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LIGHT BEE X
ELECTRIC MOTORCYCLES
OWNER'S MANUAL

Manufacturer: CHONGQING QIULONG TECHNOLOGY CO., LTD
Address: CHONGQING QIULONG TECHNOLOGY CO., LTD
No.259, Shimian Village, Qiezixi Street, Dadukou District, Chongqing City, China

Post Code: 400082 Tel:+86-23-68905603
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Please read this manual carefully before riding, and do not use electric motorcycles until you understand their characteristics.
Please keep this manual properly. This manual contains the most current product information available at the time of printing, your motorcycle may look and setup differently from the information supplied in this owner's manual.For the latest function introduction and safety guidelines, please visit our website www.sur-ron.com to view the electronic manual or go to the official online forum to communicate with other users.

This manual covers the following motorcycle

Light Bee: X-25Version

Offroad Tire (Front 70/100-19 Rear 3.00-18)

Riding Tips for Maximum Range

Range varies in Light Bee electric motorcycles similarly to how it varies in gas motorcycles. The range variety of Light Bee electric motorcycles comes from the riding conditions after each full charge. In addition to riding habits, energy consumption is also affected by environmental conditions (such as extreme cold or hot weather, riding on steep hill or soft sand etc.). To achieve the maximum range on a single full charge, please pay attention to reduce the speed advisably and to maintain a constant speed.

To reach the ideal range, please follow the tips below:

1.Avoid frequent and abrupt acceleration and braking.

2.Under safe conditions, riding range can be extended using regenerative braking.

3.Maintain a correct tire pressure (Please refer to Standard Tire Pressure Table at page 10.11).

4.Remove any unnecessary load.

5.The maximum range in winter and summer could be slightly different.

In conclusion, you can estimate the range according to the above factors and your riding habits.
Note: The range will be varying significantly according to the various road conditions during off-road riding.

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Important Notice

Congratulations on your decision to purchase a Surron electric motorcycle, we welcome you to the community of Surron motorcycle riders.

Please read this manual carefully before riding, and do not use electric motorcycles until you understand their characteristics. This manual is designed to provide you with a better understanding of the operation, inspection and basic maintenance of Light Bee electric motorcycle.

You can also find this manual on our official website, welcome to go to http://www.sur-ron.com to download. Updated information will be timely released online, 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.

If you have any questions regarding the operation or maintenance of your motorcycle, please contact the authorized dealer or the after-sales service department of Surron at:

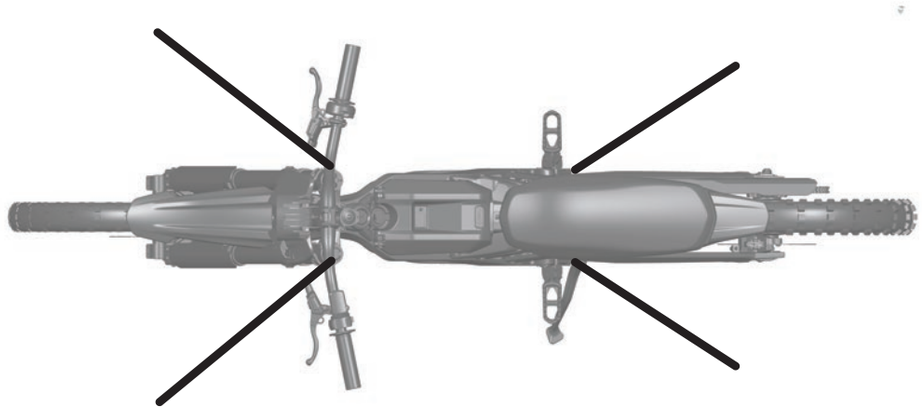
service@qiulongtech.com

WARNING

lf the controller, battery pack, motor or charger malfunction, please contact the authorized dealer designated by the Surron immediately for replacement or repair.

Transporting

It is highly recommended that the Light Bee is firmly secured on the transport frame using ratchet straps during transportation. lt is recommended to use soft straps to reduce scratches or other damages.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 is a high performance electric motorcycle and should be treated with extreme caution.

Please comply with local laws and regulations, the Light Bee off-road version (X version) is prohibited from driving on public roads.

Proper safety gear, including a regional/national approved helmet, eyewear, riding boots, gloves and protective clothing should be worn while riding to reduce the risk of potential injury. We highly recommend the use of full height motocross boots since the vast majority of motorcycle injuries are through leg and foot impact.

Please read and ensure that you are aware of all warings and instructions as well as safety labels in this manual before operating the Light Bee electric motorcycle.

Before operating a Light Bee electric motorcycle, make sure you are legally qualified to ride an electric motorcycle.

Never consume alcohol or drugs before operating Light Bee electric motorcycle.

Please be responsible for your own riding behavior when operating Light Bee 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 in the " Pre-ride Check"'section on page 7.1 and the battery level indicated on the battery indicator.

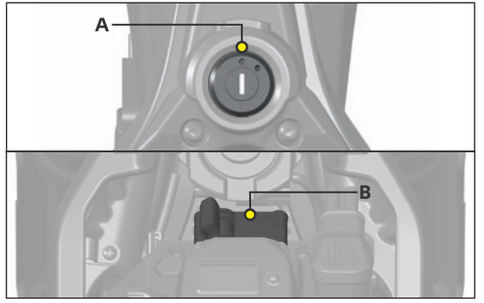
Your safety depends on the good condition of the Light Bee electric motorcycle. Ensure compliance with the periodic maintenance table and adiustment requirements contained in this manual. Make sure you understand the importance of all items that need to be thoroughly checked before riding.

Modifying a Light Bee 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 electric motorcycle. Large, bulky items can adversely affect the safety and performance of a Light Bee electric motorcycle.

Important Information

Several important operation considerations are listed below: Always turn the key switch A and main power switch B to the OFF position when not actively riding. It is extremely easy to forget that the motorcycle is still in standby mode because Light Bee electric motorcycle is completely silent. An accident can occur if the motorcycle is left powered up while getting on or off the motorcycle.



Please charge the battery pack of Light Bee electric motorcycle after each use. Once fully charged, disconnect from AC power supply. Disconnect the charger and power supply after charging. Make sure that charging is done in an open area or under supervision.

When the key is in the off position and the main power switch is turned off, the electronics of the Light Bee electric motorcycle will not consume power.

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 electric motorcycle ‘s battery pack with the original or manufacturer approved charger.

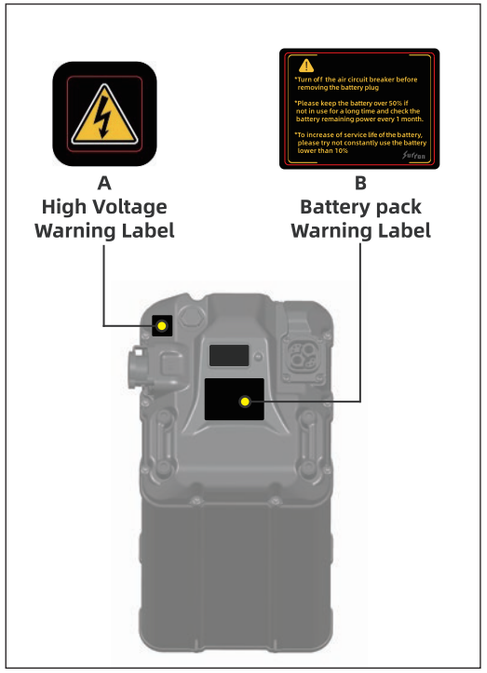
The battery pack does not benefit from deep discharging. To maximize battery life, charge the battery pack immediately after each ride. Frequent deep discharge will adversely affect the battery life.

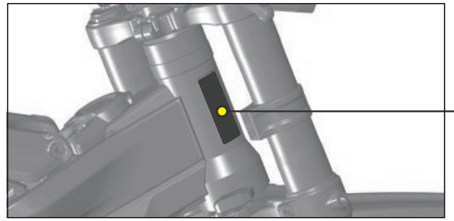
Failure to follow the battery pack storage and charging instructions described in this manual may void the warranty of the Light Bee electric motorcycle. These guidelines have been rigorously tested to ensure maximum battery pack efficiency and service.

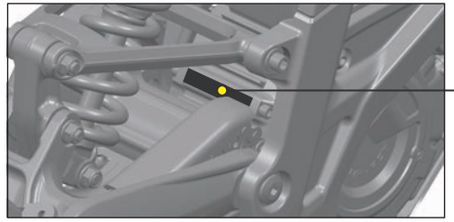
Safety Information

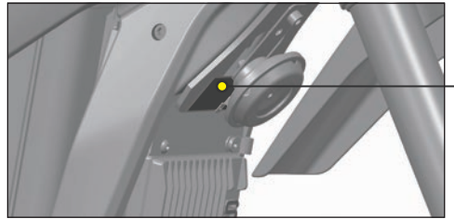
-FETCH LIGHT-飞起来-

Location of Important Labels









VIN Label

Safety Information

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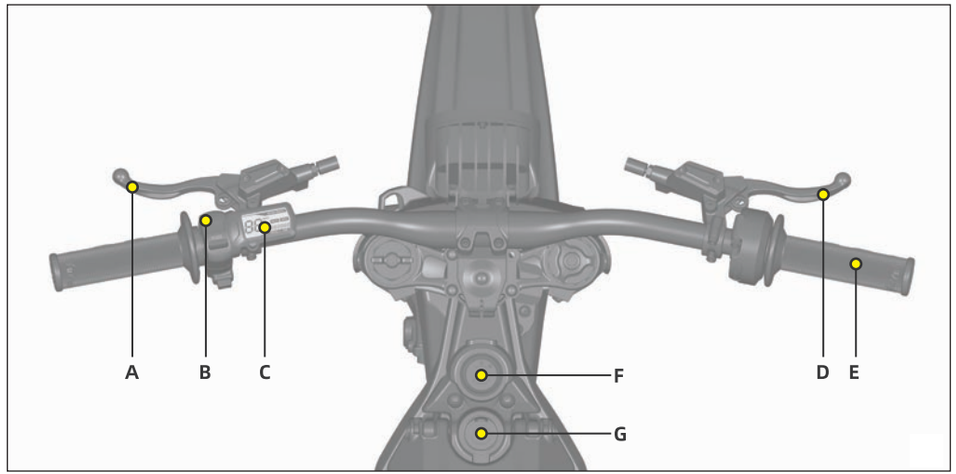


Functional Part Overview

A.Rear Brake Lever

For description and operation, please refer to "Feature Introduction", on page 6.1.

B.Left Combination Switch

For description and operation, please refer to "Feature Introduction", on page 6.2.

C.Dashboard

For description and operation, please refer to "Display and Indicator" on page 4.1 and "Function Setting" on page 5.1.

D.Front Brake Lever

For description and operation, please refer to "Feature Introduction" on page 6.1.

E.Throttle Grip

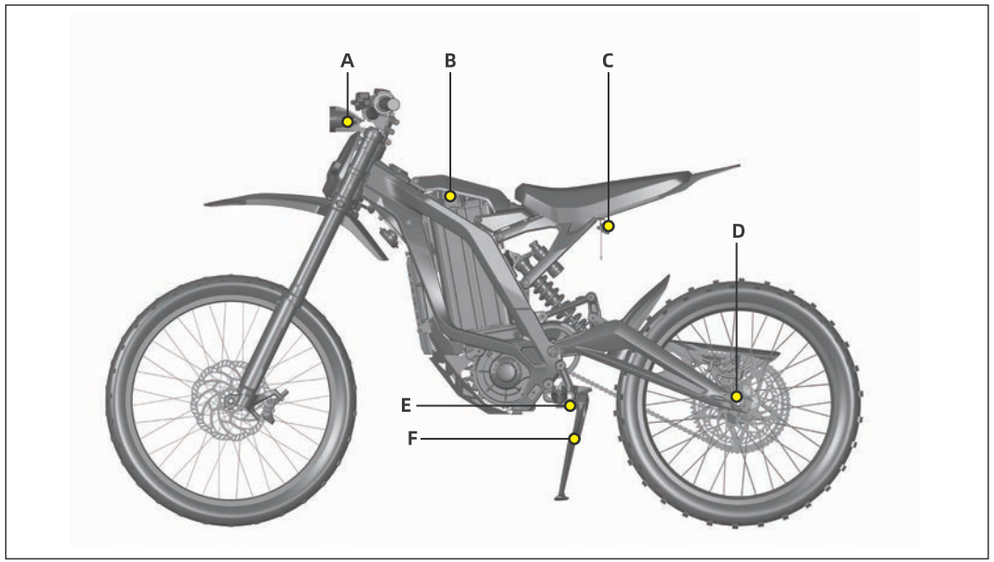
For description and operation, please refer to "Feature Introduction" on page 6.1.

F.Key Switch

For description and operation, please refer to "Starting and Operating" on page 7.4.

G.USB Port

5V 2.4A Standard USB-A port.



Functional Part Overview

A. Headlight

For headlight replacement,Please refer to"Maintenance" on page 10.14.

B. Battery Charging Port

For description and operation, Please refer to "Power Management" on page 8.2.

C. Tail Light

For tail light replacement, Please refer to "Maintenance" on page 10.14.

D. Chain Adjuster

Located on left and right side. Please refer to "Maintenance" on page 10.12.

E. Side Stand Switch

This switch is a safety sensor that prevents misoperation when the side stand is down.

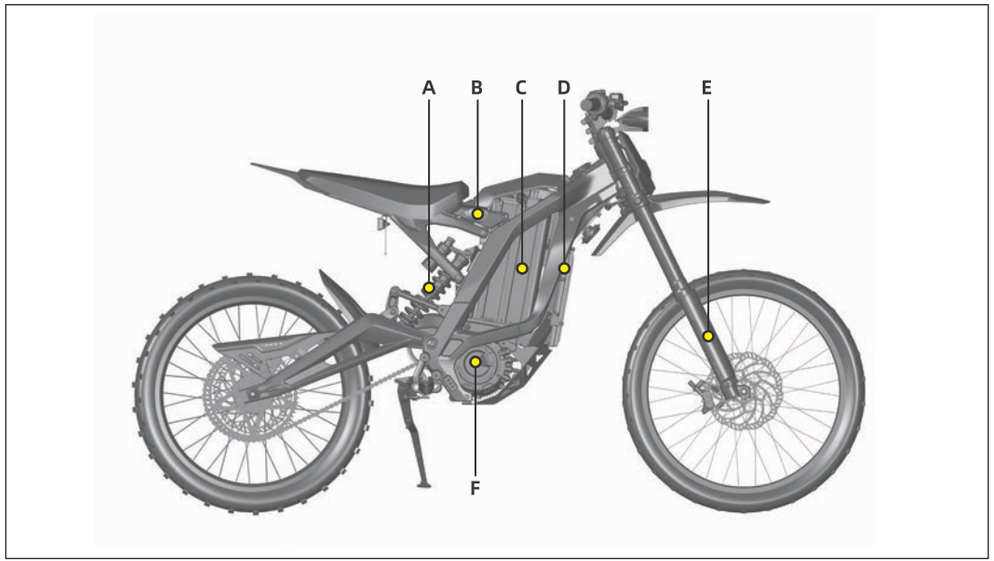
F. Side Stand

The side stand supports the motorcycle when parked. The key switch should be in the OFF position when parked.

CAUTION

Park the motorcycle only on a flat firm surface, otherwise the motorcycle could fall over and cause damage.

-FETCH LIGHT-飞起来-



Functional Part Overview

A. Rear Shock Absorber

For description and operation, please refer to "Starting and Operating" on page 7.9.

B. Battery Compartment Lock

For description and operation, please refer to "Starting and Operating" on page 7.5.

C. Battery Pack

For description and operation, please refer to "Power Management" on page 8.1.

D. Controller

For description and operation, please refer to "Power System Management" on page 9.1.

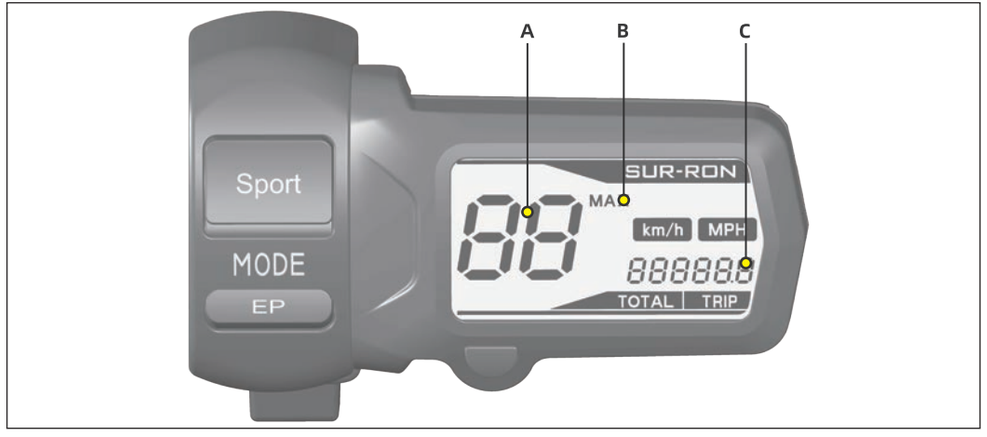
E. Front Fork

For description and operation, please refer to "Starting and Operating", on page 7.7.

F. Motor

For description and operation, please refer to "Power System Management" on page 9.1.

-FETCH LIGHT-飞起来-



Display and Indicator

Dashboard Overview

A. Speedometer

The speedometer is digital display in either kilometers per hour (km/h) or miles per hour (mph). For description and operation, please refer to "Function Setting" on page 5.1.

B. Maximum Speed

When "MAX" is displayed, the speedometer value is the maximum speed of last trip.

C. Odometer

The odometer displays the trip mileage or total mileage. For description and operation, please refer to "Function Setting" on page 5.1.

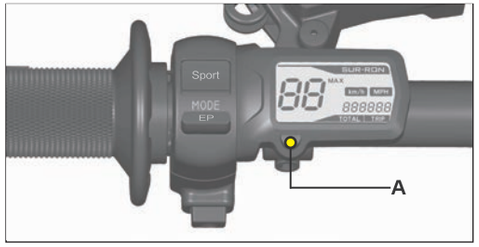
Dashboard Setting

The information displayed on the dashboard can be set by long press or short press A bottom.

Odometer Display

Switching between total mileage and trip mileage:

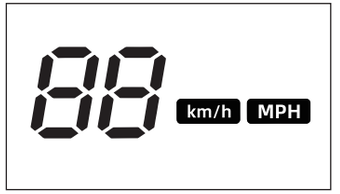
When the dashboard is powered on and the speed is zero, short press the A bottom to switch between total mileage TOTAL and trip mileage TRIP.



Reset maximum speed and trip mileage:

When the dashboard is powered on and the speed is zero, switch to the trip mileage mode and long press the A button for more than 2 seconds to reset maximum speed and trip mileage.

Speed Display Unit



Switch between miles per hour (mph) and kilometers per hour (km/h):

1. Press and hold the A bottom when the dashboard is powered off, then power on the dashboard and keep holding the A bottom for more than 2 seconds to switch.

2. MPH is displayed when selecting miles per hour (MPH).

3. km/h is displayed when selecting kilometers per hour (km/h).

System Function Setting

System Function Indicator

The indicator on the diagnostic cable (see page 11.1 for instructions) indicates that the system function has been successfully set.

Setting the Mode of System Function

By factory default setting, the regenerative braking is set at medium level and the brake override is disabled.

After the motorcycle is powered on, when it is at standby and the side stand is down, the system function mode is ready to be set within 20 seconds.

When in the system function mode setting state, different functions can be set by a combination of short pulls (about 0.5 second) and long pulls (about 2 seconds) on the front/rear brake lever; After the setting is complete, the number of times the indicator flashes indicates the newly set function mode. For example, if the diagnostic cable indicator flashes four times, it indicates the regenerative braking is set at high level.

After the time limit is exceeded, it will automatically exit the system function mode setting state, and the motorcycle can be set again after being re-powered on.

The specific functions that can be set are (By combining of pulls on the brake lever):

① Low regenerative braking. Operation: 2 short and 1 long, indicator flashes twice;

② Medium regenerative braking. Operation: 3 short and 1 long, indicator flashes 3 times;

③ High regenerative braking. Operation: 4 short and 1 long, indicator flashes 4 times;

④ Turn off the regenerative braking. Operation: 7 short and 1 long, indicator flashes 7 times;

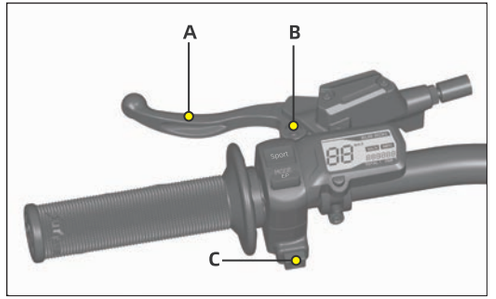
⑤ Turn off the side stand switch and tilt switch. Operation: 6 short and 1 long (automatically turned on after vehicle powered on again), indicator flashes 6 times;

⑥ Turn off the brake override. Operation: 8 short and 1 long, indicator flashes 8 times;

⑦ Turn on the brake override. Operation: 9 short and 1 long, indicator flashes 9 times;

⑧ Throttle sensitivity setting function. Factory default is normal mode. Set to pro mode, operation: 5 short and 1 long, indicator flashes 12 times. To set to normal mode again, operation: 5 short and 1 long, indicator flashes 11 times. By repeating this operation, you can cycle through the normal mode and pro mode.

Handlebar Controls

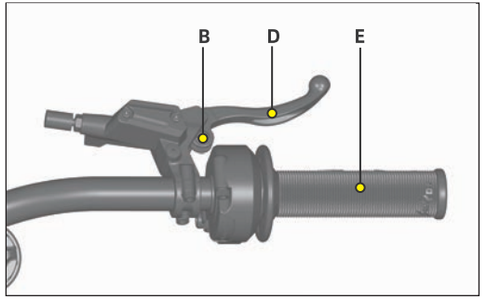


A. Rear Brake Lever

When you pull the lever backwards, it will control the rear brake system.

B. Brake Lever Adjusting Screw

This adjusting screw is used to adjust the span between the brake lever and the handlebar. The position of the brake lever is adjusted by using a 2mm Hex wrench to make it more suitable for individuals.



C. Horn Button

When the main power switch and key switch are in the ON position, the horn can make a sound when the horn button is pressed. The Light Bee electric motorcycle is very quiet when riding, and the horn can be used to warn pedestrians or other motorists present.

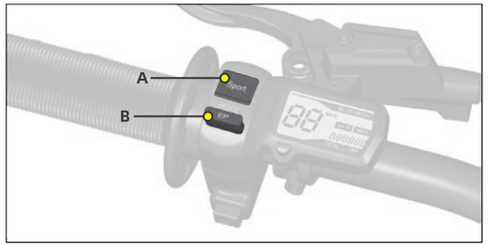
D. Front Brake Lever

When you pull the lever backwards, it controls the front braking system.

E. Throttle

The throttle is used to control speed.

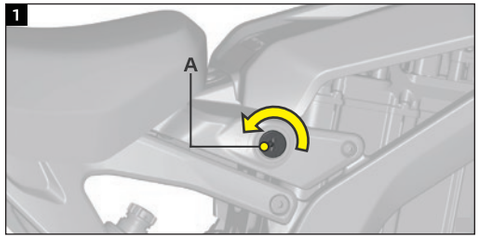
Riding Mode Switch

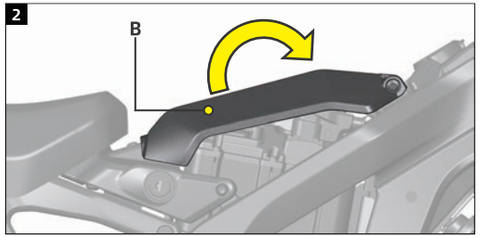


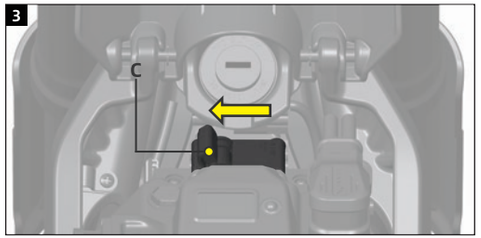
A. Sport Mode: When in Sport mode, the motorcycle has a strong explosive force, which is suitable for non-paved roads such as offroad tracks and trails. It is recommended to use this mode after becoming familiar with the motorcycle.

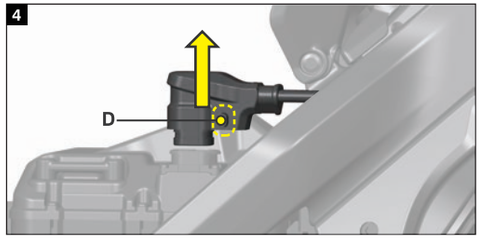
B. EP Mode: When in EP Mode, the motorcycle has a softer output power and acceleration. It is suitable for user who are not familiar with the motorcycle's handling.

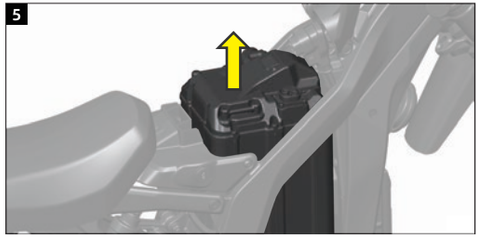
Battery Pack Removal











1. Insert the key into the Battery Compartment Lock A and turn the key counterclockwise to unlock.

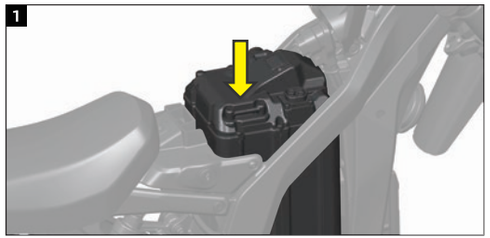
2. Open the Battery Compartment Cover B

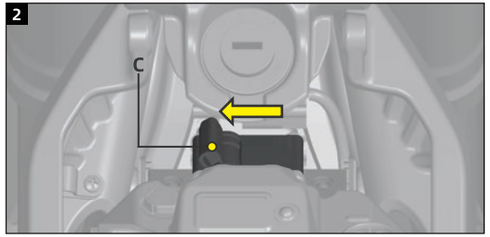
3. Turn off the main power switch C.

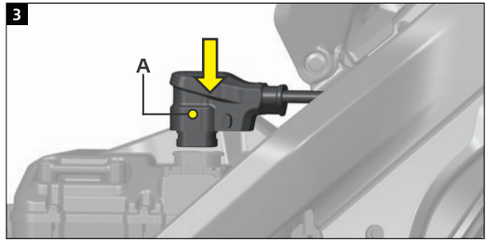
4. Hold down the button D, follow the arrow to remove the discharge plug.

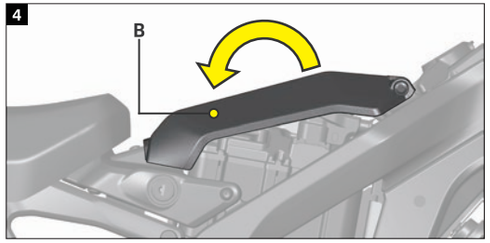
5. Remove the battery pack upward in the direction of the arrow.

Battery Pack Installation









1.Put the battery pack in the battery compartment.

2. Verify that the Main Power switch C is in the OFF position.

3. Connect the Discharge Plug A to the battery socket.

4. Press the Battery Compartment Cover B to lock it.

_____WARNING_____

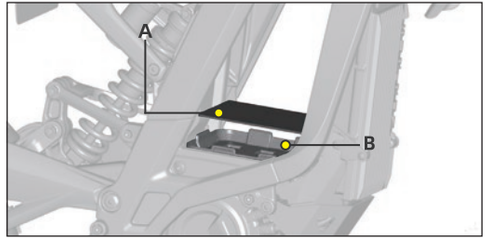
Before removal and installation of the battery pack on the Light Bee motorcycle, the key switch and the main power switch must be in OFF position.

When removing and installing the battery pack, place the discharge plug outside the left side of the battery compartment.

Battery Bottom Buffer Installation

Remove the battery pack. For description and operation, please refer to page “Battery Pack Removal” on page 6.2.

Tear the protective film of Battery Bottom Buffer A, and paste it on the Battery Bottom Positioning Block B.



_____ CAUTION _____

When the battery pack is obviously loose in the battery compartment, it is recommended to add buffer to avoid the continuous abnormal noise and damage to the motorcycle.

Charger

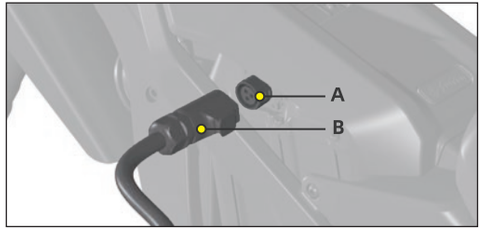
1. Charger port direction: Charger port B has the function of preventing misoperation, and the gap corresponds to battery charging port A for connection.

2. Charging operation sequence:

①Connect the charger output plug to the battery socket;

②Connect the charger input plug to the mains supply;

③After the mains power is powered on, the charger enters the state of self-test. After the self-test is passed, it will enter the normal charging state.



Pre-ride Check

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

Steering

Check if the handlebar, ahead stem and headset need to be tightened. Adjust if necessary. Please refer to "Torque Management" on page 10.3.

Battery Pack

Check that the battery level displayed on the battery pack is sufficient to support your riding. The range varies according to actual use of different environment, so the displayed battery level is for reference only.

Chain

Check the chain tension and condition. Adjust or replace if necessary. Please refer to "Chain" on page 10.12.

Brake System

Pull the brake lever and push the motorcycle to see if the front and rear wheels can be fully locked. You should be able to lock the wheels completely by braking.

Throttle

When the key switch is in the off position, twist the throttle and release it to check whether the throttle rotates smoothly and returns to idle freely.

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 replace the tire immediately.

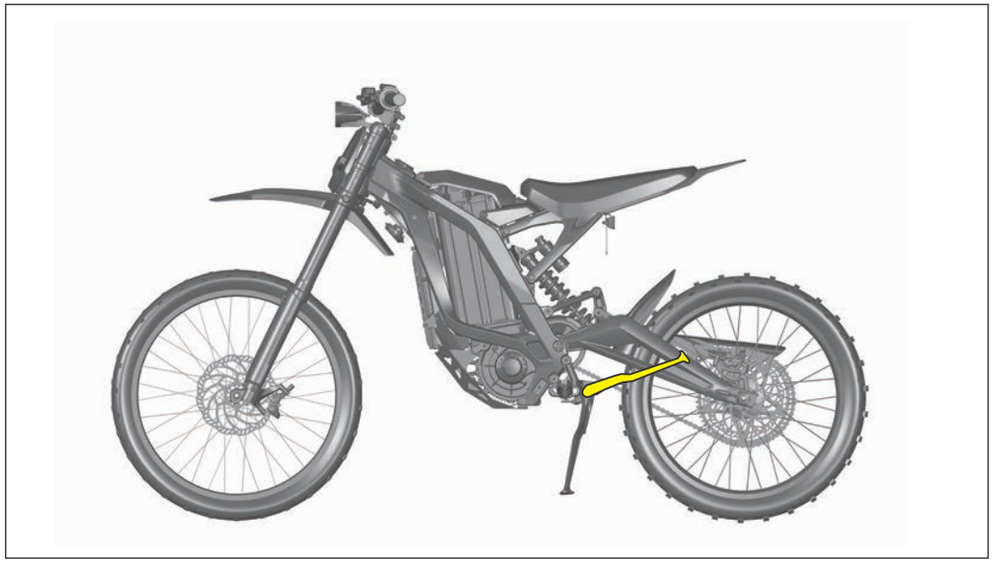
Starting and Operating

----------WARNING----------

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

Electrical System

Check whether the headlight and tail light are functioning properly.
Check whether the side stand switch and tilt switch are functioning properly.



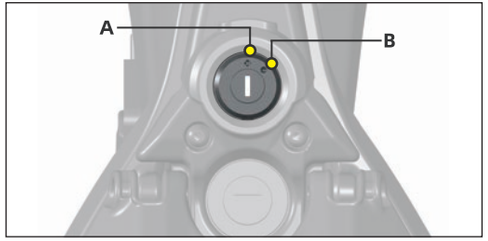
Starting and Operating

Key Switch

This is a two-position switch located on the USB charging port holder. The functions are as follows:

OFF A

ON B



OFF Position

This position is to turn off the Light Bee electric motorcycle, thereby turn off all the electrical system. The key can also be removed from this position.

ON Position

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

Dashboard ON.

Headlight ON.

Tail light ON.

Operating 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 electric motorcycle.

2. When the Light Bee electric motorcycle is powered on, turn the key counterclockwise to switch the key from ON position to OFF position, then the Light Bee electric motorcycle is powered off. Remove the key immediately after turn off the key switch and safely park the motorcycle to prevent the theft.

-FETCH LIGHT-飞起来-

Battery Compartment Lock

This is a two-position self-return switch located on the right of the frame body. The functions are as follows:

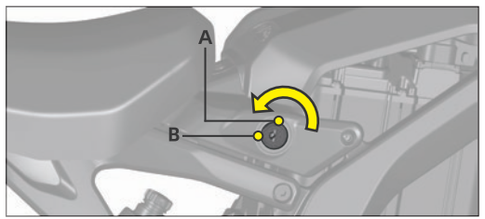
1. Lock A

2. Unlock B

Operating the Battery Compartment Lock:

1. When in lock position, insert the key into the Battery Compartment Lock and turn counterclockwise to switch the key from lock position to unlock position. When the key is in unlock position, the battery compartment cover can be opened.

2. When releasing the key, the key will automatically return from unlock position to lock position, and the key can be removed when in lock position.



Riding Light Bee Electric Motorcycle

Starting

1. Turn the key switch to the ON position.

2. Confirm the battery level displayed on the battery is sufficient.

3. After confirming that there are no obstacles and passing vehicle in the surrounding area, retract the side stand, twist throttle to increase speed and start riding.

Braking

The brake levers are located on the left and right of handlebars.

The right brake lever controls the front brake.

The left brake lever controls the rear brake.

WARNING

Gradually increase the braking force could stop the Light Bee electric motorcycle gently without locking the wheels. The Light Bee electric motorcycle is a powerful vehicle, so it is highly recommended that you practice adequately and master all the safe emergency stop operation.

Parking

1. Ensure the throttle is at idle position.

2. Put the side stand down in case of the motorcycle tilt over.

3. Turn the key switch to the OFF position then remove the key, and keep it safe.

NOTE

After each ride, please check the remaining battery level and charge the battery pack in time.

Front Fork Adjustment

CAUTION

For any adjustable knob to be adjusted to the full, it should be adjusted one space back after reached the end space.

Preload

Adjust the preload by turning the knob A on the top of the left front fork. The symbol "+" means to increase the preload, and the symbol "-" means to decrease the preload.

Turn the adjusting knob A clockwise in the "+" direction to increase the preload.

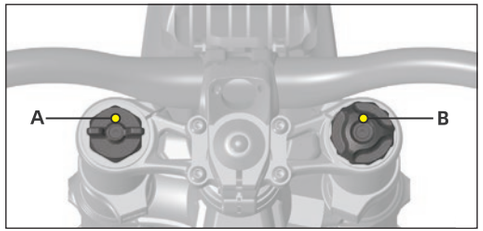
Turn the adjusting knob A counterclockwise in the "-" direction to decrease the preload.

Rebound Damping

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

Turn the adjusting knob B clockwise in the "+" direction to increase the rebound damping, resulting in slower rebound speed.

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



CAUTION

The preload and rebound damping should be adjusted properly according to the road conditions and the weight of the rider. Avoid adjusting the damping to the maximum limit, otherwise it may cause the front fork malfunction or even serious injury.

NOTE

The appearance of front fork may vary in different brands, please refer to the actual product.

NOTE

Please check and calibrate the air chamber pressure regularly. Recommended value: 80-100 PSI.

Rear Shock Adjustment

CAUTION

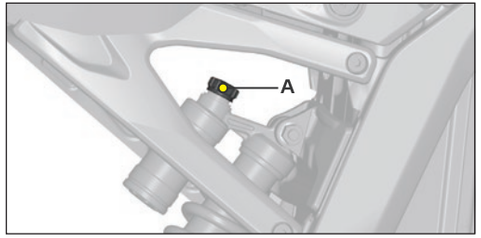
For any adjustable knob to be adjusted to the full, it should be adjusted one space back after reached the end space.

Compression Damping

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

Turn the adjusting knob A clockwise in the "+" direction to increase the compression damping.

Turn the adjusting knob A counterclockwise in the "-" direction to decrease the compression damping.



NOTE

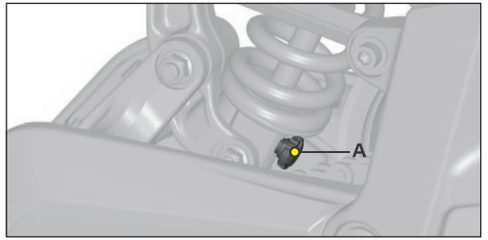
The appearance of rear shock may vary in different brands, please refer to the actual product.

Rebound Damping

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

Turn the adjusting knob A clockwise in the "+" direction to increase the rebound damping, resulting in slower rebound speed.

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



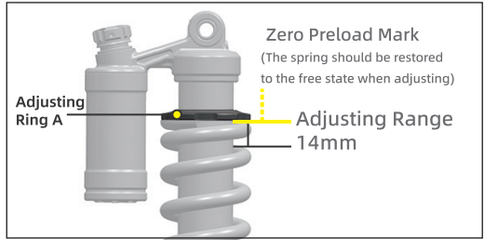
NOTE

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

Preload

Turn the adjusting ring A with the adjusting wrench.

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



CAUTION

It is NOT recommended to adjust the preload more than 14mm. Excessive preload will affect the effective travel of the rear shock. The damping and preload should be adjusted properly according to the road conditions and the weight of the rider. Avoid adjusting the damping to the maximum limit, otherwise it may cause the rear shock malfunction or even serious injury.

NOTE

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

Battery Pack

The Light Bee electric motorcycle uses high-performance and high rated lithium-ion battery which can be used in the ambient temperature range of -15 ~ 40°C（5~104°F）, the best working condition is when ambient temperature is between 10°C ~ 30°C（50~86°F）. Extreme low or high ambient temperature will affect the battery pack performance and life span. Do not use the battery pack at temperatures beyond the allowable range, and do not charge the battery pack below 0°C（32°F）.

The charging time of the battery pack is about 3 hours in 25°C（77°F） ambient temperature.

When the ambient temperature is too low, the performance of the battery pack will be affected. It is normal that the range will be reduced a little, and the performance of the battery pack will automatically recover after the temperature rises back to working condition.

When not in use for a long time, please charge the battery level to 40% ~ 50%, and check the remaining capacity every month. Charge the battery pack once when the battery level is less than 20%, so as to avoid excessive discharge of the battery pack, affecting performance and causing damage.

It is strictly prohibited to use high pressure water gun to flush the battery pack or immerse the battery pack in water. The wading of the whole motorcycle should not exceed the center of the wheel, otherwise it may cause water ingress in the battery pack, internal short circuit and permanent failure of the battery pack.

If water ingresses into the battery pack or battery pack has other issues, it is strictly forbidden to charge or use the battery pack. It may cause fire, burn and explosion of the battery pack.

The battery pack is water resistant and sealed with a high voltage circuit inside. Damaged external structure will reduce the water-resistant performance of the battery pack. If the water-resistant structure is damaged, please contact the after-sales service. It is strictly forbidden for users to disassemble the battery pack to avoid potentia damage and serious danger.

Power Supply and Charging

Before charging, please check whether the grid voltage is within the input voltage range supported by the charger.

For USA and Japan: 100~120V AC,45~65Hz;

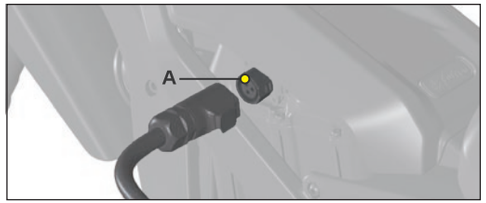
For Europe: 200~240V AC, 45~65Hz.

Before charging, please check whether the socket load power of AC power network can meet the power requirements of the charger (1000W or more is recommended)

When charging, please connect the charger output plug to the battery pack first, then connect the charger input plugto the AC power supply.

Connect the charger output plug into the battery charging port A on the left side of the motorcycle to charge.

The charger will turn off automatically when the battery pack is fully charged. Please disconnect the power supply for the charger and the charging plug connected to the battery.



_____ CHARGING PRECAUTIONS _____

When charging, please put the motorcycle / battery pack in a safe place, beyond the reach of children.

Avoid using the battery pack when it has just finished charging. After fully charged, disconnect the charger before use. it is recommended to let it stand for 10 minutes or more before use.

It is prohibited to cover any object on the charger during charging. The charger is for indoor use, please use it in a dry and well-ventilated environment.

Please cover the charging port cap of the battery pack after charging is completed.

_____WARNING_____

Always charge the battery pack in a well-ventilated environment and keep away from any combustibles. Do not charge in rain.

_____WARNING_____

The battery pack can only be charged with the original charger or dedicated charger specified bymanufacturer. The use of unauthorized chargers or accessories may cause damage, failure of the battery pack or even danger.

_____WARNING_____

Do not charge the battery pack below 0℃ (32℉), otherwise it will damage the battery pack. The battery pack can be charged again after its temperature rises back above 0℃(32℉). The maximum allowable charging temperature insidethe battery pack is 60℃(140℉). If the internal temperature of the battery pack exceeds this value, it can only be charged after natural cooling below 55℃(131℉). The battery pack will discharge and heat up rapidly after heavy riding. Even if the ambient temperature is low, the battery pack internal temperature may still be high.

_____WARNING_____

The battery pack is only allowed to naturally stand and return to normal temperature. Do not use other methods to rapidly raise or lower the temperature of the battery pack.

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.

_____SERIOUS WARNING_____

If you find the following situations, please stop charging and disconnect the power supply immediately, and do not use the electric motorcycle, Contact Surron after-sales service or send to maintenance point as soon as possible:

The battery pack housing is damaged;

Strange smell during charging;

The battery pack or charger overheated;

Smoke or fire in the battery pack. If occurs, throw the battery pack into water immediately to avoid further losses.

Power System

The power system of Light Bee electric motorcycle mainly consists of a motor and a controller.

_____WARNING_____

It is strictly prohibited for users to disassemble the motor without permission, otherwise it may cause the position sensor malfunction or damage the corresponding seal which can lead to motor failure.

It is strictly prohibited to disassemble the controller and its cables without permission, it may cause serious consequences such as electric shocks and burns. The controller is a high-voltage precision electronic component with cables carrying large current. Incorrect wiring connection and wrong screw torque may cause damage to the controller or power system.

_____WARNING_____

The power system of the Light Bee electric motorcycle must be repaired or replaced by a trained professional technician authorized by Surron. Users are not allowed to disassemble or modify the power system of the Light Bee electric motorcycle. It's prohibited to put the power system into the water, otherwise it will cause damage.

Power cables have high current during operation, do make sure the cables are correctly and firmly connected, ensure that the torque and tightness of cable fastening bolts meet the requirements, and ensure cable insulation also meets the requirements. Disassembling power system components and cables is strictly prohibited.

_____WARNING_____

The power system is a 60V high voltage system. During operation, repair and maintenance of the motorcycle, ensure that the motorcycle and power cables are well isolated.

Power System Management

Maintenance Items

The following table lists the brake fluid to be replaced for maintenance.

Parts	Type	Volume
Brake Fluid	DOT4	

Maintenance Record

Please follow the Periodic Maintenance Table on page 10.2. After each scheduled service or maintenance is performed, please record all the required information in the Maintenance Record of this manual.

Scheduled Maintenance

The Light Bee electric motorcycle must be maintained as scheduled to ensure safe and reliable performance. The required maintenance schedule specifies how often you should have your electric motorcycle serviced and which items need attention. If you do not feel performing the tasks or need assistance, please contact your nearby Surron authorized dealer to maintain your motorcycle. The warranty will be void if damage, malfunctions, or performance problems are caused by improper maintenance or repair of the electric motorcycle.

The service intervals in this Periodic Maintenance Table are based on riding conditions on unpaved surfaces. If you often ride in wet or dusty areas, some items will need more frequent service. Please consult your local dealer for recommendations applicable to your individual needs and use. It is recommended that you maintain your Light Bee electric motorcycle at least once every 6 months regardless of the distance ridden.

CAUTION

It is recommended to check the tightening torque of all the screw and bolts before every track or trail ride.

Periodic Maintenance Table

Regular maintenance must be carried out according to this table to keep your Light Bee electric motorcycle in optimal operating condition. The initial maintenance is crucial and must not be neglected. Where time and mileage are both listed, follow the interval that appears first.

Light Bee Electric Motorcycle Periodic Maintenance Table

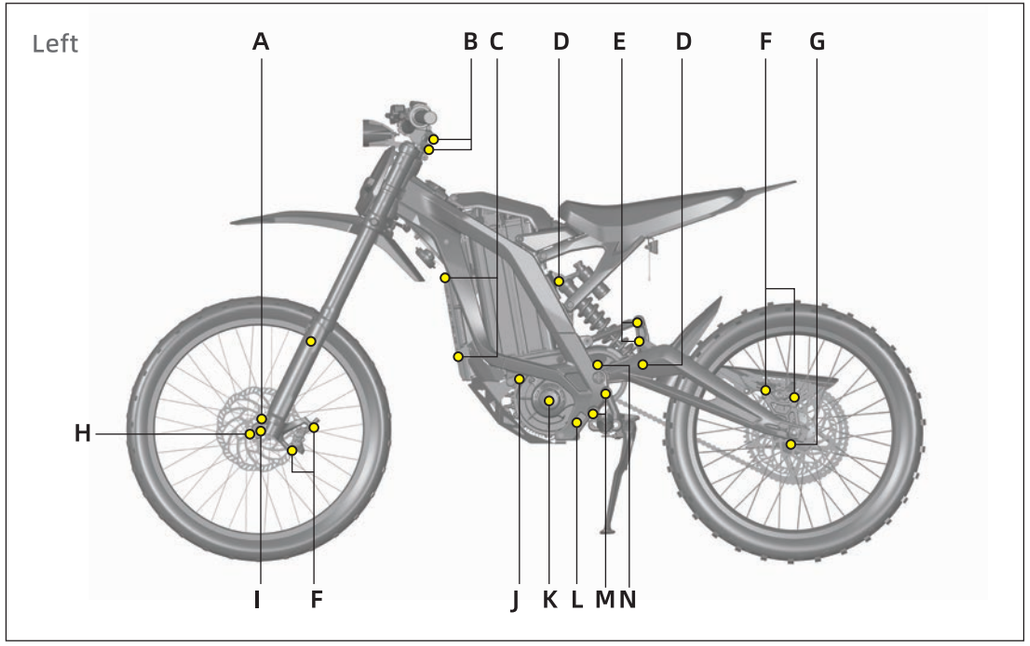
Check Items	Every Ride	100km	500km	2000km	5000km	10000km/12months	20000km/24months
Tire(worn)	○ 🔧						🗘
Brake Pads Worn		○	○	○	○ / 🗘	○ / 🗘	🗘
Brake Disc Worn			○	○	○ / 🗘	○ / 🗘	🗘
Chain		○ / 🔧	○ / 🔧	○ / 🔧	○ / 🗘		🗘
Sprocket (Front & Rear)				○	○ / 🗘		🗘
Primary Belt & Primary Drive Pully				○ / 🔧			🗘
Battery Pack Capacity	○						
Front Fork & Rear Shock	○					🔧	🔧
Brake Fluid		○		○	○	🗘	🗘
Bearings				○	○		
Lights	○						
Wheel Spokes	○	🔧			🔧	🔧	🔧
Swingarm Protection Block				○	○	○ / 🗘	○ / 🗘
Tilt Switch				○	○	○	○
Side Stand Switch	○						
Screw Torque				○ / 🔧	○ / 🔧	○ / 🔧	○ / 🔧

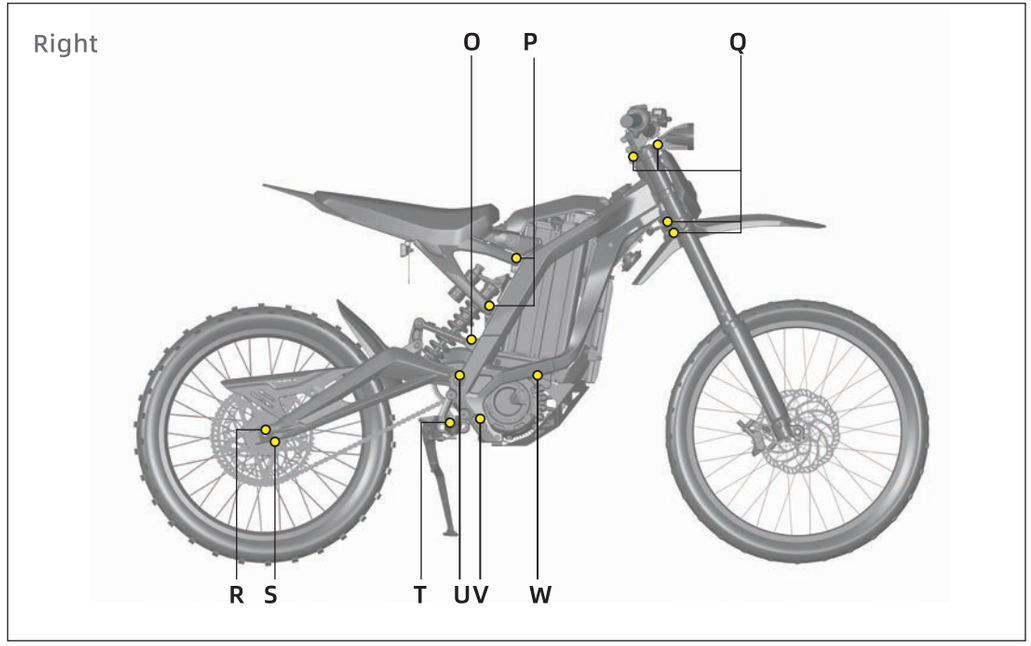
○ Check 🗘 Replace 🔧 Maintain

Maintenance

Torque Management

Check regularly and tighten the following fasteners on the Light Bee electric motorcycle according to the specified torque.





-FETCH LIGHT-飞起来-

	Item	Torque	Specification	Note
A	Front Disc	8-10N.m	Torx pan head screw M5*10	/
B	Handlebar Ahead Stem	5-6N.m	Hexagon socket head M6*20	/
C	Controller Installation Screw	8-10N.m	Hexagon socket head M6*16	/
D	Rear Shock Top & Bottom Installation Screw	20-25N.m	Hexagon socket head half-thread L50-M8	/
E	Rear Shock Linkage Arm AxleFront & Rear Brake Caliper Installation Screw	20-25N.m	Hexagon socket head half-thread L50-M8	/
F	Front & Rear Brake Caliper Installation Screw	12N.m	Hexagon socket head M6*18	/
G	Rear Brake Disc Installation Screw	10-12N.m	Torx pan head screw M6*13	Thread locker required, KAFUTER K-0609 or similar
H	Front Axle Pinch Bolt	12N.m	Hexagon socket head	/
I	Front Wheel Axle	20-25N.m	T-shaft Bolt	/
J	Motor Left Top Mounting Bolt	20-25N.m	Hexagon socket head M8-*40	/
K	Primary Pully Locking Bolt	40-50N.m	Hexagon nut with flange M12*1.25	/
L	Motor Left Bottom Mounting Bolt	20-25N.m	Hexagon socket head M8*45	/
M	Left & Right Foot Pegs Installation Screw	25-30N.m	Hexagon socket head M8*25	/
N	Primary Drive Rear Pulley Installation Screw	10-12N.m	Hexagon socket head M6*16	/
O	Linkage Installation Screw	20-25N.m	Hexagon socket head M8*35	/
P	Subframe	15-20N.m	Hexagon socket head M8*20	/
Q	Steering Stem Upper & Lower Connection Plate	8-10N.m	Hexagon socket head	/
R	Rear Wheel Axle	55-60N.m	T-shaft Bolt M12*1.25*198	/
S	Rear Sprocket Installation Screw	20-25N.m	Hexagon socket head M8*16	/
T	Foot Pegs Left & Right Mounting Bolt	40-45N.m	Hexagon nut with flange M10*1.25	Thread locker required, KAFUTER K-0609 or similar
U	Swingarm Pivot Shaft	30-35N.m	M10*1.0	/
V	Motor Right Bottom Mounting Bolt	20-25N.m	Hexagon socket head M8*25	/
W	Motor Right Top Mounting Bolt	20-25N.m	Hexagon socket head M8*25	/

Battery Pack

CAUTION

1. Battery packs are lithium-ion systems that do not require maintenance but need to be charged from time to time. When not in use for a long time, please charge the battery pack level to about 40% ~ 50% for storage. You will need to check the remaining battery level every month. If the battery pack level drops below 20%, it should be recharged to prevent the battery pack from excessive discharge, which will affect performance and cause damage.
2. The battery pack should be kept away from low and high temperature environments. Do not store it under direct sunlight. When not used for a long time, please store the battery pack at an ambient temperature of 10°C ~ 30°C(50°F~86°F).

CAUTION

3. Only service agents authorized by Surron are qualified to repair or disassemble the battery pack.
4. Disposing of the battery packs is subject to local laws. Used battery pack is encouraged to be handled by professional recycling agency for recycling, please do not discarded at will.

Brake System

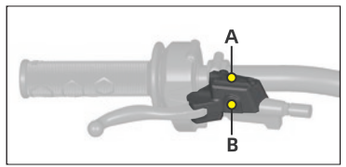
This section describes how to maintain the brake system of the Light Bee electric motorcycle, which covers the brake pads (front and rear brake pads are universal) and recommends brake fluid type and levels of front and rear brake systems.

Bleeding the Braking System

Users need to bleed air from the braking system, which can only be done at the designated authorized dealer.

Brake Fluid Level Check

Brake Fluid Reservoir



The brake fluid level can be observed through the inspection window B. If the fluid level is lower than one-third of the inspection window B, the brake fluid must be added. Before opening the brake fluid reservoir, please clean all dust and dirt on the reservoir cap A to avoid contaminating the brake fluid.

A low fluid level may indicate worn brake pads or leak in the hydraulic system. Check whether the brake pads are worn and whether the hydraulic system is leaking. Only use the new mineral brake fluid in a sealed container.

The steps of adding brake fluid are as follows:

1. Unscrew the two screws on the cap of the brake fluid reservoir, remove the brake fluid reservoir cap and the reservoir gasket.

2. Add new mineral brake fluid.

3. Check the cap seal to make sure that there is no wear or damage, and the position is correct.

4. Install the screws for the reservoir cap (torque: 2.5N.m).

Maintenance

_____ CAUTION _____

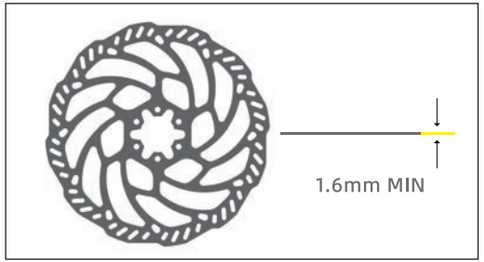
Do not splash the brake fluid on the painted surface, as it may damage the paint. Spilling brake fluid on plastic parts can cause corrosion. Before removing the reservoir cap, make sure to put an oil absorbent towel under the reservoir.

_____WARNING_____

Before checking the fluid level, the Light Bee electric motorcycle should be in a flat and upright state and the handlebars should be in the center to ensure that the reservoir is in a horizontal position.

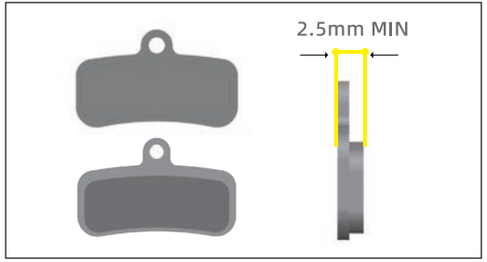
When adding new brake fluid, if the brake fluid overflows, it should be removed immediately to prevent contamination of other parts.

Brake Disc Inspection



The thickness of brake disc should be inspected regularly. The minimum thickness is 1.6mm.

Brake Pad Inspection



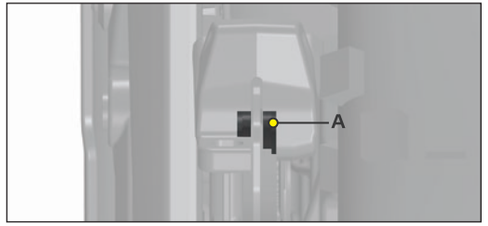
The brake pads must be checked at the specified intervals in the Periodic Maintenance Table, please refer to page 10.2. Check the remaining amount of brake pad visually from the side of the brake caliper.

If the thickness of the front or rear brake pads is less than 2.5 mm, please replace the brake pads. If the brake pad is damaged, please replace both brake pads immediately regardless of the degree of damage.

Brake Pads Replacement

It is recommended to check and run-in after replacing new front and rear brake pads A or brake discs to ensure that the brake discs and brake pads adapt and match. Proper run-in can improve the braking feel and reduce or eliminate braking noise.

Front & Rear Brake Pad



_____ CAUTION _____

The brake pads need to be replaced in pairs

_____WARNING_____

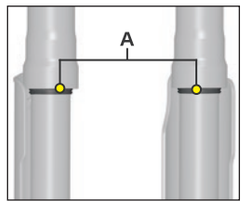
When using a new braking system or new brake pads, the initial braking force may be small. Please try to run in the brake pads and brake discs at low speed to ensure that the brake system can provide normal braking force.

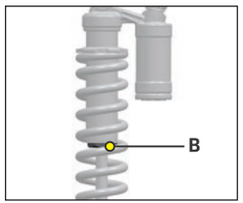
Suspension System

1. 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 flush upwards facing the dust-proof seal A and B, as this will flush mud and sand into the seal and cause leakage.

2. Only use neutral detergent with a soft cotton to clean. Corrosive solvents may cause damage to the dust proof oll seals.

3. It is recommended to apply a layer of lubricating grease on the surface of the main tube after cleaning to make the surface of the main tube fully lubricated.





_____WARNING_____

The shock absorber contains high-pressure gas or liquid.

Do not try to modify or disassemble the shock absorber.

After riding the motorcycle, the shock absorber and the gas cylinder may be in a high temperature state. Do not touch directly to avoid burns.

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

For maintenance, please refer to the Periodic Maintenance Table on page 10.2. For adjustment, please refer to page 7.7 and 7.9.

Wheels and Tires

Check the wheels and tires for any of the following:
Deformed or cracked rim;
Impact marks on the rim;
Loose or deformed spokes;
Cuts, cracks, penetration or missing tread blocks 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.

WARNING

Incorrect tire pressure is a common cause of tire failure. Long-term incorrect tire pressure may lead to tire damage, thread separation or even loss control of the motorcycle, resulting in serious personal injury.

WARNING

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. When the tire pressure is too low, the rolling resistance of the outer tire increases, and the inner tube may also shift.

Standard Tire Pressure Table

Type	Front	Rear
Off-road	225kPa	225 kPa

NOTE

For off-road tires, it is recommended to lower the tire pressure accordingly when riding in tracks and trails.

Maintenance

Chain

Please refer to the Periodic Maintenance Table on page 10.2 for the inspection and maintenance of the chain.

1. Keep the chain and sprockets clean.

2. Check the chain wear, tightness and lubrication.

(1) After removing the key from the key switch and turning off the main power switch, prop up the body of the motorcycle with a lift stand so that the rear wheel is suspended. Move the chain up and down and check whether the swing is within the recommended range: 15-30mm.

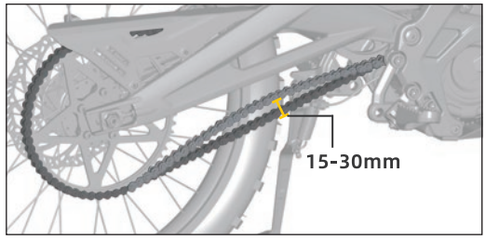
(2) When adjusting, first loosen the rear wheel axle nut, and then adjust the left and right adjusting bolts to make the chain tightness within the recommended range.

(3) Use appropriate amount of chain oil or chain wax to lubricate the chain.

CAUTION

1. When the chain swings up and down beyond the recommended range, it will aggravate the wear of swingarm protection rubber. Please adjust the value to 15mm in time.

2. After adjustment, the left and right chain adjuster marks should be symmetric to the mark on the swingarm.



Chain Adjustment Procedure

1. After removing the key from the key switch and turning off the main power switch, prop up the body of the motorcycle with a lift stand so that the rear wheel is suspended.

2. Loosen the rear wheel axle nut C.

3. Loosen the locknut A of the left and right adjusting bolts B.

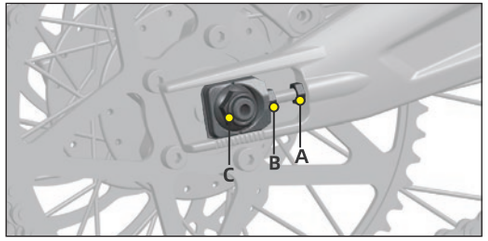
4. Adjust the left and right adjusting bolts B equally until the chain is adjusted within the specified range.

5. Tighten the rear axle nut C.

6. Tighten the left and right locknuts A to fix the position of the adjusting bolt B.

7. Test ride the motorcycle.

8. After the test ride, please recheck whether the chain is adjusted correctly, and re-adjust if necessary.



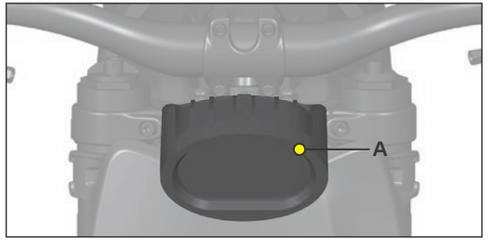
CAUTION

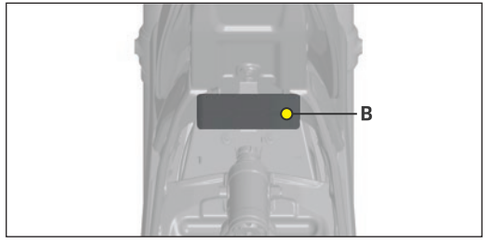
When adjusting the tension of the chain, adjust the adjusting bolts on both sides equally.

Maintenance

Light Replacement

When the headlight A/tail light B/ is damaged, please contact the authorized dealer for a complete replacement.





Motorcycle Cleaning

1. Use a sponge or clean soft cloth, neutral detergent and water to gently clean the motorcycle.

2. Be extremely careful when cleaning the dashboard, it is easy to get scratched than other parts of the motorcycle.

3. After cleaning, rinse the motorcycle thoroughly with water to remove all detergent residues.

4. Dry the motorcycle with a soft dry towel.

5. After cleaning, please check the vehicle carefully for anomalies.

-FETCH LIGHT-飞起来-

CAUTION

Improper cleaning can damage motorcycle parts. Do not use high-pressure water gun to flush bearings, seals, electrical components and plugs. In order to extend the service life of the Light Bee electric motorcycle, it should be cleaned and maintained regularly and it is recommended to wipe it dry as soon as possible after cleaning.

Do not use any harsh chemical products on plastic parts. Avoid cloths or sponges that have been in contact with strong corrosive detergents, solvents, thinners, fuels (gasoline), rust removers or inhibitors, brake fluid, antifreeze, or electrolytes.

CAUTION

We recommend that you carefully use the high-pressure water gun to clean the Light Bee electric motorcycle to avoid damaging the motorcycle parts.

WARNING

After cleaning and before starting to ride, make sure the brakes system function properly.

Wheel and Tire Cleaning

Avoid using strong acid wheel cleaners. If you use this type of product to clean stubborn dirt, please clean it in a short time and dry it immediately.

CAUTION

Tires only need to be cleaned. Any tire maintenance products may reduce the friction between the tire and the ground, and even lead to premature aging of the tire.

Long-term Storage

For motorcycle that are not used for a long time (more than 30 days), it is recommended to maintain the battery level to about 40% to 50%, and turn off the main power switch of Light Bee electric motorcycle.

The battery pack also discharges slowly when stored. Check the level of the battery pack at least once every month. If the battery level drops below 20%, then it should be recharged to 40% to 50%.

When you are ready to use the Light Bee electric motorcycle again, please fully charge the battery pack to ensure it is restored to its best condition.

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

CAUTION

Do not store the Light Bee electric motorcycle with battery level lower than 20%. Discharging the battery pack below 20% for a long period of time may reduce the battery life or even damage the battery pack. Battery pack damage due to over-discharge or long-term very low battery level is not covered by the warranty.

WARNING

Only authorized professional technicians are qualified to provide maintenance services for the battery pack. Please be aware that unauthorized handling of the internal components of the battery pack is very dangerous. Do not disassemble the battery pack!

Light Bee Electric Motorcycle Official Parts

Light Bee electric motorcycles reguire the use of parts and accessories specified by Surron. You can obtain original spare parts for maintenance of your Light Bee electric motorcycle trough your dealer.

Fuse

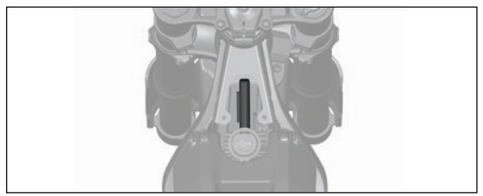
The motorcycle electrical system has an overcurrent protection device. The fuse is a one-time protection device, which will blow to protect the circuit when it is overloaded. When replacing the fuse, use the same specification model.

CAUTION

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

Fuse Box

The fuse box is located under the USB cover.



The fuse box has a protective cap, which must be opened first to access the fuse. To open the cap, press down firmly on the latch and open the cap.

Replacing the fuse:

1. Pinch the fuse box cap and open the cap to the right of the fuse box.

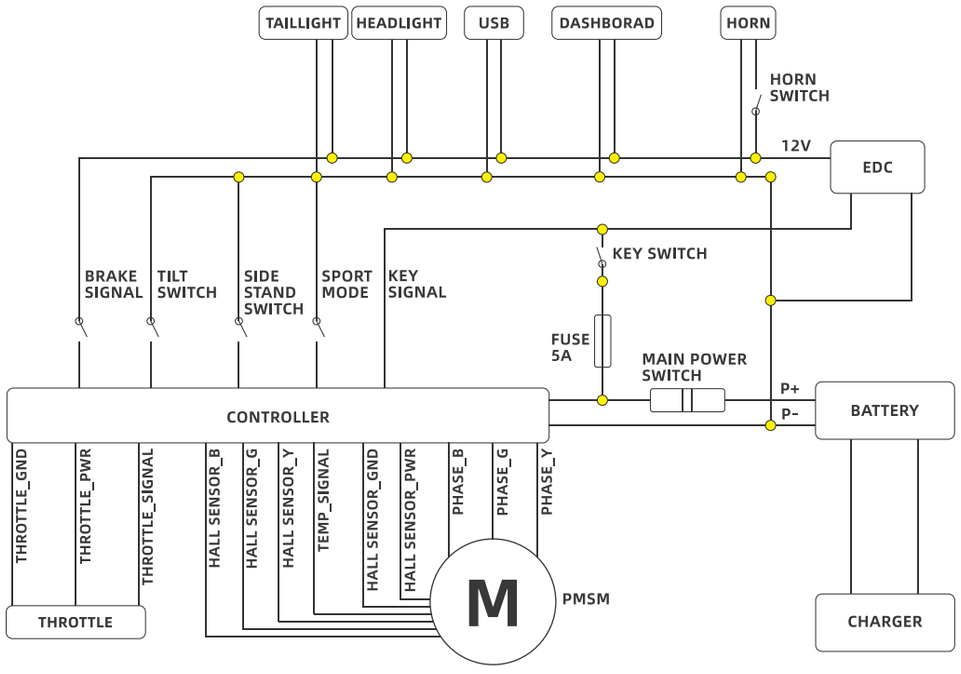
2. Replace the defective fuse with the same specification model.

CAUTION

The fuse box contains a spare fuse.

Maintenance

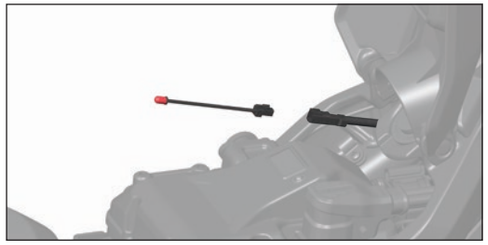
Light Bee Electrical Schematic Diagram



Light Bee Electric Motorcycle Troubleshooting

All Light Bee electric motorcycles are carefully inspected before delivery. Even the Light Bee 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 repairing or maintenance. If you are unable to solve the problem by yourself, please contact the local authorized Surron dealer at your convenience. If there is no dealer in your area, please reach out to Surron after-sales service team.

Diagnostic Cable Usage



The diagnostic cable indicator flashes for a long time at an interval of 2 seconds, it flashes for a short time at an interval of 0.5 second. The long time flash code is 10, the short time flash code is 1, and the cumulative total is the current error code. (For example, twice long time flashes plus once short time flash corresponds to 10+10+1, the error code is the sum of 10+10+1=21.)

1. Prop up the body of the motorcycle with a lift stand so that the rear wheel is suspended.

2. Open the battery compartment cover, refer to page 6.2.

3. Find the corresponding plug near the main power switch and connect the diagnostic cable to the plug.

4. Insert the key and power on the motorcycle, twist the throttle.

5. Observe and record the flashing interval and number of flashes on the diagnostic cable indicator. Refer to page 11.7 “Error Code & Fault List”.

CAUTION

The fault reported by the diagnostic cable can be one or multiple faults, and indicator will cycle indicates them.

The indicating period of a fault does not exceed 15 seconds. During the indicating cycle, pay attention to whether multiple faults are being indicated.

Temperature Precautions

Cold Weather

The cold weather will not permanently affect battery capacity of Light Bee electric motorcycle. However, riders may find the motorcycle's range and power reduced as cold temperature may impact on the amount of power the battery pack can release.

Therefore, when used in an environment below 0°C（32°F） compared to an environment at 25°C（77°F）, the Light Bee electric motorcycle may temporarily reduce its range by about 30%.
In extreme cold weather, the Light Bee electric motorcycle may also temporarily reduce power and fail to reach top speed.

It is not recommended to ride the motorcycle when temperature is extremely low. If so, the battery pack must be placed at ambient temperatures above 0°C（32°F）when charging. The battery management system (BMS) of Light Bee electric motorcycle does not allow the battery pack to discharge below -20°C（-4°F）, which is strictly limited by the battery manufacture.

It is recommended to store the Light Bee electric motorcycle in a suitable temperature environment.

The motorcycle can be stored in the following conditions:

1. Recommended ambient temperature above 0℃ for long term storage.

2. Before storage, charge the battery pack to a level of 40%～50%. Check the battery level at least once a month. If the battery level drops below 30%, it should be recharged to 40%～50%.

3. The battery pack must be charged with ambient temperature above 0℃（32℉）. Due to the battery's own protection function, the battery pack cannot be charged at 0℃（32℉）inside.

Storage temperatures below -20℃（-4℉）may permanently reduce the battery pack performance. Keep the temperature above -20℃（-4℉）and follow the guidelines for long-term storage (please refer to "Long-term Storage" on page 10.16) to ensure that the battery pack is not permanently damaged during winter storage.

Hot Weather

In high temperature condition, the battery won't have any performance changes. However, when the battery pack temperature is above 65℃（149℉）, the motor controller will limit the power output. If the temperature continues to rise, the battery output will be turned off.

When the battery internal temperature exceeds 60℃（140℉）, the battery management will no longer allow charging.

CAUTION

With the battery pack's own protection in effect, the battery pack is not allowed to be charged at temperature below 0℃（32℉）. Similarly, as long as the battery pack is at a temperature above -20℃（-4℉）in the winter, it can avoid damage to the battery pack when it is maintained at more than 30% of the battery level.

CAUTION

Please do not leave the Light Bee electric motorcycle or its battery pack in an environment above 40℃（104℉）or under direct sunlight for long periods of time, as this may accelerate the degradation of battery performance.

Safety Interlock

When the battery pack is connected to the Light Bee electric motorcycle, if the battery management system detected a serious internal failure, one or both of the following two measures will be taken to prevent battery pack damage:

1. Riding prohibited. If the battery level is 0, or if the battery management system detects some serious internal faults, the motorcycle will be prohibited from use until the problem is solved.

2. Charging prohibited. If the battery management system detects some serious internal faults, it will prevent charging, until the problem is solved.

Precautions for Light Bee Electric Motorcycle

Light Bee electric motorcycle has high voltage components, please take proper precautions when using it. The high voltage components are dangerous and can result in electric shocks, burns and even serious personal injury.

For safety purposes, always follow the instructions on the label attached to the motorcycle parts and do not touch or attempt to remove or replace any high voltage parts, cables (marked by the orange outer tube) or connectors. In the event of an accident, do not touch any high voltage terminals or components connected to the cables. In case of fire on the electric motorcycle, make sure your personal safety first and then use Class D fire extinguisher to put out the fire. When the flame is out, use large quantity of water or a water-based fire extinguisher to cool it down.

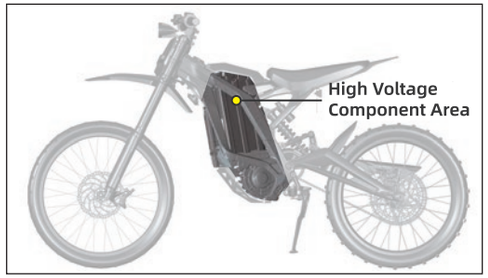
Troubleshooting

_____WARNING_____

Light Bee electric motorcycle uses 60V high voltage system. The power system may be too hot to touch after use. Beware of high voltage and high temperatures and obey all the safety rules and regulations on the motorcycle.

_____SERIOUS WARNING_____

The high voltage circuit system of the Light Bee electric motorcycle is not allowed to be maintained by user. Removing or replacing high-voltage components, cables, or connectors may result in severe electric shocks, burns, or even life-threatening injuries.



-FETCH LIGHT-飞起来-

Error Code & Fault List

Error Code	Error Description	Troubleshooting
1	Running normally	/
2	Controller MOS failure	Contact manufacturer or authorized dealer
3	Controller hardware over current	Vehicle power limit use
4	Controller firmware over current	Tum OFF the key switch and back to ON again
5	Motor missing phase, running stuck	Check whether the motor phase cable connection is loose
6	Motor position sensor (Hall sensor) failure	Contact manufacturer or authorized dealer
7	Locked rotor protection	Check whether the motor is blocked
8	Controller over temperature, power limited	Vehicle power level 1 limit use
9	Controller level 2 over temperature	Stop riding and wait for the temperature cool down
10	Motor over temperature, power limited	Vehicle power level 1 limit use
11	Motor level 2 over temperature	Stop riding and wait for the temperature cool down
12	Main cable level 2 over voltage	Regenerative braking OFF
13	Main cable level 2 under voltage	Charge the battery pack
14	Throttle open protection	Check if the throttle is unable to return to idle position or throttle cable is short circuited
15	Throttle failure/throttle signal error	Check if the throttle cable is short circuited or broken
16	Brake signal triggered	Check if the brake switch is short circuited
17	Motor temperature sensor failure	Contact manufacturer or authorized dealer

Troubleshooting

Error Code	Error Description	Troubleshooting
18	Discharging MOS failure	Contact manufacturer or authorized dealer
19	Battery temperature sensor failure	Contact manufacturer or authorized dealer
20	Battery discharging level 2 over temperature	Stop riding and wait for the temperature cool down
21	Controller sampling error	Contact manufacturer or authorized dealer
22	Side stand switch triggered	Check if the side stand is down
23	Tilt switch triggered	Turn the key switch OFF and back ON/Check tilt switch
24	Key switch power lost protection	Check key switch and controller connection
25	Battery level 1 under voltage, power limited	Charge the battery pack
26	Charging MOS level 2 over temperature	Stop charging, contact manufacturer or authorized dealer
27	Battery communication failure	Check vehicle communication circuits
28	Battery level 2 under voltage	Charge the battery pack
29	Battery level 2 low temperature	Use after the battery temperature rises
30	Battery level 1 over temperature, power limited	Stop riding and wait for the temperature cool down
31&32	Controller-Battery communication failure	Check vehicle communication circuits
33	Battery level too low	Charge the battery pack
34	Battery cell level 2 low charging temperature	Stop charging until the battery temperature rises
35	Battery level 3 over current	Check if the power systems is blocked/damaged

Common Troubleshooting

Fault Description	Possible Cause	Troubleshooting solution
Vehicle does not power on	Battery plug not connected properly	Check battery plug
	Battery level too low	Charge the batter pack
	Battery enters temperature protection	Wait the temperature back to working condition
	Main cable fuse blown	Check all cables and replace fuse
	Key switch not properly engaged	Check key switch cable connection or replace new key switch
	DC Converter failure	Replace DC converter
	Battery failure	Repair or replace the battery at Surron after-sales points
Vehicle powered on but not moving	Side stand switch protection	Retract the side stand
	Brake override switch protection	Check brake signal switch
	Tilt switch is triggered and not reset	Turn off the key switch and turn on again, after lift up the motorcycle
	Throttle not in idle position when powered on	Check and adjust throttle travel
	Battery low level protection	Charge the battery pack
	Motor temperature too high	Stop riding and wait for the temperature cool down
	Controller temperature too high	
	Side stand switch failure	Disconnect or replace side stand switch
	Tilt switch failure	Disconnect or replace tilt switch

Fault Description	Possible Cause	Troubleshooting solution
Vehicle powered on but not moving	Throttle contact is poor or damaged	Replace throttle
	Controller plugs are in poor contact	Reinsert the plugs of the controller
	Motor encoder is in poor contact	Check motor encoder connection
	Controller or motor encoder failure	Repair/replace the controller or motor at Surron after-sales points
Vehicle powered on but no battery display	Battery indicator not connected properly	Repair or replace the battery at Surron after-sales points
	Battery indicator broken	Repair or replace the battery at Surron after-sales points
Charger not working	Battery enters temperature protection	Wait the temperature back to working condition
	The charger plug is in poor contact	Reinsert the charging plug
	Charger failure	Replace charger
	Battery failure	Repair or replace the battery at Surron after-sales points
Invalid riding mode/power limited	Battery level too low	Charge the battery pack
	Battery temperature protection	Wait the temperature back to working condition
	Motor or controller temperature too high	
	Riding mode switch broken	Replace riding mode switch
USB port no power	USB plug is in poor contact	Check USB plug connection
	USB converter failure	Replace USB converter

_____NOTE_____

We may update and supplement the above content, please get the latest version from your dealer or official website.

Troubleshooting

Condition of Warranty

Surron hereby warrants that a new Surron bike purchased from an authorized Surron dealer to be free from defect in materials and workmanship for the period of time stated herein, subject to certain limitations stated herein. This warranty applies only if the bike has been properly set up and serviced for pre-delivery by an authorized 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 bike. This warranty is void if the ONLINE OWNERS REGISTRATION/ DEALER PRE-DELIVERY INSPECTION has not been completed in full and entered into Surron Distributor website within 7days of purchase by the original selling dealer.

Period of Warranty for Surron Motorcycle

For Light Bee X version, off-road used but not used in competition:
Duration: 12 months from date of purchase or 10000 kilometers, whichever comes first.
Limitations: This warranty is not transferable and applies to the original purchaser only.

For Light Bee X version, racing motorcycle or used in any kind of competitions:
Duration: 30 days from date of purchase.
Limitations: This warranty is not transferable and applies to the original purchaser only.

Any Surron motorcycle utilized commercially in connection with generating income and/or is 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 by or used by Surron or a Surron authorized dealership's customers, members of the staff or press media, but have never been registered within the state, province, or country.
The warranty period is effective on the date of purchase by the Original Purchaser and remains in effect only as stated above.

Warranty Information

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 the battery chemistry, there is a normal, expected reduction in range/capacity that battery packs can yield over time and usage.
Depending on use and storage conditions, battery packs will degrade during the duration of this warranty time. Surron will only repair or replace pursuant to this warranty term a battery pack that exhibits a nominal storage capacity reduction of greater than 20% of the published nominal capacity, as measured by Surron or a Surron authorized 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.

Warranty Labor Coverage

Labor to replace parts that are covered by the Surron warranty and are found to be defective in material or workmanship is free of charge for the original purchaser. Warranty repairs must be performed only with the authorization of Surron. The cost of parts and labor involved in routine care and maintenance, as well as the replacement of parts due to normal wear and tear, use, or deterioration, are not covered. This includes, but is not limited to, items such as tires, brake pads and discs, drive belts, drive chains, fork seals, bearings, grips, foot pegs, and seats etc.

General Exclusions from Warranty

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

1. Lack of proper maintenance or contrary to the requirements described in the Owner's Manual.

2. Modification, alterations, and installation of parts that are not genuine Surron parts or

supplied as original equipment

3. Parts, components or battery pack damaged by use or operation under abnormal circumstances, damages due to accident, collision, abuse, neglect or exceeded use like competition level.

4. Modification, alterations, and installation of not genuine Surron or Surron authorized Power System like motor, gearbox, battery and MCU.

5. Normal wear components, including but not limited to the following: tires, rim, brake components spokes, drive chain, drive belt, handle grips, all bearings, all seals, all transmission gear, suspension valving/seals, all sprockets, foot pegs and seat.

6. Damage, malfunctions, or performance problems caused by continued operation of the motorcycle after an error code shown or other warning indicates a mechanical or operational problem.

7. Any cosmetic concerns that arise as a result of environmental conditions, owner abuse, misuse, such as, but not limited to, using not suitable liquid etc., lack of routine care and maintenance, and/or improper use.

8. Damages or malfunctioned to the component and electric system due to owner installing non genuine Surron parts or replacement parts not approved by Surron.

9. Damages to the paint, coatings or corrosion of metal parts due to external influences such as stones, salt. Fading or painted or metal coated surfaces.

10. Damage, malfunctions, or performance problems caused by fire, collision, accident, or improper storage

11. The tires installed on the Surron electric motorcycle. The original equipment tires are warranted separately by the tire manufacturer.
In addition, the Surron warranty is only for end-user customers and does not apply to motorcycles or accessories not imported or distributed by Surron or authorized by Surron.

Warranty Information

Owner Responsibility

1. The owner is responsible for reading and understanding the Owner's manual, this warranty term, and all product warnings before operating your Surron electric motorcycle. Maintaining the Surron electric motorcycle in accordance with the schedule printed in the Owner's manual.

2. The owner is responsible for the costs of maintenance to the motorcycle, including service at scheduled intervals.
Any service work done by the owner without any authorization from Surron will void the warranty. Perform all recommended and necessary routine care and maintenance and engage in proper use of your Surron electric motorcycle as detailed in the Owner's manual, failures caused directly by lack of maintenance or improper maintenance will void the warranty.

3. If warranty repairs are needed, they must be performed by an authorized Surron dealership with correct qualifications. The owner may be asked to provide the following documentation of proper maintenance: a maintenance record which displays the date of service and service work performed by an authorized dealer, copies of repair orders/ receipts.

4. The original registered owner, as documented on the Surron motorcycle warranty registration form, is responsible for conveying the Owner's Manual and all safety warnings, instructions, and Limited Warranty if the unit is sold, loaned, or otherwise transferred to another person.

5. The owner must return the Surron motorcycle or parts to an authorized Surron dealer within ten (10) working days after discovering any defective parts. Your Surron dealer should initially determine if the particular Surron component(s) in question are to be submitted to Surron for evaluation. All warranty work must be performed by an authorized Surron dealer.

6. The owner is responsible for performing all recommended and necessary routine care and maintenance, and for engaging in proper use of their Surron motorcycle and battery pack as detailed in the Owner's Manual including obtaining any firmware updates available at each

service interval or in a timely basis following a notification that a new update is available of which must be completed by an authorized Surron dealer. Learn and obey all federal, state, and local laws governing the operations of a motorcycle, generally and an electric motorcycle, specifically. When operating a Surron electric motorcycle, the owner must wear proper safety equipment and clothing at all times, including but not limited to a helmet, eye protection, and appropriate boots. Convey the Owner's Manual and all safety warnings, instructions, and Limited Warranty if the unit is sold, loaned, or otherwise transferred to another person.

7. Surron does not authorize any company or person to create a liability or any warranty obligation on behalf of Surron. Surron in its sole discretion will make the final disposition of any component(s) submitted for warranty evaluation. All parts and components returned to Surron, and replaced under this warranty 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. 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 are applicable to any product sold by Surron. The buyer and all other parties who contract with Surron hereby specifically and knowingly 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, 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 of time, or inconvenience. Surron has the right to continuously upgrade the design and electric system, including but 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. Some countries do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from country to country. The contents stated herein are subject to change without notice.

Warranty Information

How to Obtain Warranty Service

To receive any type of warranty service, take your Surron motorcycle and warranty registration proof to any authorized Surron dealer during normal service hours. If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform Surron or your Surron authorized dealer. If you fail to meet the conditions and scope of the warranty terms, we can still provide repair services upon your request for a certain charge. If you are unable to get satisfactory warranty service at a Surron dealer, or you are dissatisfied with a warranty decision, please write email to the following address:

service@qiulongtech.com

In order to assist you, we will need the following information:

-Your name, address, and phone number

-Product model and vehicle identification number (VIN number)

-Date of purchase

-Dealer name and address

-Nature of problem

Note:
We will complete the warranty work as soon as possible, but we are not responsible for delays in work caused by factors beyond our control. The aforementioned factors include but are not limited to: shortage of spare parts, delay in transportation, force majeure, etc.

Reporting Safety Defects

United States

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Surron. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Surron. To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at:

1-888-327-4236 (TTY:1-800-424-9153);
go to http://www.safercar.gov
or write to:
Administrator
National Highway Traffic Safety
1200 New Jersey Avenue SE
Washington, DC 20590
You can also obtain other information about motor vehicle safety from:
http://www.safercar.gov

Warranty Information

-FETCH LIGHT-飞起来-

After you have had your Light Bee electric motorcycle serviced, please make sure that the appropriate maintenance record has been completed. Use the space "Remark" to record issues you want to remind yourself about or mention at the next service.

100KM

Odometer Reading		Performed by		Date	

Maintenance Record

Remark

Annex

500KM

Odometer Reading		Performed by		Date	

Maintenance Record

Remark

1000KM

Odometer Reading		Performed by		Date	

Maintenance Record

Remark

Annex

2000KM

Odometer Reading		Performed by		Date	

Maintenance Record

Remark

5000KM

Odometer Reading		Performed by		Date	

Maintenance Record

Remark

10000KM|12months

Odometer Reading		Performed by		Date	

Maintenance Record

Remark

Light Bee Electric Motorcycle After-sales Record Sheet					
	Odometer Reading	Warranty Item	Performed by	Date	Remark
1					
2					
3					
4					
5					

Light Bee Electric Motorcycle After-sales Record Sheet					
	Odometer Reading	Warranty Item	Performed by	Date	Remark
6					
7					
8					
9					
10					

PARAMETERS LIST	
Vehicle model	QL4000DY-A
Dimension	1850x780x1080mm
Ground clearance	270mm
Seat height	830mm
Dry/Curb weight	57kg
Carrying capacity	100kg
Tire	Front Off-road-70/100-19 Rear Off-road-3.00-18
Assistance functions	Regenerative Braking (on SPORT mode)
Wheel base	1255mm
Front fork travel	200mm
Rear shock/wheel travel	85/210mm
Power system	PMSM+FOC sinewave controller
Rated power	4000w
Maximum power	8000W
Maximum torque	266N.m
Top speed	75km/h
Range	75km（@40km/h）
Battery Type	Lithium battery 60V/40Ah
Riding mode	SPORTS + ECO mode
Charge time	3h
Frame design	Aluminum forged frame

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 B 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.