

Cover Image

This manual will provide you a better understanding of your electric motorcycle.
Please take your time to read this manual carefully **and all safety labels before riding.**

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Introduction

1.1

Important Notice

Congratulations and thank you for purchasing SURRON STORM BEE electric motorcycle. We sincerely welcome you to the community of SURRON electric motorcycle riders.

This manual is designed to provide you **with** a better understanding of the operation, maintenance requirements and troubleshooting of your electric motorcycle. Please take your time to read this manual **carefully as well as all safety labels before riding**. Please **DO NOT** use it until you understand the **basic operation and features** of the STORM BEE electric motorcycle. **You can also find this manual to download on our official website <http://www.sur-ron.com>**. If there is any critical update, it will be released on the official website. Please visit our official website to get the latest version.

Please ensure that this manual stays with the motorcycle at all times, even when you resell it.

If you have any questions regarding the operation or maintenance of your motorcycle, please **contact the after-sales service department of Sur-ron at:**

service@qiulongtech.com

Warning: If the power supply is damaged or the charging system malfunctioned, please contact your authorized dealer designated by the manufacturer immediately for replacement or repair.

About This Manual

This Manual covers the following motorcycles:

STORM BEE R(road): All terrain version

ABS (optional)

Headlight and Indicators

All terrain tires (19-inch diameter front and 17-inch diameter rear)

STORM BEE E (enduro): Trail version

ABS (optional)

Headlight and Indicators

Off-road tire (21-inch diameter front and 18-inch diameter rear)

STORM BEE F (Off road): Off-road version

Off-road tire (21-inch diameter front and 18-inch diameter rear)

Riding tips for maximum range

Range varies in STORM BEE electric motorcycles similarly to how it varies in gas motorcycles. The range variety of STORM BEE electric motorcycles comes from the riding **application** 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 soft road, etc.). To achieve the maximum range with a single charge, please pay attention to reduce the maximum speed, less sudden acceleration and maintain a constant speed to ensure the maximum range.

To reach the maximum range, please following the tips below:

- Avoid frequent and acute acceleration and braking.
- **under safe riding conditions, please reduce the riding speed by using the throttle to decelerate instead of pulling the brake lever.** When your riding the STORM BEE, as long as the motorcycle is moving and the throttle is in the idle position, the energy regenerative brake will reduce the speed of the STORM BEE and converting the kinetic energy to charge the battery pack.
- Maintain a correct tire pressure (Please refer to **Recommended tire pressure table** page10.9.)
- Remove unnecessary goods and reduce load.
- The maximum range in winter or summer could be slightly different.

In conclusion, you can estimate your range according to the above factors and your riding habits.

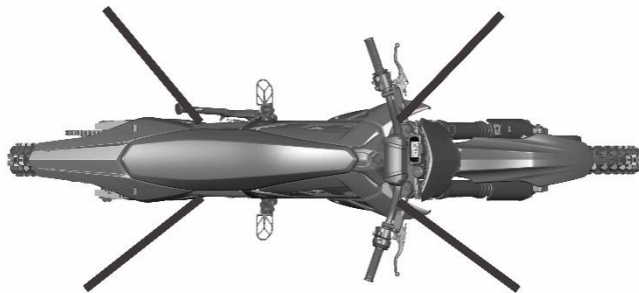
Note: The range will be reduced according to the various tough road conditions during off-road riding.

1.10

Transporting

It is highly recommended that the electric motorcycle be firmly secured on the transport frame using ratchet straps while it is being transported. It is recommended that the soft straps must be used to reduces 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. Please do not damage the chain or brake line when tied the strap. The tie down straps should be at a 45° angle from the motorcycle. Follow the manufactures instructions for the ratchet straps you are using.



2.1

Safety Riding Requirement

Your electric motorcycle can provide many years of service and pleasure if you take responsibility for your own safety and understand the challenges you can meet while riding. **There is a lot you can do to protect yourself whilst riding. You will find many helpful recommendations throughout this manual. The following are a few that we consider to be most important.**

- STORM BEE is a high performance electric motorcycle and should be treated with extreme caution.
 - Proper safety gear, including a regionally/nationally approved helmet, riding boots, eyewear, 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.**
 - Read all warnings and instructions in this manual as well as all the safety labels before operating your electric motorcycle.
 - Never **allow** a guest to ride your electric motorcycle without proper instruction.
 - **Ensure you have the legal qualification to ride the motorcycle before operation.**
 - **Never consume alcohol or drugs before operation of your electric motorcycle.**
 - Persons unwilling or unable to take responsibility for their actions should not use this motorcycle. You assume all responsibility while operating your motorcycle. The seller assumes no liability for misuse or operator negligence.
 - Prior to each use, the rider must check everything in the “check before ride” section on page 7.1, and the charge level of the battery pack as indicated on the dashboard display charge indicator.
-
- It is important to keep your motorcycle properly maintained and in safe riding condition. Having a breakdown can be difficult, especially if you are stranded off-road far from your base. To help avoid problems, inspect your motorcycle before every ride and perform all recommended maintenance according to the maintenance schedule and adjustment

requirements listed in this manual. Be sure you understand the importance of checking all items thoroughly before riding. If you are the STORM BEE off-road version owner, please understand your motorcycle is designed and manufactured for off-road use only. The tires are not made for **paved surface** use and the motorcycle does not have Turn indicators **or** other features required for use on public roads. If you need to cross a paved or public road, get off and walk your motorcycle across.

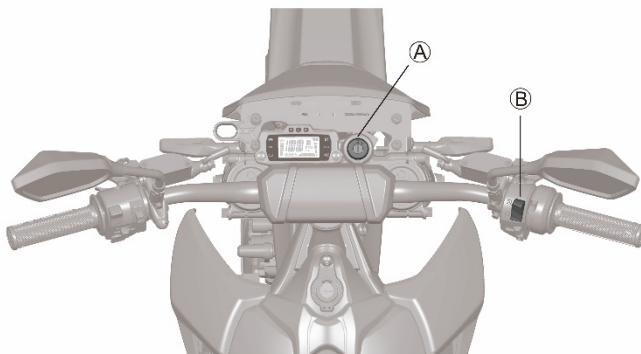
- Modifications to the motorcycle may render the motorcycle unsafe and may cause severe personal injury. The manufacturer cannot be held liable for non-approved modifications.
- Be very careful when loading or adding accessories to your motorcycle. Large, bulky, or heavy items may adversely affect the handling and performance of your motorcycle.

2.2

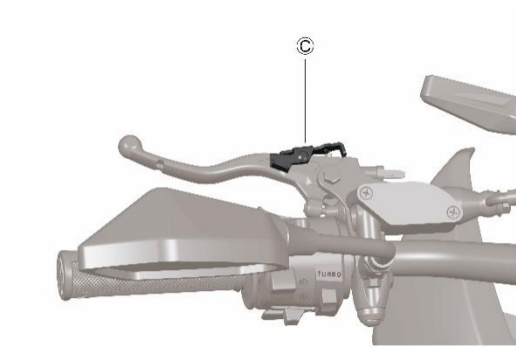
Important Information

Several important operation considerations are listed below:

- Always turn the key switch(A) and motor stop 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 it is completely silent. An accident can occur if the motorcycle is left powered up while getting on or off the motorcycle.



- Turn the motor stop switch (B) OFF when pushing or moving the motorcycle.
- Use the parking brake (C) when you are stopped on a ramp or steep hill. Do not hold partial throttle to keep the motorcycle stationary on a ramp or steep hill, it can trigger the locked rotor protection which cause the motorcycle to slip back.



- Please recharge the battery pack of your electric motorcycle after each use. Once fully charged, disconnect from AC power supply. Make sure that the charging is carried out in an open space or with monitoring.
- While unplugged with the key in the OFF position, the motorcycles electronic components will consume a small amount of power and the battery pack will drain extremely slowly. If you don't ride for an extended period of time (30 days or more), you may need to charge the electric motorcycle for a few hours prior to your next ride. **The battery pack will be damaged if it is stored for a long time under low power.**

CAUTION: Only charge the STORM BEE battery pack with the motorcycle's original charger or the manufacture approved accessory charger.

- The battery pack does not require nor benefit from deep discharging. To get the most battery pack life, recharge the battery pack after each ride. Constantly leaving a battery pack in a deep discharging state will cause battery cell damage.
- Failure to follow battery pack storage and charging instructions as described in this Manual may void the warranty of your STORM BEE electric Motorcycle. These guidelines have been rigorously tested to ensure maximum battery pack efficiency and service.

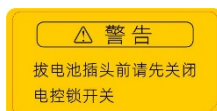
Location of Important Lables

2.4

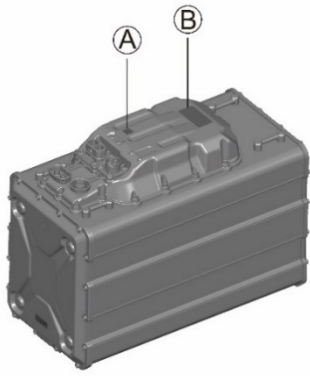
High Voltage Warning Label A



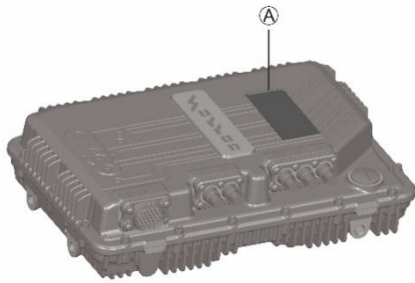
Battery pack Warning Label B



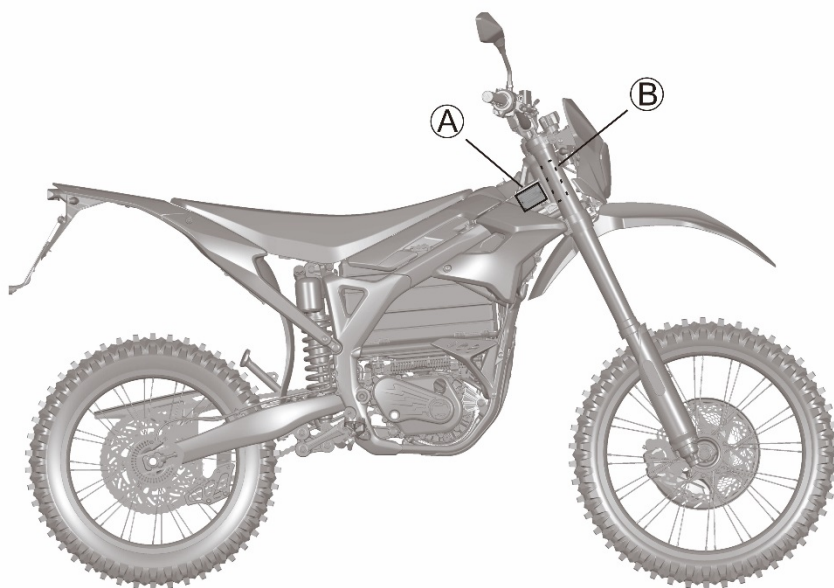
Warning: Please turn off the key switch before unplugging the battery.



2.5
Controller Label A

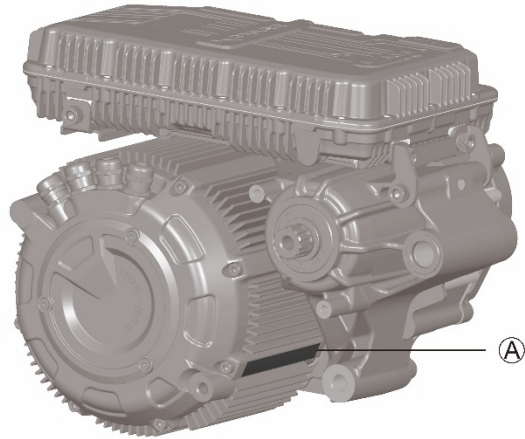


2.6
VIN label (A) The motorcycle chassis number information (B)



2.7

Motor Serial Number (A)

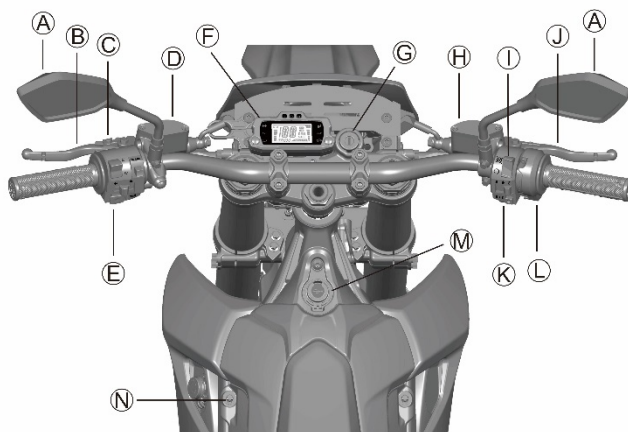


The motorcycle may have the following information for different sale region models:

- A. VIN label (Australia) – certification label
- B. VIN label (North American) – certification label
- C. VIN label (European Union) – certification label
- D. Tire and loading information label
- E. VIN label

Operation and Component Locations

3.1



A. Mirrors

This STROM BEE electric motorcycle is equipped with convex mirrors. A convex mirror has a curved surface. Convex mirrors offer a greater field of view than a similar flat mirror. However,

the greater field of view makes objects seem further away than they really are. Care must be used when judging the distance of objects seen in these mirrors.

B. Rear Brake Lever

For description and operation, see "Feature Introduction" , on page 6.1.

C. Parking Brake Lever

For description and operation, see "Feature Introduction" , on page 6.2.

D. Rear Brake Fluid Reservoir

For description and operation, see "Maintenance" , on page 10.5.

E. Left Handlebar Control

For description and operation, see "Feature Introduction" , on page 6.1.

F. Dashboard

For description and operation, see "Display and Indicator" , on page 4.1. and "Feature Setting" , on page 5.1.

G. Key Switch/Steering Lock

For description and operation, see "Starting and Operating" , on page 7.2.

H. Front Brake Fluid Reservoir

For description and operation, see "Maintenance" , on page 10.6.

I. Motor Stop Switch

For description and operation, see "Feature Introduction" , on page 6.3.

J. Front Brake Lever

For description and operation, see "Feature Introduction" , on page 6.3.

K. Right Handlebar Control

For description and operation, see "Feature Introduction" , on page 6.3.

L. Throttle grip

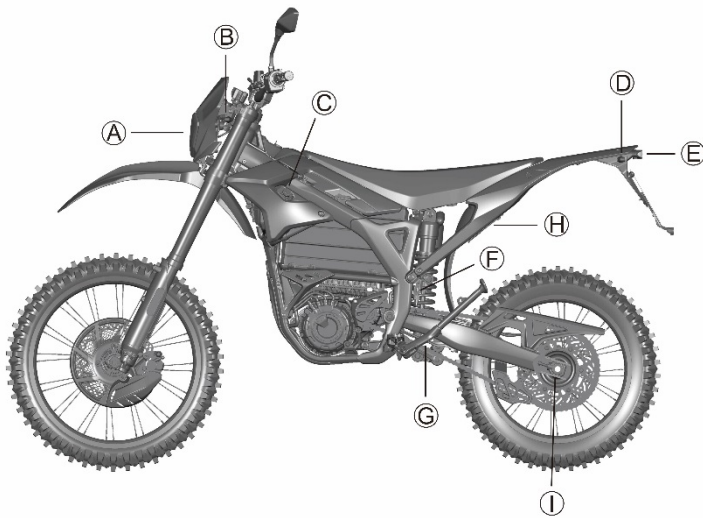
For description and operation, see "Feature Introduction" , on page 6.3.

M.USB port

5V 2.4A USB port.

N. Seat Installation bolt

Fix the seat on the frame, see "Feature Introduction" , on page 6.3.



3.5

A. Headlight

- For headlight operation, see “Feature Introduction” , on page 6.2.
- For headlight replacement, see “Maintenance” , on page 10.12.
- For headlight alignment, see “Maintenance” , on page 10.11.

B. Front Turn Indicator

- For turn indicator operation, see “Feature Introduction” , on page 6.2.
- For turn indicator replacement, see “Maintenance” , on page 10.12.

C. Integrated Charging port

- For description and operation, see “Power Management” , on page 8.2.

D. Rear Turn Indicator

- For rear turn indicator operation, see “Feature Introduction” , on page 6.2.
- For rear turn indicator replacement, see “Maintenance” , on page 10.12.

•E. Brake/Tail/License plate Light

- For Brake/Tail/License plate Light replacement, see “Maintenance” , on page 10.12.

F. Sidestand Switch

- This switch is a safety feature that prevents motor operation when the sidestand is down. If the sidestand were down when riding it could contact the ground causing you to lose control of the motorcycle and cause personal injury.

CAUTION: Park only on a flat firm surface, otherwise the motorcycle could fall over causing damage.

G. Sidestand

- The sidestand supports the motorcycle when parked. The key switch should be in the OFF position when parked.

H. Sidestand strap

- This strap is a safety feature that prevents the sidestand down when riding causing you to lose control of the motorcycle and cause personal injury.

I. Chain Adjuster

- Located on left and right side. See “Maintenance” , on page 10.9.

Feature Introduction

3.6



3.7

A. Battery pack

For description and operation, see "Power Management" , on page 8.1.

B. Controller

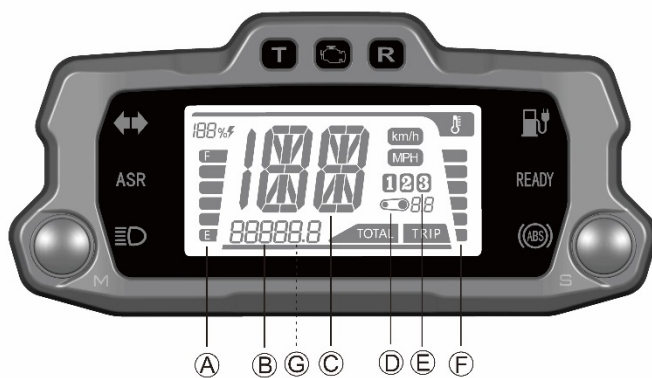
For description and operation, see "Power System Management" , on page 9.1.

C. Motor and Reduction gearbox

For description and operation, see "Power System Management" , on page 9.1.

Display and Indicator

3.8 Dashboard Overview



3.9

A. Charge Indicator

This indicator and readout display the amount of energy remaining in the battery pack similar to the fuel gauge on a gasoline powered motorcycle.

B. Odometer

The odometer displays the total distance the motorcycle has been ridden in kilometers or miles.

C. Speedometer

The speedometer is a digital display in either kilometers per hour (km/h) or miles per hour (mph).

For description and operation, see "Feature Setting" , on page 5.2.

D. Transmission ratio Display

It displays the current transmission ratio of STORM BEE electric motorcycle.

E. Riding mode

This area displays the riding mode (1,2,3) corresponding to the Riding mode of ECO, RAIN and SPORT. The Riding mode button is located on the right handlebar assembly.

For description and operation, see "Feature Introduction" , on page 6.3.

F. Temperature Indicator

The temperature indicator is on the right side of the LCD dashboard display, indicating the temperature of the motor, controller and battery pack. When the temperature of one of these components exceeds the rated temperature limit, the temperature indicator will flash. For description and operation, see "Starting and Operating" , on page 7.4.

G. Warning Code Display

When the motorcycle fails, the corresponding Warning Code will be displayed. For Warning Code, see "Troubleshooting" on page 11.4

Display and Indicator

3.10



3.11

A. TURBO Mode Indicator



This indicator shows the working state of turbo mode. The indicator will **dissappear** when turbo mode is not available. The indicator illuminates when turbo mode is available. If the indicator is flashing slowly, turbo mode is in use. If the indicator is flashing fast, turbo mode is about to end.

B. System Warning Indicator



There are two working states for the system warning indicator light. An orange flashing light indicates the power down state and if a fault has been detected, the indicator illuminates a solid orange light. See “Troubleshooting” for detailed Warning Code, on page 11.4.

C. Reverse mode indicator (R)



The indicator illuminates when the motorcycle is in reverse mode; the indicator **dissapers** when the motorcycle is out of reverse mode.

D. Turn indicator



Once the Turn indicator is switched on, the Turn indicator remains flashing until the Turn indicator request has been canceled.

E. ASR indicator



The Acceleration Slip Regulation feature is turned on and off by the ASR switch, and the

ASR indicator turns on and off accordingly. When the Acceleration Slip Regulation (ASR)

feature of the motorcycle is in the locked on state, this indicator illuminates. When the ASR indicator flashes, both the signal of the speed sensor and the ASR feature is abnormal. Please

check whether the gap between the wheel speed sensor and the code disk is in the range of 0.8 ~ 1.2mm, and whether the wheel speed sensor is abnormal

F. High Beam Indicator



When the headlight high beam is on, this indicator illuminates blue, and remains on until the high beam is turned off.

G. Low Power Indicator



When the power of the battery pack is low (SOC < 20%), the low power indicator flashes. If the power is very low (SOC < 10%), the indicator stays on.

H. Ready Indicator



It indicates that the motorcycle is ready to move if the throttle control is twisted.

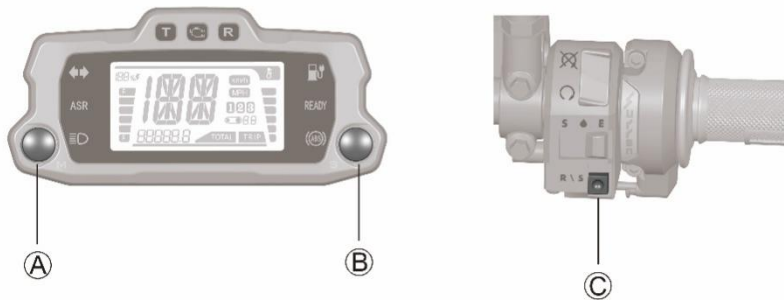
I. ABS (Anti-Lock Brake System) Indicator



The indicator illuminates or flashes when ABS system fails or is in the OFF mode. For description and operation, see "Starting and Operating" , on page 7.5.

Feature Setting

3.12 Dashboard Setting



The features and displays on the dashboard can be customized to your personal preferences by using the **MODE** and **SEL** buttons combined with the **R\S** button on the Handlebar Control

A. Mode Button (MODE)

By momentarily pressing or holding the **MODE** button you can reset fields and toggle through the trip menus and display options.

B. Select Button (SEL)

To select the corresponding feature by **pressing SEL** button when entering the feature menu.

C. Reverse mode\Switch setting button R\S

To set different feature by **R\S** button when entering the system feature mode. The **R\S** button can switch the ASR level during normal riding.

Display - Odometer



Select total or trip mileage:

1. To select the display of total or trip distances, momentarily press the **MODE** button when the dashboard in its normal operating mode and the speed is 0km/h.
2. Trip mileage and maximum speed are displayed synchronously. The speedometer displays the current speed during riding.
3. **TOTAL** is displayed in dashboard when selecting the total mileage.
4. **TRIP** is displayed in dashboard when selecting the trip mileage.

Reset trip mileage and maximum speed:

To reset the trip mileage and maximum speed simultaneously by pressing and holding the **SEL** button for more than 2secs in the trip mileage mode, when the the dashboard in its normal

operating mode and the speed is 0km/h.

Unit Display – Speed




Select English(MPH) or metric (km/h):

1. Press and hold the **MODE** button with the dashboard off and turn the key switch ON whilst still holding the mode button for more than 2s with the dashboard in its normal operating. Then select English (MPH) or metric (km/h).
2. **MPH** is displayed when selecting English (MPH).
3. **km/h** is displayed when selecting metric (km/h).

Display - Transmission ratio



Transmission ratio setting:

Press and hold the **SEL** button with the dashboard off and turn the key switch ON whilst still holding the SEL button for more than 2s with the dashboard in its normal operating. Then enter into the transmission ratio setting mode, and "  ## " flashes at a frequency of 1/sec. To adjust the transmission ratio by momentarily press **MODE** to decrease by 0.1, or **SEL** button to increase by 0.1. Press and hold **SEL** button for more than 2 seconds to save the current setting.

Example: The factory stock rear tire is 18-inch, factory configured rear sprocket is 52 gears, and factory configured front small sprocket is 14 gears.

Rear Wheel size (inch)	No. of Rear Sprocket teeth	Transmission ratio
≥19	52	0.9
18	52	1.0
18	≥57	1.1

System Feature Setting

System Feature Mode Display



Note:

Display one of the English letters in field A (Different English letters are displayed according to different feature modes)

Display one of the Numbers in field B (Different Numbers are displayed according to different feature modes)

System Feature Mode Setting:

MODE button and **SEL** button in dashboard: Press the two buttons at the same time to enter the system feature setting mode and the first feature (stay on) of the dashboard is displayed. Press and hold the **R/S** button in Right Handlebar Control to select **X** in the feature **menu** to exit the **System Feature Mode**, or exit automatically without any operation for 10 seconds.

Momentarily press **R/S** button in Right Handlebar Control: Cycle through the current **menu**

Press and hold **R/S** button in Right Handlebar Control: enter the **setting menu** of the currently selected feature **menu** or select the current setting and return to the feature **menu**

feature **menu** display mode: always on (display the setting for the current feature, and initially display BX when entering)

setting menu display mode: flashing (display the setting for the current feature when entering)

The features are listed as follows:

①Level setting of brake energy regenerative feature (B0 B1 B2 B3 B4 B5) Factory default at B2 (feature is disabled in B0, and strengthens in turn from B1 to B5)

②Level setting of slide energy regenerative feature (E0 E1 E2 E3 E4 E5) Factory default at E3 (feature is disabled in E3, and strengthens in turn from E1 to E5)

③Level setting of ASR feature (A1 A2 A3) Factory default at A2 (feature strengthens in turn from A1 to A3)

④Setting of e-brake feature (P0 P1) Factory default at P1 (feature is disabled in P0, and Activated in P1)

⑤Setting of tilt protection feature (C0 C1) Factory default C1 (feature is disabled in C0, and

Activated in C1)

⑥Reserved feature (F0 F1 F2) Factory default at F0 (feature is disabled in F0, and strengthens in turn from F1 to F2)

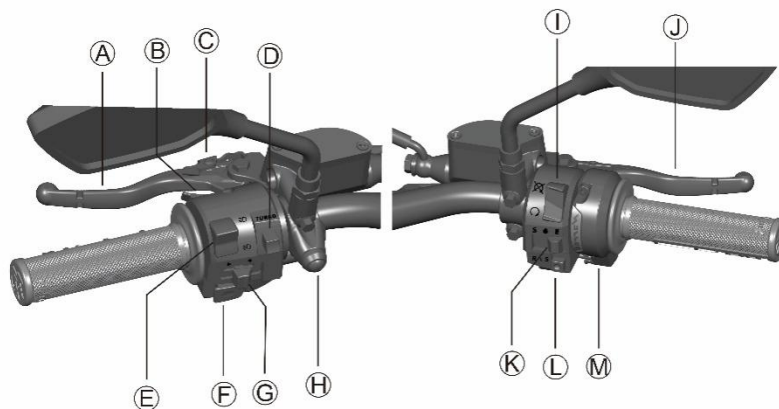
⑦Exit System Feature Mode Setting (X)

Warning: it is recommended to turn off the tilt protection in off road environment, to avoid the loss of power due to the triggering of tilt protection when performing some jump tricks.

功能介绍 Feature Introduction

3.16

车把控件 Handlebar controls



3.17

A. Rear brake handle

When you **pull** the handle backwards, it will control the rear brake system. When braking, the throttle should be in the idle position. The brake lights are also lit.

B. Acceleration Slip Regulation switch (ASR switch)

The Acceleration Slip Regulation (or called traction control) is set by the ASR switch in the left-hand handle switch and the **R/S** button of the right-hand handle switch, as the current motorcycle ASR setting.

- ① **ASR switch**: located behind the left-hand handle control, trigger switch.
- ② Regular no pressing: ASR off
- ③ Regular long pressing: ASR is turned on and in the setted ASR value

- ④ Short press 3 times in a row: ASR is turned on, and locked in current state; switching between active and disable.

If you short press 3 times again, ASR will be turned off.

(1) ASR level setting key: also **Switch setting button R/S**, located in front of the right-hand handle switch, trigger switch. When the dashboard in the normal condition, the **R/S** button can switch between ASR setting level.

① Short press once: display the current ASR setting level;

② quick short press twice: The ASR setting will be leveled up and display on the dashboard; keep press **R/S** button will made the ASR level cyclically between display A1 ~ A3, please refer to page 5.4 for the specific setting method.

C. Parking brake

When parking on a slope, **apply the locking brake** to prevent the motorcycle from slipping. For instructions and operations, please refer to page 6.4 of "**Feature Introduction**".

D. Turbo Switch

The Turbo switch is the red button on the left handle switch. **When the electric motorcycle is in the sport mode, press the Turbo switch and the electric motorcycle will instantly output the maximum power.** The Turbo mode is only valid in the sport mode, follow " One full throttle, limited activate time, limited interval time" principle.

Specifically, When the motorcycle is in the sports mode and the electric motorcycle met the operating conditions of Turbo mode, the Turbo mode indicator on the dashboard will stay on. Press the Turbo mode switch and the Turbo mode is triggered, and the Turbo mode indicator on the dashboard will flashing slowly. When Turbo mode activated for a certain period of time (about 10 seconds), the Turbo mode indicator will flash rapidly, and the controller will automatically exit Turbo mode after another 10 seconds, then the Turbo mode indicator goes out, and back to normal operation condition. It will take about another 10 seconds to reboot, and re-use the Turbo mode again.

E. Headlight high/low beam switch

When the switch is pressed, the headlight changes from low beam to high beam. It remains in the selected position until it is switched back. When in the high beam position, the high beam indicator on the **dashboard** lights up.

F. Horn button

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

G. Turn indicator switch

When you push the Turn indicator switch to the left or right, the corresponding front and rear Turn indicators will flash. When the Turn indicator light switch is turned on, the Turn indicator light is on.

Be sure to turn and other operations in accordance with the law. Unlike cars, turn indicators must always be manually cancelled on **Sur-ron** electric motorcycles.

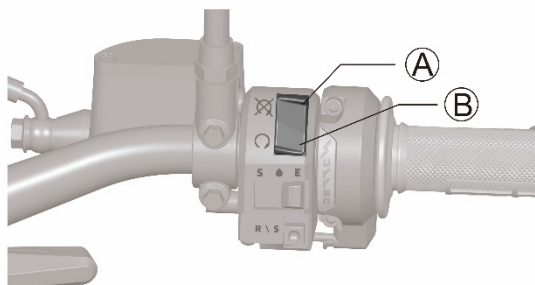
Press the switch and it will return to the off position (middle).

H. ABS Switch

For operations and instructions, see " Starting and Operating " page 7.6.

I. motor switch

When the top ○A of the switch is pressed, it will cut off the power supply for operation signal. The controller remains in the state of no power output until the bottom ○B of the switch is pressed. The switch does not close all operation electrical circuits, only the operating of the motor.



J. Front brake handle

When you **pull** the handle backwards, it controls the front braking system. When braking, the acceleration handle should be in the idle position. The brake lights are also lit.

K. Riding mode button

For instructions and operations, please refer to page 6.4 of "**Feature Introduction**".

L. Reverse mode\Switch setting button R/S

For instructions and operations of the function setting, please refer to page 5.1 of "**Function Setting**".

Reverse mode: When the throttle is in idle position and the electric motorcycle speed is 0km/h, press and hold the R/S function key and do not release it. The reverse indicator **R** on the dashboard will light up, and the electric motorcycle will enter the reverse mode. Twist the **throttle** and the motorcycle starts to reverse; once it enters the reverse mode, releasing the R/S button will instantly cut off the power. **Only when the R/S button is released and the throttle is reset to zero will the reverse mode be exited and the forward gear mode will be functionally again.**

M. Throttle control

Rotate the **throttle** handle counterclockwise to accelerate the motorcycle.

When the electric motorcycle is in the riding state, the kinetic energy regenerative system (KERS) will be activated when the ebrake is suddenly activated or the throttle position is back to idle. KERS will generate electric energy from the riding motorcycle then stored in the battery

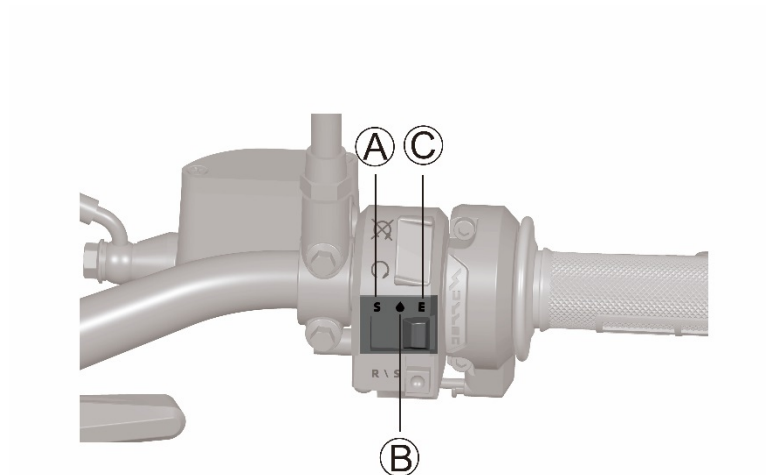
pack, thereby helping to improve energy efficiency and increase the range. A slight resistance is felt when KERS is activated. The KERS level can be changed in the **System Feature Mode**, see page 5.4 for details.



Feature Introduction

3.18

Riding mode button



The Riding mode buttons include sports mode ○A, rain mode ○B and ECO mode ○C. You can switch between Riding mode while riding.

1. Sports mode ○A

This mode has strongest power output and acceleration ability. It is highly recommended that users **only** use this mode after familiarizing themselves with the motorcycle.

2. Rain mode ○B

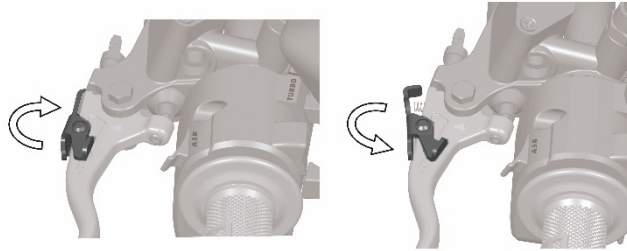
In this mode, the power is **reduced**, and the ASR function is turned on and stay on by default, which can effectively prevent the motorcycle from slipping.

3. ECO mode ○C

In this mode, the power and acceleration ability are much **reduced**, the electric motorcycle is much easier to ride and maximized the cruise range.

3.21

Parking brake operation



Your Storm Bee electric motorcycle is equipped with a parking system. When activated, the parking system will prevent the electric motorcycle from rolling forward or backward.

A. Parking system on

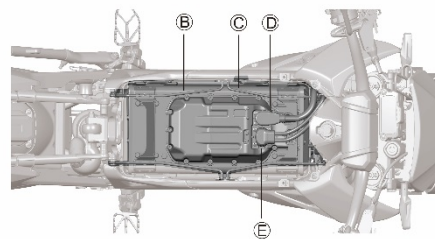
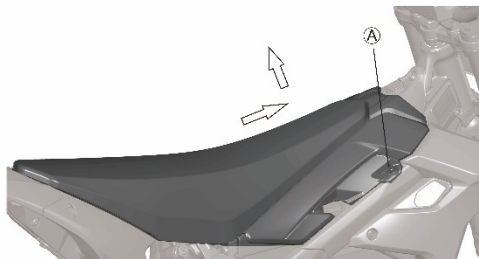
Pull the rear brake **lever**, push the parking brake lever into the gap between the brake **lever** and the brake **lever housing**, and release the rear brake **lever**.

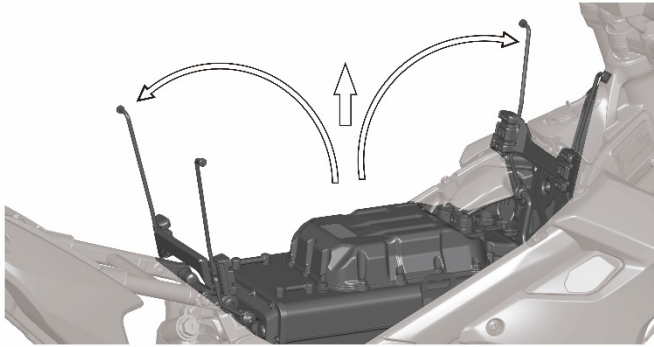
B. Parking system off

Pull the rear brake lever, the parking brake lever will automatically pop out of the gap between the rear brake **lever** and the rear **brake lever housing**.

3.22

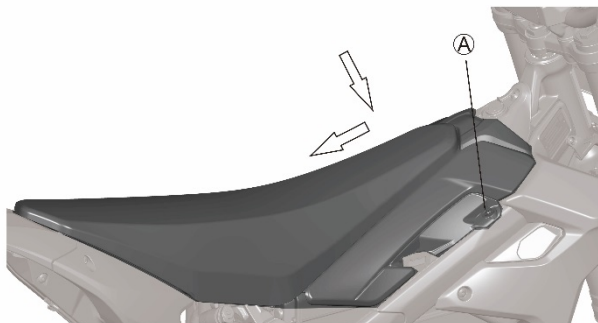
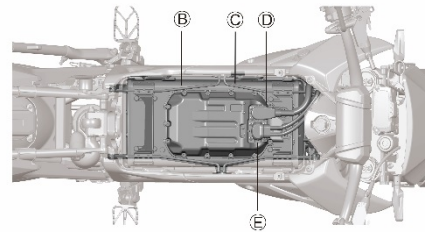
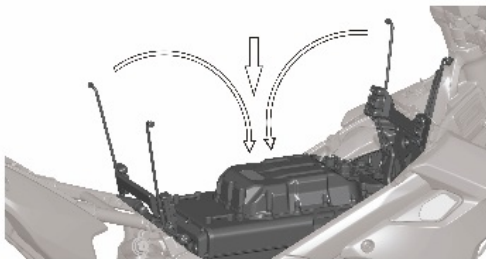
Battery pack disassembly and assembly





Battery pack **removal**

1. Use a portable tool to remove the two mounting screws of the front support cover of the seat
2. Push the seat and the front support cover of the seat forward first according to the arrow showing on the diagram, and then lift the seat upwards along the arrow.
3. First remove the charging plug ○D and then remove the discharge plug ○E
4. Remove the front compression bracket ○C of the battery pack and the rear compression bracket ○B of the battery pack from the fixed lugs and rotate them to the corresponding positions according to the arrow showing on the diagram.
5. Lift the battery pack up to remove the battery pack and put in the safe position.



Battery pack installation

1. Put the battery pack in the battery compartment
2. Press the the front compression bracket ○C of the battery pack and the rear compression bracket ○B of the battery pack to the fixed lugs
3. plug the battery pack discharge plug ○E back in first, then plug the charging plug ○D next
4. Install the seat back in according to the arrow showing on the diagram, first put the the seat on the frame and push the seat backward along the arrow direction to fix the seat hook on the subframe.
5. Use a portable tool to install the two mounting screws of the front support cover of the seat ○A

Warning: Before removal and installation of the battery pack on the electric motorcycle, the key switch must be in the OFF position, so that the whole motorcycle is in no power condition

Warning: Do not change the installation steps of the charging plug and the discharge plug at will. As the battery pack are high-voltage components, the wrong installation steps may cause serious injury.

Starting and Operating

4.1

Check before riding

Before operating the electric motorcycle, please check the following item to ensure that the electric motorcycle is in operational condition

•Battery pack

Check that the battery level displayed on the battery pack or dashboard is sufficient to support your riding. We recommend you to full charge before use

• Chain

Check the chain tension and condition. Adjust or replace if necessary. See "Chain" on page 10.9

•Brake system

Pull the brake lever and push the motorcycle to see if the front and rear wheels are 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 is move smoothly and return to idle freely.

• Tyre

Check the tire pressure and tread depth of the tires.

Check the cold tire pressure, maintain the correct tire pressure, and check for damage and abnormal wear of the tire. As described on page 10.8, when the tread depth is less than 2 mm, please replace the tire immediately.

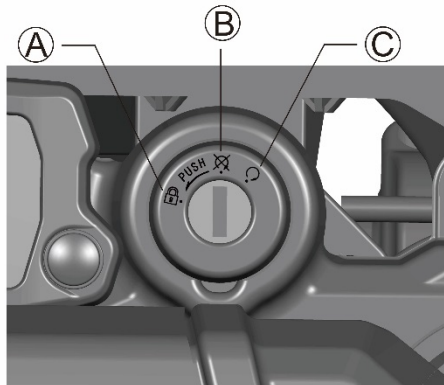
Warning! Unusual tire pressure is a common reason that cause of tire failure, and may cause severe tires issues or loss the control of the electric motorcycle, which may result in serious personal injury. Check the tires regularly to ensure proper tire condition.

• Electrical System

Check whether the headlights, turn indicator lights and brake lights/tail lights are functioning properly

4.2

Key Switch / Steering lock



This is a three-position key switch located above the front fork and in front of the handlebar.

The switch positions are as follows (the off-road version equipped a two-position switch):

1. steering lock ○A (off-road version does not have this function)
2. OFF ○B
3. ON ○C

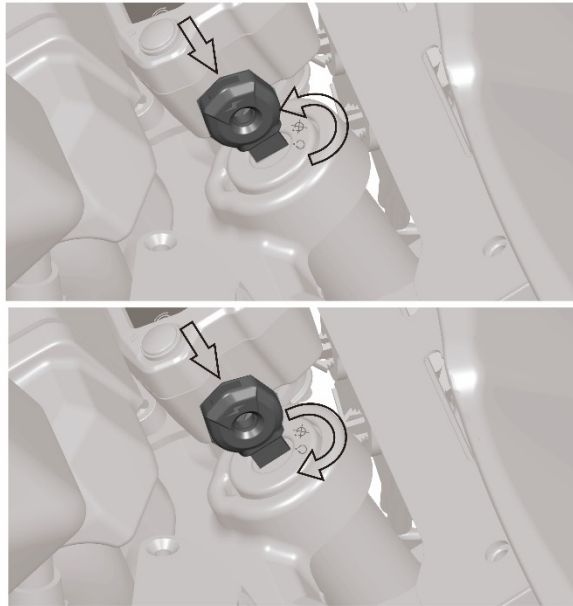
The key should be removed from the electric motorcycle when parking to prevent motorcycle been stolen. The key can be removed in the OFF or **steering** lock position.

Steering lock

Using a **steering** lock when parking can prevent unauthorized use and help prevent motorcycle been stolen.

Operating the Steering lock:

1. Rotate the handlebar to the extreme left position.
2. With the key in the OFF position, press the key downward and then turn the key counterclockwise to the lock position.
3. Remove the key.



Unlock the **steering** lock:

1. Insert the key, press down and turn clockwise.

OFF position

This position is used to turn off the Storm Bee electric motorcycle, thereby disable all the electrical system.

ON position

This position is used to operate the Stormbee electric motorcycle. The following visible instruments will lights on when you turn the key switch ON:

- Headlights turns on
- Dashboard display turns on

Starting and Operating

4.4

Riding a Storm Bee electric motorcycle

This section gives you a general idea of how to operate the electric motorcycle safely

Starting

1. Turn the **key switch** to the ON position.
2. Confirm the battery percentage display on the dashboard.
3. Press the motor switch to the start position.
4. Gently squeeze the left brake **lever** to make sure that the parking brake is unlocked.

After confirming that there are no obstacles and passing vehicles in the surrounding area, retract the sidestand, gently squeeze the brake **lever** to enter the READY mode, and the green READY light on the dashboard will light up, and twist **throttle** inward (counter clockwise) to increase the speed; when the **throttle is rotated outwards**, the motorcycle speed decreases.

Braking

The brake **levers** are located on the left and right handlebars

When you pull the right brake lever, it controls the front brake.

When you pull the left brake lever, it controls the rear brake.

Warning! If ABS is disabled or cannot be operated, apply too much force to the brakes which will cause the wheels to lock up. This may cause you to lose control of the electric motorcycle and may result in serious injury or death.

Progressive use of the brakes and control of the operating force on the brake lever will gradually stop the electric motorcycle without locking the wheels. Your electric motorcycle is a powerful vehicle, so it is strongly recommended that you practice adequately, and familiar with all the safe emergency stop operation.

Park the Storm Bee electric motorcycle

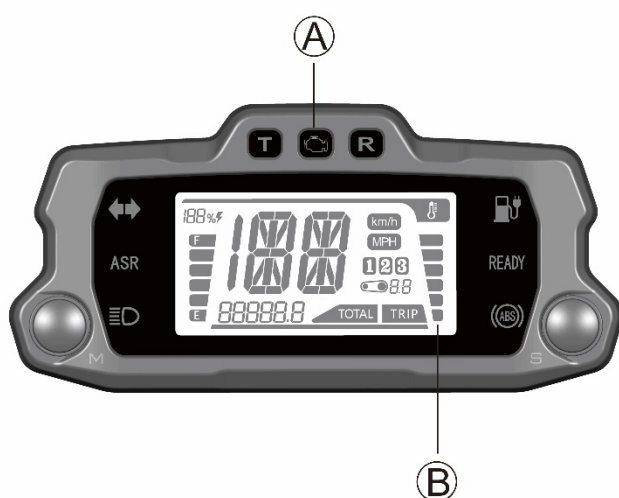
1. When the throttle is in the closed position, press the motor switch to the closed position. The switch can also be used to turn off the motor in an emergency.
2. Turn the key switch to the OFF position and remove the key, and keep it in a safe place.
3. Lock the parking brake to prevent the motorcycle from moving due to the gradient (it is recommended to use the parking brake when parking on flat ground and slope, this is a good parking habit).
4. After each ride, please check the power and charge the battery pack in time.

4.5

Temperature indicator

The air-cooled electric power system of the Storm Bee electric motorcycle has a simple and reliable structure, but high-power density, light weight design and easy maintenance advantage. Long-term continuous operation at high power/high speed will result in high temperature of the power system.

Therefore, your Storm Bee electric motorcycle will self-monitoring the temperature of each component of the power system to ensure the power system operating through a comprehensive multiple thermal management strategy.



Temperature indicator on the dashboard ○B

The indicator had two information states:

- In Phase 1, when riding the electric motorcycle, the temperature indicator progress bar will gradually increase until the entire temperature indicator ○B flashes, and the orange system warning indicator ○A above the dashboard will also start flashing, and tell you the Storm electric motorcycle is about to enter the temperature protection mode. To prevent the motorcycle from forced reducing its power, you can choose to slow down and riding smoothly or switch to ECO mode until the indicator light stops flashing.
- Phase 2 If the temperature continues to rise, the orange system warning indicator ○A above the dashboard will stay on to inform you that the electric motorcycle is now enter a temperature protection strategy, and the power of the Storm Bee electric motorcycle will be reduced accordingly.

Starting and Operating

4.6

ABS (Anti-lock braking system)

Warning! The ABS anti-lock braking system maximizes the braking efficiency in emergency situations and the safety during riding. Under certain conditions, ABS can shorten the braking distance, but it cannot replace good riding habits.

Warning! Please ride safely and respect the legal speed limit on the road.

Warning! Ride cautiously when turning. If you braking while turning, ABS may not be able to offset the centrifugal force of inertia. Such activities will cause unsafe riding and easily cause accidents. Certain riding conditions and environments may reduce the braking efficiency of ABS and make its braking distance equal to that of a motorcycle without ABS.

1、 ABS Switching ON/OFF conditions

- ① The whole motorcycle is powered on;
- ② The speed of the front and rear wheels of the motorcycle is zero;
- ③ The electric motorcycle is in non-diagnostic mode.

ABS operation method

- ① After turn the Key switched ON, ABS is turned on by default;
- ② When the ABS is in the OFF condition, the ABS indicator flashes at a frequency of 1.2 second, when the ABS is in the ON condition, the ABS indicator is off;
- ③ When the ABS switch is pressed for more than 3s and not released within 5s, the ABS ON/OFF switch request will be ignored and the ABS keeps the current state;
- ④ When the ABS switch is pressed for more than 30s, the ECU of the ABS regards the switch signal as a fault signal, and the ABS returns to default ON state. The ABS can only be turned OFF after the power is switched on again.

4.7

Disable ABS

1. In the parking state, put down the sidestand;

2. Place the **motor** switch in the OFF position;
3. Turn the key switch to the ON position;
4. Press and hold the ABS switch for 3 seconds and then release, the rear wheels ABS function is now turned off, and the ABS indicator light flashes at a frequency of 0.2 second; Then press and hold the ABS switch again for 3 seconds and release it, and the ABS function will switch back to ON state; press and hold the ABS switch again for 3 seconds, now all ABS functions are turned OFF, and the ABS warning light flashes at a frequency of 1.2 second.

Warning! When ABS is disabled, the electric motorcycle will be able to operate as a motorcycle without ABS function, and the braking distance may increase

Caution: When the ABS system is disabled, the ABS indicator will continue to flash (1.2 second a time).

Reactivate ABS

1. **Every time the key switch is turned ON**, the ABS system is activated by default.
2. Activating and deactivating the ABS system are the same operations, which can restore the ABS system from the OFF state to the ON state.

ABS indicator

- ① When the ABS system detects a fault, the ABS fault indicator will light up. If the fault is eliminated, the ABS warning light will disappear when the motorcycle speed reaches 5km/h in the current states or turn ON the key switch and reaches the speed of 5km/h next time;
- ② When the ABS is in the ON mode and the speed of your electric motorcycle reaches 5km/h, the ABS indicator light goes out,
- ③ When the ABS is in the off mode, the ABS warning light flashes at a frequency of 1 time/sec;
- ④ When the ABS switch is pressed, the ABS warning light flashes at a frequency of 2.5 times/sec, but when the ABS switch is pressed for more than 30s, the ABS warning light is always on;
- ⑤ When the ABS is in the diagnosis mode, the ABS warning light is on.

Warning! When your Storm Bee electric motorcycle exceeds 5km/h, if the ABS indicator light is still on, It indicates that the ABS system is malfunctioning, and the ABS may not work normally. Please contact the authorized dealer or manufacturer for after-sales repair in time. When the ABS system does not work, your Stormbee electric motorcycle will operate as a motorcycle without ABS, which may increase the braking distance and may cause unpredictable conditions.

4.8

Warning! ABS work requires comparing the relative speed of the front and rear wheels. Failure to use the tires specified by the manufacturer may adversely affect the ABS function and the braking distance of the Stormbee electric motorcycle

Warning! If the speed of the front and rear wheels changes greatly, such as during a **wheel lock up** or off-road riding, the ABS indicator will light up and ABS will be disabled.

Caution: To reactivate the ABS, please stop the Storm Bee electric motorcycle completely, then turn **the key switch** key to the off position, wait for about 5s, and then return it to the ON position. Once both wheels reach 5km/h and are fully functional, the ABS light should go out

Starting and Operating

4.9

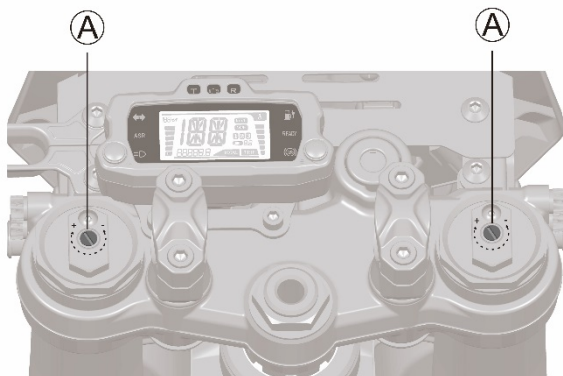
Front fork adjustment

Compression damping——FASTACE、KKE

Use a flat-blade screwdriver to turn the screws ○A on the top of the left and right front fork to adjust the compression damping. The symbol "+" means hard (large compression damping), and the symbol "-" means soft (small compression damping).

- Turn the adjusting screw ○A clockwise in the "+" direction to increase the compression damping.
- Turn the adjusting screw ○A counterclockwise in the "-" direction to reduce the compression damping.

Caution: Try to keep the damping adjustment balanced.

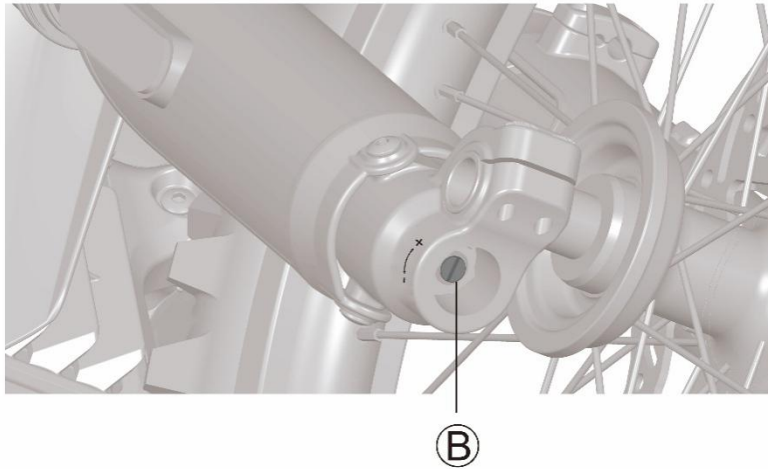


Caution: The appearance of front fork in different brands may be different, please refer to the actual product.

Rebound damping——FASTACE、KKE

Adjust the rebound damping by turning the screws ○B at the bottom of the left and right front fork with a flat-blade screwdriver. The symbol "+" means hard (slower rebound), and the symbol "-" means softer (faster rebound).

- Turn the rebound adjusting screw ○B clockwise in the "+" direction to reduce the rebound speed.
- Turn the rebound adjusting screw ○B counterclockwise in the "-" direction to increase the rebound speed.



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

Caution: The damping and spring preload should be adjusted reasonably according to the road conditions and the weight of the rider. **Avoid** adjusting the damping to the maximum limit value, otherwise the front fork may malfunction or even cause a crash.

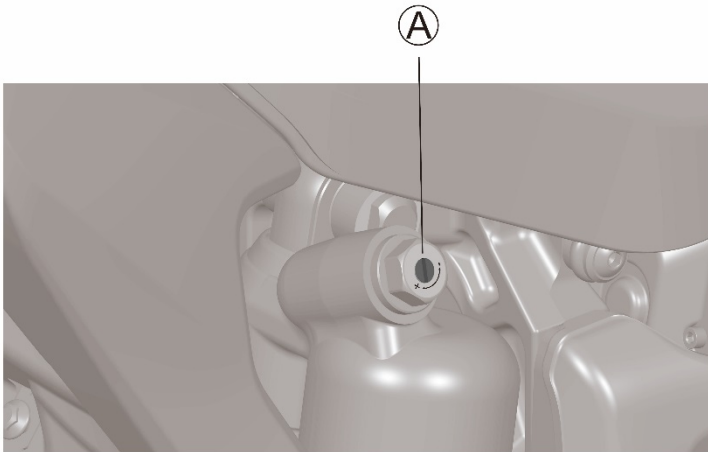
4.10

Rear shock adjustment

Compression adjustment—FASTACE, KKE

The compression adjustment screw is located on the top right side of the rear shock absorber. "+" is printed on the adjusting screw to indicate hard (large compression damping) and "-" indicates soft (small compression damping).

- Turn the adjusting screw ○A clockwise in the "+" direction to increase the compression damping.
- Turn the adjusting screw ○A counterclockwise in the "-" direction to reduce the compression damping.

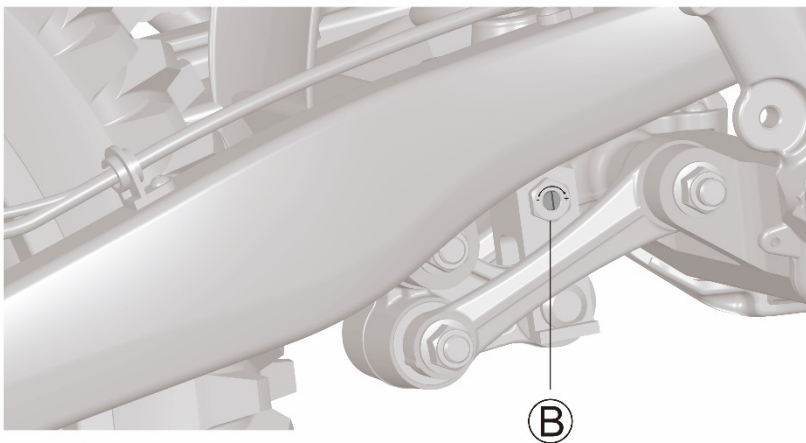


Note: The appearance of rear shock absorber in different brands may be different, please refer to the actual product.

Rebound adjustment—FASTACE, KKE

The rebound adjustment screw $\circ B$ is located at the bottom of the rear shock absorber. "+" printed on the adjustment screw means hard (slower rebound), "-" means soft (faster rebound)

- Turn the rebound adjusting screw $\circ B$ clockwise in the "+" direction to reduce the rebound speed.
- Turn the rebound adjusting screw $\circ B$ counterclockwise in the "-" direction to increase the rebound speed.

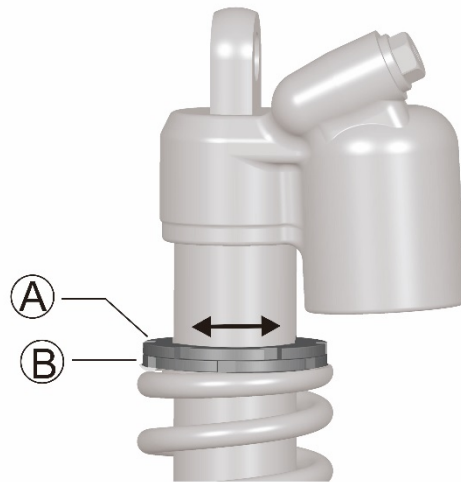


Note: The appearance of rear shock absorber in different brands may be different, please refer to the actual product.

Rear shock preload adjustment—FASTACE, KKE

1. Loosen the spring lock ring $\circ A$.
2. Use an adjusting wrench to turn the adjusting ring $\circ B$.

3. Rotate the adjusting ring ⓐ counterclockwise to reduce the preload on the spring and rotate the adjusting ring ⓑ clockwise to increase the preload of the spring.



Note: The appearance of rear shock absorber in different brands may be different, please refer to the actual product.

Note: The damping and spring preload should be adjusted reasonably according to the road conditions and the weight of the rider. **Avoid** adjusting the damping to the maximum limit value, otherwise the shock absorber may malfunction or even cause a crash.

Power management

5.1

Battery pack

The Storm Bee Motorcycle uses high-performance high rated lithium battery which can be used in the ambient temperature range of $-20^{\circ}\text{C}\sim 50^{\circ}\text{C}$, the best working condition is when ambient temperature is between $10^{\circ}\text{C}\sim 30^{\circ}\text{C}$. Too low or too high ambient temperature will affect the battery pack performance and service life. **warning** Do not use it at temperatures beyond the allowable range, and do not charge the battery pack below 0°C .

The charge time of the battery pack is about 4h at normal ambient temperature.

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

When battery pack not in use for a long time, please charge the battery percentage to about 60%~80%, and you will need to check the remaining battery percentage every month. If the battery percentage drops below 30%, it must be recharged to 60% ~ 80%.

It is strictly forbidden to wash the battery pack with a high-pressure water pump, let alone 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 ingressed in to battery pack or battery pack had other issues, it is strictly forbidden to charge the whole motorcycle or battery pack again. It may cause the risk of fire, combustion and explosion of the battery pack.

The battery pack is water resistant and sealed with a high voltage circuit inside. If the external structure is damaged this 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 customers to disassemble the battery pack, to avoid potential damage and serious danger.


Power supply and charging

5.4

Before charging, please check whether the input voltage range of the charger is consistent with the grid voltage, AC 95 ~ 125V / 190 ~ 250V.

Before charging, please check whether the load power of AC power network socket can meet the power requirements of charger.

When charging, please connect the battery pack first, and then connect the AC power input plug. If you plug in the AC power first and then connect to the motorcycle battery pack, the charger can not charge normally.

You can directly plug the charger into the battery charging port  on the portside of the motorcycle or plug the charger into the charging socket B of the removed battery pack to charge.

The charger will turn off automatically when it is fully charged. Please disconnect the power supply of the charger and unplug the charging plug.

When charging, please put it in a safe place beyond reach of children.

·Avoid using the battery pack when it has just reached full charge. It is recommended to let it cool down for 10 minutes or longer after it is fully charged.

·It is forbidden to cover any object when charging. This charger is for indoor use. Please use it in a dry and well ventilated environment.

·After charging, please put the rubber cap of charging socket back on.

Warning! Always charge the battery pack in a well ventilated place away from any fire hazard. If you want to charge the electric motorcycle outdoors, do not charging in the rain or humidity condition.

Warning! The battery pack can only be charged with a special charger supplied with the original motorcycle manufacturer or specified by the manufacturer. The use of unauthorized chargers or accessories may cause damage or failure of the battery pack, or even cause danger.

Warning! Do not charge the battery pack below 0 °C, otherwise it will damage the battery pack. It can only be charge after the temperature of the battery pack rises back to above 0 °C. The maximum allowable charging temperature inside the battery pack is 60 ° C. If the internal temperature of the battery pack exceeds this temperature, it can only be charged after cooling to below 60 ° C. If the battery pack is discharged rapidly due to heavy duty riding, the internal temperature of the battery pack may still be higher than 60 ° C even if the ambient temperature is low.

Warning! The battery pack is only allowed to return to normal temperature by itself. Do not use other methods to raise or lower the temperature of the battery pack.

Warning! The battery pack may not be able to charge immediately after high power output or high temperature operation. The battery pack should cool down for 30 minutes or longer before charging. The battery management policy does not allow charging when the internal temperature is high, otherwise the battery life will be shortened.

Serious warning! When you find the following situations, please stop charging immediately, disconnect the power supply, and do not use the electric motorcycle. Contact the after-sales service or send it to the maintenance Office for maintenance as soon as possible.

·The appearance of the battery pack is damaged.

·Strange smell during charging.

·The temperature of the battery pack or charger is too high and unable to cooling down by itself.

·Charging can not be complete for a long time.

·If the battery pack is on fire, please throw the battery pack into the water to prevent more damage

5.5 power system

The Storm Bee Electric Motorcycle power system include controller, motor and a reduction gearbox.

Warning: Motor is designed to be sealed and water resistant. The customer is not allowed to disassemble the motor without permission, otherwise may cause the position sensor malfunction or damage the corresponding seal which can lead to motor malfunction.

Warning: there is gear oil inside the reduction gearbox. Please ensure that the gear oil level is in recommended position during the operation. Users are not allowed to disassemble the reduction gearbox without permission.

Warning: The controller is a precision high voltage electronic component. Incorrect wiring may cause damage to the controller. Do not disassemble the controller and cable without permission, otherwise it will cause electric shock, burn and other serious accidents.

Warning: The power system of the Storm Bee Electric Motorcycle must be repaired or replaced by a professional technician authorized by the manufacturer. Users are not allowed to disassemble and modified the power system of the Storm Bee Electric Motorcycle without permission.

5.6 Terminal box

A1 (black) controller negative terminal

A2(red) controller positive terminal

A3(yellow) controller phase U terminal

A4(green) controller phase V terminal

A5(blue) controller phase W terminal

B1(black) negative power terminal

B2(red) positive power terminal

C1(yellow) motor phase U terminal

C2(green) motor phase V terminal

C3(blue) motor phase W terminal

Warning: Power cables had 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 recommended torque requirements and cable insulation also meet the requirements. Do not disassemble the power cable without any permission.

Warning: The power system is 90V high voltage system and the power cable is in orange colour. No matter the motorcycle is in operation, repair and maintenance or cleaning, it is necessary to ensure that the electric motorcycle is well isolated.