will enter sleep mode and stop supplying power, and the T-BOX may not be able to connect to the network. To resume normal power output, the battery pack must be activated either by charging with the charger or by pressing the battery pack button. If the battery level remains below 30% after activation without further charging, the pack will re-enter sleep mode.

30% to help prevent performance degradation and battery damage. If the battery pack does not work or the battery level indicator does not respond when the button is pressed, the battery pack is considered faulty. In such cases, please contact the manufacturer or dealer for assistance.



Power Management

Never clean the battery pack with a high-pressure washer on the battery pack, nor submerge it in water. Do not ride the motorcycle through water above the wheel hub level, as this may cause water ingress, internal short circuit, and permanent battery pack failure.

Never attempt to charge or operate the motorcycle or battery pack if the battery pack has been exposed to water or is faulty, as this may cause fire, combustion, or explosion.

The battery pack is a sealed, waterproof unit containing high-voltage circuits. Damage to the exterior may compromise its waterproof integrity. If the waterproof structure is compromised, contact after-sales service.

Never attempt to disassemble the battery pack, as this could result in damage or serious safety risks.

Cold Weather

The Light Bee 2 electric motorcycle can be used in cold weather without causing permanent damage to the battery pack. Low temperatures, however, reduce the energy the battery pack can deliver, which may result in decreased range and power. At temperatures below 0°C, the Light Bee 2 electric motorcycle's range may temporarily drop by about 30% compared to 25°C.

In extremely cold weather, the Light Bee 2 electric motorcycle may experience a temporary reduction in power and may not achieve its maximum speed.

The battery pack's performance may be permanently reduced if it is stored below -20°C. Storing the battery pack above this temperature and following the long-term storage guidelines (refer to page 10.17 for details) can prevent it from suffering permanent damage during storage in cold weather.

Hot Weather

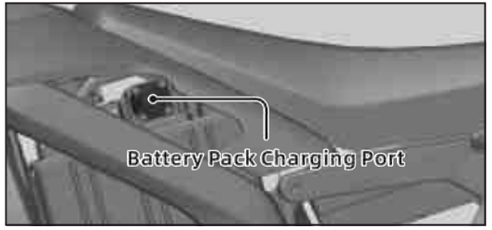
The Light Bee 2 electric motorcycle can operate in hot weather without noticeable performance loss. However, if the battery pack's temperature exceeds 65°C, the Battery Management System (BMS) will disable power output to prevent damage.

When the battery pack's temperature exceeds 50°C, the charger will reduce the charging current to protect the battery, which may extend the charging time. If the temperature exceeds 55°C, charging will be disabled by the Battery Management System.

⚠ Caution

Do not expose the Light Bee 2 electric motorcycle or its battery pack to environments above 45°C or to direct sunlight for prolonged periods, as this may accelerate battery performance degradation.

Power Supply and Charging



• Before charging, ensure that the charger's input voltage matches the grid voltage (AC 85-250V).
• Before charging, ensure that the socket load power of AC power grid can meet the power requirements of the charger.
• When charging, first connect the charger to the charging port on the battery pack, then connect the charger plug to the power grid.
• Once the battery pack is fully charged, the charger will automatically stop charging. Please disconnect the charger from the power source and unplug it promptly. If the charger remains connected to the battery pack for an extended period after charging is complete, the battery pack may enter sleep mode. Riders will need to press the battery pack button or unplug and reconnect the charger to reactivate the battery pack.

⚠ Charging Precautions

• When charging, please put the motorcycle / battery pack in a safe place, beyond the reach of children.
• Before charging, ensure that the charger's input port is free of water or debris.
• Avoid using the battery pack when it has just finished charging. After fully charged, it is recommended to let it stand for 10 minutes or more before use.
• Replace the charging port cap of the battery pack after charging is completed.

⚠ Warning

•Always charge the battery pack in a well-ventilated area away from combustible materials. Avoid charging the Light Bee 2 electric motorcycle outdoors when it is raining.
• Do not cover the charger while it is in use. This charger is intended for indoor use only. Please use it in a dry, well-ventilated environment.
• The battery pack can only be charged with the original charger or dedicated charger specified by manufacturer. The use of unauthorized chargers or accessories may cause damage, failure of the battery pack or even danger.
• Do not charge the battery pack if its temperature is below -5°C, as this may damage the battery pack. Wait until the temperature rises above -5°C before charging. The maximum allowable charging temperature for the battery pack is 55°C. If the battery pack's temperature exceeds this threshold, let it cool below 50°C before charging. During aggressive riding, the battery pack may discharge and heat up quickly, and its temperature may exceed 55°C even at low ambient temperatures.
• The battery pack is only allowed to naturally stand and return to normal temperature. Do not use other methods to rapidly raise or lower its temperature.
• The battery pack may not be able to be charged immediately after high power output or high temperature operation. Charging should begin after the battery pack has cooled for 30 minutes or more. The battery management policy does not allow charging when the internal temperature is too high to protect battery life.

⚠ Warning

⚠ Serious Warning

If you find the following situations, please stop charging and disconnect the power supply immediately, do not use the motorcycle, and contact SURRON after-sales service or send the motorcycle to maintenance point as soon as possible:
• The battery pack enclosure is damaged;
• Presence of abnormal odor during battery charging;
• The battery pack or charger overheated;
• The battery pack does not reach full charge despite extended charging;
• In case of a battery pack fire and, if it is safe to do so, put the battery pack in water to prevent further damage.

Power System

The power system of the Light Bee 2 electric motorcycle mainly consists of a motor, gearbox and a motor controller.

⚠ Warning

•It is strictly prohibited for riders to disassemble the motor without permission, otherwise it may cause the position sensor malfunction or damage the associated seals, which could result in loss of control and damage to the motor.

•The gearbox contains engine oil. Please ensure that the oil level is within the proper range during use.

•Prolonged operation of the gearbox with insufficient oil may cause damage. Unauthorized disassembly by the user is strictly prohibited.

•The controller is a precision high-voltage electronic component with high-current cables. Incorrect wiring or screw torque may result in controller damage or power system burnout. Do not disassemble the controller or its cables without permission, as this may lead to electric shock, burns, or other severe consequences.

•The power system of the Light Bee 2 electric motorcycle must be serviced or replaced only by

⚠ Warning

manufacturer-authorized personnel or professionally trained technicians. Unauthorized disassembly or modification by riders is strictly prohibited. The power system must not be immersed in water, as this may cause damage.

•High-voltage cables carry high current during operation. Without authorization, do not disassemble them to ensure reliable connections.

•The power system operates at Class B voltage, and the power cables are orange. During use, servicing, or maintenance, ensure that the insulation of the cables and motorcycle remains intact.

Power System Management

Servicing and Maintenance

Importance of Servicing and Maintenance

Make sure your motorcycle is well maintained, as this is critical for your safety and the safety of your property, and to ensure optimal performance while minimizing the risk of malfunction.

Maintenance is the responsibility of the motorcycle's owner. In the absence of sufficient skills, experience, or tools, maintenance should be carried out at the nearest authorized dealer. Any damage to components or riding incidents resulting from improper maintenance, disassembly, or installation are the owner's responsibility.

Regular Maintenance

The maintenance intervals in the Light Bee 2 electric motorcycle maintenance schedule are based on normal riding conditions on paved roads. Frequent riding in wet, dusty, or off-road environments may require more frequent maintenance and servicing. Please consult your dealer for advice tailored to your specific riding conditions.

Maintenance Records

Always follow the maintenance schedule (refer to page 10.2 for details) and record all relevant details in the "Maintenance Record" section of this manual (refer to page 13.1 for details).

List of Consumable Components

Inspection Item	Specification	Replacement Details
Off-road Tires	Front: 70/100-19 Rear: 3.0-18	Replace when worn to the limit or damaged Refer to page 10.11
Front & Rear Brake Pads	For Light Bee 2 only	Replace when the pad material has worn down to the bottom of the wear indicator groove. Refer to page 10.9
Brake Discs	For Light Bee 2 only	Replace when thickness is less than 2 mm Refer to page 10.9
Brake Fluid	DOT4	Replace after the specified mileage or time interval Refer to pages 10.2 and 10.8
Chain	520-90 links	Replace after the specified mileage or when wear exceeds limit. Refer to pages 10.2 and 10.12
Front Drive Sprocket	12 T, for Light Bee 2 only	Replace after the specified mileage or when wear exceeds limit. Refer to page 10.2
Rear Driven Sprocket	43 T, for Light Bee 2 only	Replace after the specified mileage or when wear exceeds limit. Refer to page 10.2
Gearbox Oil	5W-30 (160ml)	Replace after the specified mileage Refer to pages 10.2 and 10.6

Periodic Maintenance Schedule

Regular maintenance must be carried out according to the schedule below to keep your electric motorcycle in optimal operating condition. Initial maintenance is crucial and must not be neglected. Where both time and mileage are listed, follow the interval that occurs first.

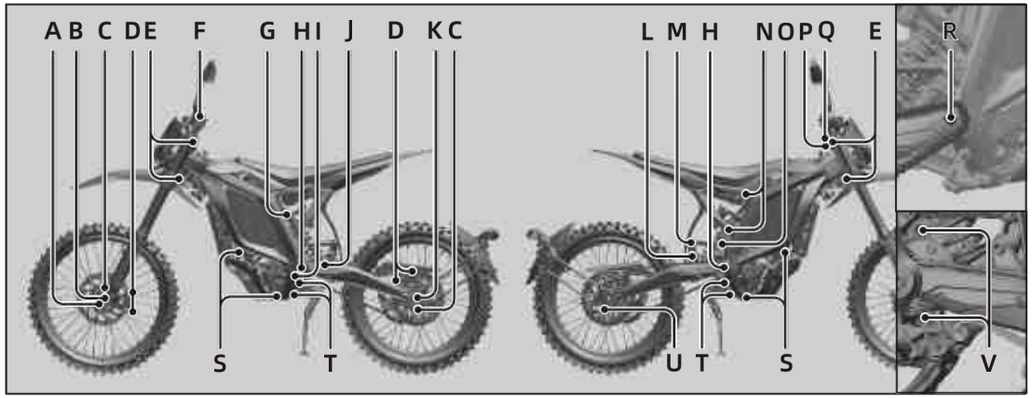
Electric Motorcycle Periodic Maintenance Table

ec tems	1000m/ mont	2000m/ mont	000m/ mont	000m/12 mont	10000m/1 mont	1000m/2 mont
Tire	● 🔧	● 🔧	● 🔧	● 🔧	● 🔧	● 🔧
Weel Soes	●	●	●	●	●	●
rea Pas	● 🔧 🔄	● 🔧 🔄	● 🔧 🔄	● 🔧 🔄	● 🔧 🔄	● 🔧 🔄
rae rolic Stem	● 🔧	● 🔧	● 🔧	● 🔧	● 🔧	● 🔧
Primar elt (Light Bee/ Ultra Bee)	● 🔧	● 🔧 🔄	● 🔧 🔄	● 🔧 🔄	● 🔧 🔄	● 🔧 🔄
Pulle	● 🔧	● 🔧	● 🔧 🔄	● 🔧	● 🔧 🔄	● 🔧 🔄
ain	● 🔧	● 🔧	● 🔧 🔄	● 🔧	● 🔧 🔄	● 🔧
Swing arm Protection loc	● 🔧	● 🔧	● 🔧 🔄	● 🔧	● 🔧 🔄	● 🔧 🔄
Srocets	● 🔧	● 🔧	● 🔧	● 🔧 🔄	● 🔧 🔄	● 🔧 🔄
Socs	● 🔧	● 🔧	● 🔧	● 🔧	● 🔧	● 🔧
earings	●	●	● 🔧 🔄	●	● 🔧 🔄	● 🔧 🔄
igts	●	●	●	●	●	●
Error oe (Turn on)	●	●	●	●	●	●
reaing	●	●	●	●	●	●
ear o (Hyper Bee Only)	● 🔧	● 🔧	● 🔧	● 🔧	● 🔧	● 🔧
atter arger eel	● 🔧	● 🔧	● 🔧	● 🔧	● 🔧	● 🔧
Electrical Wiring/Plugs/ Screwing Terminal/Sensors	●	●	●	●	●	●
Screws Torue	●	●	●	●	●	●
n normal onition	●	●	●	●	●	●

● Check 🔄 Replace 🔧 Maintain

Maintenance

Critical Fastener Torque Specifications



Regularly check the following fasteners on the Light Bee 2 electric motorcycle and tighten them to the specified torque values

Steering Head Adjusting Nut Adjustment Procedure:

1. Place the motorcycle on a support stand so that the front wheel is off the ground;
2. Loosen the steering head nut and front fork mounting bolts on the upper triple clamp;
3. Tighten the steering head adjust nut to 20 N·m, then back it off by half a turn;
4. Tighten the steering head nut and front fork mounting bolts on the upper triple clamp;
5. Check whether the handlebar rotates smoothly. If necessary, repeat the above steps.

	Item	Torque	Specification	Note
A	Front Fork Lower Leg Locking Screw	7~9N·m	Hexagon Socket Head-M5*16	
B	Front Wheel Axle Lock Bolt	40~45N·m	Hexagon Pan Head-M16*1.5*12	
C	Brake Disc Mounting Screw	11~13N·m	Torx Pan Head -M6*13	K-0243
D	Brake Caliper Mounting Bolt	11~13N·m	Torx Socket Hexagon Flange Screw-M6*25	
E	Front Fork Upper Clamp Locking Screw	11~13N·m	Hexagon Socket Head-M6*22	
F	Handlebar Clamp Arch Mounting Screw	12N·m	Torx Socket Hexagon Flange Screw-M6*25	
G	Shock Axle Top	30~35N·m	Torx Socket Hexagon Flange Screw-M8*51	
H	Swingarm Mid. Shaft Step Bolt	190N·m	Step Bolt-M22*1.5*18	K-0243
I	Motor Assembly Left Mounting Bolt	60~65N·m	Hexagon Socket Head-M10*30	K-0243
J	Shock Axle Bottom	30~35N·m	Torx Socket Hexagon Flange Screw-M8*51	
K	Rear Wheel Axle Nut	100N·m	Hexagon Flange Lock Bolt -M16*1.5	
L	Triangular Cantilever Swingarm Mounting Screw	60~65N·m	Hexagon Flange Bolt-M10*1.25*68	
M	Triangular Cantilever Linkage Mounting Screw	30~35N·m	Torx Socket Hexagon Flange Screw-M8*63	
N	Subframe Mounting Screw	25~28N·m	Hexagon Socket Head-M8*20	
O	Linkage Mounting Screw	30~35N·m	Torx Socket Hexagon Flange Screw-M8*40	
P	Steering Head Adjust Nut	20N·m	Round Nut-M25*1*8	
Q	Steering Head Nut	55~65N·m	Hexagon Pan Head Bolt-M16*1*17.5	
R	Front Drive Sprocket Mounting Step Bolt	25~28N·m	Hexagon Pan Head Step Bolt -M8*20	K-0243
S	Frame Support Bracket Mounting Screw	25~28N·m	Hexagon Socket Head-M8*25	
T	Footpeg Assy. Mounting Screw	30~35N·m	Torx Socket Pan Head Screw-M8*25	K-0243
U	Driven Sprocket Mounting Screw	30~35N·m	Torx Socket Pan Head Screw -M8*16	K-0277
V	Right Motor Assembly Mounting Bolt	60~65N·m	Hexagon Socket Head Screw-M10*50	K-0243

Note: The threadlocker specified in the table is Kafuter.
An equivalent threadlocker of the corresponding grade/specification may be used as a substitute.

Battery Pack Maintenance

⚠ Caution

1. The battery pack is a lithium-ion system that does not require routine maintenance but should be charged periodically. If the battery pack will not be used for an extended period, please charge it to 60–80% and check the remaining charge every month. Recharge it if the battery level drops below 30% to maintain battery activity and avoid affecting performance or causing damage.
2. Keep the battery pack away from excessive heat. Do not store it in high-temperature environments or in direct sunlight. If the battery pack will not be used for an extended period, store it in an ambient temperature of 10°C and 30°C.
3. Dispose of the battery pack in accordance with local laws and regulations. Do not discard used or damaged battery packs; instead, take them to a certified recycling facility.

⚠ Warning

Only qualified service technicians should perform maintenance on the battery pack. Unauthorized tampering with internal parts is very dangerous. Do not disassemble or modify the battery pack.

Gearbox

Gearbox Oil Inspection





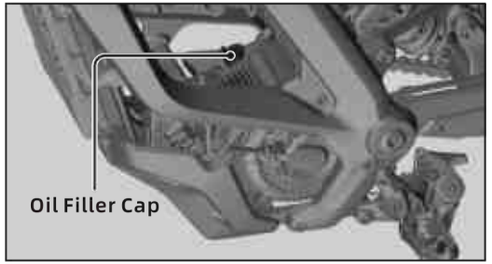
When the Light Bee 2 electric motorcycle is in a cold state, place the motorcycle upright on a level surface. Allow the motorcycle to stand for several minutes, then observe the oil sight glass on the gearbox. The oil level should be between one-third and two-thirds of the sight glass.

Gearbox Oil Replacement





1. Before changing the gearbox oil, power off the motorcycle, remove the battery pack, unscrew the drain bolt to empty the oil, and take off the oil filler cap. Keep the motorcycle upright on a level surface until the used oil drips intermittently. Reinstall and tighten the drain bolt to 20–25 N·m.



2. Add 160 ml of new 5W-30 gearbox oil through the filler port. Let the motorcycle sit for a while, then check the oil level using the sight glass. Once the level is within the normal range, tighten the oil filler cap.

⚠ Caution

Always use oil of API SN/MA2 grade or higher.
Recommended Engine Oil:
Factory-filled with Mobil Super 1000 5W-30 engine oil (API SN grade).

Brake System

This section describes how to maintain the brake system of the Light Bee 2 electric motorcycle, This section describes maintenance of the brake system, including brake pads (front and rear brake pads are identical) and recommends the levels and types of brake fluids for front and rear brake systems.

Bleeding the Brake System

If bleeding is required, contact an authorized dealer.

Brake Fluid Level Check

Before checking the brake fluid level, ensure that the reservoir is kept level.

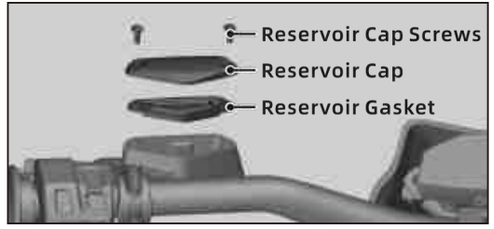
The minimum fluid level is at the halfway point of the sight glass, while the maximum fluid level is at the top edge of the sight glass.

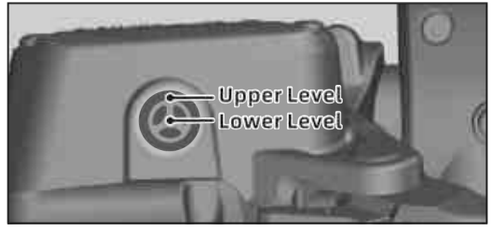
If the fluid level falls below the halfway point of the sight glass, the brake fluid level is below specification. This may indicate brake pad wear or a hydraulic brake system leak. Inspect the brake pads for excessive wear and check the hydraulic brake system for any signs of leakage.

Steps for Adding Brake Fluid:

1. Unscrew the screws on the reservoir cap, remove the reservoir cap and the reservoir gasket.
2. Add new DOT4 brake fluid.
3. Check the cap seal to make sure that there is no wear or damage, and the position is correct.
4. Reinstall and tighten the reservoir cap screws for the reservoir cap (torque: 2N·m).







⚠ Caution

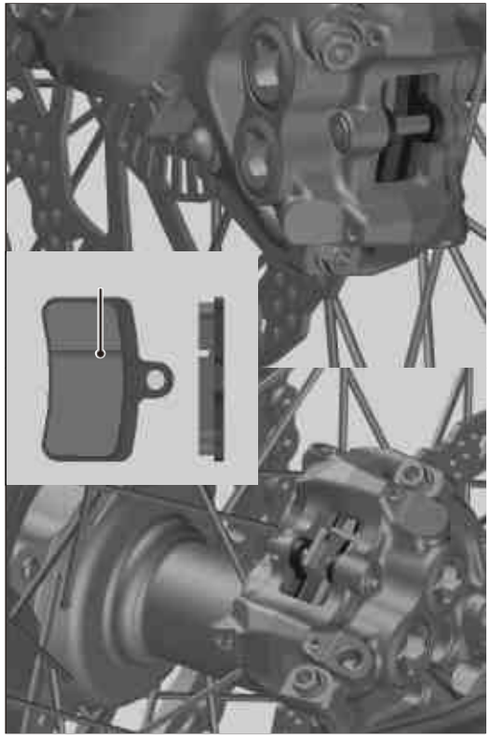
Refill the brake fluid immediately if the fluid level can be observed through the oil sight glass.
Avoid spilling brake fluid on painted surfaces, as it may damage the paint. If brake fluid gets on plastic parts, it may corrode them. Before removing the cap, always place an absorbent cloth under the master cylinder reservoir.

⚠ Warning

Before checking the fluid level, ensure the Light Bee 2 electric motorcycle is upright on level ground, the handlebars are centered, and the reservoir is leveled using a suitable level gauge.

⚠ Warning

If any brake fluid spills during refilling, it must be wiped off immediately to avoid contaminating surrounding parts.



Brake Disc Inspection

Regularly inspect the thickness of the brake disc. The minimum allowable thickness is 2 mm.

Brake Pad Inspection

Brake pads must be inspected at the intervals specified in the maintenance schedule (refer to page 10.2 for details).

Visually inspect the remaining brake pad thickness of the brake pads from the side of the caliper.

If the brake pad has worn down to the bottom of the wear indicator groove, replace the brake pads immediately.

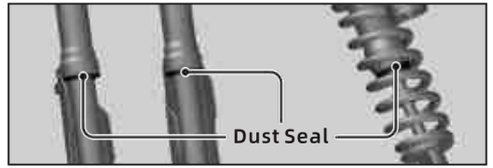
Brake Pad Replacement

It is recommended to inspect and bed in after replacing new brake pads or brake discs to ensure that the brake discs and brake pads adapt and match. Proper bedding-in improves braking performance and reduces brake noise. and reduce or eliminate braking noise.

⚠ Warning

When using a new braking system or new brake pads, the initial braking force may be small. Please try to run in the brake pads and brake discs at low speed to ensure that the brake system can provide normal braking force.

Suspension System



Refer to the maintenance schedule (refer to page 10.2) for maintenance and to pages 7.7 to 7.10 for adjustment.

- It is recommended to clean the surface of the shock absorber immediately after each ride, especially the mud and sand attached to the surface of the main tube. When cleaning with a high-pressure water gun, it is strictly prohibited to spray directly toward the upward-facing dust seals of the front fork and rear shock, as this will flush mud and sand into the seal and cause leakage.
- Avoid using harsh or corrosive solvents, which can damage the dust seals. Clean with a neutral cleaner and a soft cloth.
- It is recommended to apply a layer of suspension lubricant on the surface of the main tube after cleaning to make the surface fully lubricated.

⚠ Warning

Improper operation to the shock absorber may cause damage, explosion and serious personal injury.

- The shock absorber contains high-pressure gas or liquid.
- Do not try to modify or disassemble the shock absorber.
- Do not expose the gas cylinder to impact, high temperatures, or open flames.
- After riding, the shock absorber and the gas cylinder may be in a high temperature state. Do not touch them directly to avoid burns.

Wheels and Tires

Check the wheels and tires for any of the following:

- Deformed or cracked rim;
- Impact damage to the rim;
- Loose or deformed spokes;
- Cuts, cracks, splits or missing sections in the tread or sidewall area;
- Tire bulge;
- Uneven tire thread wear;
- Uneven height of tire mounting line.

If you find any of the conditions above, please replace the wheel or tire immediately.

Tire Pressure

The standard tire pressure is 225 kPa (32 psi).

For off-road riding, it is recommended to lower the tire pressure accordingly when riding in tracks and trails 100 ~ 150 kPa (14.5~22psi).

⚠ Warning

Incorrect tire pressure is a common cause of tire failure. Riding for an extended period with incorrect tire pressure may result in tire damage, thread separation or even loss control of the motorcycle, which can cause serious personal injury.

Before each ride, check the tire pressure and adjust it to an appropriate pressure level. When the tire is cold, use an accurate pressure gauge to check the tire pressure.

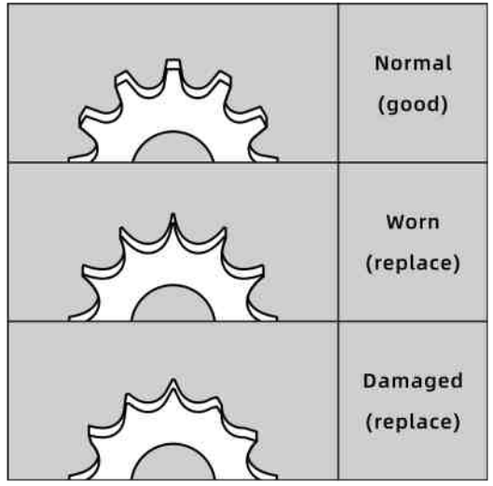
Sprocket and Chain

Please refer to page 10.2 for the inspection and maintenance schedule of the sprockets and chain.

1. Keep the chain and sprockets clean.
2. Check the chain wear, tightness and lubrication.

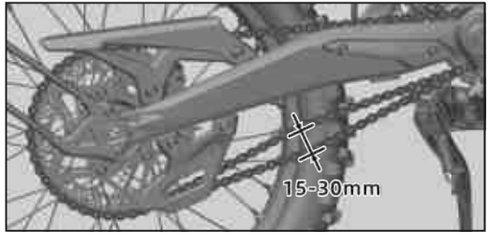
Sprocket Inspection

After powering off the motorcycle, inspect the sprockets for wear or damage as shown in the figure below. Replace them if necessary.



Chain Maintenance Procedure

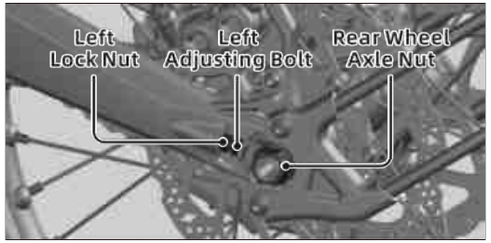
1. After confirming that the motorcycle is switched off, prop up it with a lift stand so that the rear wheel is suspended. Move the chain up and down and check whether the chain slack is within the recommended range: 15-30mm. If not, adjust it (refer to page 10.13 for details).
2. Clean the chain appropriately and apply an appropriate amount of chain lubricant or chain wax.

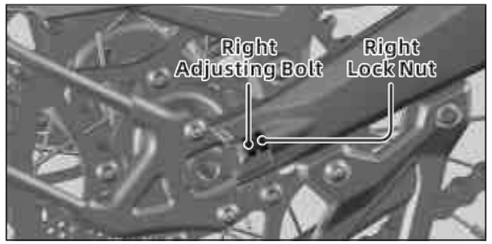


⚠ Caution

1.When the chain swings up and down beyond the recommended range, it will aggravate the wear of swingarm protection rubber. Please adjust it in time.

2. After adjustment, the left and right chain adjusters should be positioned symmetrically.





Chain Adjustment Procedure

1. After confirming the motorcycle is powered off, prop up the it with a lift stand so that the rear wheel is suspended.
2. Unscrew the rear wheel axle nut.
3. Loosen the lock nut of the left and right adjusting bolts.
4. Adjust the left and right adjusting bolts equally until the chain's up-and-down swing falls within the specified range.
5. Tighten the rear axle nut to 100N·m.
6. Tighten the left and right lock nuts to fix the position of the adjusting bolt.
7. Test ride the motorcycle.
8. After the test ride, please recheck whether the chain is adjusted correctly, and re-adjust if necessary.

⚠ Caution

When adjusting the tension of the chain, adjust the adjusting bolts on both sides equally.

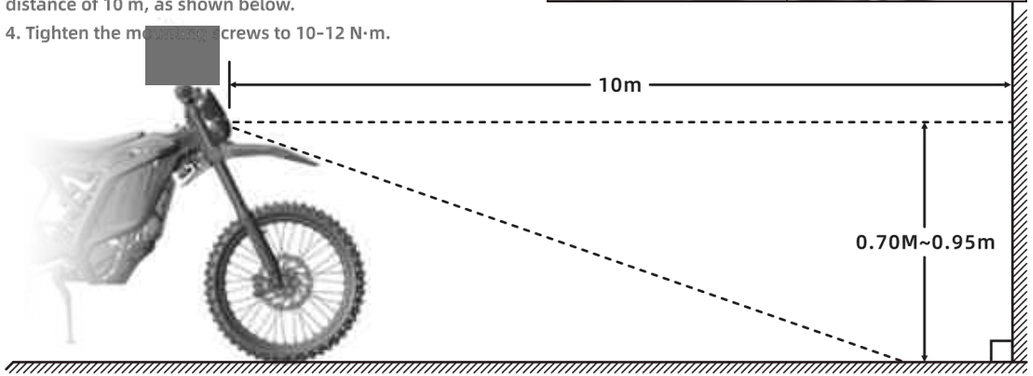
Headlight Adjustment

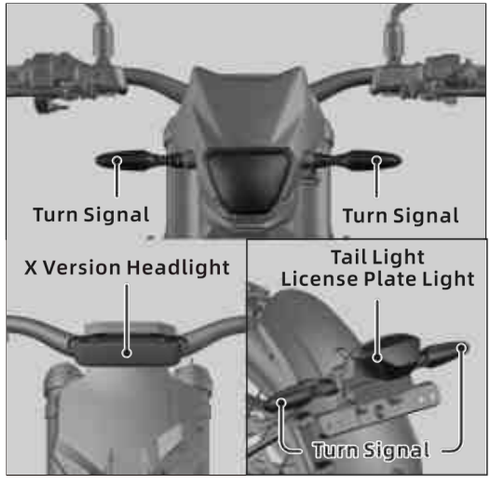
The headlight's angle should be checked regularly. Whenever the motorcycle ride height or suspension settings are changed, the headlight must be readjusted, as changes in the motorcycle's angle affect the headlight's angle. Before adjusting the headlight, ensure that the shock absorbers and tire pressure are correctly set. The headlight beam can be adjusted vertically; an incorrect beam angle may result in the beam pointing too near or too far.

Headlight Angle Adjustment Procedure:

1. When the low beam is turned on, position the motorcycle upright on level ground.
2. Sit on the motorcycle in the normal riding position and check the beam alignment.
3. Loosen the mounting screws on both sides of the headlight and manually adjust the beam so that the low beam cutoff line is 0.7-0.95 m above the ground at a distance of 10 m, as shown below.
4. Tighten the mounting screws to 10-12 N·m.







Light Replacement

When the headlight/turn signal/tail light is damaged, contact an authorized dealer for replacement.

Motorcycle Cleaning

1. Use a sponge or clean soft cloth, pH-neutral detergent and plenty of clean water to gently clean the motorcycle.
2. Be extremely careful when cleaning the instrument display is easily scratched than other parts of the motorcycle.
3. After cleaning, rinse the motorcycle thoroughly with water to remove all detergent residue.
4. Dry the motorcycle with a soft dry towel.
5. After cleaning, please check the motorcycle for any damage, wear, or leaks.

After cleaning the motorcycle, promptly lubricate the chain and other components that require lubrication. Ensure all electrical components are completely dry before operating the vehicle. If riding the Light Bee 2 electric motorcycle after cleaning, apply the brakes several times at a low, safe speed to remove any debris from the brake pads.

Wheel and Tire Cleaning

Do not use acidic wheel cleaners. If you use this type of product to clean stubborn dirt, please clean it in a short time and dry the motorcycle immediately.

⚠ Caution

- Remove the onboard charger and input cable before cleaning.
- Improper cleaning may damage motorcycle components. Do not flush bearings, seals, electrical components, or connectors with high-pressure water gun. To extend the life of the Light Bee 2 electric motorcycle, perform regular cleaning and maintenance and dry it thoroughly immediately after washing.
- Do not use any harsh chemicals on plastic parts. Avoid using strongly corrosive cleaners, solvents or thinners, fuels (gasoline), rust removers or inhibitors, brake fluid, antifreeze, or cloths/sponges that have come into contact with electrolytes.
- We recommend exercising caution when cleaning the Light Bee 2 electric motorcycle with a high-pressure washer gun to avoid damaging its components.

⚠ Warning

- Be sure to test the brakes after washing the motorcycle and before riding.
- Use clean water only when cleaning tires. Any tire dressing or tire shine products may reduce the friction between the tire and the ground, and even lead to premature aging of the tire.

Long-term Storage

For motorcycles that will not be used for a long time (more than 30 days), it is recommended to discharge the 60-80% State of Charge (SOC), and disconnect the discharge plug between the Light Bee 2 electric motorcycle and the battery pack.

• The battery pack also discharges slowly even when stored. Check the battery level at least once a month. Before using the Light Bee 2 electric motorcycle again, fully charge the battery pack to ensure it is restored to its optimal condition.

• In order to extend the service life of the power system, the Light Bee 2 electric motorcycle should be stored in a cool and ventilated place. Storing the Light Bee 2 electric motorcycle in a hot or humid place will shorten the life span of the battery pack and electrical system. For more information about the battery pack and electrical system, please refer to page 8.1.

⚠ Caution

Do not store the Light Bee 2 electric motorcycle with the battery level lower than 30%. Keeping the battery pack below 30% for an extended period may shorten its lifespan or even cause damage. Battery pack damage caused by over-discharge or extended periods at extremely low battery level is not covered by the warranty.

Genuine Parts and Accessories

Light Bee 2 electric motorcycles require the use of genuine SURRON parts and accessories. You can obtain original spare parts for maintenance of your Light Bee 2 electric motorcycle through your dealer.

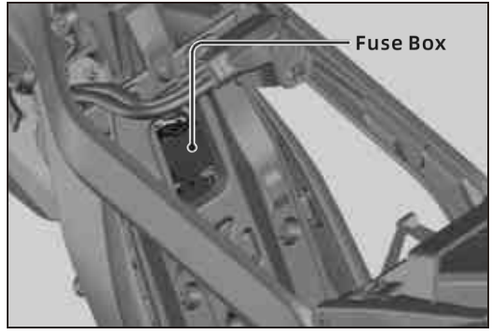
Maintenance

Fuse

The motorcycle is equipped with an over-current protection device in the electrical system. The fuse is a single-use protection device, which will blow to protect the circuit when it is overloaded. Always replace a blown fuse with one of the same specification and model.

⚠ Caution

If the fuse is repeatedly blown, please contact the dealer to check the electrical system.



The fuse box is located on the front panel of the battery pack.

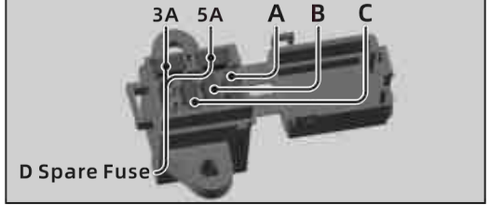
The fuse is protected by a cover, which must be opened before accessing the fuse. Press down firmly on the latch and open the cover.

How to replace the fuse:

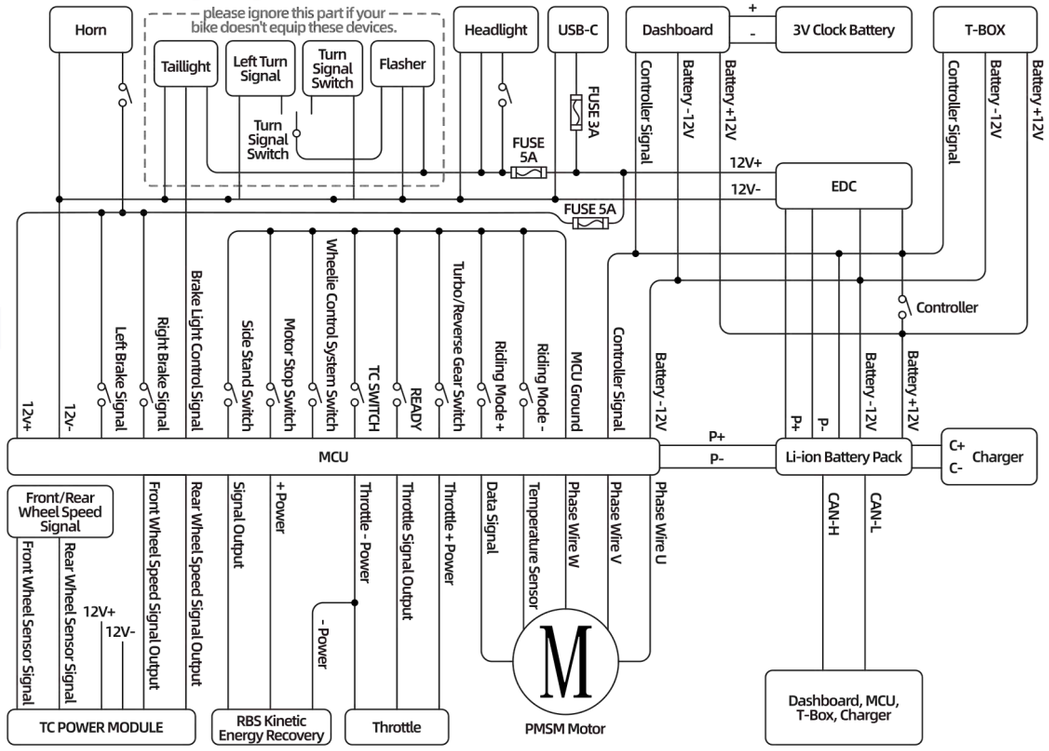
1. Hold the fuse box cover and pull it down to open.
2. Replace the fuse only with one of the same rating and type.

Functions of each 12V fuse are listed below:

No.	Rating	Purpose
A	5A	Signal system
B	5A	Light system
C	3A	USB-C
D	3A/5A	Spare fuse



Electrical Wiring Diagram



Light Bee 2 Electric Motorcycle Troubleshooting

All Light Bee 2 electric motorcycles are carefully inspected before delivery. Even the Light Bee 2 electric motorcycle is carefully inspected, some technical problems might occur occasionally. The following information provides guidelines to help you identify problems and do the basic troubleshooting and maintenance. If you are unable to solve the problem by yourself, please contact your authorized SURRON dealer. If there is no dealer in your area, please reach out to SURRON after-sales service team.

Safety Interlock

When the Battery Management System detects a serious internal fault with the battery pack in the Light Bee 2 electric motorcycle, it will take one or both of the following protective measures to prevent damage to the battery pack:

- Disabling Usage: If the battery pack is completely discharged or the Battery Management System detects a serious internal fault, the motorcycle will be disabled until the issue is resolved.
- Charging Disabled: If the Battery Management System detects certain serious internal faults, charging will be disabled even if the battery back is connected to the charger and AC power is on, until the issue is resolved.

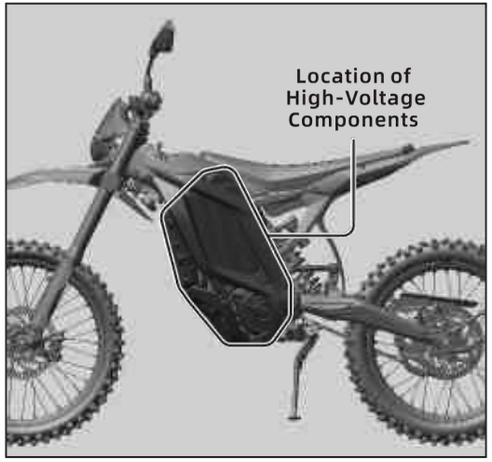
High-Voltage Safety Precautions

The Light Bee 2 electric motorcycle contains high-voltage components. Proper precautions must be taken during operation, as these high-voltage components can cause burns, electric shock, or serious personal injury. For your safety, always follow the precautions indicated on the labels attached to the motorcycle's components. Do not touch, attempt to remove, or replace any high-voltage components, cables (identified by orange insulation), or connectors. In the event of an accident, do not touch any high-voltage terminals or components connected to the cables.

In the event of a fire, ensure your own safety first and use a Class D fire extinguisher to put out the flames. After the fire is extinguished, cool the motorcycle with plenty of water or a water-based fire extinguisher.

⚠ Warning

The Light Bee 2 electric motorcycle operates with high-voltage electrical system. After use, the power system may stay very hot. Exercise caution around high voltage and high temperatures, and always obey all warning labels on the motorcycle.



⚠ Serious Warning

The high-voltage electrical system of the Light Bee 2 electric motorcycle must not be serviced by riders. Disassembling or replacing high-voltage components, cables, or connectors may result in serious burns, electric shock, or even death. High-voltage cables are orange and can be easily identified.

Troubleshooting

System Warning Information



When a fault is detected, the system warning indicator above the dashboard will light on, and a popup will show the relevant fault message. You can also access the Motorcycle Information page to view detailed fault information. Refer to the table on (pages 11.4 to 11.13) for possible causes and recommended solutions.

⚠ Caution

1. When a fault occurs, the system warning indicator will stay on, and a popup will show the fault name.
2. If the system warning indicator or popup warning stays on, the system may be malfunctioning. Stop the motorcycle safely and contact an authorized service center as soon as possible.
3. While the motorcycle is being serviced for a fault, any damage resulting from continued use or improper operation is the user's responsibility. SURRON is responsible only for defects in materials or workmanship.

Troubleshooting

Fault List

Fault Description	Troubleshooting Solution
Transportation Mode	Pair the motorcycle with the SURRON App
Lv2 Battery over discharge	Limit the motorcycle's power usage and check if the power system is jammed.
Lv2 REGEN overcurrent	Reduce regenerative braking level.
Lv2 Battery discharge MOS over temp	Stop the motorcycle and contact the manufacturer or dealer
Lv2 Battery charge MOS over temp	Stop charging and contact the manufacturer or dealer
Self-diagnostic over temp	Turn off the key switch and restart the motorcycle
Lv2 Battery cell temp imbalance	Stop the motorcycle and contact the manufacturer or dealer
Lv2 Motorcycle insulation protection	Stop the motorcycle and contact the manufacturer or dealer
Battery cell volume imbalance	Contact the manufacturer or dealer
Lv3 Battery cell low voltage	Charge the battery
Lv3 Discharging over current	Stop the motorcycle and contact the manufacturer or dealer

Fault Description	Troubleshooting Solution
Lv3 Battery cell over temp	Stop the motorcycle and wait for the battery temperature to drop before use
Lv3 Battery cell low temp	Stop the motorcycle and wait for the battery temperature to rise before use
Battery sampling chip 1 error	Contact the manufacturer or dealer
Battery sampling chip 2 error	Contact the manufacturer or dealer
Battery current sampling sensor error	Contact the manufacturer or dealer
Battery voltage sampling sensor error	Contact the manufacturer or dealer
Battery temp sensor error	Contact the manufacturer or dealer
Self-diagnostic temp sensor error	Contact the manufacturer or dealer
Battery MOS temp sensor error	Contact the manufacturer or dealer
Battery discharge MOS error	Contact the manufacturer or dealer
Battery charge MOS error	Contact the manufacturer or dealer

Fault Description	Troubleshooting Solution
Lv3 Battery discharge MOS over temp	Stop the motorcycle and wait for the battery temperature to return to normal before use
Lv3 Self-diagnostic over temp	Stop the motorcycle and wait for the battery temperature to return to normal before use
Battery current sampling sensor over temp	Stop the motorcycle and wait for the battery temperature to return to normal before use
Battery short circuit protection	Stop the motorcycle, turn off the main power, disconnect the battery from the motorcycle, and contact the manufacturer or dealer.
Lv2 Battery discharge cable over temp	Stop the motorcycle and wait for the battery temperature to return to normal before use
Lv3 Battery discharge plug high temp	Stop the motorcycle and wait for the battery temperature to return to normal before use
Self-diagnostic discharge fail	Contact the manufacturer or dealer
Battery discharge plug temp sensor error	Contact the manufacturer or dealer
Charging Hardware_Err	Stop charging and contact the manufacturer or dealer
Charging OTP (Over Temperature Protection)	Stop charging and contact the manufacturer or dealer
Charging SW OTP (Software Over Temperature Protection)	Stop charging and contact the manufacturer or dealer

Fault Description	Troubleshooting Solution
Charging HW OTP (Hardware Over Temperature Protection)	Stop charging and contact the manufacturer or dealer
Charging SW OVP (Software Over Voltage Protection)	Stop charging and contact the manufacturer or dealer
Charging HW OVP (Hardware Over Voltage Protection)	Stop charging and contact the manufacturer or dealer
Charging OCP (Over Current Protection)	Stop charging and contact the manufacturer or dealer
Charging SCP (Short Circuit Protection)	Stop charging and contact the manufacturer or dealer
Charging Protect Relay	Stop charging and contact the manufacturer or dealer
Charging Bat Reverse	Stop charging and contact the manufacturer or dealer
Charging UVP (Under Voltage Protection)	Stop charging and contact the manufacturer or dealer
Charging Lv3 Battery cell over temp	Stop charging and contact the manufacturer or dealer
Charging Lv3 Battery cell low temp	Stop charging and contact the manufacturer or dealer
Charging Lv2 Battery cell volume imbalance	Stop charging and contact the manufacturer or dealer

Fault Description	Troubleshooting Solution
Charging Lv2 Battery cell temp imbalance	Stop charging and contact the manufacturer or dealer
Charging Lv2 Battery cell over temp	Stop charging and contact the manufacturer or dealer
MCU electron tube error	Contact the manufacturer or dealer
MCU over current	Limit the motorcycle's power usage
Motor locked rotor error	Check if the motor is jammed
MCU sampling error	Contact the manufacturer or dealer
Lv2 MCU over temp	Stop the motorcycle and wait for the controller temperature to drop before use
Lv2 Motor over temp	Stop the motorcycle and wait for the motor temperature to drop before use
Main power cable instant Low voltage	Check the controller's power input cable
Lv3 Main power cable Low voltage	Charge the battery
Main power cable over voltage protection	Deactivate the kinetic energy recovery function

Fault Description	Troubleshooting Solution
Battery unexpected SoC/temperature protection	Stop the motorcycle and wait for the battery temperature to return to normal before use
Battery temp over/low protection	Stop the motorcycle and wait for the battery temperature to return to normal before use
Throttle signal protection	Check if the throttle is short-circuited or if it returns to the idle position
Throttle grounded protection	Check if the throttle is short-circuited, disconnected, or damaged
Tilt protection	Restart and reset the motorcycle
Motor temp sensor error	Contact the manufacturer or dealer
Wheel Hub speed sensor error	Check if the front and rear wheel speed sensors are disconnected
Main power cable instant High voltage	Deactivate the kinetic energy recovery function
MCU firmware malfunction	Restart and reset the motorcycle
Battery cell high voltage difference	Contact the manufacturer or dealer
Battery discharging MOS over temp	Stop the motorcycle and wait for the battery temperature to return to normal before use

Fault Description	Troubleshooting Solution
Battery cell low voltage	Charge the battery or contact the manufacturer or dealer
MCU Energy Regeneration protection	Restart and reset the motorcycle
Battery temp imbalance	Contact the manufacturer or dealer
Battery insulation protection	Contact the manufacturer or dealer
RBS Trigger signal protection	Check if the left combination switch is short-circuited or if the lever returns to the idle position
RBS Trigger ground protection	Check if the left combination switch is short-circuited, open, or damaged.
Motor position sensor error	Contact the manufacturer or dealer
POWER LIMITED	Limit the motorcycle's power usage; check the battery voltage and temperature for abnormalities.
Battery discharge cable over temp	Stop the motorcycle and wait for the battery temperature to return to normal before use
IMU error	Restart the key switch or contact the manufacturer or dealer.
Motorcycle status did not meet SWC active requirement	Check the battery level and temperature, or restart the key switch.

Fault Description	Troubleshooting Solution
Motorcycle status did not meet SWC switching requirements	Check the battery level and temperature, or restart the key switch.
SWC rear wheel reverse rotation protection	Automatically resumes during forward motion.
Power output reduced due to battery not match	Check the battery's wiring harness or contact the manufacturer or dealer.
Dashboard&BMS communication error	Check the wiring harness of display and battery, or contact the manufacturer or an authorized dealer.
Dashboard&MCU communication error	Check the wiring harness of display and controller, or contact the manufacturer or an authorized dealer.
BMS&MCU communication error	Check the wiring harness of battery and controller, or contact the manufacturer or an authorized dealer.
Key signal lost	Check the wiring harness of key switch, or contact the manufacturer or an authorized dealer.

Caution: The above content may be updated or supplemented. Please refer to the manufacturer's or dealer's website for the latest version.

Troubleshooting

Common Troubleshooting

Symptom	Possible Cause	Troubleshooting Solution
Motorcycle fails to power on	Battery pack connector not fully seated	Check the battery pack connector
	Battery pack low voltage protection activated	Charge the battery pack
	Battery pack in low/high temperature protection	Wait until the battery pack temperature returns to normal
	Main harness fuse blown	Check wiring and replace the fuse
	Key switch connector poorly contacted	Firmly plug the connector or replace the key switch
	DC converter damaged	Replace the converter
	Battery pack malfunctioning	Repair or replace the battery pack at an authorized after-sales service center
Power is on but the motor does not operate	Side stand switch protection activated	Fold up the side stand
	Brake cut-off switch protection activated	Check the brake switch
	Tilt switch not reset after Tilt	Lift the motorcycle and switch the key off and on to reset
	Throttle not returned to idle position after startup	Adjust the throttle free play
	Battery pack low voltage protection	Charge the battery pack
	Motor temperature too high protection	Wait for the motor to cool before use
	Controller over-temperature protection	Wait for the controller to cool before use
	Side stand switch damaged	Disconnect the switch connector or replace the side stand switch
	Brake cut-off switch damaged	Unplug the brake switch connector or replace the brake switch
	Tilt sensor damaged	Unplug the Tilt sensor connector or replace the Tilt sensor
	Throttle poorly contacted or damaged	Replace the throttle
	Controller connector poorly contacted	Unplug and plug the controller signal connector
	Motor encoder connector poorly contacted	Unplug and plug the motor encoder connector
	Controller malfunctioning	Repair or replace the controller at an authorized after-sales service center
	Motor encoder malfunctioning	Repair or replace the motor at an authorized after-sales service center

Symptom	Possible Cause	Troubleshooting Solution
Power is on but battery level is not displayed	Battery indicator connector loose	Repair or replace the battery pack at an authorized after-sales service center
	Battery indicator damaged	Repair or replace the battery pack at an authorized after-sales service center
Charging does not function	Battery pack temperature too low or too high	Wait until the battery pack temperature returns to normal before charging
	Charger connector poorly contacted	Unplug and plug the charging connector
	Charger malfunctioning	Replace the charger
	Battery pack malfunctioning	Repair or replace the battery pack at an authorized after-sales service center
Ride mode not working or power output reduced	Battery level too low	Charge the battery pack
	Battery pack temperature too low or too high	Wait until the temperature returns to normal before use
	Motor or controller temperature too high	Wait for them to cool down before use
	Riding Mode switch damaged	Replace the combination switch
No output from USB port	USB connector loose	Unplug and plug the USB connector
	USB converter damaged	Replace the USB converter

Caution: The above content may be updated or supplemented. Please refer to the manufacturer's or dealer's website for the latest version.

Warranty Information

Surron Electric Motorcycle

Conditions of Warranty

Surron hereby warrants that a new Surron electric motorcycle purchased from an authorised Surron dealer will be free from defects in materials and workmanship for the period of time stated herein, subject to certain limitations stated herein. This warranty applies only if the electric motorcycle has been properly set up and serviced for pre-delivery by an authorised Surron dealer. The warranty applies only if the motorcycle has been operated and maintained in accordance with the owner's manual or other Surron literature that was delivered with the electric motorcycle.

This warranty is void if the DEALER PRE-DELIVERY INSPECTION has not been completed in full and entered into the Surron distributor website within seven days of purchase by the original selling dealer.

Period of Warranty for Surron Motorcycles

For motorcycles used in recreation and farming, but not used in competition:

Duration: 12 months from the date of purchase or 10,000 kilometres, whichever comes first.

12.1

Limitations: This warranty is non-transferable and applies to the original purchaser only.

12.1

Any Surron motorcycle utilised commercially in connection with generating income and/or commercially licensed or tagged (e.g. rental, demonstration, wholesale, etc.) during the warranty period will be covered for 30 days from the date of purchase.
Demonstration motorcycles are Surron electric motorcycles that have been ridden or used by Surron, or a Surron authorised dealership's customers, members of staff, or press media, but have never been registered within the state, province, or country.

The warranty period becomes effective on the date of purchase by the original purchaser and remains in effect only as stated above.

Parts Covered by the Warranty

Surron warrants to the customer that the motorcycle is defect-free both in terms of material and workmanship from the factory. Due to battery chemistry, there is a normal, expected reduction in the range and capacity that battery packs yield over time and usage.

Depending on use and storage conditions, battery packs will degrade over the duration of this warranty period. Pursuant to this warranty term, Surron will only repair or replace a battery pack that exhibits a nominal storage capacity reduction of greater than 20% of the published nominal capacity, as measured by Surron or an authorised Surron dealer/workshop.

Any part found to be defective during the motorcycle's stated warranty period under proper use and normal operating conditions, subject to the limitations of this warranty policy, will be repaired or replaced free of charge. "Normal operating conditions" require routine care and maintenance of the Surron electric motorcycle and battery pack as described in the owner's manual and maintenance handbook.

Warranty Labour Coverage

Labour to replace parts that are covered by the Surron warranty and found to be defective in material or workmanship is free of charge for the original purchaser. Warranty repairs must be performed only with the authorisation of Surron.

The cost of parts and labour involved in routine care and maintenance, as well as the replacement of parts due to normal wear and tear, use, or deterioration, is not covered. This includes, but is not limited to, items such as tyres, brake pads and discs, drive belts, drive chains, fork seals, bearings, grips, footpegs, and seats.

12.2

12.2

General Exclusions from Warranty

This warranty does not cover any failures resulting from or caused by:

1. Lack of proper maintenance or maintenance contrary to the requirements described in the owner's manual and the New Zealand maintenance handbook.
2. Parts, components, or battery packs damaged by use or operation under abnormal circumstances, or damage due to accident, collision, abuse, neglect, or extreme use, such as competitive racing.
3. Modifications, alterations, or installation of non-genuine Surron parts or non-Surron-authorised power system components, including the motor, gearbox, sensor, electrical wiring, converter, charger, display, battery, and MCU.

4. Normal wear components, including, but not limited to, the following: tyres, rims, brake components, spokes, drive chain, drive belt, handlebar grips, all bearings, all seals, all transmission gears, suspension valving/seals, all sprockets, footpegs, and seat.
5. Damage, malfunctions, or performance problems caused by the continued operation of the motorcycle after an error code or other warning indicator signals a mechanical or operational problem.
6. Cosmetic concerns that arise as a result of environmental conditions, owner abuse, misuse (such as, but not limited to, using unsuitable cleaning liquids), lack of routine care and maintenance, or improper use.
7. Damage to or malfunction of components and electrical systems due to the owner installing non-genuine Surron parts or replacement parts not approved by Surron.
8. Damage to paint and coatings, or corrosion of metal parts due to external influences such as stone chips or salt.
9. Fading of painted or metal-coated surfaces.
10. Damage, malfunctions, or performance problems caused by fire, collision, accident, or improper storage.
11. Tyres installed on the Surron electric motorcycle (the original equipment tyres are warranted separately by the tyre manufacturer).

In addition, the Surron warranty applies solely to New Zealand end-user customers who purchased from an authorised dealer. It is not applicable to electric motorcycles or accessories not imported or distributed by Surron, or not authorised by Surron.

Modifications

12.3

The motorcycle may only be equipped with parts that have been purchased from and installed by Surron New Zealand or a Surron authorised dealer. This includes non-genuine parts, but excludes any modifications to the power system, such as the motor, gearbox, sensor, electrical wiring, converter, charger, display, battery, and MCU. The supplier of non-genuine parts provides the installation guide and the corresponding warranty. The Surron warranty does not cover any damage that results from the installation of non-genuine parts.

12.3

End-user customers are responsible for keeping records of all modifications.

The installer is responsible for the warranty and associated damage repair resulting from non-genuine parts, which are not covered by the New Zealand nationwide warranty.

Owner Responsibilities

1. The owner is responsible for reading and understanding the owner's manual, the New Zealand periodic maintenance handbook, these warranty terms, and all product warnings before operating their Surron electric motorcycle. The owner is also responsible for maintaining the Surron electric motorcycle in accordance with the schedule printed in the New Zealand periodic maintenance handbook.
2. The owner is responsible for all maintenance costs, including scheduled service intervals. Service work performed by the owner will void the warranty.
3. The owner must perform all recommended and necessary routine care and maintenance, and engage in the proper use of the Surron electric motorcycle as detailed in the owner's manual and the New Zealand periodic maintenance handbook. Failures caused directly by a lack of maintenance or improper maintenance will void the warranty.
4. If warranty repairs are required, they must be performed by an authorised Surron dealership with the correct qualifications. The owner may be asked to provide documentation of proper maintenance, such as maintenance records displaying the date of service and work performed by an authorised dealer, or copies of repair orders and receipts.
5. The original registered owner, as documented on the Surron motorcycle warranty registration form, is responsible for passing on the owner's manual, the New Zealand periodic maintenance handbook, all safety warnings, instructions, and the Limited Warranty if the unit is sold, loaned, or otherwise transferred to another person.
6. If the vehicle owner needs to replace a faulty part, they must contact an authorised Surron dealer or deliver the faulty part to an authorised Surron dealer within ten (10) days of the malfunction occurring. The authorised dealer will then carry out warranty or after-sales maintenance for the faulty part.

12.4

12.4

7. The owner is responsible for ensuring all recommended and necessary routine care and maintenance are carried out, and for using the Surron motorcycle and battery pack as detailed in the owner's manual and the New Zealand periodic maintenance handbook. This includes obtaining any firmware updates available at each service interval or on a timely basis following notification that a new update is available, which must be completed by an authorised Surron dealer.
8. The owner must learn and obey all national, regional, and local laws governing the operation of motorcycles generally and electric motorcycles specifically. When operating a Surron electric motorcycle, the rider must wear proper safety equipment and clothing at all times, including, but not limited to, a helmet, eye protection, and appropriate boots.
9. Surron does not authorise any company or individual to create liability or warranty obligations on its behalf. Surron, at its sole discretion, will make the final decision regarding any component submitted for warranty evaluation. All parts and components replaced under this warranty and returned to Surron shall become the property of Surron.

Limitations on Warranty

The limited warranty described in the Warranty information pages is the only warranty which applies to your motorcycle at New Zealand. Surron makes no other warranty or guarantee of any kind expressed or implied. No implied warranties of merchantability or fitness for a particular purpose or any purpose, is applicable to any product sold by Surron buyer and all other parties who contract with Surron, hereby specifically and knowledgeably waive any and all warranties, expressed or implied. This limited warranty does not cover any incidental or consequential damages, including loss of value of the motorcycle, Lost profits or earnings, out-of-pocket expenses for substitute transportation etc., expenses associated with returning the covered product back to its owner, mechanic's travel time or communication charges, loss or damage to personal property, loss or time, or inconvenience. Surron has the right to continuously upgrade the design and electric system or improve not limited to the motorcycle, power system or battery pack. Some countries do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. also excluded from this warranty are any incidental or consequential damages including loss of use. This warranty gives you specific legal rights, and you may also have other rights, which vary, from situation by situation. The contents stated herein are subject to change without notice.

Disclaimer

12.5

Surron is not responsible for any losses arising from an owner's intentional misuse, gross negligence, unauthorised modifications (such as abnormal system logs, mismatched hardware identification codes, or abnormal performance parameters), use of uncertified accessories, or operations exceeding design specifications. In cases of damage caused by manufacturing or design defects, Surron will offer appropriate remedies, including repair, replacement, or refund, depending on the situation. For claims related to personal injury, property damage, or emotional distress, Surron shall be exempt from liability to the maximum extent allowed by law.

12.5

For products distributed via specialised sales channels, such as equipment designed for competitive use, Surron's liability is confined exclusively to manufacturing defects. The owner acknowledges and accepts that participation in competitions, use in racing environments, professional modifications, or any other conditions surpassing typical consumer use, as well as their resulting outcomes, are entirely the owner's responsibility.

Unauthorised reverse engineering, decompilation, or alteration of the electrical control system without prior written approval from Surron is considered a contract violation. In cases of minor infractions, such as non-commercial individual modifications, Surron retains the authority to demand an immediate halt to the activity and issue a formal warning. For major infractions, such as commercial-scale reproduction or sales, the company may seek legal injunctions and claim damages. These damages will be calculated as either the official retail price of the affected product model per instance of violation or the actual financial loss suffered by Surron, whichever amount is greater. The official retail price at the time of the infraction will serve as the basis for this calculation. Furthermore, Surron reserves the right to confirm modification activities on the owner's device through remote diagnostics or direct inspections, requiring full collaboration from the owner.

By using this product, the owner consents to the installation of a GPS tracking system for verifying its location and grants Surron permission to periodically check its usage region. In cases of unauthorised use, the owner will be required to pay a penalty amounting to three times the product's retail price. Additionally, Surron reserves the right to remotely disable the product's functionality immediately. The company accepts no responsibility for any usage in jurisdictions where additional legal obligations or liabilities may arise.

How to Obtain Warranty Service

To receive any type of warranty service, take your Surron motorcycle and warranty registration proof to any authorised Surron dealer during normal service hours. Local dealers can be found at: sur-ron.co.nz/pages/local-dealers-nz.

If you believe that your vehicle has a defect that could cause a collision, injury, or death, you should immediately inform Surron or your authorised Surron dealer. If you fail to meet or do not comply with the conditions and scope of the warranty terms, we can still provide repair services upon request at a charge.

12.6

12.6

If you are unable to obtain satisfactory warranty service from a Surron dealer, or if you are dissatisfied with a warranty decision, please send an email to: **sales@sur-ron.co.nz.**

We will re uire t e ollowin in or ation to assist you

- Your details: Name, email address, and phone number
- Nature of the problem
- Invoice details: Full itemised invoice including product model and date of purchase
- Dealer and vehicle details: Selling dealer name and Vehicle Identification Number (VIN)

Annex

1000km **3 Month**

Odometer reading		Performed by		Date	

MAINTENANCE RECORD

REMARKS

2000km **6 Month**

Odometer reading		Performed by		Date	

MAINTENANCE RECORD

REMARKS

4000km **9 Month**

Odometer reading		Performed by		Date	

MAINTENANCE RECORD

REMARKS

6000km **12 Month**

Odometer reading		Performed by		Date	

MAINTENANCE RECORD

REMARKS

10000km **18 Month**

Odometer reading		Performed by		Date	

MAINTENANCE RECORD

REMARKS

14000km **24 Month**

Odometer reading		Performed by		Date	

MAINTENANCE RECORD

REMARKS

Annex

Light Bee 2 Electric Motorcycle After-Sales Service Record Form

No.	Odometer Reading	After-Sales Service Item	Performed by	Performed on	Remarks
1					
2					
3					
4					
5					

Light Bee 2 Electric Motorcycle After-Sales Service Record Form

No.	Odometer Reading	After-Sales Service Item	Performed by	Performed on	Remarks
6					
7					
8					
9					
10					

Annex

Motorcycle Model Specifications Comparison		
Configuration	Light Bee 2 X	Light Bee 2 L3
Model	QL8000DY-A	QL8000DY-B
Dimensions	1900×790×1080 mm	1940×790×1080 mm
Minimum Ground Clearance	280 mm	280 mm
Seat Height	830 mm	830 mm
Weight	65 kg	68 kg
Designed Load Capacity	100 kg	100 kg
Tire Specifications	Front: 70/100-19 off-road tire; Rear: 3.00-18 off-road tire	
Auxiliary Features	Kinetic Energy Recovery, Auto Hold, RBS, Wheelie Control, Cruise Control, TC, PIN Code Start, Phone Key	
Wheelbase	1280 mm	
Front Fork Travel	215 mm	
Rear Shock / Wheel Travel	85 mm/220 mm	
Power System	High-Speed Permanent Magnet Synchronous Machine + Vector Sine Wave Controller	
Rated Power	8 kW	
Peak Power	24 kW (Turbo mode)	
Maximum Drive-Wheel Torque	410 N·m	
Top Speed	90 km/h	
Range	108km (@40km/h)	
Battery Pack Type	High-rate ternary lithium battery, 78.54 V / 45 Ah	
Riding Modes	S (Sport) / Turbo / M (Custom) / D (Daily) / E (Eco) / L (Crawl) / R (Reverse)	
Charging Time	4 h	
Frame Type	Full Aluminum Alloy Forged Frame	