ARCTORA ProLight RS

Manual

www.arctora.com

Create a Limitless World of Outdoor Adventure

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⚠ Warning

- Do not ride through deep water as it can damage the battery, motor, or cause personal injury.
- Always wear a protective helmet and comply with local traffic regulations when riding.
- Do not operate the vehicle if the battery cover is not securely fastened.
- When washing the bike, ensure the charging port cover is closed and do not use high-pressure water to clean the battery or electrical components.

IMPORTANT SAFETY INFORMATION:

- **Read and understand this manual completely before operating the vehicle.**
- **This vehicle is intended for riders aged 16 and above.**
- **Failure to follow safety instructions may result in serious injury and void the warranty.**

Contents

Welcome

⚠ WARNING

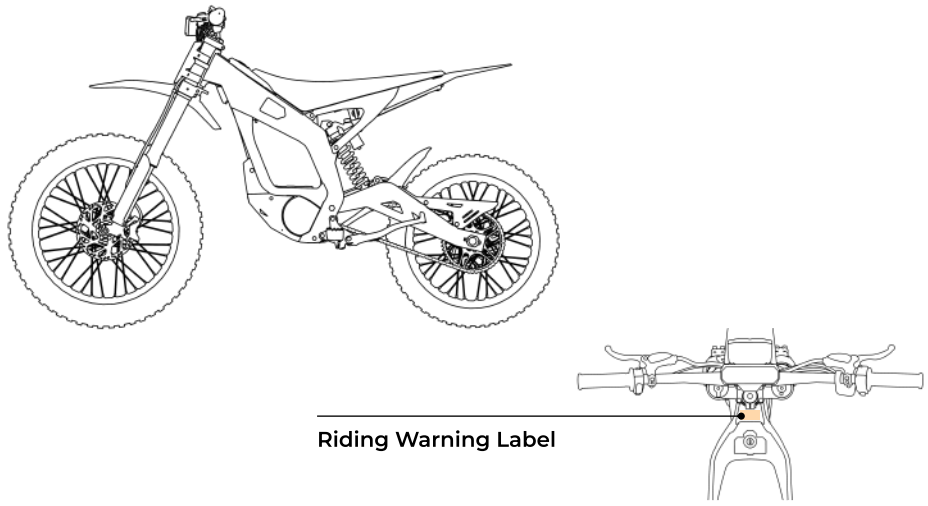
- It is strictly forbidden to wade in deep water, otherwise it may damage the battery or even cause personal injury. When riding, please wear a safety helmet and obey traffic rules.
- Please do not drive the vehicle when the seat is not locked.
- It is strictly forbidden to use a high-pressure water gun to wash the inside of the battery hatch.

To ensure your safety and optimal performance, please read this manual thoroughly before operating the vehicle and retain it in a safe, accessible location.

IMPORTANT: Do not operate this electric dirt bike until you

- Fully understand its performance characteristics
- Are familiar with all operational procedures
- Have completed the pre-ride inspection checklist
- Understand all maintenance requirements

Important Label Locations



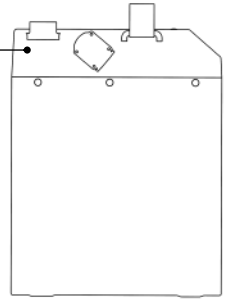
ⓘ Note

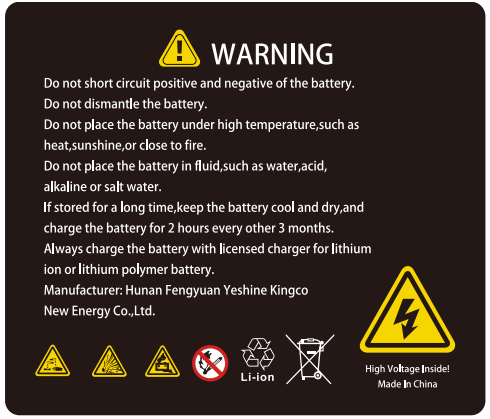
The images and illustrations in this manual are for reference purposes only and may not reflect the exact appearance of your specific model. Please refer to your actual product for precise details regarding appearance, features, and functionality.

REGULATORY COMPLIANCE: This product may be subject to local regulations. Please check with local authorities regarding usage requirements in your area.

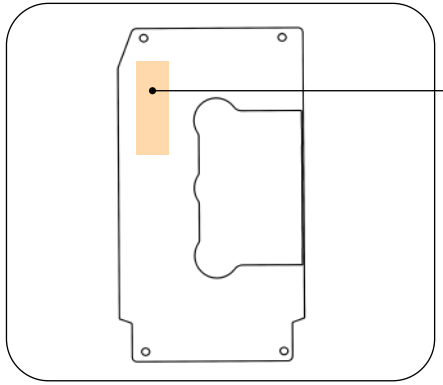
Important Label Locations

Battery Warning Label

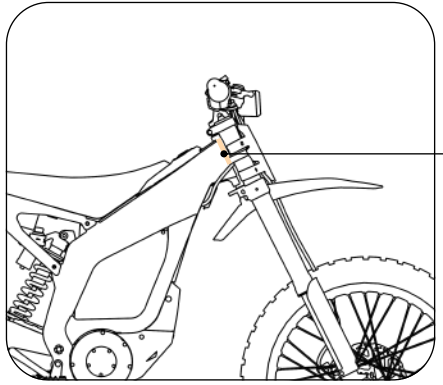




Important Label Locations



Controller Label



VIN Location

Safety Instructions

- Please use the bicycle in accordance with local laws and regulations.
- You are responsible for understanding and adhering to the laws and traffic rules in your area. Persons under 18 years old are strictly prohibited from operating this product.
- Before using this product, it is recommended to have the necessary motorcycle riding license or to have undergone professional training and be proficient in motorcycle riding skills.
- Before you ride, please thoroughly read this manual and practice in a safe area to fully grasp the riding techniques and become familiar with the bike's components.This is fundamental for safe riding.
- Do not lend the bike to individuals without riding experience to prevent injury. Always wear the appropriate riding helmet and protective gear while riding.
- Do not park in building lobbies, evacuation stairways, corridors, or at emergency exits. When charging, keep the product away from flammable materials, and do not charge for extended periods.
- This product is designed for single rider use only. Do not carry additional passengers or cargo.
- When riding, please wear bright-colored clothing. Ensure that your attire allows full range of motion, is not tight-fitting, and has no open cuffs. Avoid riding in sandals or high heels. This product contains numerous electrical components; do not expose it to rain for extended periods.
- Car Wash Precautions: When washing the bike, remove the battery first. Do not use a high-pressure water gun on the battery or other electrical components.
- Do not submerge the battery in water (damage to the battery’s exterior may impair its waterproof performance). Avoid wading deeper than the wheel hubs to prevent water from entering the battery, which could cause internal short circuits and permanent battery failure. Under these conditions, do not recharge the vehicle or battery, as it poses a risk of fire and combustion.
- If the bike emits unusual noises or alarm notifications, immediately cease use and contact our customer service hotline for professional guidance or repair and maintenance services.

⚠ Warning

For your safety, any unauthorized modifications to the product will void the warranty. For replacement parts, please contact customer service!

Riding Environment Requirements

- Avoid riding in severe weather conditions or when extremely fatigued. Riding in rain or snow can increase braking distances. In cases of heavy rain or severe weather, try to avoid riding altogether.
- Exercise caution and drive slowly on complex terrain. High-speed riding over obstacles, uneven surfaces, slippery roads, loose materials, steep slopes, or sharp turns can lead to loss of control, collisions, falls, or injuries.
- Avoid riding in heavy rain or on waterlogged roads. If the water level exceeds the center of the wheels, it may affect the motor and brakes. The bike can be used in rain or snow, but prolonged deep water exposure should be avoided. It is recommended to keep water depth below 200mm.
- The operating temperature for this product is 14 to 113°F, and the storage temperature is -14 to 122°F, with a recommended storage temperature of 50 to 86°F. Please do not store or operate the product outside these temperature ranges.

Riding Requirements: (The following individuals should not operate this product)

1. under 18 years of age
2. Pregnant women or individuals who are unable to engage in strenuous physical activities due to illness
3. Individuals under the influence of alcohol or drugs
4. Individuals exceeding the weight limit specified (see "**Model Specifications**").

Pre-ride Inspection

- Check the tires: Ensure there are no cracks, unusual wear, or embedded objects such as nails, stones, or glass. For optimal riding performance, check tire pressure: (Front tire: 175-225 kPa; Rear tire: 235-280 kPa.)
- Check for loose axle screws.
- Check Handlebars and Wheel Stability: Ensure that the handlebars are secure and that the front and rear wheels are stable with no wobbling, allowing for normal operation. Check that reflectors are not damaged or contaminated.
- Inspect the power circuit and lighting system. Ensure that both the front and rear brake systems are operational.
- Make sure the battery level meets the riding requirements.
- Check the spoke tension; tighten any loose spokes to 4N·m-6N·m.
- Ensure the throttle operates smoothly without sticking.
- Chain condition: The chain should have a 10-20mm play. If it is sticking, clean off any dirt and sand.
- Clean the front fork stanchions and rear shock absorber piston rod to remove any dirt.
- Verify that both front and rear brakes function properly and ensure that the brake cable are undamaged.

Riding Instructions

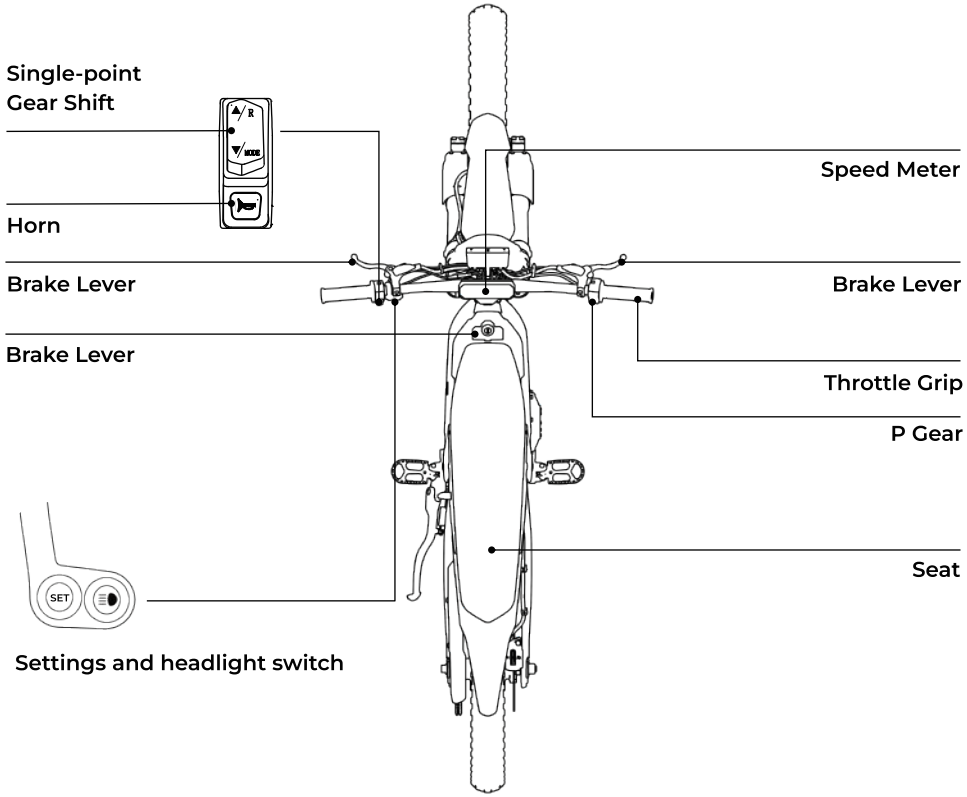
- Do not use mobile phones, cameras, or headphones while riding.
- It is recommended to ride in a controlled and safe environment while wearing appropriate protective gear. Avoid riding in public places or on motor vehicle roads.
- Avoid rapid acceleration and deceleration to conserve battery power, protect components, and extend the bike's range and lifespan.
- If you notice any abnormalities while riding, stop immediately. Do not use the bike until the issue has been identified and resolved. Please contact customer service promptly.

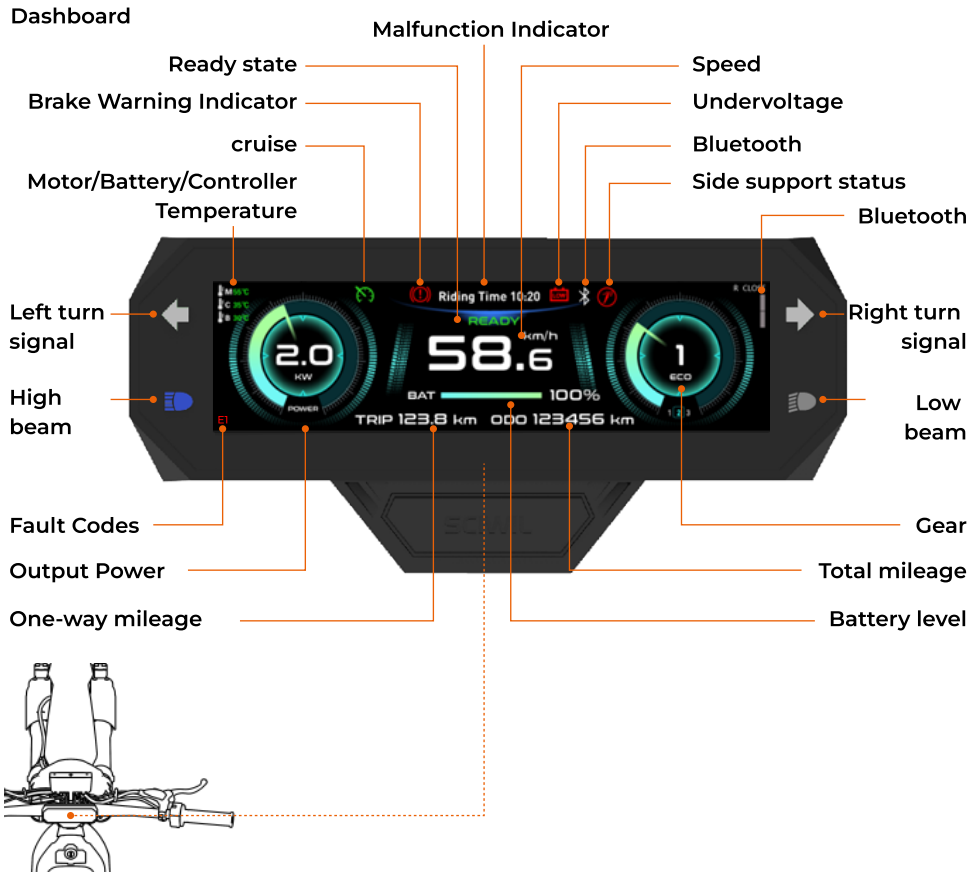
Usage Instructions

- When not in use, park the bike on a flat surface and turn off the power. Avoid parking on slopes or soft ground to prevent tipping.
- Always use the provided lithium battery charger. The charger input voltage is 110-240V. Before charging, let the product sit idle. Do not charge if the charger or charging port is wet. Avoid charging or parking in prohibited areas. Keep the charging area clear of flammable materials and disconnect the power promptly after charging is complete.
- Do not charge the battery when the temperature is below 32°F, as this may damage the battery. Wait until the battery temperature has risen before charging.

Function Diagram

Please identify the various parts of the bike body according to the markings in the picture and familiarize yourself with the bike.





Functional area introduction:

Status: Displays real-time status, including Bluetooth, headlight, brake, undervoltage, steering, cruise, side stand status, etc.

Battery display: Displays remaining battery power;

Multi-function display area: Total mileage ODO, single mileage TRIP, maximum speed MAX, average speed AVG, riding time TIME, voltage VOL, power, current;

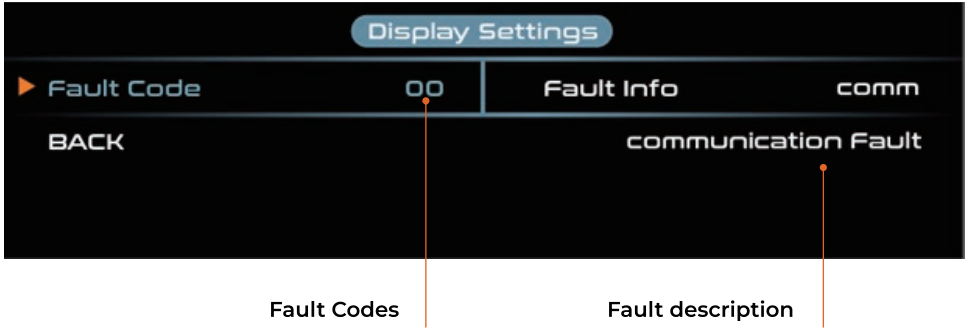
Gear: ECO/SPORT/RACE gear;

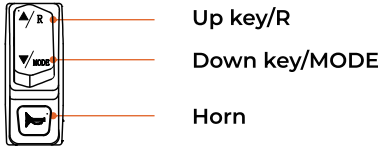
⚠ Warning

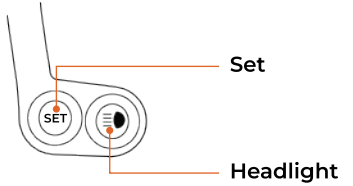
- Pay attention to safety during use, and do not plug or unplug the meter when it is powered on;
- Try to avoid using it in harsh environments, such as heavy rain, heavy snow, and strong sunlight;
- Try to avoid bumping the meter;
- The meter uses a waterproof film, please do not tear it off to avoid affecting the waterproof performance of the meter;
- Regarding the background parameter settings of the meter, please do not change them at will, otherwise normal riding cannot be guaranteed;
- When the meter cannot be used normally, it should be sent for repair as soon as possible.

Settings interface

Settings interface







The key operation instructions are as follows:

Long press: means long press the key for more than 2 seconds;

Short press: means short press the key for less than 0.5 seconds;

Double click: means short press the key twice for a total time of less than 0.3 seconds;

Power on/off

Key on: When the instrument panel is off, turn on the key and the instrument panel lights up.

Button shutdown: When the instrument is powered on, press and hold the [SET button] for more than 1 second to turn off the instrument panel.

Key shutdown: When the instrument is powered on, turn off the key to turn off the instrument panel.

Gear Switching

Short press [Down key/MODE] to switch gears;

3 gear modes: 0/1/2/3, when the display is 0, there is no power output

Kinetic Energy Recovery

When the device is powered on, short press [Up Button/R] to switch kinetic energy recovery to R1 (50%) / R2 (100%) / R CLOSE (off).

Setting Instructions:

1. Enter the setting menu: In the power-on state, double-click the [SET key] to enter the parameter setting interface. The parameters that can be set include: brightness, metric-imperial switching, battery display, speed ratio, etc. (see 4.2 Settings)
2. Adjust parameters: In the setting interface, short press [up key/R] or [down key/MODE] to switch the setting items. Short press the [SET key] to enter a parameter setting. At this time, you can short press [up key/R] or [down key/MODE] to add or subtract the setting value. The parameter will flash after modification. After selecting the set value, short press the [SET key] to save and switch to the next setting parameter at the same time.
3. Save and exit the setting menu: After modifying the parameters, double-click the [SET key] again to exit the menu setting and save the modified parameters. If there is no key operation, the menu will automatically exit and save the modified parameters after 10 seconds.

Metric/Imperial:

System Unit, press the button to switch between Metric (km/h) / Imperial (mph) display, set metric / imperial.

Metric/Imperial

System Unit, press the button to switch between Metric (km/h) / Imperial (mph) display, set metric / imperial.

Backlight brightness

Brightness, button position selection, I is the darkest backlight, IIIII is the brightest.

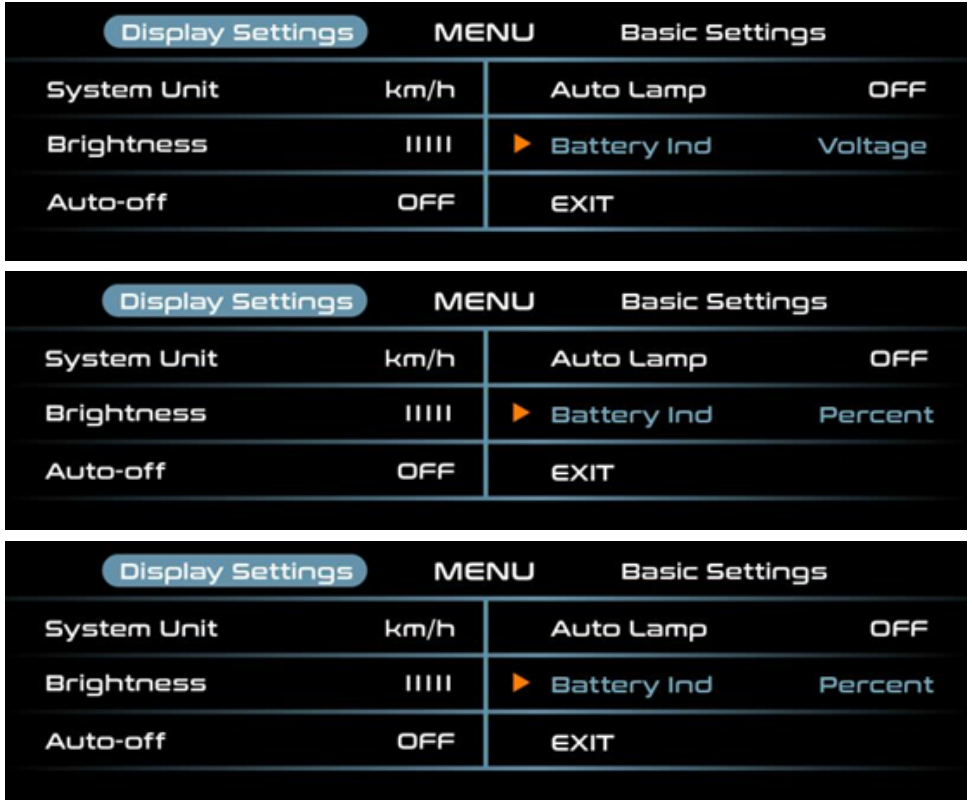
Automatic shutdown time

Auto-off, key position selection 1~10min, represents the automatic shutdown minutes, the default is 5min.

Automatic headlight selection

Auto Lamp, press the button to select OFF/ON, and set the headlights to turn on automatically.

Battery Ind



Battery Ind, press the button to select Voltage /Percent / OFF, the meter power indicator position will display voltage value / power percentage / turn off the display.

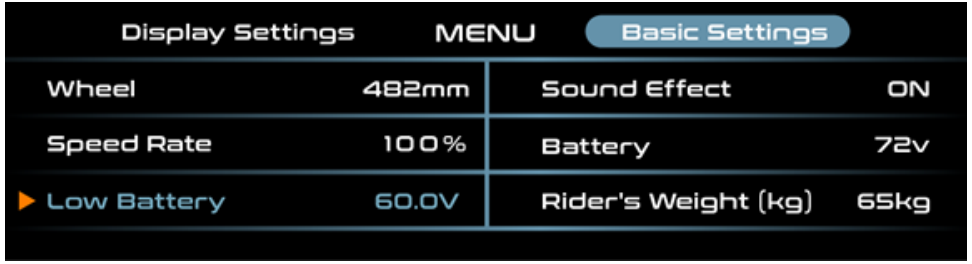
Wheel diameter selection

Wheel, button adjustment: default 26 inches, precision 0.1; wrong wheel diameter selection will lead to abnormal speed. Unit: inch

Speed ratio setting

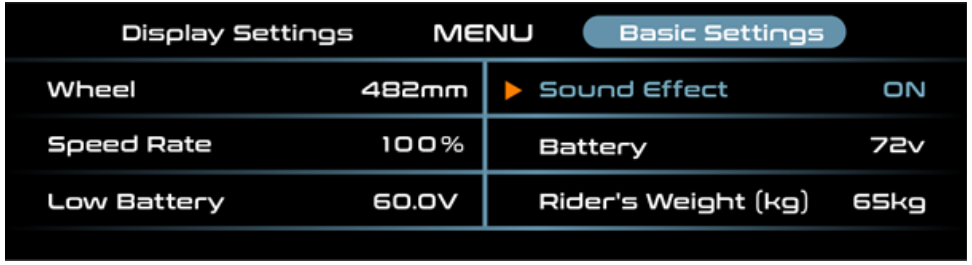
Speed Rate item, press the button to adjust the range from 0% to 200% and adjust the actual vehicle speed display.

Battery undervoltage setting



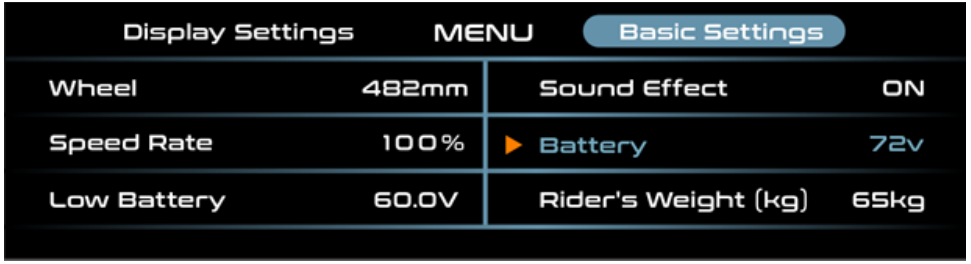
Low Battery: You can press the button to adjust the low voltage point of the instrument according to the actual battery low voltage point.

Sound switch



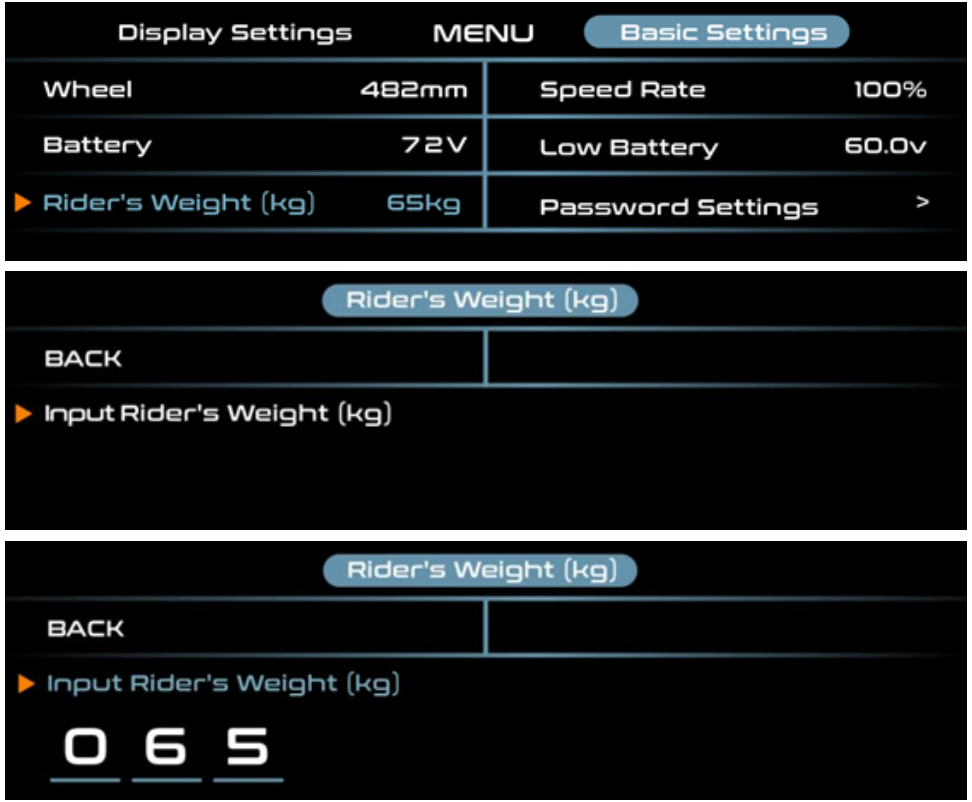
Sound Effect, select ON to turn on the button sound effect, select Off to turn off the button

Voltage Selection



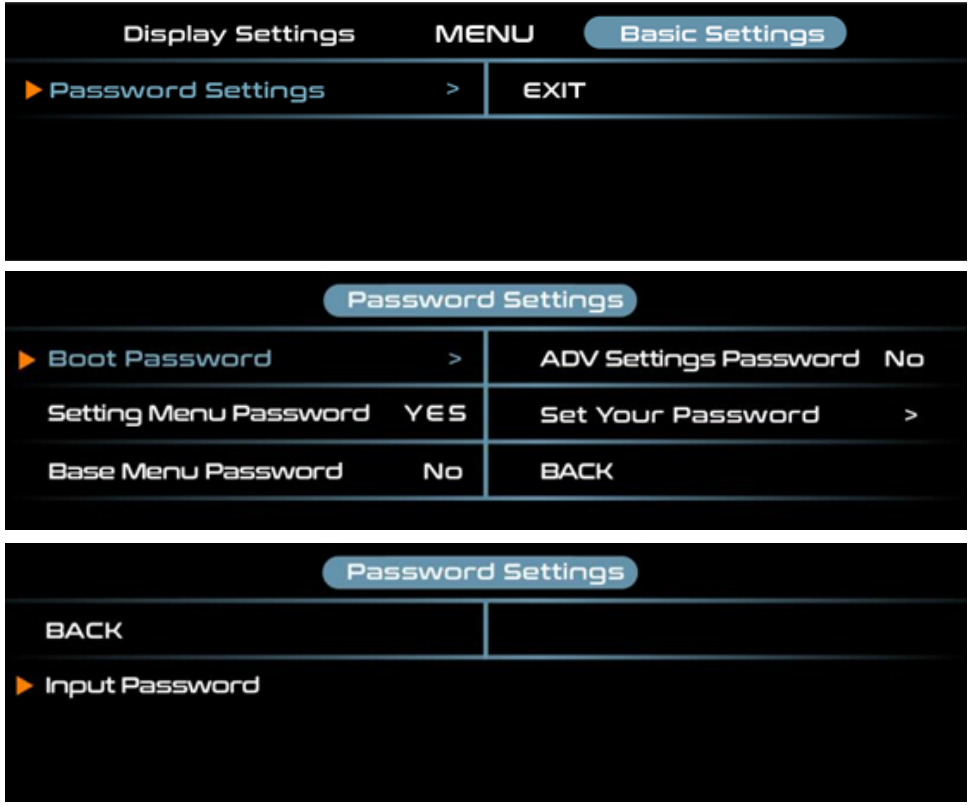
Rated Voltage, press the plus/minus button to switch the display to 24-72V.

Rider weight



Rider’s Weight item, press SET key to enter the weight input interface, press the key to adjust, set the actual weight to obtain calorie consumption data.

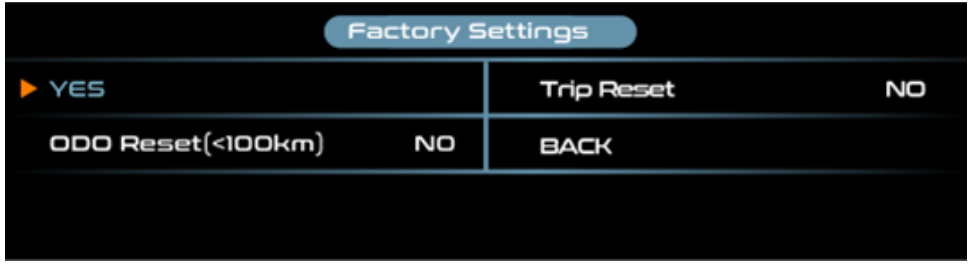
Power-on password

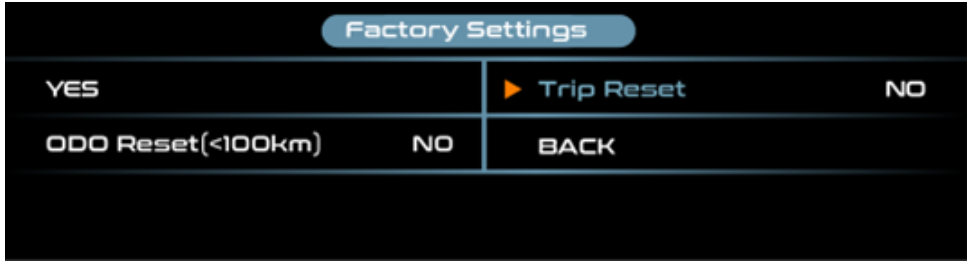


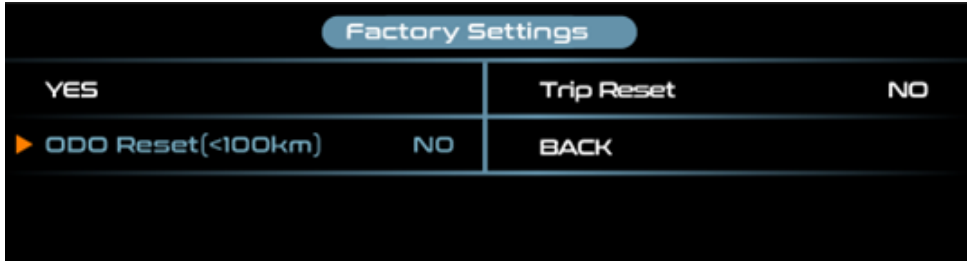
Rider weight

Password settings, short press the SET button to enter the password option, first set a four-digit power-on password (see the figure below), you can choose to open the power-on password, menu password, basic settings password, advanced settings password and modify the password.

Factory settings



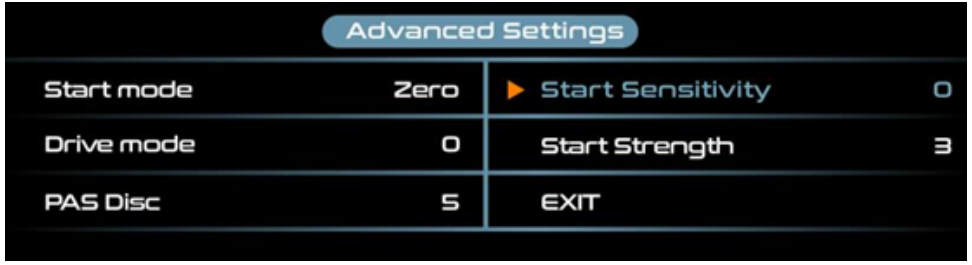




Factory Settings, click to enter the Restore Factory settings interface, select YES to restore factory settings, select Trip Reset to reset single mileage, select ODO Reset to clear ODO mileage within 100km, and select Back to return to the previous menu.


Display Settings
MENU
Basic Settings
Factory Settings
>
Information
EXIT


Information
MAX Speed
82.8 km/h
ODO
82.8 km
AVG Speed
55.8 km/h
Product Info
>
TRIP
74.1 km
Battery Info
>


Advanced Settings
Start mode
Zero
Start Sensitivity
0
Drive mode
0
Start Strength
3
PAS Disc
5
EXIT


Information
MAX Speed
82.8 km/h
ODO
82.8 km
AVG Speed
55.8 km/h
Product Info
>
TRIP
74.1 km
Battery Info
>

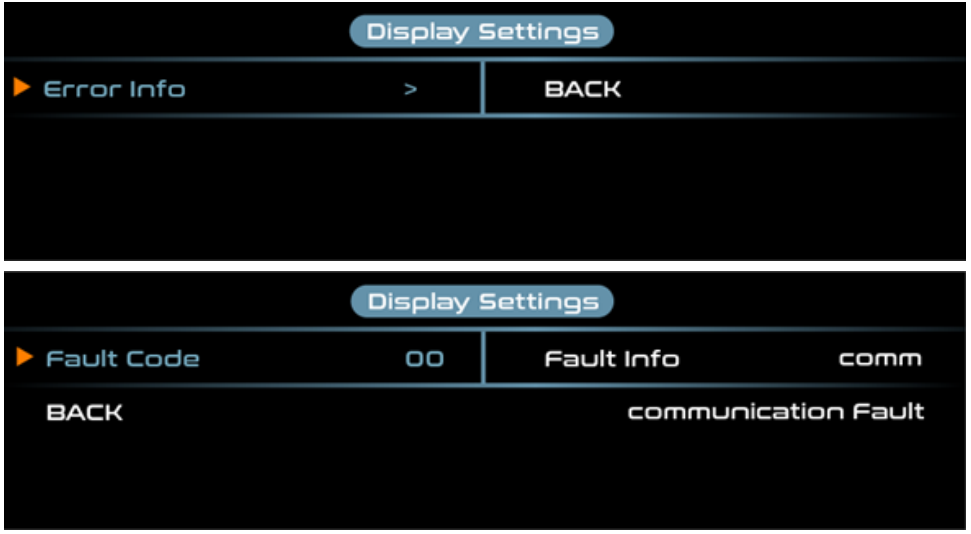

Product Info
Version
H 1.0
BACK
Date
2023 - 03 - 05
Serial NO
SWC - K80 - 13


Information
MAX Speed
82.8 km/h
ODO
82.8 km
AVG Speed
55.8 km/h
Product Info
>
TRIP
74.1 km
Battery Info
>

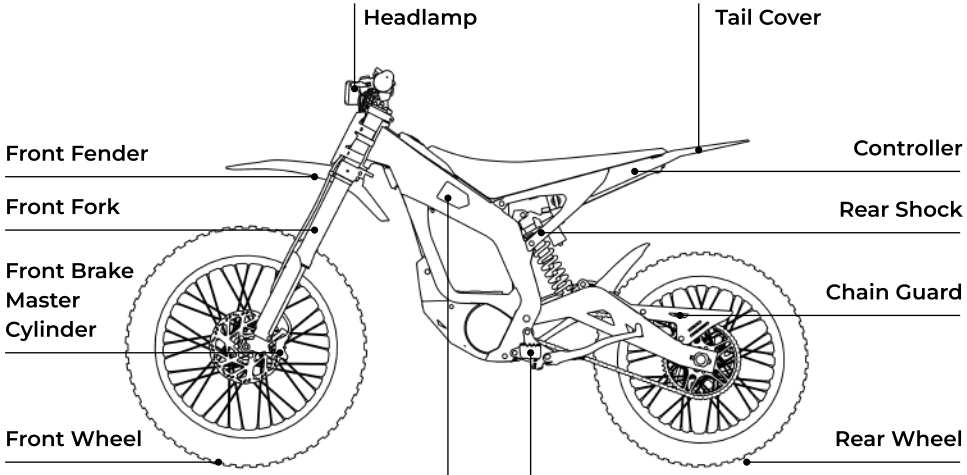
Information Display

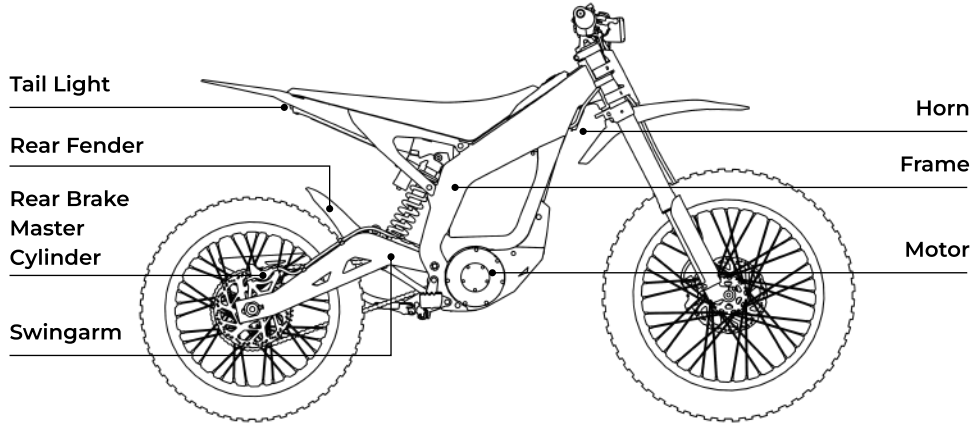
Information, click to enter the Information interface, which displays the speed mode and mileage mode numerical information.

Fault Information



Error Info, click to enter the Error Info interface, which displays the fault code and corresponding fault information. If there are multiple fault codes, press SET to switch to display all current fault codes and information.





Note

When the controller temperature and motor temperature are too high, or the battery power is too low, the bike will automatically reduce power. This is not a malfunction.

Note

For ease of maintenance and repair, each bike has a unique VIN. Please keep it safe. It is engraved on the head tube, located on the right side of the frame's seat tube.

Protective Equipment

Why Should You Purchase Motorcycle Riding Gear?

Unlike cars, motorcycle riding requires a set of gear to protect the rider from injuries in the event of an accident. It typically includes a helmet, gloves, boots, riding suit, riding pants, and armor.

1. Helmet:

Off-road helmets are different from regular motorcycle helmets. They cover your full head, face, mouth and chin and are lighter weight than many motorcycle helmets. Off-road helmets and goggles have a detachable design that provide better eye protection, and there is a sun visor on the top of the helmet to block the sunlight and reduce splashes of mud and rain.

2. Armor and Riding Suit:

The human body is fragile, especially the joints. Therefore, full-body armor is essential for off-road riding. It provides protection to the chest, back, shoulders, elbows, knees, and shins. Riders usually wear a long-sleeved off-road shirt and pants over the armor which can resist dirt, mud, gravel and other debris during off-road riding.

3. Gloves:

Full-fingered gloves are also crucial for off-road motorcycle riding. The palm area should use non-slip fabric, and the joints should have good flexibility. The back of the hand should also be able to prevent hand injuries in case of a fall and prevent blisters during long rides.

4. Boots:

Off-road motorcycle riding boots are mostly made of hard plastic. They are taller and stiffer than regular boots and provide better protection to your feet and ankles than regular boots or tennis shoes.

5. Travel Gear:

A backpack may be needed for short or long distances.

6. Rain Gear:

If you have to ride in rainy weather, it is advisable to wear a raincoat or waterproof riding suit. For long rides, it is recommended to carry rain gear. Staying dry will be more comfortable and keep the rider more alert.

Model Specifications

Basic information	Brand	Arctora
	Overall dimensions (L x W x H)	1902 × 800 × 1200mm
	Total weight w/ battery	67kg/47.7lbs
Riding requirements	Maximum load capacity	75-136kg/165-300 lbs
	Recommended age	18~55 years old
Main parameters	Wheelbase	1260mm
	Seat height	825mm
	Ground clearance	280mm
	Maximum speed	103kmh / 64mph
	Maximum power	16.3Hp (1.2kW)
	Rangeper full charge (NEDC Conditions)	80.25km/49.9mi
Battery	Protection level	IP67
	Battery type	Ternary lithium battery 21700
	Capacity	45Ah
	Voltage	72V
	Battery charging current	10A
	Charging time	4 hours @220V; 6 hours @110V

Motor	Motor type	Air-cooled, brushless PMSM
	Rated power	6000W
	Rated voltage	72V
Charger	Input voltage	AC110/220V
	Output voltage	84V
	Output current	10A
Onboard charger	Input voltage	AC110
	Output voltage	FOC vector control
	Output current	4A
Controller	Model	FOC vector control
	Overcurrent protection	105A
	Undervoltage protection	60V

Note

The range figures can vary significantly depending on the testing environment. The tested range data for the entire vehicle chassis is based on a rider weight of 75 kg (165 lbs), an ambient temperature of 77°F, and NEDC conditions.

Dirt bike system	Frame type	Forged lightweight alloy
	Wheel type	Aluminumalloy spokes - F: 1.4-19, R: 1.6-18 inch
	Tire type	Off-road Front : 3.00-18 Rear : 80/100-17
	Two-stage transmission system	Chain drive
	Suspension	38 mm adjustable damping inverted fork
		Multi-link rear suspension
	Braking system	Hydraulic disc brake
	Handlebar	Alloy handlebar
Other	Communication port	CAN
	Lighting	LED
	Display type	LCD
	Mobile charging port	10W fast charging

Additional Statements

- ARCTORA is committed to continuously improving product functionality and performance. Specifications and manual content may be updated without prior notice. We appreciate your understanding. In case of any discrepancies between icons, images, and the actual product, please refer to the physical product.
- To the extent permitted by law, the company reserves the right to interpret and explain this statement.
- This statement is subject to the local national and state laws. The company assumes no liability for any claims, responsibilities, or losses resulting from or potentially arising from the consumer's violation of the above terms. Any unforeseen or unavoidable risks encountered during operation are the sole responsibility of the rider.
- If you ever decide to resell or transfer your bike, please ensure that you also pass on this manual, as it is part of the product. If you have any questions, the company is always happy to assist you. Thank you again for choosing and trusting our product.

Electrical Circuit Diagram

Yellow	Green A	Blue	White
Red A	Black	Black B	Brown

Quick Installation Guide

Warning

Please be sure to wear a helmet and protective gear. For your safety, please choose a full-face off-road helmet and off-road protective gear. Please take comprehensive safety precautions. Do not lend this product to or allow people who are not familiar with or cannot drive to use it. Do not ride after drinking.

Warning

Please be sure to install according to the assembly steps in this guide. If the vehicle or accessories are damaged due to incorrect assembly, you will be required to pay for the accessories replacement fee separately.

Note

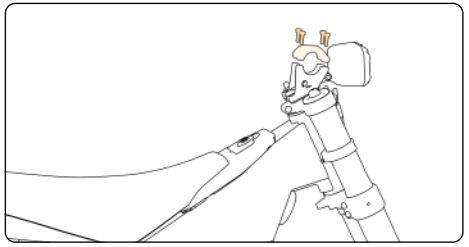
T25:
Accessory tool, T25 hexagon socket wrench

Note

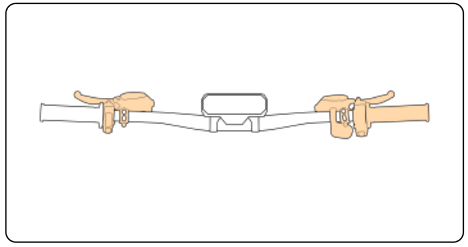
3mm, 4mm, 5mm, 6mm, 8mm:
Accessory tool, Open-end spanner 13mm-16mm *2

Handlebar Installation

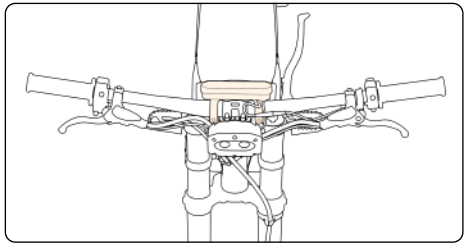
1. Use a T25 to loosen and remove the four clip locking screws, then remove the clip.



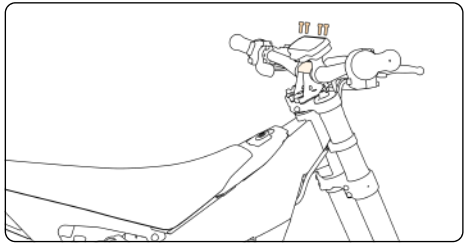
2. Sequentially attach the brake lever and throttle grip to the handlebar tube, but do not tighten them.



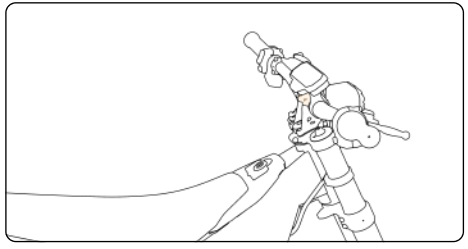
5. Adjust the instrument to the appropriate position and tighten the screws.



3. Install the handlebar tube, adjust the instrument, fix the clamp, and adjust the angle and position according to your riding habits.

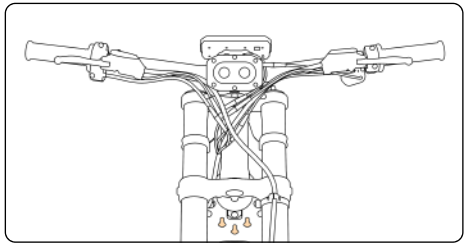


4. Tighten the 4 screws with a torque of 6~9N.m

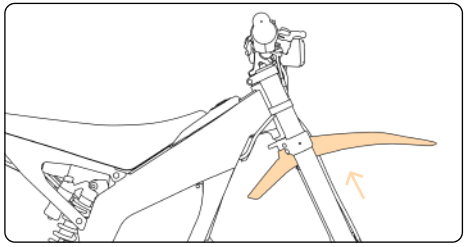


Front Fender Installation

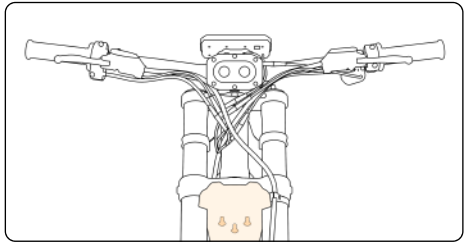
1. Remove the three flange cone-point Torx step screws;



2. Insert the flanged torx screw through the front fender and washer, then use a T25 wrench to install it (Do not tighten).

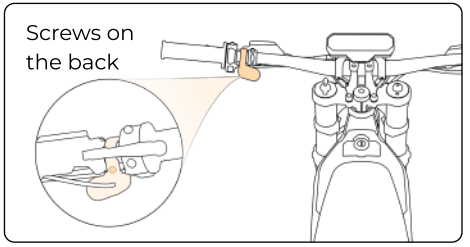


3. Use a T25 wrench to install the two remaining screws through the front fender and headlight bracket. Then, tighten all three screws. (Note: Ensure the main power cable is routed correctly.) The torque value should be set to 7–11 N·m.

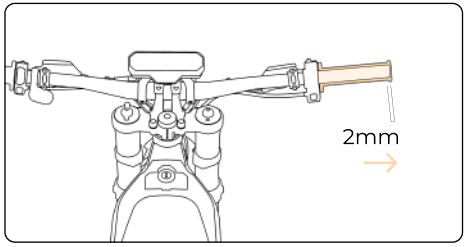


Front Brake Lever and Throttle Grip Installation

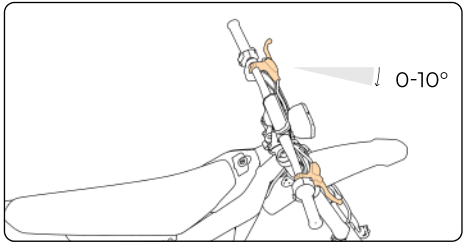
1. Adjust the switch assembly to the correct position and tighten the screws appropriately (do not tighten them)



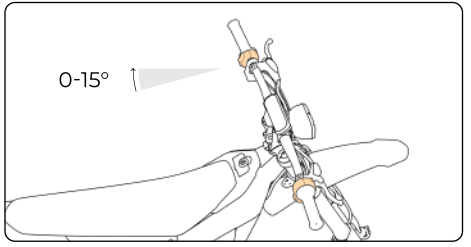
2. As shown in the figure, after installing the throttle grip to the bottom, it needs to be pulled back by 2 mm.



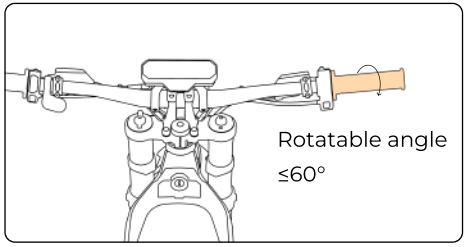
3. When installing the front brake lever, the disc brake fluid reservoir can be tilted downwards at an angle of 0-10°.



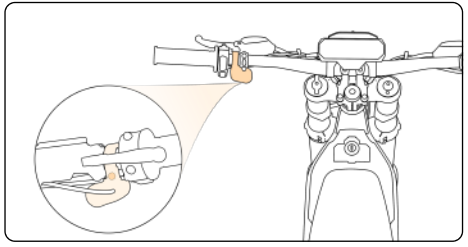
4. The parking button and gear shift button assembly can be tilted backwards 0-15°.



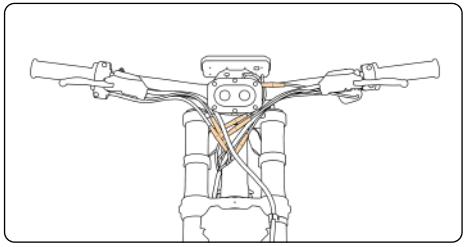
5. Tighten the throttle and brake lever (T25); make sure the throttle can return to its original position naturally.



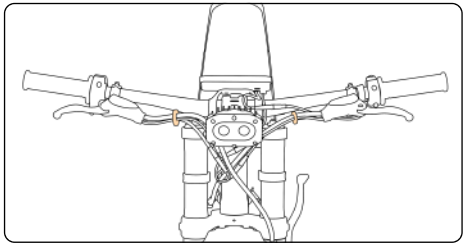
7. Tighten the switch assembly screws



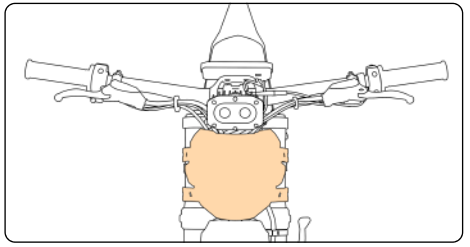
6. Arrange all control cables correctly and ensure that all plugs are correctly and securely connected.



8. Secure the cables using the included rubber tie



9. Installing the number plate

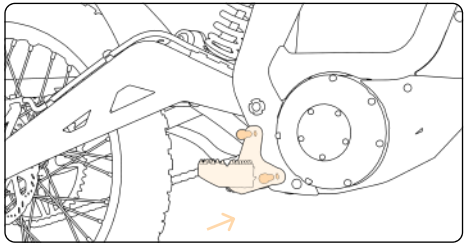


⚠ Warning

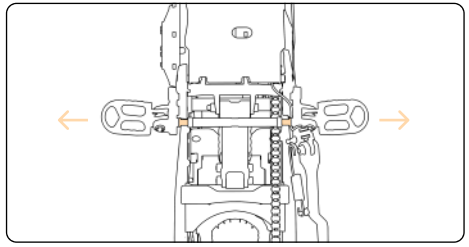
- Once the cables are secured, test by rotating the handlebars to ensure there is no slack in the wiring and that there is no tension.
- Do not entangle the headlight, front brake handle, and throttle handlebar cables when installing them.

Kickstand Installation

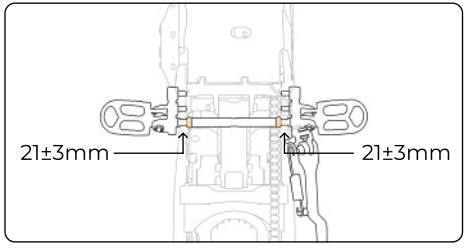
1. Use 6# to install the M8 mounting bolts, and then connect the right front pedal assembly (torque value is 40~45N.m)



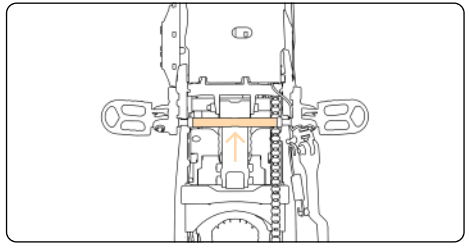
2. Adjust the screws at both ends of the pedal connecting rod to make it close to the pedal.



3. Adjust the pedal connecting rod nut so that the nut is 21±3mm away from the top screw edge at both ends.

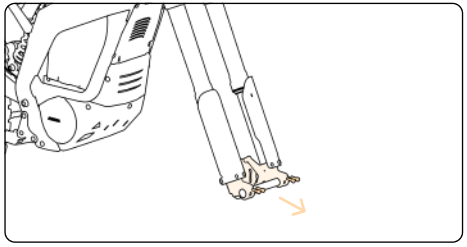


4. Adjust the connecting rod to the center position from the notch in the middle of the connecting rod.

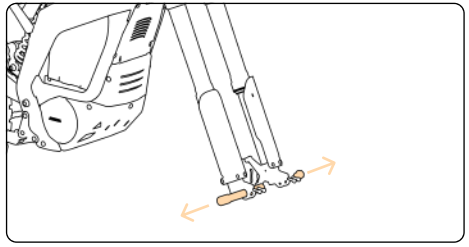


Front Wheel Installation

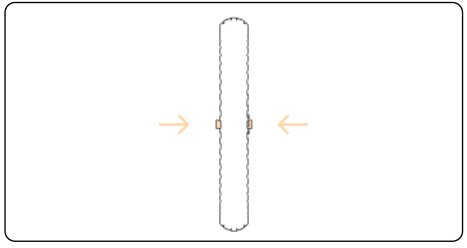
1. Use a 5# hexagon wrench to loosen the four front wheel axle locking bolts at the lower end of the front fork.



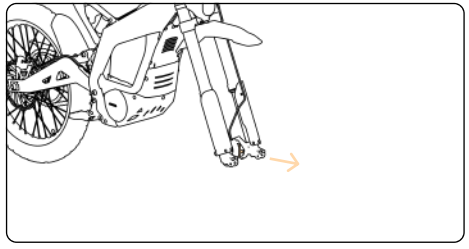
2. Use a 8# wrench to remove the nuts on both sides of the front wheel axle. Tap it gently with a rubber hammer to remove the front wheel axle.



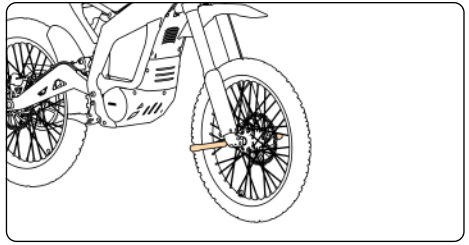
3. Put the bushing into the front wheel axle



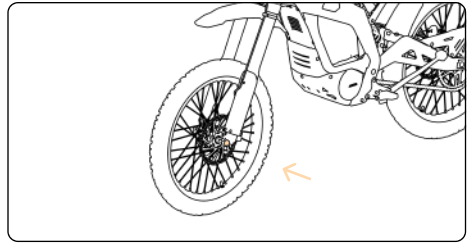
3. Remove the brake caliper clamps and place the front wheel onto the front wheel mount on the front fork.



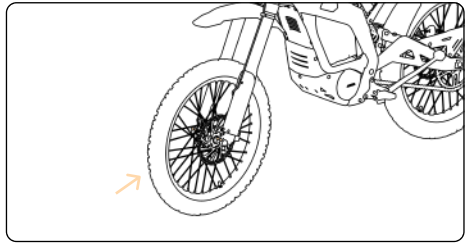
5. Install the front wheel axle so that it passes through the front fork and the front wheel in sequence.



6. Use an 8# wrench to tighten the locking nuts, ensuring they are secure.



7. Use a 5# hexagon wrench to tighten the four bolts(6-8N.m) at the lower end of the front fork.



Note

Step 4:

Pay attention to the coordination with the disc brake caliper during installation.

Step 5:

Do not use the front brake until the front wheel is installed.

Step 6:

Four screws need to be pre-tightened to prevent slipping.

⚠ Warning

Adjust the grip strength of the brake lever according to the actual situation, gradually increasing pressure. Avoid squeezing the lever suddenly to prevent wheel lock-up and skidding. Try to avoid sudden braking or sharp turns that can cause side slips, especially on slippery roads during rainy weather, as these can be extremely dangerous.

- Suddenly squeezing the rear brake lever with your left hand while riding may cause skidding; suddenly
- Squeezing the front brake lever with your right hand may lead to a crash.

If the bike collides due to an accident while riding, the system will enter a power cut-off protection mode (power output is disconnected; it can be restored by turning the Power Button back on). This is a normal occurrence. For your safety, make sure to turn off the power before lifting the bike to avoid accidental throttle activation and potential accidents.

⚠ Warning

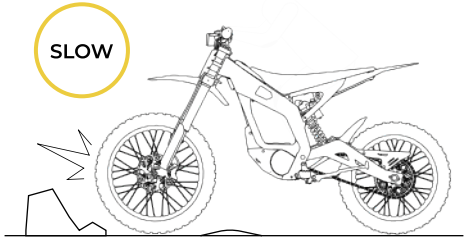
It is strictly forbidden to turn the throttle before sitting firmly to prevent accidents. The side stand can only be used to support the bike. It is forbidden to open the side stand and sit on the bike with your feet off the ground.

ⓘ Note

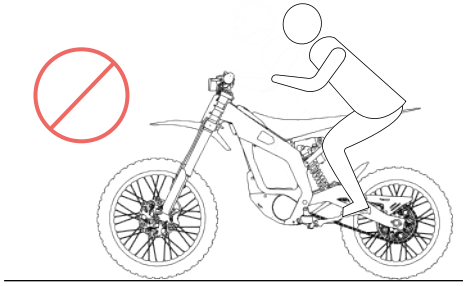
Pay attention to the road conditions and reduce speed as you approach the parking spot. Once stopped, turn off the power switch and lower the kickstand to secure the bike.

⚠ Warning

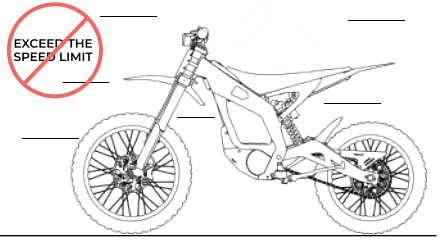
- When parking the bike, make sure to turn off the power button to prevent accidental throttle activation and potential accidents. Immediately turn off the power button after dismounting.



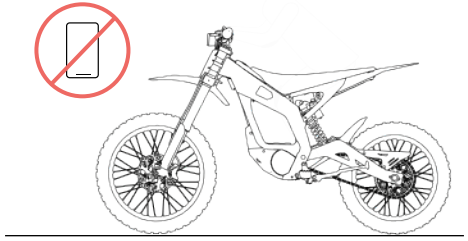
In complex road conditions, proceed with caution anddrive ataslow speed.



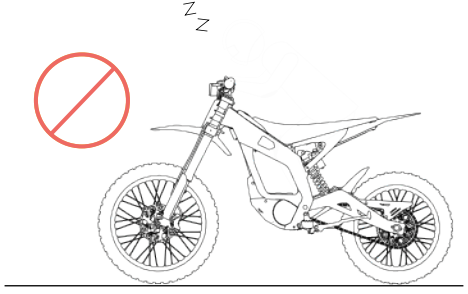
No passengers or cargo allowed.



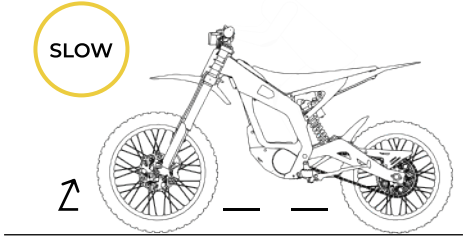
Keep both hands on the handlebars and avoid speeding.



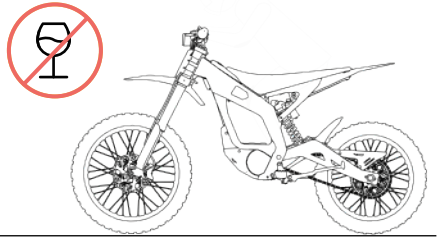
Do not use phones, cameras, headphones, or earplugs while riding.



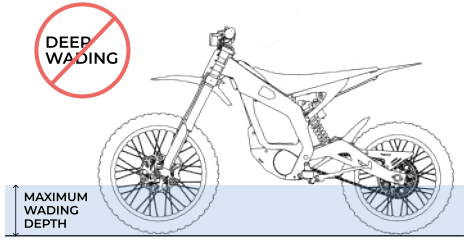
Do not ride when extremely tired.



Before making sharp turns, be sure to slow down.

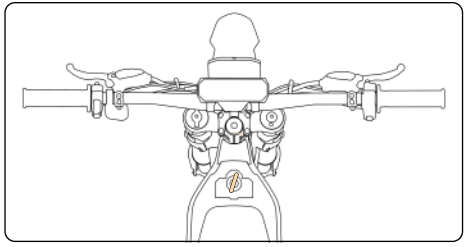


Do not ride under the influence of alcohol.

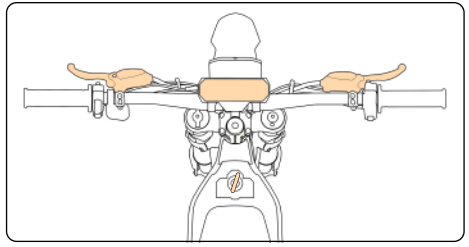


Do not ride through deep water, as it may damage the battery and pose a risk of personal injury.

1. Turn the ignition key clockwise until it reaches the UNLOCK position.



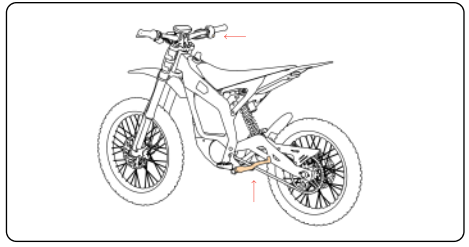
2. Check that all switches, gauges, horn, brakes, and battery indicator are functioning properly



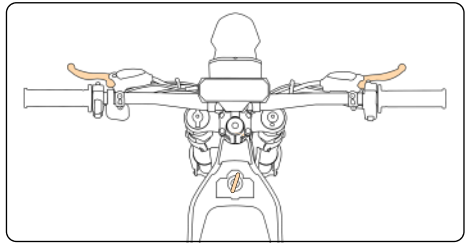
⚠ Warning

Do not rotate the throttle before you are seated securely to avoid accidents. The kickstand is only for supporting the bike; do not lift your feet off the ground after the kickstand is deployed.

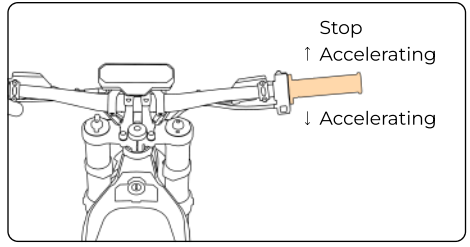
3. Before starting the motor, ensure both feet are on the ground, press the 'P' button, retract the kickstand, and slowly rotate the throttle.



5. Release the throttle and adjust the grip on the brake levers according to the braking distance needed.



4. Use the throttle to accelerate or decelerate. Rotate it inward to accelerate and outward to decelerate.

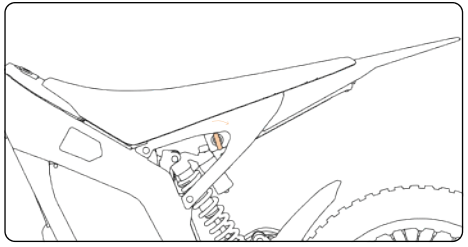


⚠ Warning

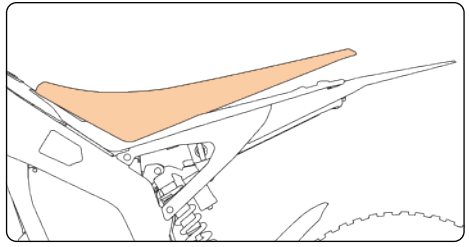
When accelerating, do so smoothly and gently. Avoid aggressive operation to prevent danger or damage to the bike components. Use ECO mode during your initial rides. Only switch to SPORT mode or ULTRA after becoming fully acquainted with the bike.

Battery Installation

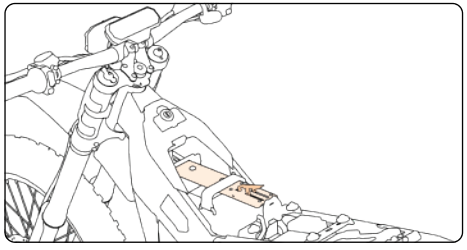
1. Insert the car key into the keyhole under the seat cushion and turn it clockwise to the unlock position.



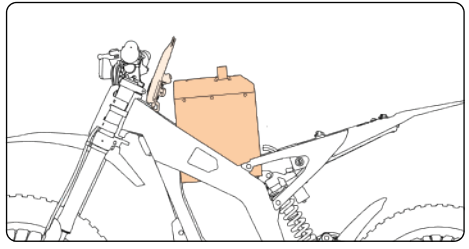
2. First pull the cushion backwards, then lift it upwards to remove it.



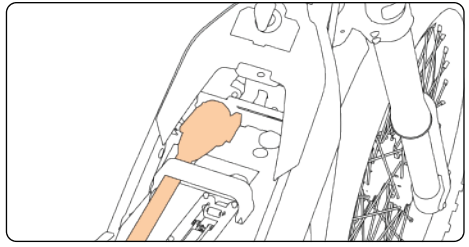
3. Rotate the wrench on the battery clamp upward to unlock and remove the battery clamp.



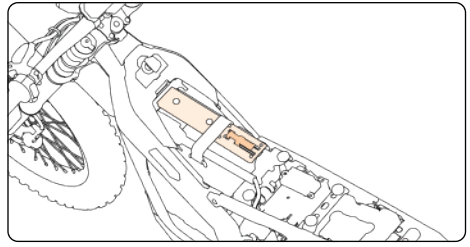
4. Lift the control panel cover with your left hand, and place/remove the battery inside/outside with your right hand (charging port facing the left side).



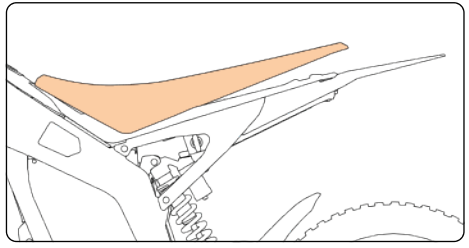
5. Connect the discharge plug by aligning it with the socket and securing the latch.

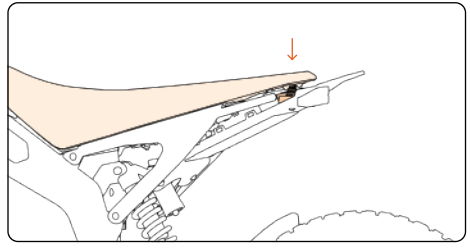


6. Insert the front of the battery clamp into the slot, rotate the wrench upward, and press the rear end firmly to lock it in place.



7. Align the seat latches with the slots, push the seat forward, and press down firmly to lock it.





Check the tires

- Tires are intact and undamaged.
- Correct tire pressure (Front: 175~225 kPa, Rear: 235~280 kPa). Insufficient tire pressure can lead to abnormal wear, unresponsive steering, lower speed, and reduced range.
- Over-inflated tires can cause abnormal wear, reduced comfort, and even blowouts, which pose safety risks.

Check the dashboard, horn and brakes

- Check if the functions displayed on the dashboard are working correctly.
- Verify if the horn is functioning properly.
- Grip both the front and rear brake levers to ensure that the front and rear brakes are working correctly.

Check the handlebars

- Ensure that the handlebars are securely fixed and that the steering is responsive.

Suspension adjustment

- Please adjust the front and rear suspension according to the actual conditions.

Usage Guidelines

The bike is "power off" (powered on but loses power while in operation)

- Motor overheating
- Controller overheating
- Battery overheating
- Battery depleted
- Kickstand cut-off (when the kickstand is deployed, twisting the throttle will not result in power output).

Bike reduces power

- When the battery is low, the controller will reduce the output power to protect the battery.
- When the battery is extremely low, under heavy load conditions (such as rapid acceleration or climbing steep slopes), the controller may enter undervoltage protection and the bike will stop running. If not charged in time, the battery may enter over-discharge protection; (Over-discharge protection effectively safeguards the cells, and after this protection, the battery needs to be reactivated with a charger.)
- If the controller overheats, the bike will reduce power. If overheating persists, it will cut off the power output.
- ·If the motor overheats, the bike will reduce power. If overheating persists, it will cut off the power output.

Operating conditions

- When the temperature is below 0°C, the battery is equivalent to 80% of its normal capacity. It is not recommended to use the sport mode.
- When the temperature exceeds 40°C, it is advised not to ride at full power for extended periods.

Water crossing

Altrax bike's key electrical components are designed with adequate waterproofing for typical riding environments. The water crossing depth should not exceed 200mm, and prolonged submersion is not recommended. Especially, if the motor is overheated, submerging it in water for cooling may cause damage due to internal air contraction.

Below are the waterproof ratings for each component:

Batteries, motors, controllers

Full connector

Charging and Charger Information

Safety Procedures and Instructions:

- Before using the battery, please read the user manual and the markings on the battery surface carefully.
- Please charge the battery in a normal, indoor environment.
- During use, keep away from heat sources, high voltage, and prevent children from playing with the battery.
- Do not drop or strike the battery.
- Do not short-circuit the positive and negative terminals of the battery. Do not disassemble or install the battery by yourself and do not let the battery get damp to avoid any danger.
- To prevent damage to the battery, do not turn on the device while the battery is short-circuited.
- Do not short-circuit the charging interface of the battery while it is being charged to avoid damaging the battery.
- When not in use for a long time, please store the battery properly. Keep the battery in a partially charged state, neither fully charged nor completely discharged. Wrap the battery with non-conductive material to avoid direct contact with metal which may damage the battery. Store the battery in a cool and dry place.
- Dispose of the battery safely and properly. Do not throw it into fire or water.

⚠ Warning

- Please charge the battery above 0℃. Since charging below 0℃ will cause battery damage, we have set up battery protection to prevent charging below 0℃.
- Avoid using and storing the battery in environments below -20℃ or above 50℃. If not used for more than 30 days, please fully charge it first, store it in a cool and dry place, and fully charge it every 60 days, otherwise the battery may be damaged.
- Do not throw it into fire or water. Disassembling the battery pack is prohibited.

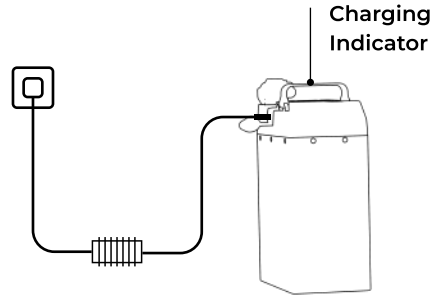
How to Charge

Method #1

Connect the charger port to the bike's charging port and plug in the power to start charging.

Method #2

- Remove the battery (see "Installing the battery").
- First connect the charger output to the battery charging port, and then plug the other end into an electrical outlet.
- Install the battery (see "Installing the battery").



Note

It is necessary to use a power source with reliable grounding. The ground wire of the power source should be insulated and should not be connected to shared facilities such as water pipes. Distinguish between the ground wire and neutral wire of the power source and do not connect these two conductors together. For the safety of you and your family, if there are any areas in your home where the electrical system does not meet the above requirements, please make improvements as soon as possible.

How to Charge

⚠ Warning

- The charger will perform charging detection and abnormality identification during the first 15 seconds after powering on. The fan will stop rotating during detection, and normal charging will begin after detection is successful.
- When charging the battery, please place it in a safe place out of reach of children.
- It is prohibited to touch all interfaces of the battery with hands as it may cause personal injury.
- It is prohibited to touch all interfaces of the battery with metal objects as it may damage the battery.
- If you smell any unusual odor or notice excessive heat during the charging process, or if the battery still cannot display full charge after a long time, please stop charging immediately and send it to a repair center for inspection.
- Only approved ERP chargers should be used to charge the ERP battery pack. Any other unauthorized chargers may damage the battery pack and pose serious risks.
- Check the charger to ensure that the input voltage matches the local power supply voltage (AC 110V / AC 220V) as indicated on the charger

ⓘ Note

The charger indicator light will flash red when charging. When the battery is fully charged, the light will turn solid green. Please disconnect the power promptly once charging is complete.

⚠ Warning

Please use the lithium battery charger designed for this vehicle. The start-stop switch must be turned off before installing or removing the battery. Plugging in or out with power on will affect the life of the battery discharge plug. There is a risk of ignition when plugging in the battery plug with the start-stop switch turned on, which can easily damage the plug or battery. The charger will automatically shut down when fully charged, but try to avoid connecting the charger to the power grid for a long time, and the longest time should not exceed 6 hours.

- The battery has internal protective mechanisms and circuits to prevent hazards. Improper disassembly will damage the protective functions and may cause the battery to overheat, smoke, deform, or ignite.
- Do not connect the positive and negative terminals of the battery with metal and do not store or move the battery together with metal objects. If the battery is short-circuited, a large current will flow, damaging the battery and causing it to overheat, smoke, deform, or ignite.
- Heating and burning the battery will melt the battery's insulation, disable safety functions, or burn the electrolyte. Overheating will cause the battery to overheat, smoke, deform, or ignite.
- Do not use the battery near a fire source, oven, or in an environment exceeding 75℃. Overheating will cause a short circuit inside the battery, resulting in overheating, smoking, deformation, or ignition.

Troubleshooting

Note

When the vehicle detects a fault, the instrument panel lights up, and the fault code is displayed in the position where the vehicle speed is displayed. You can query the handling suggestions in the table below by the fault code.

Warning

For any electrical issues, please consult a qualified technician at an authorized repair shop. Unauthorized disassembly and repairs are strictly prohibited.

Error Code	Item	Cause of Fault	Method
	Motor not working after power is connected	1. Loose battery connection 2. Throttle connector loose or disconnected 3. Motor wiring loose or disconnected	1. Secure the wires 2. Secure the plugs 3. Reconnect and tighten at the repair site
	The maximum speed is relatively low	1. Trigger the temperature protection system 2. Trigger the low battery protection system 3. Chain tension is unreasonable	1. Wait for the vehicle temperature to return to the normal operating range 2. Check if the battery level is sufficient 3. Adjust the secondary drive chain tension
	Speed control failure	1. Trigger the bike protection system 2. Throttle malfunction 3. Brake system installation error	1. Restart the bike. 2. Check if the throttle cable and plug connections are secure. 3. Clean any objects from the brake disc and brake pads; check if the brake caliper is loose or installed incorrectly.

Error Code	Item	Cause of Fault	Method
	Insufficient range per charge	1. Insufficient tire pressure 2. Insufficient charging or faulty charger 3. Improper brake adjustment, excessive driving resistance 4. Battery aging or damage 5. Frequent hill climbing, headwinds, frequent acceleration and deceleration, heavy load	1. Maintain proper tire pressure 2. Keep the battery adequately charged or check the charger plug 3. Readjust the brakes 4. Replace the battery 5. Reduced battery life in this usage environment is normal
	The charger is not charging	1. The charger plug is disconnected or loosely connected 2. The battery pack connector plug is loose or disconnected 3. The battery needs activation due to over-discharge	1. Plug in securely 2. Plug in securely 3. Activate the battery
	After plugging in, the charger doesn't work, and the battery gauge shows no power	1. Due to prolonged non-charging or improper battery storage, the battery has entered over-discharge protection mode	1. Plug the charger into a power outlet. The green light on the charger will start flashing 2. Plug the charger into the outlet and connect it to the battery. The charger's red light will stay on 3. Check if the charger’s three-pin plug is properly connected and if the charging output "+" is connected
00	Throttle, Motor	Communication Fault	Please check the bike's CAN network wiring
01		Throttle Fault	Please check if the throttle is functioning properly
04		Motor Overtemperature Fault	Please check if the motor temperature sensor wiring is normal or if the motor temperature is too high
05		Motor Sensor Fault	Please check if the motor sensor is functioning properly
10	Controller	Controller Overtemperature Fault	Please check the controller temperature.
11		Controller Lock Protection	1. Please check the controller 2. Is the vehicle carrying a heavy load or on an incline?

Error Code	Item	Cause of Fault	Method
12	Controller	Controller Overvoltage Protection	Please check the control input voltage to see if it exceeds the maximum standard voltage
13		Controller Undervoltage Protection	Please check the control input voltage to see if it is below the minimum standard voltage
14		Controller Overcurrent Protection	Please check the controller
20	Battery	Discharge Overtemperature Fault	Please check the battery temperature
21		Discharge Undertemperature Fault	Please check the battery temperature
22		Charge Overtemperature Fault	Please check the battery temperature
23		Charge Undertemperature Fault	Please check the battery temperature
24		Cell voltage difference fault	Please check the battery cell voltage
25		Cell Undervoltage Fault	Please check the battery cell voltage
30	OBC	OBC Overtemperature Fault	Please check the OBC temperature
31		OBC Output Overvoltage Fault	Please check the OBC output voltage
32		OBC Output Undervoltage Fault	Please check the OBC output voltage
33		OBC Short Circuit Protection	Please check for any short circuit inside or outside the OBC
40	Charger	Charger Overtemperature Fault	Please check the charger temperature
41		Charger Output Overvoltage Fault	Please check the charger output voltage
42		Charger Output Undervoltage Fault	Please check the charger output voltage
43		Charger Short Circuit Protection	Please check for any short circuit inside or outside the charger

Maintenance Guide

As a general rule, for normal riding, the first inspection (i.e., the initial maintenance) should be done between 10 to 300 km (6-186mi).

Inspection Checklist

- Check the chain tension;
- Check the tension of the front and rear wheel spokes; Ensure there is no play in the headstock;
- Check the tightness of all handlebar screws; Adjust the shock absorbers, checking for oil leaks, and ensure the compression and rebound damping are in the correct positions.

Note

- Do not turn the adjustment knobs to the extreme left or right during adjustments.
- During the entire maintenance process, the vehicle cannot be powered on, that is, it cannot be operated while the vehicle is started.
- Choose a wide and flat area to park the bike.
- When checking the bike during a ride, do so in a safe location and be aware of the surrounding environment.
- If you find any abnormalities during the inspection, resolve them before riding. If you cannot fix the issue yourself, contact after-sales service or an authorized service center.

Note

- Both front and rear brakes are disc brakes. When the brake pads are significantly worn, they should be replaced.
- Keep the disc brake system clean during daily use to avoid prolonged attachment of mud and sand, and especially to avoid oil contamination.

Operational Area Inspection

Inspection of the Shock Absorbers

- Check for bending, deformation, or damage.
- Inspect the front shock absorbers for damage, looseness, or oil leakage. Move the handlebars up and down to check for any abnormal noises caused by front shock absorber issues. If any abnormalities are found, contact after-sales service or an authorized service center.

Brake System Inspection

- Check the gap of the brake lever. It should be within the specified range (15-30mm). If not, it needs adjustment.

Brake Performance Inspection

- On a dry and flat road surface, check the braking effect by riding at a low speed and using the front and rear brakes separately.

Tire Inspection

- Since tires are in constant contact with the ground, stones, glass, nails, and other debris can cause damage. Pay attention to the road surface while riding to avoid areas that could damage the tires. Regularly check the tires for cracks, embedded objects like stones or glass, and unusual wear.

- Check tire pressure with a tire pressure gauge when the tires are cool.
- Inspect the tension of the wheel spokes.
- Check the chain tension. The chain should have an up-and-down play of 10-20mm.
- Inspect the tread depth of the tires.

Tread Depth Check

- Inspect the tread depth. If the wear reaches the limit marker, the tire should be replaced. If there is abnormal noise or wobbling during riding, contact after-sales service or an authorized service center for inspection and repair.

Recommended Torque Specifications

- Swingarm axle nut: 30 N·m
- Rear wheel axle nut: 40-45 N·m
- Front wheel axle screw: Torque specifications depend on the type of front fork.

Note

If the braking effect is not ideal even after gripping the brake lever tightly, check the cleanliness of the brake pads. If the issue persists, please contact after-sales service or an authorized service center for inspection.

Front Fork Inspection:

- Hold the handlebars and compress the front fork a few times to check if it works smoothly.
- Check for any leaks on fork assembly such as oil, scratches, and friction noise on the working area of the front fork legs.
- Inspect if there is any mud or sand sticking to the rear shock assembly after riding. If there is, it needs to be cleaned; otherwise, it may cause damage to the oil seal and lead to oil leakage.
- If any issues are found with the shocks, contact the ERP after-sales service center for inspection and replacement.

Rear Shock Adjustment:

Before each ride, check the following:

- Ensure that the quick release mechanism is properly adjusted and secured.
- Wipe and clean the inner stanchions, and check the entire fork for any obvious damage.
- Check if the headset is properly adjusted.
- Ensure that the front brake hydraulic line is properly configured and adjusted for brake assembly clearance to avoid rubbing in critical areas.
- Check the torque of the stem caps and bolts.

Note

- Note: The steering tube and inner stanchions of the fork must be kept parallel. (After heavy impact, the fork may exhibit signs of bending forward.)

Front Fork Maintenance:

- Disassemble the fork and clean and lubricate each component.
- Inspect all parts for damage such as fractures, dents, and normal wear. If any parts are found to be damaged or excessively worn, do not use the fork until the damaged parts are replaced. If all parts are in usable condition, proceed to step three:
- Apply appropriate lubricating oil to the spring, upper and lower bushings, inner stanchions, and valve components. Fill the clean oil seal with a sufficient amount of lubricating fork oil. Replace the worn bushings if there is excessive play between the inner and outer stanchions.
- All forks that have been used for more than 5 years should be regularly inspected and maintained (at least once a year) to ensure their safety.

Battery Inspection

Check The Battery Level

The bike uses a sealed ternary lithium battery. To check the battery level, press the battery switch. When all the battery LEDs are lit, it indicates that the battery is fully charged.

Check The Battery Appearance

Check for any damage. If there is damage to the top or bottom seals or the battery level indicator, it could lead to a risk of water ingress due to seal failure. Please contact after-sales service or an authorized service center.

Battery Charging and Charger Usage

- Check if the charger input voltage matches the grid voltage.
- It is strictly forbidden for users to disassemble the battery to avoid damage and danger.
- If the battery enters over-discharge protection, it needs to be activated. For activation methods, see "**Troubleshooting.**"
- The charger will automatically shut off after the battery is fully charged. Avoid keeping the charger connected to the power grid for extended periods, and do not exceed 6 hours.
- Only use the original matching charger for charging. Do not use other models of chargers to avoid damaging the battery or causing danger.

Motor and Controller Use and Maintenance

- Regularly check if the screws of the motor and controller are loose.

- Regularly check if the motor and controller wiring is loose and inspect the insulation condition.
- Avoid riding through deep water to prevent affecting the motor's operation.

Note

- Before removing or installing the battery, please turn off the power button and ensure the charging port cover is sealed;
- If you encounter difficulty inserting the battery into the frame, do not force it. Remove the battery and check for any foreign objects; During winter, it is recommended to store the battery in indoor temperatures above 0°C and regularly check the charge level.

Note

When the motor and controller temperature is too high or the battery power is low, the vehicle will automatically reduce power operation. This is not a malfunction.

Warning

Do not let the bike's water level exceed the wheel center. Riding with the motor submerged for long periods may cause motor failure.

Fuse Replacement

If, after pressing the start/stop button, the instrument panel, horn, and lights do not work, the fuse may have blown. To replace the fuse, please follow these steps:

1. Turn off the power.
2. Open the seat.
3. Open the fuse box.
4. Replace the fuse.

Note

- Avoid strong water flow impacting the fuse area.
- If the fuse blows again shortly after replacement, investigate other potential causes beyond the fuse.
- Ensure the fuse is securely installed. If the insertion point is loose, it may cause the fuse to overheat, leading to other faults and hazards.
- Always use the specified fuse model for replacements; using an incorrect fuse may fail to provide proper protection.

After-sales Service and Warranty Coverage

Warranty Terms

- 1-Year Warranty**: Includes the motor, controller, battery, charger, and other non-consumable parts. Free repairs are provided for non-human-caused performance faults, as outlined in the warranty standards section of this manual.
- Returns and exchanges are not supported without quality issues. If functional faults or product quality issues occur, you can opt for a return or exchange after the company's authorized service center verifies that the issue is not caused by human factors.

Warranty Start Date

For in-store purchases, the warranty period is based on the invoice date or purchase receipt date (whichever occurs first). For online purchases, the warranty period starts from the day after the delivery receipt date. Delivery receipts and order invoices serve as valid proof. If no proof is provided, if proof is missing, or if the proof is unclear, the system-recorded sales date will be used.

Component: Motor
Warranty coverage:
Damage due to coil burnout, phase loss, demagnetization, short circuit, open circuit, abnormal noise, etc.

Component: Battery
Warranty coverage:
After charging the lithium battery within the specified usage environment (charging temperature range: 0°C to 35°C; operating temperature range: -10°C to 45°C), the battery capacity may decline to varying degrees in low temperatures. Specific reference levels are as follows: 70% capacity at -10°C, 85% at 0°C, and 100% at 25°C. In the absence of external impact, if the battery shows voltage anomalies, fails to charge, or has a detected capacity below 70% using a discharge tester, it will be eligible for warranty service (warranty period for battery replacement will be calculated from the date of replacement, based on the remaining warranty period of the old battery).

Component: Controller, Charger
Warranty coverage:
Performance failures or quality issues due to product defects that cannot be repaired

Component: Electric Control Lock, Main Cable, Headlight, Tail Light, Horn Converter
Warranty coverage:
Performance failures or quality issues due to product defects that cannot be repaired

Component: Brake
Warranty coverage:
Leakage, ineffective braking (excluding brake pads)

Component: Suspension
Warranty Coverage:
Leakage, no damping

Component:	Dashboard, USB power supply, combination switch, throttle
Warranty Coverage:	
Performance failures or quality issues due to product defects that cannot be repaired	

Component:	Rear swingarm, handlebars, bicycle frame, head tube, kickstand, rear shock absorber, sprocket, front fork, front and rear alloy wheels
Warranty Coverage:	
Performance failures or quality issues due to product defects that cannot be repaired	

Component:	Bearings (excluding motor bearings), chain,inner and outer tubes, disc brake rotors,handlebar grips, fenders, handlebar grips,seat cushion, fuses, decorative parts,plastic components, and other items
Warranty Coverage:	
Consumable parts	

Non-Warranty Coverage

- The following situations are not covered by the free warranty service, and users will need to pay for repairs:
- Exceeding the service period or scope specified in this user manual.
- Product faults or damage caused by incorrect use, riding, or maintenance not in accordance with the instructions in this user manual.
- Faults or damage caused by exposure to rain, snow, smoke, chemicals, or other corrosive substances or by force majeure events (including but not limited to earthquakes, typhoons, fires, floods, social incidents, violent crimes, etc.)
- Users will not be covered under warranty for the following situations:
- Improper use of the battery, such as long-term storage (e.g., leaving the entire vehicle plugged in for over a month, or storing the battery alone with an initial charge below 60% for more than 3 months), deep discharge, failure to charge promptly, or failure to perform regular maintenance, leading to unrepairable battery depletion or undervoltage. This also includes damage from battery casing issues that compromise waterproofing and result in internal damage due to water ingress.
- Unauthorized modifications, repairs, or damage to the product or its components, affecting their normal use.
- Damage caused by using non-original parts or unauthorized alterations to the circuitry or wiring configuration.
- Product faults or damage resulting from collisions, falls, traffic accidents, overloading (carrying passengers is strictly prohibited), speeding, or other human factors.
- Quality issues arising from extreme sports or competitive use with the intent to push limits. It is recommended to limit vertical drops to within 50 cm.
- Inability to provide valid warranty documents, product invoices, or if the serial number on the warranty card does not match the product.
- Cases where full compensation has been received from an insurance company.
- Normal wear and tear from reasonable use.

Maintenance Schedule

Note

Proper maintenance can significantly extend the lifespan of your vehicle. After intense riding or off-road use, it is crucial to perform a thorough inspection to ensure all components are functioning properly.

Maintenance Categories	Requirements
Front and rear suspension maintenance, brake fluid	Every 6 months
Brake pad replacement	When worn to the limit indicator
Brake disc replacement	When disc thickness <1.5mm
Bearing replacement	When noise or looseness occurs
Wheel replacement	When worn to the limit indicator

Routine Maintenance Log

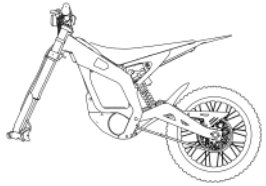
Note

- Users must perform the mandatory maintenance items listed in the "Warranty Record Card" at the designated authorized service centers on time. Failure to complete maintenance tasks on schedule will be considered as forfeiting the warranty.

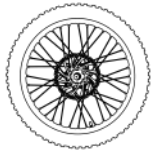
Maintenance Period	Requirements	Technician/ Service Provider Signature
Initial warranty: 300 km / 1 month	Fastener check, chain (motor/wheel/ brakes/spokes, etc.), motor gearbox oil replacement	
After initial warranty: 1000 km /3months	Safety component tightness check, high current circuit inspection, chain and motor/wheel/brakes/spokes, etc.	
2000 km / 6 months	Replace when disc brake thickness is less than 1.5 mm	

Packing List

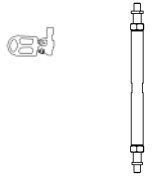
- Please carefully check whether the items in the packaging box are complete and intact. If there are any missing or damaged items, please contact the dealer or the manufacturer's after-sales department for consultation in time.



Main Body



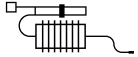
Front wheel



Pedal and bike stand assembly

Front fender

Number Plate



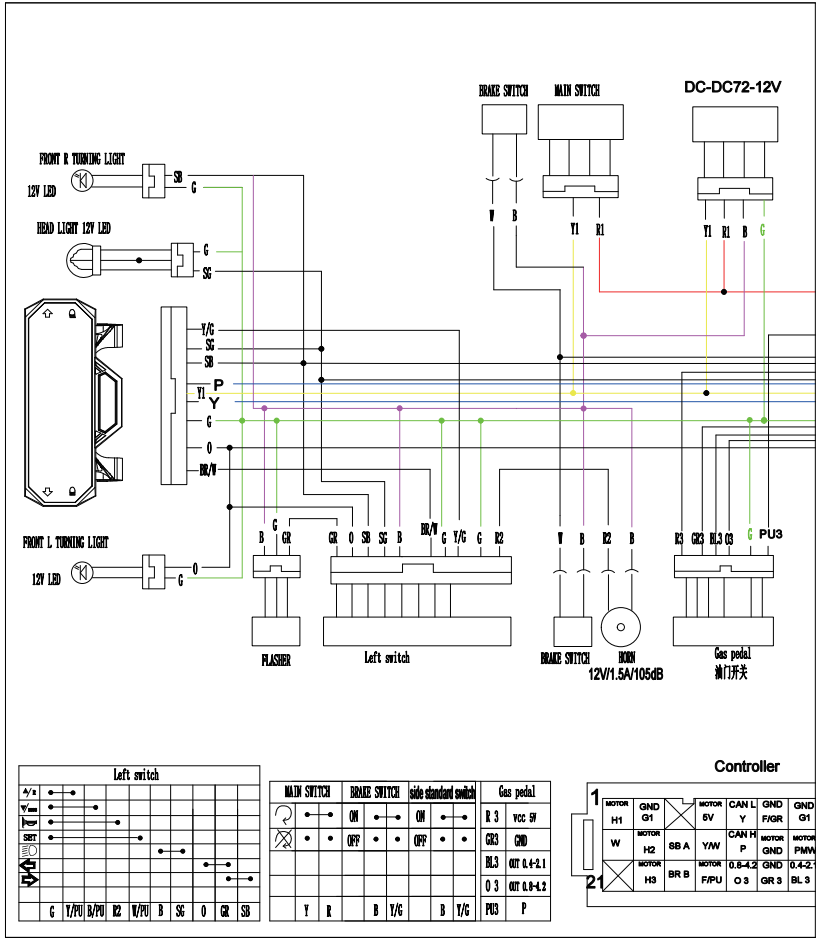
Charger

Key*2

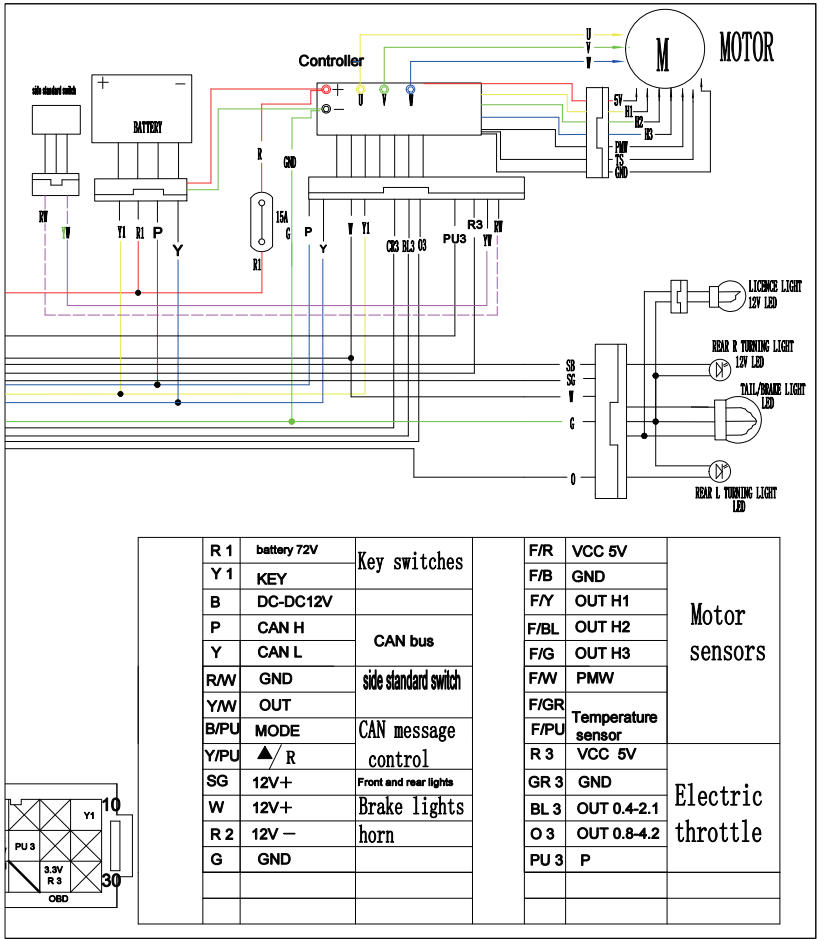
Multi-functional tool

Manual

Circuit Diagram (*1/2*)



Circuit Diagram (*2/2*)



R 1	battery 72V	Key switches	F/R	VCC 5V	Motor sensors
Y 1	KEY		F/B	GND	
B	DC-DC12V		F/Y	OUT H1	
P	CAN H	CAN bus	F/BL	OUT H2	
Y	CAN L		F/G	OUT H3	
R/W	GND	side standard switch	F/W	PMW	
Y/W	OUT		F/GR	Temperature sensor	
B/PU	MODE	CAN message control	F/PU		
Y/PU	▲/R		R 3	VCC 5V	Electric throttle
SG	12V+	Front and rear lights	GR 3	GND	
W	12V+	Brake lights	BL 3	OUT 0.4-2.1	
R 2	12V −	horn	O 3	OUT 0.8-4.2	
G	GND		PU 3	P	

Warranty Record Card

Maintenance items	Technician/Service Provider Signature

Scan the QR code to download the digital manual

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