- Prohibit deep immersion in water, as it may damage the electronic control system and even cause personal injury.
- Do not disassemble the battery yourself to avoid damage and danger.
- When driving, please wear a safety helmet and obey traffic rules.
- When washing the bike, please remove the battery. It is strictly prohibited to use a high-pressure water gun on the battery or other electrical components.
- If the bike is not used for more than one month, be sure to unplug the power plug and store the battery fully charged.

Disclaimer:

All information, illustrations, and specifications in this manual are based on the latest information available at the time of publication. This electric off-road motorcycle is subject to continuous improvement policies. Therefore, information, illustrations, and specifications used to explain and/or describe product, service, or maintenance improvements may be changed at any time without prior notice.

Content

Indicate dangerous situations that may result in death or serious injury if not avoided.

WARNING

Do not operate this product in traffic or any other potentially hazardous environment until you are familiar with it. Failure to do so may result in death or serious injury.

- Please ensure to wear a full-face off-road helmet and other off-road protective gear. Understand the pressure that the dirt bike can withstand. If the electric motorcycle is damaged, do not ride it. Most importantly, understand your skills and experience.

WARNING

Whenever possible, avoid riding in wet weather conditions. If riding in wet weather is unavoidable, reduce speed as necessary. Wet weather can impair visibility, braking, and traction of the electric motorcycle, and affect other road users.

- User safety is paramount. Before riding the dirt bike, make sure to check the bike: proper tire inflation, brakes functioning correctly, handlebars adjusted and securely fastened.
- Do not wear headphones or carry anything that obstructs your vision or affects control of the dirt bike.

WARNING

Under no circumstances should any electronic components of the dirt bike be disassembled or modified. Doing so is extremely dangerous and may result in death, serious injury, or voiding of the warranty.

- Please make sure to understand and comply with all local laws and regulations, and have maintenance/repairs carried out by authorized dealers.

WARNING

Never ride the dirt bike under the influence of alcohol or drugs.

NOTICE

Ensure that the kickstand is in the “on” position, then simply press the one-touch ignition switch to deactivate the P gear parking function.

- When parking (with the rider remaining on the bike), be sure to turn off the ignition switch, down the kickstand, and engage the P gear parking function to prevent accidental throttle engagement leading to accidents.

1、Safety Instructions

- Use the bike only in legal areas based on local regulations;
- You are obligated to be aware of the laws in your area and to comply with them;
- It is strictly prohibited for individuals restricted by local laws to operate the bike.
- This product is intended for use by children aged 6-15 only and must undergo training before riding in designated areas;
- Familiarize yourself with the contents of this manual before driving, and practice in a spacious and safe area to fully understand the driving essentials of the bike;
- Always wear a certified helmet and protective gear while riding;
- Park and charge the bike in open areas whenever possible, and keep a safe distance from flammable or explosive materials during charging;
- Wear brightly colored clothing while riding and avoid wearing sandals or high heels to ensure safe bike operation;
- The dirt bike contains many electrical components; therefore, avoid prolonged exposure of these components to rain to prevent water damage;
- When washing the bike, turn off the power and remove the battery. Pay attention to the water pressure and angle during rinsing, and never use a high-pressure water gun directly on the battery or other electrical components.
- Do not submerge the battery in water. If the battery gets wet, do not charge the vehicle or battery again, as this may cause the battery to catch fire, burn, or explode;
- Braking distance may increase when riding on rainy, snowy, or waterlogged roads. If the water depth on the road exceeds 24cm, it may affect the operation of the brakes;
- The operating temperature of the bike is between -10 to 45℃, and the storage temperature of the lithium battery is between 0 to 40℃. It is recommended to store the lithium battery between 10 to 40℃. Do not store or drive the vehicle

outside of these temperature ranges;

- For your safety, do not modify the dirt bike privately. If replacement parts are needed, please contact customer service.
- The bike's circuits are high-voltage and should not be connected or disconnected while powered, as this may result in serious injury or property damage. (To power on, follow the steps: open the circuit breaker - start the instrument - turn on the one-touch ignition switch. To power off, follow the steps: turn off the one-touch ignition switch - turn off the instrument - close the circuit breaker, to prevent damage to electrical components.).

Driver Prohibitions:

- Individuals aged over 15 or under 6 years old;
- Individuals under the influence of alcohol or drugs;
- Individuals exceeding the maximum bike load capacity of 50kg.

Pre-Driving Inspection:

- Tire pressure should be 26 - 28psi (180 - 195Kpa) for the front tire and 35psi (240Kpa) for the rear tire, with no abnormal tire tread wear and no foreign objects such as nails, rocks, or glass embedded;
- Ensure that the handlebars and front/rear wheels are securely fastened without any looseness;
- Check if the reflectors are damaged or contaminated;
- Inspect the power circuit, lighting system, etc., to ensure normal operation and that the battery level meets driving requirements;
- Check the spoke tension: adjust the spoke tension according to the actual tension of the vehicle's spokes, and tighten any loose spokes immediately;
- Ensure smooth operation of the throttle without any sticking, and rapid return to the idle position;
- Chain: if the chain is stuck, it is recommended to clean the surface of the chain and add chain lubricant. Under normal circumstances, the displacement of the chain from the lowest position to the highest position should be 15-20mm;
- Clean the moving parts of the front and rear shock absorbers and ensure there is no dirt;
- Check that the front and rear brakes can function properly, ensuring that the brake components are not damaged.

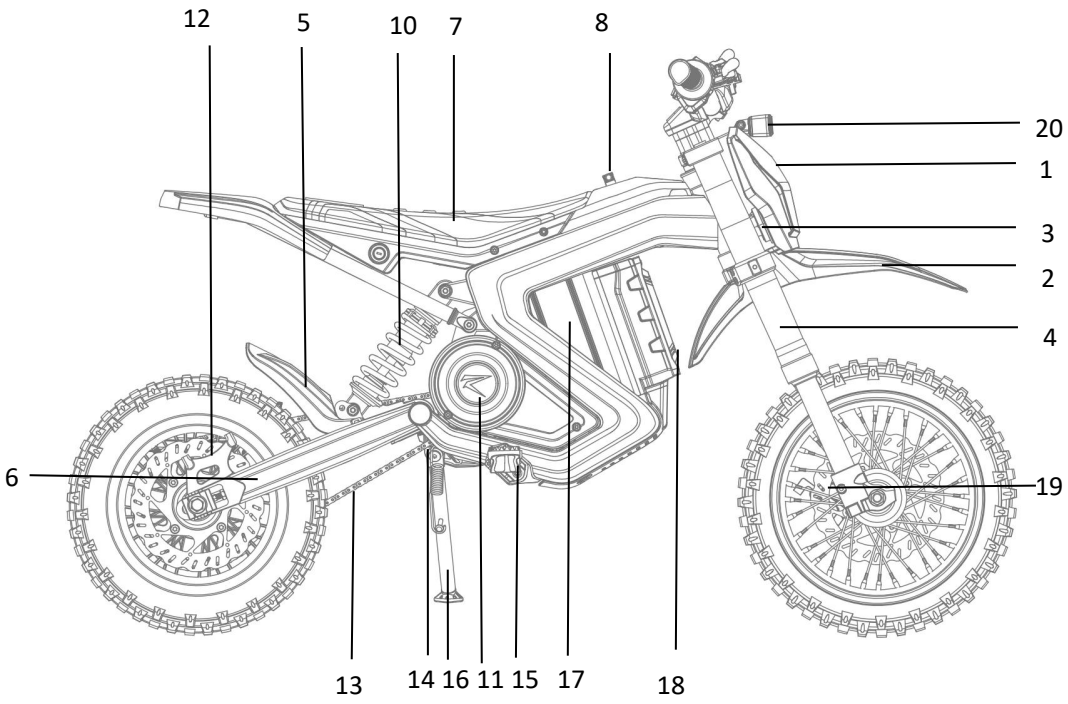
Instructions for Use

- Do not use mobile phones, cameras, headphones, or earplugs while driving, as they may affect safe driving;
- When approaching or passing through intersections, motor vehicle lanes, turns, doorways, etc., slow down and yield to pedestrians and vehicles;
- If any abnormality occurs while driving, immediately stop the vehicle, identify the cause of the alarm or malfunction, and only resume use of the vehicle after the warning is resolved and the issue is repaired. Contact after-sales service for

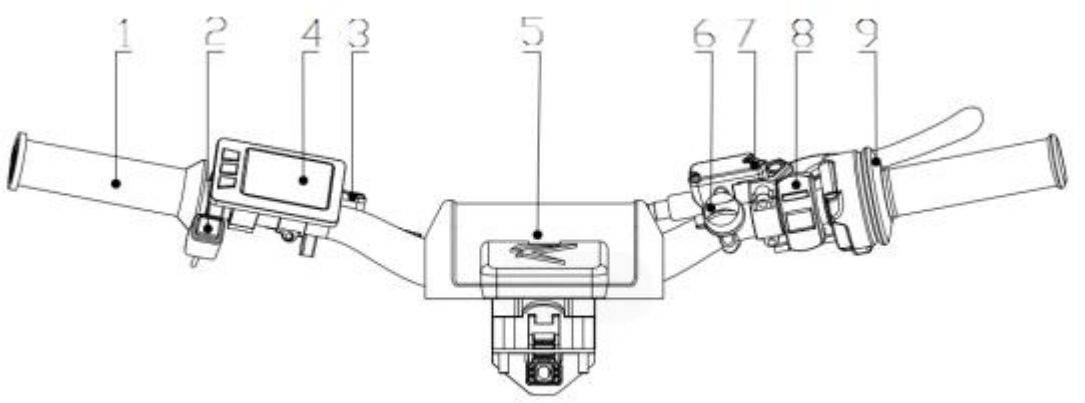
assistance and support as needed;

- When parking, ensure to park on a flat and solid surface, and promptly turn off the power to prevent accidental activation that may cause harm to you and surrounding individuals;
- Use only the dedicated lithium battery charger for this bike, with an input AC voltage of 100 - 240V. Before charging, check the charging port and charger for moisture or water ingress, and do not charge if present. During charging, keep away from flammable, explosive, high-temperature, and high-dust environments; disconnect the power promptly after charging is complete;
- Charging the lithium battery below -10°C is prohibited, as it may damage the battery. Wait for the battery temperature to rise before charging.
- Battery maintenance: Within 60 days of receiving the bike, if the bike is not started, promptly charge the battery to 70%~80% to prevent the battery from going into undervoltage protection due to natural discharge, which may result in battery damage and property loss.

2、Functional Diagram



1-Number Plate	2-Front Fender	3-Horn	4-Front Shock	5-Rear Fender	6-Rear Fork
7-Seat	8-Charging Portal	10-Rear Shock	11-Motor	12-Rear Caliper	13-Chain
14-Kickstand Sensor	15-Foot Peg	16-Kickstand	17-Battery	18-Controller	19-Front Caliper
20-Front Light(Optional)					



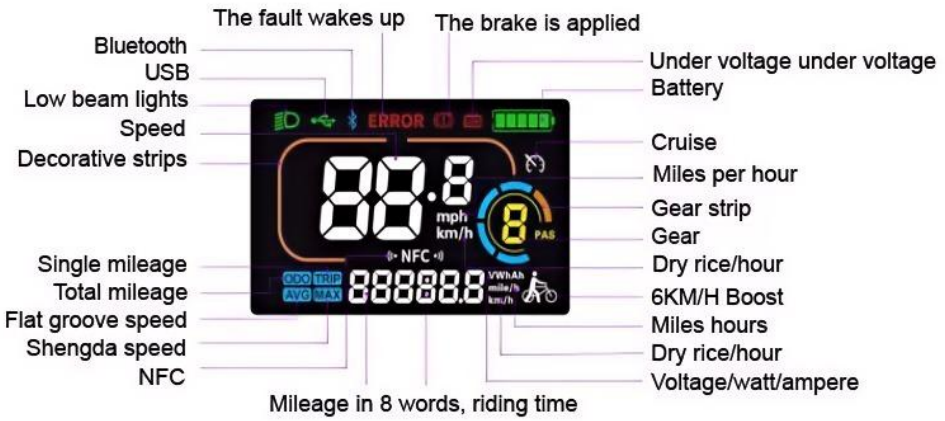
1-Grips 2-Left Assembly Switch(Horn) 3-Rear Brake 4-Dash 5-Chest Protector(Optional)

6-Magnetic Safety 7-Front Brake 8-One-touch Ignition Switch 9-Throttle

Left Switches				
	Horn	Dash-Shift Gears/Light (Reserved)	Dash-Dash（Hold）/Function （ One Click）	Dash-Shift Gears/boost function(Reserved)
Right Switches				
	Magnetic Safety	One-touch Power Off(Motor Off, Electrical Remains On)	One-touch Power Off (Motor/Electrical Remains On)	

SW-G518

Size L/W/H	82.02 x 48.02 x 43.29 mm
Screen Size L/W	50.6 x 30.6 mm
Screen Type	2.5" LCD Color Screen
	Working Temp -20 °C to 70 °C
Operating Voltage	24 V to 72 V
Functions	Headlight, Battery %, Speed, Mileage, Gears, Error Codes
Communication	UART
IP Level	IPX65



Function key definition and operation introduction:：

Press +/☼ or −/🚶, to shift gears； Press ⏻/M, to switch multifunctional display data.(Hold single button for mode/switch, hold compound buttons to set parameter.)

Hold +/☼ for 3 seconds to turn on/off headlight.

Hold ⏻/M for 3 seconds to turn on/off dash.

Hold +/☼+−/🚶, to enter parameter setting interface. Press ⏻/M in the interface to switch

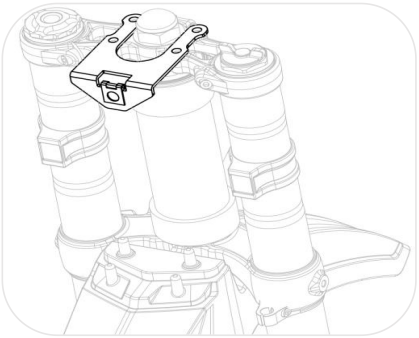
between menu items,press +/LED, −/, to modify current parameter value. The indicator will blink after modification. Press ⏻/M, to save the current menu setting value and move to the next menu item. Hold +/LED+−/ to exit the setting. The dash will exit setting when there is no further operation.

3、Quick Installation Guide

Handlebar Installation

1、Place the headlight bracket on the upper bracket, aligning it with the four holes, and secure it with the clamp nuts into the groove in front of the headlight bracket.

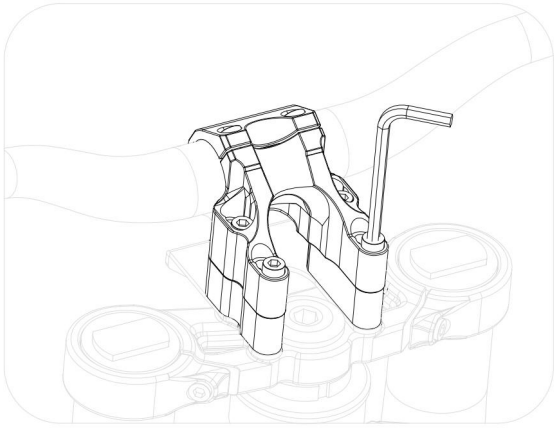
Place the handlebar on the headlight bracket, aligning it with the holes, and tighten the four screws using a Allen wrench.



2、Place the handlebar on the headlight bracket, aligning it with the holes, and tighten the four screws using a 5# Allen wrench.

Note: Use spring washers for the four screws.

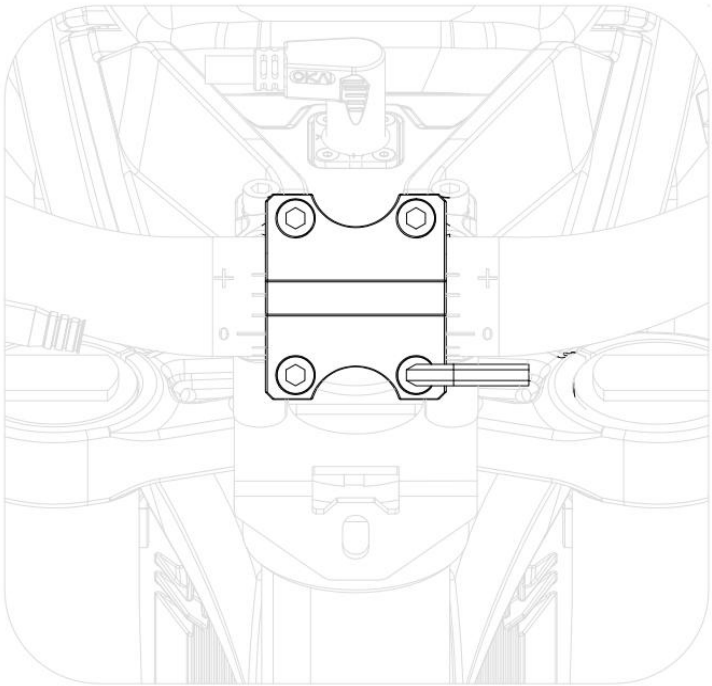
Recommended torque 7-9N.m.



Handlebar Adjustment

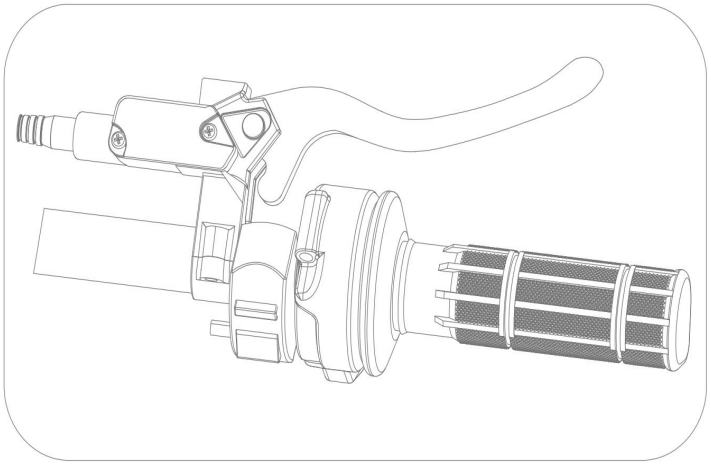
1、Loosen the four screws with a 5# Allen wrench to adjust the handlebar angle.

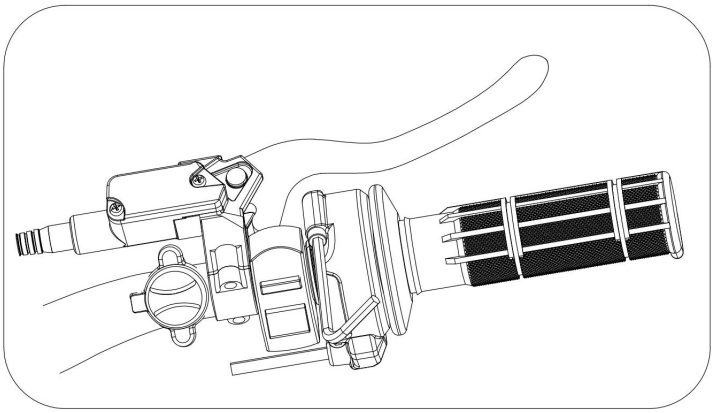
Note: Do not lose the spring washers for the screws.Recommended torque 7-9N.m.



Install the brake lever and throttle.

1、Adjust the front brake lever and throttle handle to the appropriate angle as shown in the diagram.





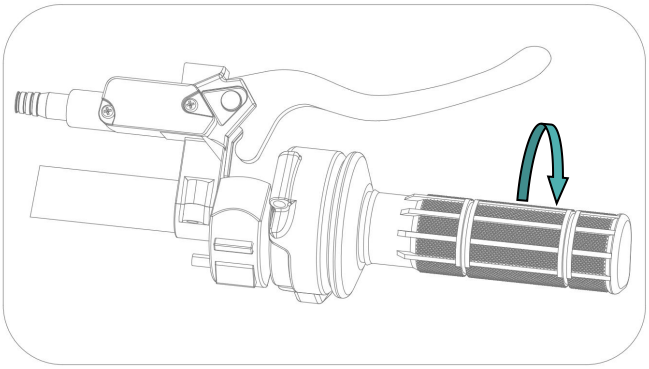
2、 Use a 4# Allen wrench to tighten the throttle handle and front brake lever separately.

Note: Recommended torque 3-5N.m.

2、Rotate the throttle handle to ensure it returns to its normal position smoothly. Inward rotation accelerates.

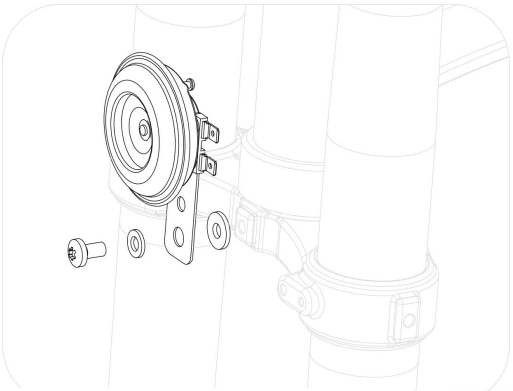
Note: Check the throttle if it does not return.

Note: Installation of the rear brake lever and left function switch follows the same steps as above.



Horn Installation

3、Use a 4# Allen wrench to tighten the φ6 flat washer, horn, and φ6 plastic washer with an M6x10 countersunk head bolt onto the lower bracket.



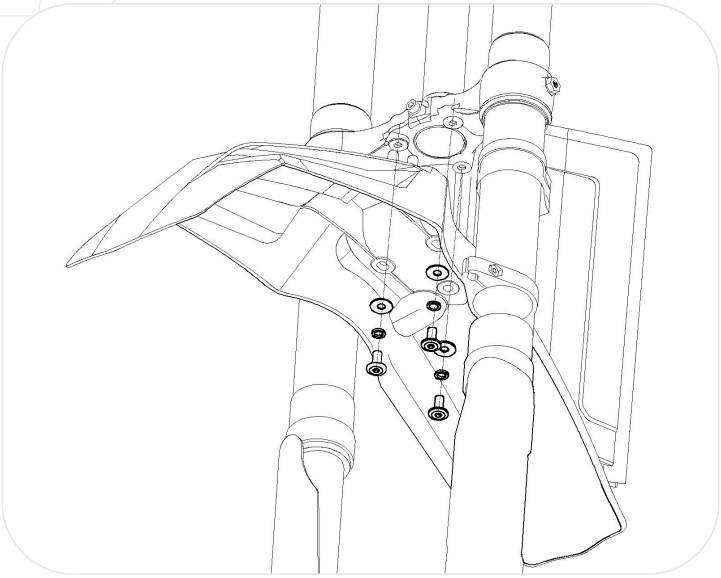
Headlight Installation

1.Position the headlight on the front fender locating pin shaft and add adjustment spacers between the headlight and the bracket.

Front Fender Installation

Use a 4# Allen wrench to tighten the front fender with 3 screws including flat washers and spring washers, fixing it to the lower bracket.

Note: Torque = 3N.m.

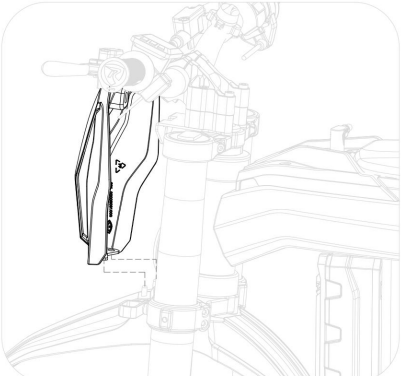


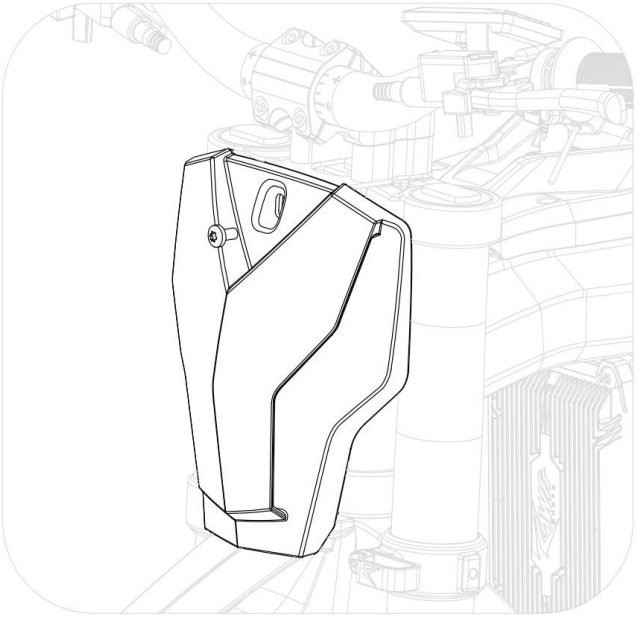
2. Adjust the position and tighten the center fixing bolt with a 5# Allen wrench.

Note: Torque = 3-5N.m.m。

Number Plate Installation

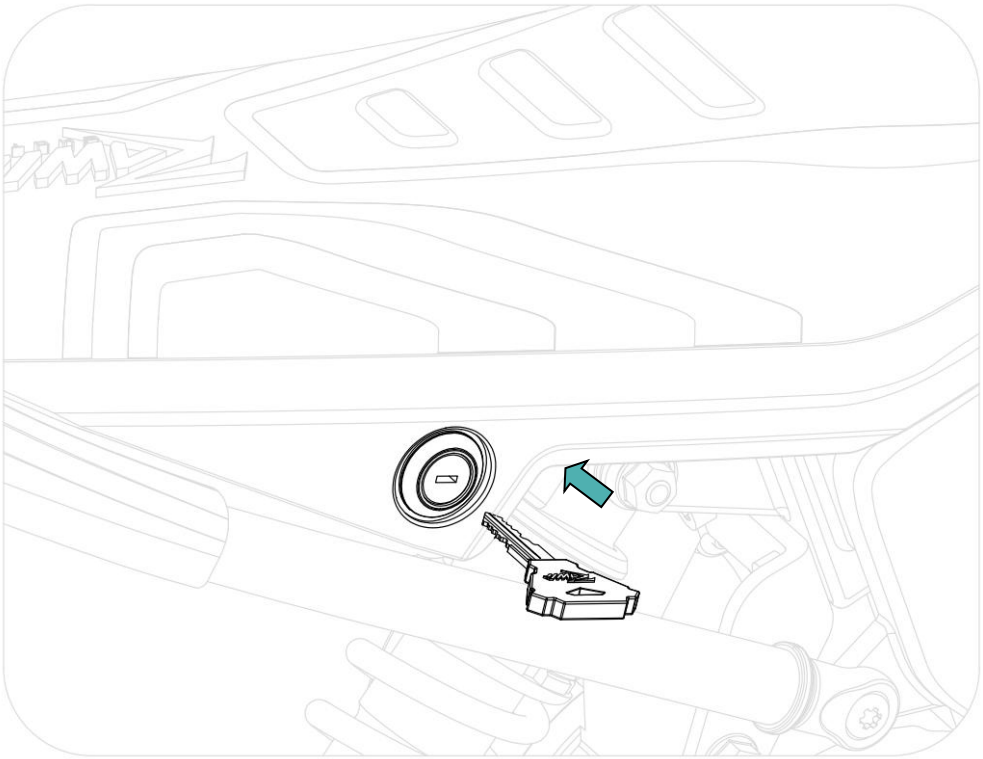
4、Mount the chest protector o the handlebar, using M6*12 bolts M6 clamp nuts to attach it to headlight bracket.

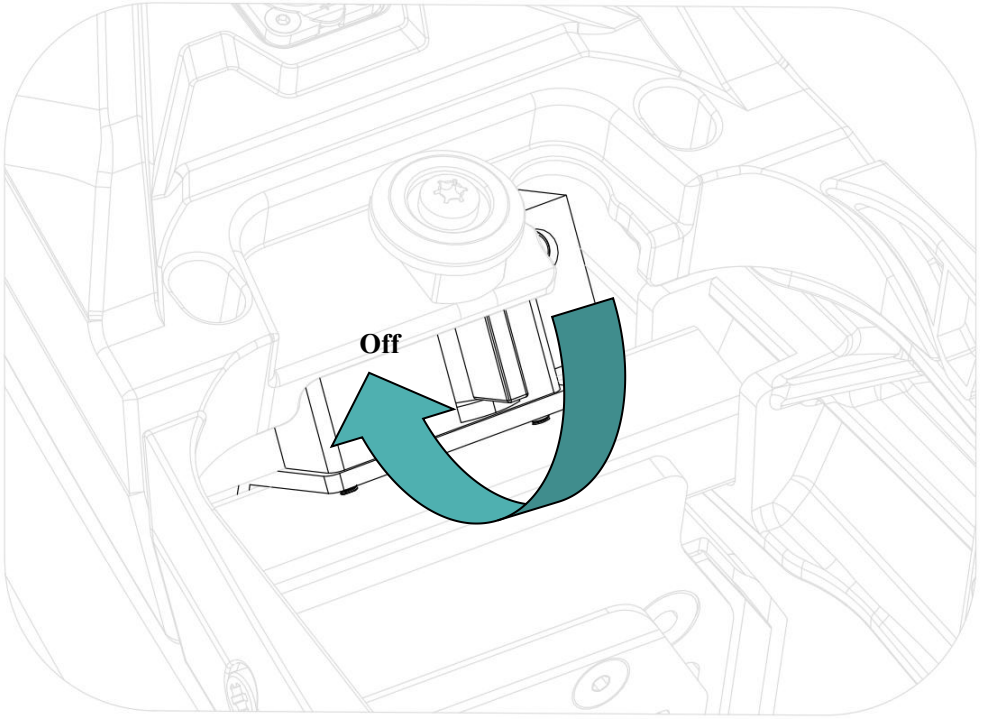




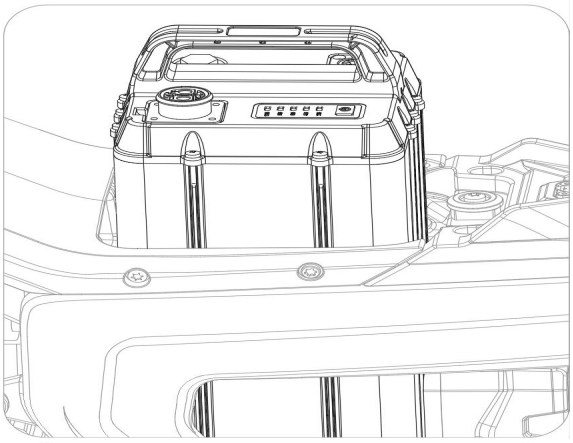
Battery Installation

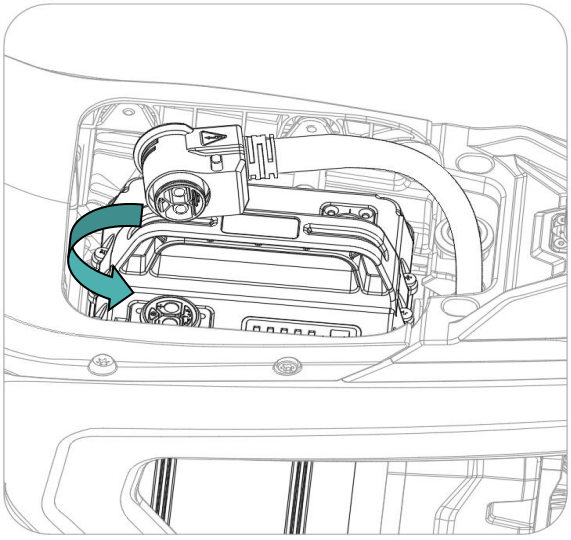
1、Insert the key into the right side keyhole of the seat, unlock the seat lock, hold the sides of the seat, and pull the seat backward to remove it. Check the air switch in front of the battery to ensure it is in the closed position.

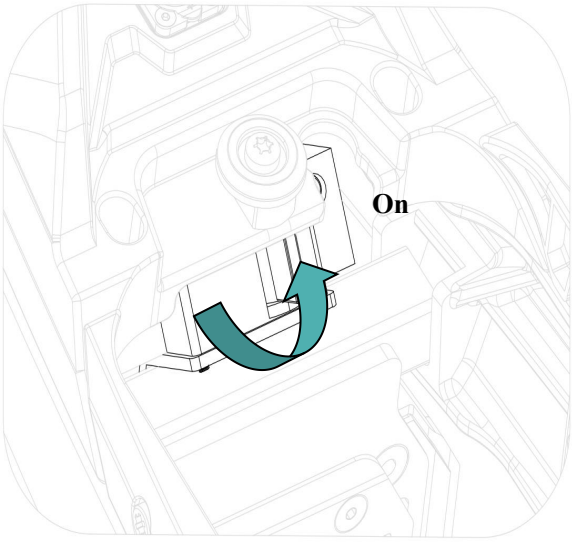




2、Insert the battery with the charging port facing the right side of the frame into the battery compartment; install the discharge plug, turn the air switch to the right to open it, close the seat, and remove the key.







Recommended Torque for Important Component Installation		
NO	Position	Recommended Torque
1	Front wheel axle tightening	28-30N.m
2	Throttle lock cover tightening	3-5N.m
3	Rear wheel sprocket tightening	20-25N.m
4	Front and rear disc brake disc tightening	20-25N.m
5	Front and rear brake caliper tightening	12-15N.m
6	Side stand tightening	3-5N.m
7	Motor fixing	25-30N.m
8	Rear fork fixing	30-35N.m
9	Rear shock absorber tightening	20-25N.m
10	Rear tailstock tightening	15-20N.m
11	Rear wheel axle tightening	40-45N.m
12	Handlebar tightening	7-9N.m
13	Steering column slotted nut	3-5N.m
14	Steering column locking bolt	20-25N.m

4、Preparation for Riding

Please ensure that you have carefully read all the items in Chapter P01 (Safety Instructions) of this manual regarding pre-ride checks, and pay particular attention to the following items:

Check the Front and Rear Tires：

1. Ensure the tires are in good condition with no abnormalities.

2. The recommended tire pressure is 180 - 200Kpa for the front tire and 210 - 230Kpa for the rear tire.

Insufficient tire pressure can lead to abnormal wear, poor steering response, low driving speed, and reduced range. Excessive tire pressure can cause localized abnormal wear on the tire tread, reduced tire grip, decreased driving comfort, and even tire blowouts, posing a safety hazard.

Check the Dash, Horn, and Brakes

1、Verify if all functions of the instrument panel are displaying normally.

2、Check if the horn is functioning properly.

3、Grip the front and rear brake levers separately, and check if both the front and rear brakes are operating correctly and if the front and rear wheels are functioning normally.

Check handlebar

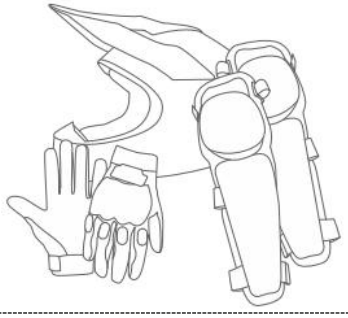
The handlebars should be securely tightened without any looseness, should turn smoothly without interference or abnormal noise.

Shock Adjustment

Adjust the front and rear shock according to the actual situation to meet individual riding preferences.

Warning: Please ensure your safety by wearing a helmet and other protective gear while riding. We highly recommend choosing a full-covered off-road helmet and off-road protective equipment for the best protection. The pictures in the manual are for reference only, so please always take full safety precautions.

It is important to not let anyone who is not familiar with the dirt bike (All-Terrain Bike) ride it. Riding with one hand or no hands is dangerous and should be avoided. Additionally, it is extremely dangerous to ride after consuming alcohol or drugs. Stay safe and always ride responsibly.

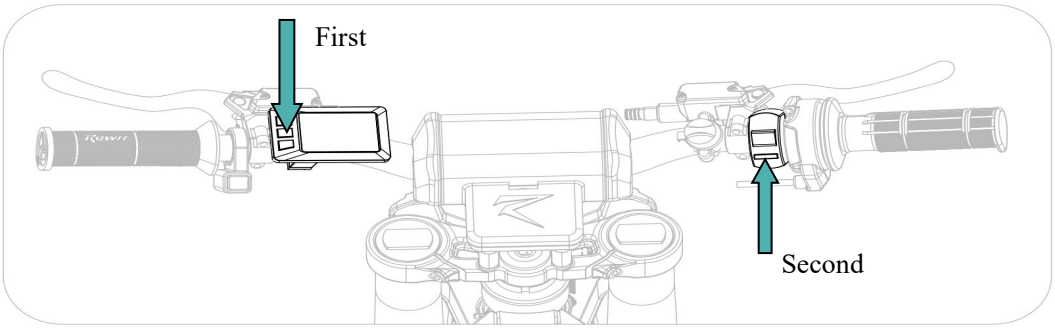


5、Learn to Ride

Start

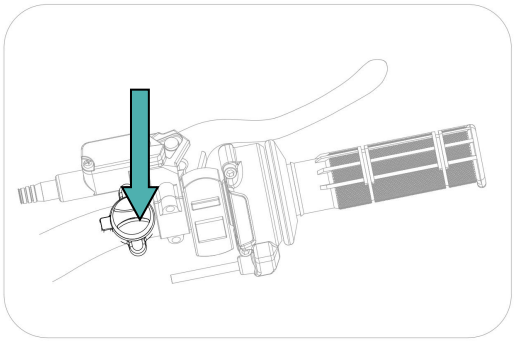
1、Press and hold the middle button on the left side of the handlebar for two seconds until the instrument panel lights up, then press the button below the ignition switch on the right side to start the bike.

2、Check if all switches, instruments, horn, front and rear brakes are functioning properly.

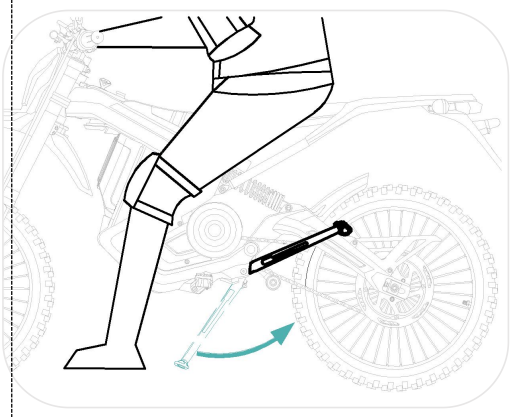


3、Magnetic suction switch protection function. Before driving, wrap the cloth strap of the magnetic suction switch around the right wrist and ensure that the magnetic suction switch is attached to the base.

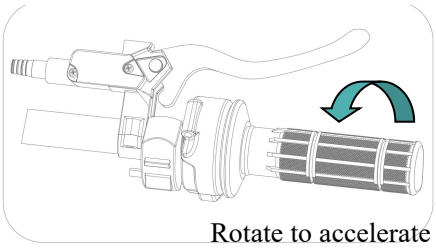
Note: If the vehicle tilts or overturns, the rider's hands release the handlebars, pulling the magnetic suction switch away from the base, which will cut off power to the bike, thus protecting the rider.



4、Before starting the bike：Sit firmly and retract the kickstand.



Warning: Acceleration must be smooth and gentle. Do not over operate to avoid danger or damage to the dirt bike. Make sure first time riders use ECO mode. And only use SPORT mode after becoming fully familiar with the bike.

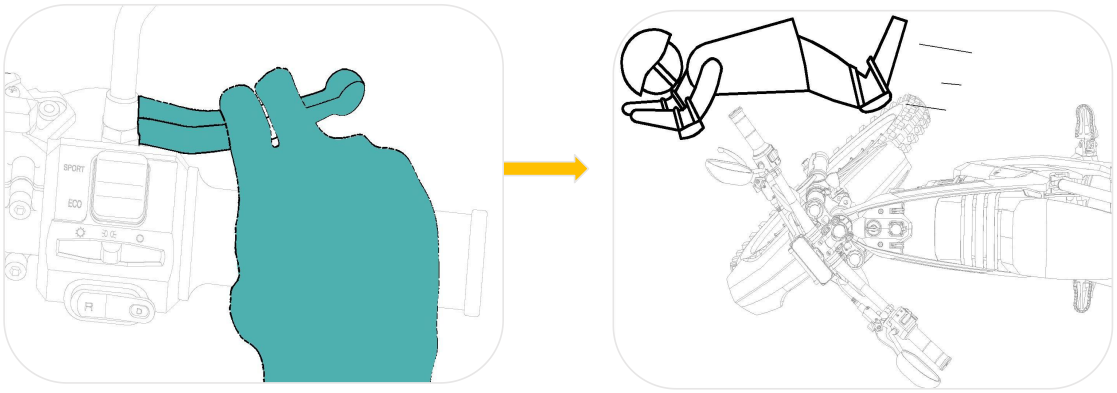


5、Slowly turn the throttle. Turning inwards accelerates, while turning outwards stops acceleration.。

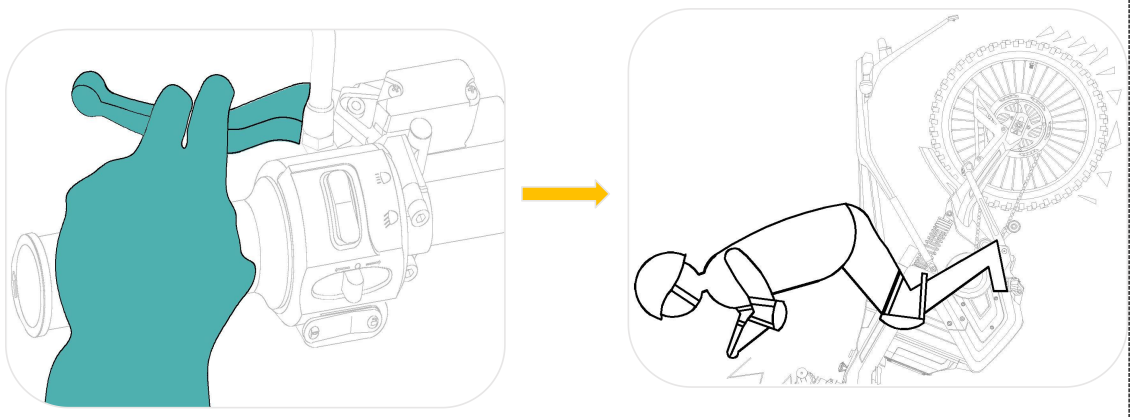
Note: When accelerating, release the brake lever, otherwise it may trigger the brake power-off function.

Warning: Please operate the brake handle according to the actual situation and gradually increase the force to prevent the wheel from locking and slipping, which can result in injury. Do not grip it suddenly. It is important to try to anticipate and avoid sudden braking, hard steering, and other operations that can easily cause side slips and falls. This is especially important when the road is slippery due to rain or other conditions.

Suddenly squeezing the front brake while driving may lead to a fall.

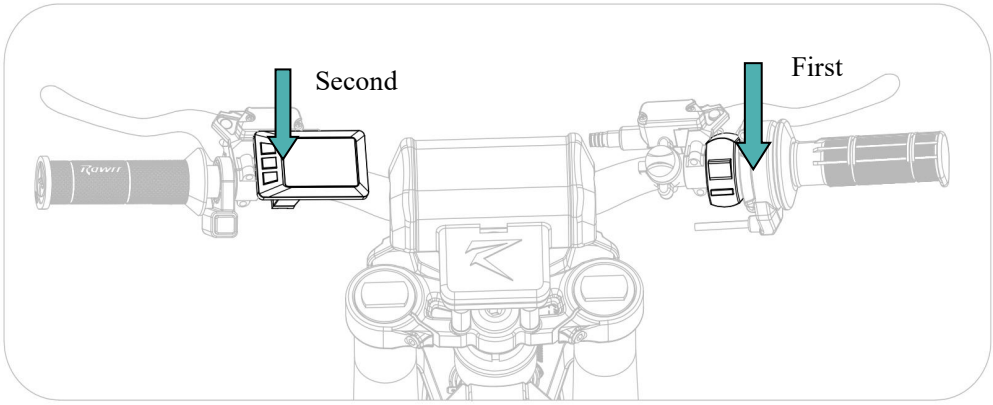


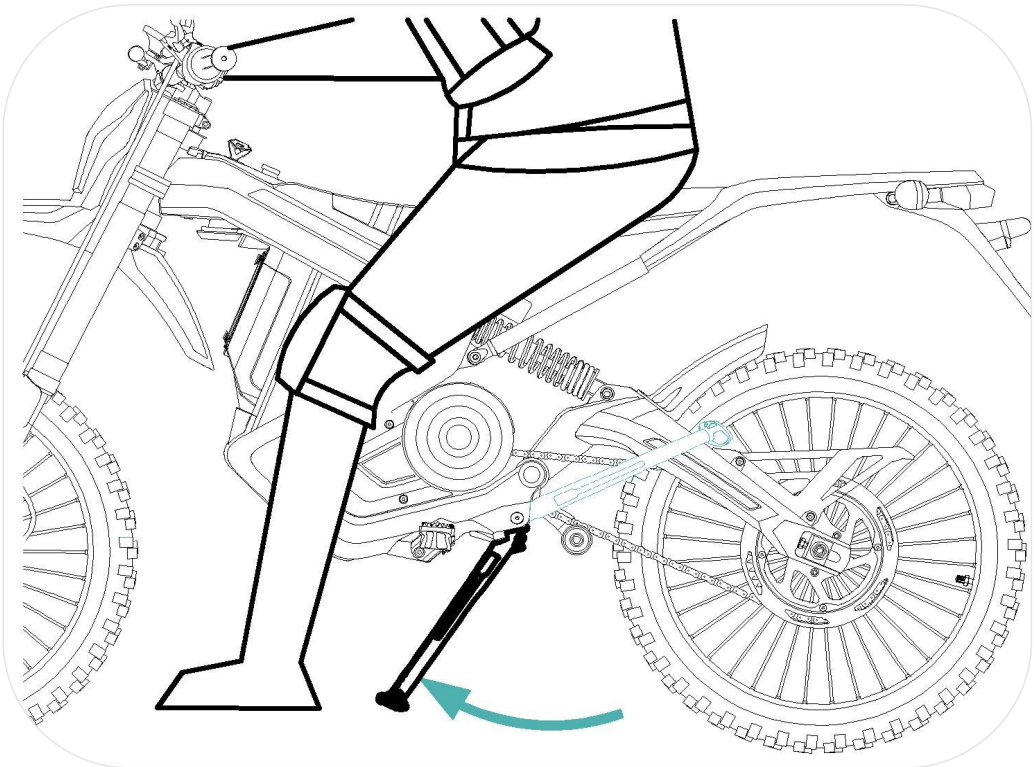
Suddenly squeezing the rear brake while driving may lead to a flip.



Parking

Pay attention to road conditions, slow down when approaching the parking area; after stabilizing the bike, press the upper button on the right side of the ignition switch to turn off the engine, then press the middle button on the left side of the instrument panel for 2 seconds to turn off the instrument panel, and lower the side stand to secure the bike.





Warning: When parking and leaving the bike, ensure to stand the side bracket, engage the P-gear parking function, and turn off the power to avoid accidental contact with the throttle, which causes accidents.

6、Bike Usage Guidelines

Parking Mode

1、The parking mode activates upon turning on the bike;

2、The bike automatically enters the parking mode after being stationary for 10 seconds;

3、When the kick stand is deployed, the vehicle enters the parking mode.

Note: Ensure that the kick stand is in the open position to release the parking mode by squeezing the brake lever!

Bike "Power-Off" (Losing power while turned on)

1、Brake Power-Off: When squeezing the brake lever, turning the throttle grip will not provide power output;

2、Motor overheating protection;

3、Controller overheating protection;

4、Battery overheating and reaching the undervoltage protection point.

Bike Power Reduction

1、Controller Overheating: When the operating temperature exceeds 85°C, it begins to reduce power. For every 1°C increase, power decreases by 10%. If overheating persists and reduces to the rated 20%, power output will be cut off until the controller cools down.

2、Motor Overheating: When the operating temperature exceeds 110°C, it begins to reduce power. For every 1°C increase, power decreases by 10%. If overheating persists and reduces to the rated 20%, power output will be cut off until the motor cools down.

3、Voltage linearly reduces power starting from 53V, decreasing by 20% for every 1V decrease, reaching a minimum reduction of 15%.

4、Power output stops when the battery level reaches 0. (Continued usage without timely recharging may trigger over-discharge protection.)

Note: After over-discharge protection is triggered, reactivation is required using the charger. Refer to Fault Phenomenon No. 7 on page 24 for activation method.

Environmental Usage Guidelines

1、When the temperature is between 0°C to -20°C, the battery performs at approximately 80% of normal capacity. It is not recommended to use the sport mode.

2、When the temperature exceeds 50°C, it is advisable not to ride at full power for extended periods.

Water Exposure

Occasional water exposure (not exceeding 24cm depth) is permissible for this bike, but prolonged submersion is not recommended, especially when the motor is at high temperatures. After water exposure and subsequent cooling, air contraction inside may cause water ingress from seals and cable positions, leading to damage.

The waterproof ratings for various components are as follows:

Battery: IP55

Motor, Controller: IP66

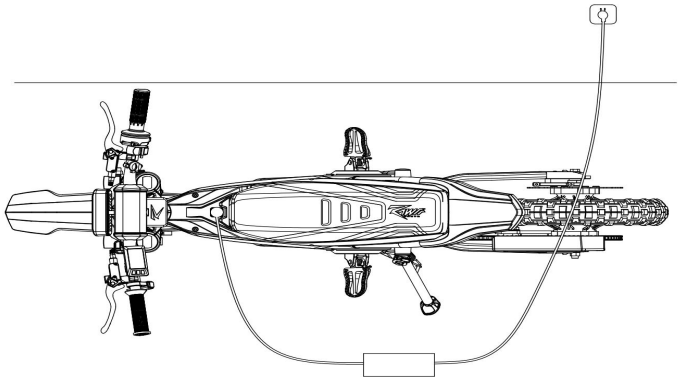
All Bike Connectors: IP55

Whole Bike: IP55

7、Charging

Charging From the Bike

Connect the charger output end to the bike's charging port, then connect the other end to the power source.



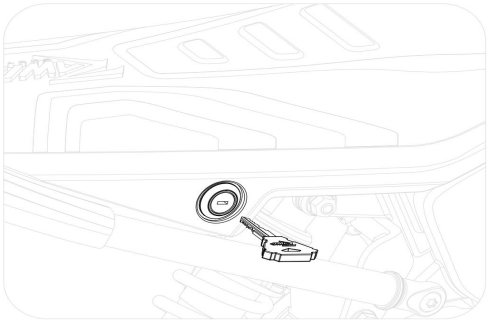
Warning: Do not charge the battery below 31°F, as this may damage the battery. Wait for the battery to warm up to the appropriate temperature before charging it.

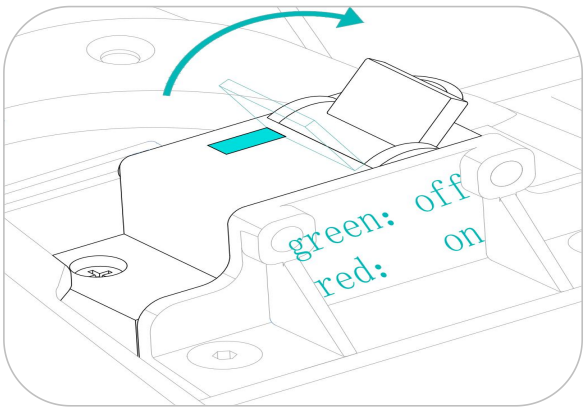
To ensure the correct use and maintenance of lithium batteries, do not dismantle them without permission. Abandoned batteries must be recycled in an appropriate facility.

When not using the dirt bike for over one month, turn off the air switch or unplug the charger, and keep the battery fully charged. When not charging, please make sure to fasten the charging sealing rubber cap.

1、Take the Battery

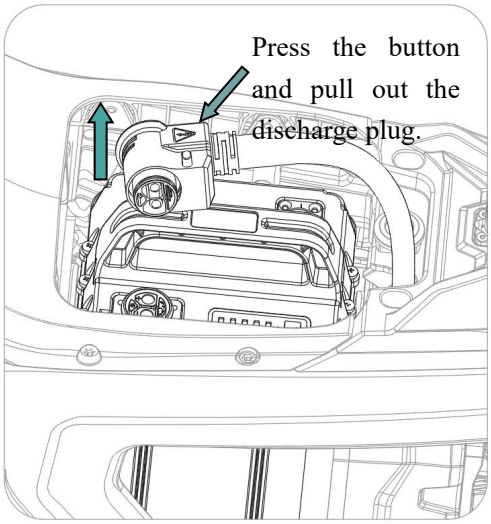
1）First, turn off the ignition switch, then switch off the instrument panel. Next, insert the key into the right side keyhole of the seat, unlock the seat lock, grasp both sides of the seat, and pull it backward to remove the seat. Finally, close the air switch in front of the battery.

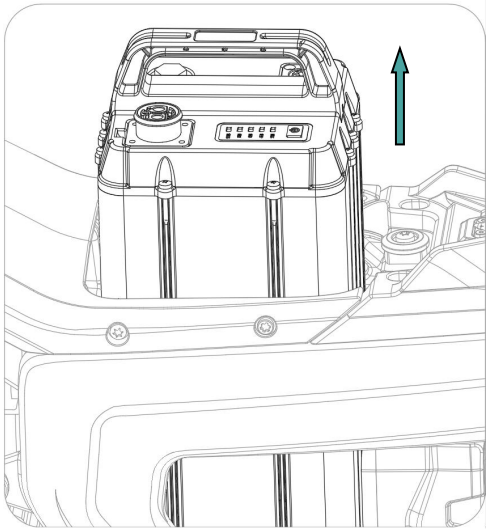




The images provided are for reference purposes only. Please refer to the actual product for accurate appearance and functionality.

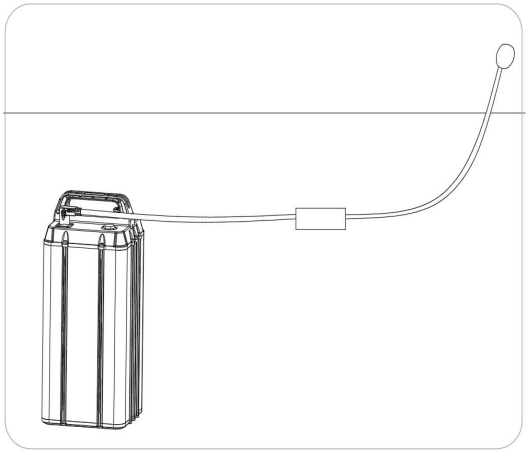
2）Press the button on the discharge plug and then pull it upwards to remove the plug. Pull the battery upward to remove it from the bike.



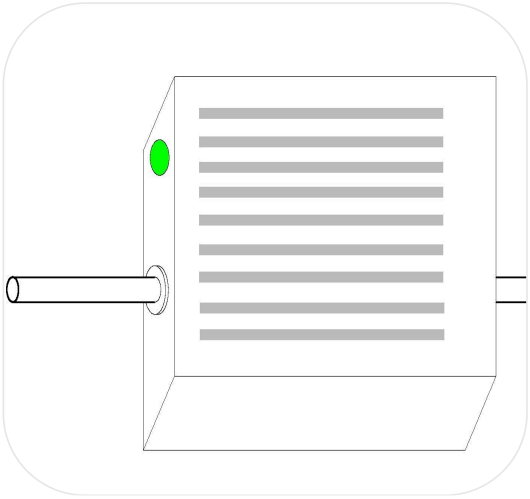


2、Charging the Battery

1）First, connect the output end of the charger to the lithium battery charging port, then connect the other end to the power source.



2）The charger indicator light flashes red to indicate charging. When the battery is fully charged, the green light stays on steadily. Please remember to disconnect the power once the battery is fully charged.



About Charging

•Charging is recommended to be performed by experienced adults and kept away from children.

•Do not place any objects on the charger. The charger should be used in a dry and well-ventilated environment.

•If you detect any unusual odors or notice excessive heat during the charging process, please stop charging immediately. If the battery level still does not indicate a full charge after an extended period, please seek repair assistance.

Warning: It is important to use the authorized lithium battery charger specifically designed for this dirt bike. When replacing the charger, please ensure to use an OEM charger to avoid potential damage. Always turn off the motor and switch before installing or removing the battery. Plugging in the charger while the electricity is on can negatively affect the life of the battery. Failure to insert the battery plug with the switch open can pose a risk of ignition and lead to damage to the plug or other components.

8、Bike Parameter

	Item	Parameter	
Basic Information	Brand	RAWRR	
	Bike Size (Length / Width / Height)	Front Wheel 14# Rear Wheel 12#：1495*671*900mm Front Wheel 12# Rear Wheel 10#：1455*671*880mm	
	Bike Weight (Excluding Battery)	Front Wheel 14# Rear Wheel12#：50Kg Front Wheel 12# Rear Wheel10#：48Kg	
	Maximum Load	50Kg	
Major Parameter	Wheelbase	1037mm	
	Seat Height	Front Wheel 14# Rear Wheel 12#：640mm Front Wheel 12# Rear Wheel 10#：620mm	
	Minimum Ground Clearance	220mm	
	Maximum Speed	Front Wheel 14# Rear Wheel 12# 50Km/h	Front Wheel 12# Rear Wheel 10# 45Km/h
	Maximum Power	3KW	
	Full Battery Range	Average Speed 25Km/h≥50km	
	Protection Level	IPX7	
Bike System	Bike Type	Double-Beam Aluminum Alloy Forging	
	Wheel Type	Spoke Wheel Rim - Aluminum Alloy: Front Wheel：14#*1.4 12#*1.4 Rear Wheel：12#*1.6 10#*1.6	
	Front Tire Type	Off-road Tire 60/100-14# 60/100-12#	
	Rear Tire Type	Off-road Tire 70/100-12# 70/100-10#	
	Transmission System	Front Wheel 14# Rear Wheel 12#：06B Chain 136 Secs Front Wheel 12# Rear Wheel 10#：06B Chain 132 Secs	
	Front Brake	203mm 2 2-piston Hydraulic Disc Brake	
	Rear Brake	203mm 22-piston Hydraulic Disc Brake	
	Suspension	Dual Shoulder Front Fork - Range 100mm	
		Adjustable Hydraulic Shock Absorber - Range 45mm	
Motor	Rated Power	2000W	
	Rated Torque	34N.m	
	Maximum Motor Speed	3100r/min	
	Climbing Angle	40°MAX	
	Cooling method	Natural Cooling	
Controller	Control Scheme	FOC Sine Wave Vector Control	
	Rated Input Voltage	48V	60V
	Rated Output Current	30AH	30AH
	Operating Ambient Temperature	-20~+65	-20~+65
	Undervoltage Protection Value	41V	49V

Charger	Charger Type	Lithium Battery Charger	
	Rated Output Voltage	48V	60V
	Input Voltage	100~240VAC 50/60HZ	100~240VAC 50/60HZ
	Output Voltage	54.6V	67.2V
	Output Current	6A	6A
Other	Handlebar Specifications	Φ22~Φ32taper handlebar	
	Communication Port	CAN Communication	
	Lighting System	LED	
	Instrument Type	LCD Color	

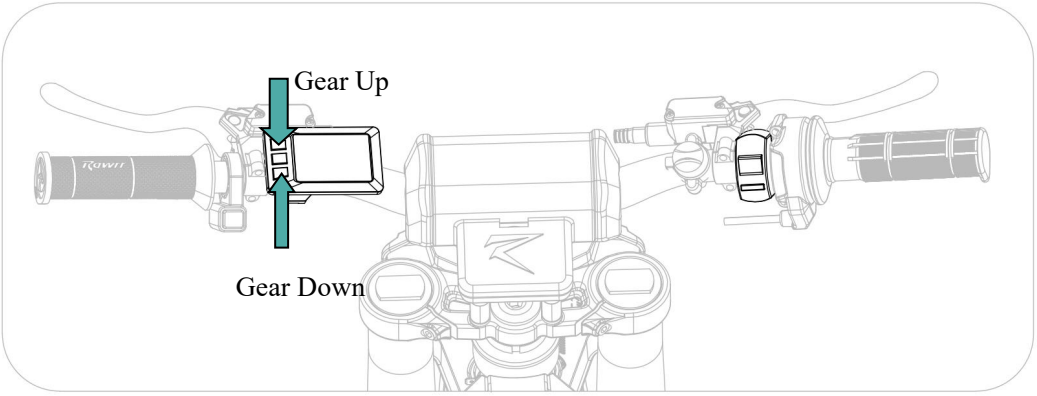
9、Other Instruction

1 、 Mantis Mini Model: Our Mantis Mini model features three different modes controlled by the controller:

1 ） Mode 1: In this mode, the speed is limited to 27 kilometers per hour, making it ideal for novice riders who are undergoing training.

2 ） Mode 2: This mode is designed for rapid acceleration while maintaining control. The power output is suppressed initially for smoother acceleration, allowing the bike to reach a maximum speed of 50 kilometers per hour with linear acceleration and without wheelie.

3 ）Mode 3: In this mode, the power delivery is optimized for easy handling and allows for lifting the front wheel if desired. The vehicle can also reach a maximum speed of 50 kilometers per hour.



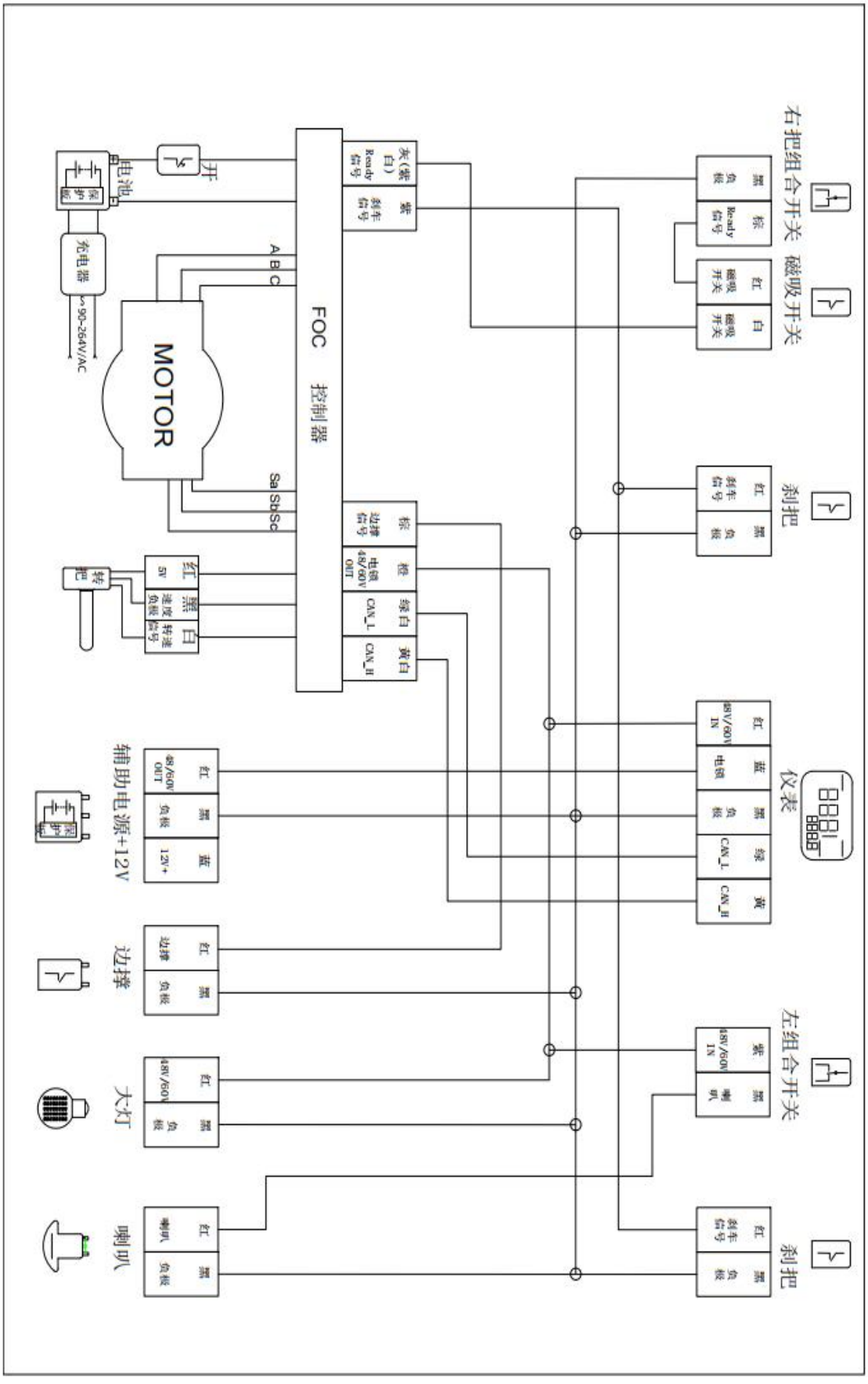
2、RAWRR is committed to continuously improving product performance. Therefore, product specifications and manual content may change without prior notice. We appreciate your understanding in this regard. If there are any discrepancies between the icons, images, or other visual representations in the manual and the actual product, please refer to the physical product for accurate information.

3 、 Within the scope permitted by law, RAWRR reserves the right to interpret and

explain the declarations and descriptions of this product.

4、If you ever decide to resell or gift your RAWRR off-road dirt bike, please do not forget to pass along this user manual as it is an integral part of the product. If you have any questions or inquiries, RAWRR is delighted to assist you at any time. Once again, we appreciate your choice and trust in our product.

Attachment（Complete Electrical Schematic）



Controller Alarm Code List

Alarm Code（Beep)	Fault Name	Protective Measures	Troubleshooting
1 (1 Short）	Overcurrent in software	Shutdown	Restart with the key. Replace the controller. Replace the motor.
2 (2 Short）	Motor overspeed	Shutdown	Restart with the key. Replace the controller wiring harness. Replace the controller. Replace the motor.
3 (3 Short）	Battery overvoltage	Shutdown	Restart with the key. Check if the controller/air switch power line is loose. Replace the battery.
4 (4 Short）	KEY power anomaly	Shutdown	Restart with the key. Replace the ignition. Replace the battery.
5 (5 Short）	12V power anomaly	Shutdown	Replace the DC converter.
6 (6 Short）	5V power anomaly	Shutdown	Replace the throttle. Replace the motor encoder. Replace the controller.
7 (7 Short）	Angle sensor disconnected	Shutdown	Replace the controller Hall harness. Replace the controller. Replace the motor.
8 (8 Short）	Hardware overcurrent	Shutdown	Replace the throttle. Replace the controller. Replace the motor.
9 (9 Short）	Current loop failure	Shutdown	Replace the controller.
10 (1 Long）	Battery undervoltage	Derating	Charge the battery. Replace the battery.
11 (1 Long1 Short）	Controller temperature too high	Derating	Turn off the power to let the controller cool down.
12 (1 Long2 Short）	Motor temperature too high	Derating	Turn off the power to let the motor cool down. Replace the controller wiring harness. Replace the motor wiring harness.
13 (1 Long3 Short）	Current sensor abnormal	Shutdown	Replace the controller.
14 (1 Long4 Short）	Motor signal interference	Shutdown	Replace the controller wiring harness. Replace the motor.
15 (1 Long5 Short）	No signal from the throttle	Shutdown	Check if the handlebar wiring harness is properly connected. Replace the handlebar. Replace the mainline.
16 (1 Long6 Short）	Throttle not reset	Shutdown	Reset the throttle, restart the key. Replace the handlebar.
17 (1 Long7 Short）	Motor stall	Derating	Check if the controller display is loose or connected incorrectly. Check if the drive wheel is stuck. Replace the motor.
18 (1 Long8 Short）	Battery communication disconnected	Shutdown	CAN harness is not connected. Replace the controller wiring harness. Replace the power line. Replace the battery.
19 (1 Long9 Short）	Battery communication failure	Shutdown	Replace the battery.
21 (2 Long1 Short）	Brake failure	Shutdown	Reset the brake, restart the key. Replace the brake power-off line.

10、Fault and Troubleshooting

No	Item	Reason	Troubleshooting
1	Power On, Motor not working	1. Battery connector loose 2. Speed control central connector disconnected 3. Motor wiring loose or disconnected 4. Brake handle does not return to position or brake switch failure	1. Check if the connection lines are securely connected. 2. Repair the plug connection firmly. 3. Reconnect and tighten. 4. Check the brake handle and brake switch.
2	Speed control failure or maximum speed is low	1. Low battery voltage 2. Speed control handle failure	1. Fully charge the battery. 2. Replace the speed control handle at the after-sales service center.
3	Insufficient range per charge	1. Tire pressure is insufficient 2. Insufficient charging or charger failure 3. Improper brake adjustment, excessive driving resistance 4. Battery aging or damage 5. Multiple uphill climbs, headwinds, frequent acceleration and deceleration, heavy load	1. Inflate the tires to the appropriate pressure. 2. Ensure sufficient power or replace the charger. 3. Readjust the brakes. 4. Replace the battery. 5. Decreased range in certain usage environments is considered normal.
4	Charger not charging	1. Charger plug loose or connection loose 2. Battery pack connector plug loose	1. Tighten the plug or connector, open the seat battery compartment, and secure the plug. 2. Open the seat, and secure the plug.
5	Seat cannot be opened	1、Seat lock failure	1. Replace the seat lock at the after-sales service center.
6	Transmission during driving abnormal noise	1、Chain tension unreasonable 2、Tire misalignment	1、Adjust the chain tension. 2、Adjust the left and right friction pads to center the tire.
7	After connecting the power supply, the charger	Battery over-discharge protection due to prolonged non-charging or improper battery storage	Connect the charger's output end to the battery charging port, plug the charger's input plug into the mains power supply, wait for the battery power indicator to light up, and the battery will enter

	cannot work properly, and at the same time, the battery meter does not display any power		normal charging state.
8	Brake not responsive	Brake pads wear	Replace the brake pads.
9	Other faults	1. When you encounter a fault that cannot be resolved by the above instructions or cannot be determined 2. Motor, controller, charger, battery damage	If you encounter any of the above situations, please contact the supplier or maintenance station. Do not attempt to open the above components yourself, as this may void the warranty commitment from our company.

11、Maintenance Guidance

In principle, for normal riding, the first inspection (also known as the initial maintenance) should be conducted between 10 to 30 kilometers.

Inspection includes:

- Checking the tightness of the front and rear wheel spokes.
- Verifying if there is any looseness in the steering column bearings.
- Inspecting the tension of the chain.
- Checking the shock for oil leaks, ensuring compression and rebound are in the correct position. (Note: During adjustment, do not turn the adjustment knob to the extreme left or right.)
- Checking the tightness of the screws securing the handlebars.

Special Attention: Maintenance operations must be performed with the power off.

During inspection, safety precautions should be taken:

1. Choose a wide and flat area to park the bike.
2. When conducting riding inspections, do so in a safe location while being aware of the surrounding environment.
3. If any abnormalities are detected during inspection, resolve them before driving. If unable to resolve on your own, contact after-sales service or designated authorized service centers.

Notes:

1. Both front and rear brakes are disc brakes. When brake pads wear, replace the brake pads promptly.
2. Pay attention to the cleanliness of the disc brake system during daily use to avoid prolonged attachment of mud and dirt, especially oil stains.

Inspection of Operating Components:

1. Check the shock for bending, deformation, or damage.

Inspect the front shock for any faults such as damage or oil leakage. Check for abnormal noises caused by front shock malfunctions when shaking the handlebars up and down. If any abnormalities are detected in the front shock, please contact the after-sales service or designated authorized service centers.

2. Brake System Inspection.

Inspect the free play of the brake handle to ensure it falls within the specified range (15~30mm). If the measurement does not meet the requirements, adjustments should be made.

3. Brake Effectiveness Check.

Perform a low-speed check on a dry, flat road surface. Test the effectiveness of both front and rear brakes separately.

4. Inspection of Tires, Spokes, Tension Wheels, and Chains.

The tires are in continuous contact with the ground, and foreign objects such as stones, glass, and nails on the road can damage your tires. Therefore, pay attention to the road surface while driving to avoid areas where tire damage may occur. Additionally, regularly check for obvious cracks or damage to the tires, and inspect for embedded stones, glass, or other foreign objects, as well as any abnormal wear and tear.

1.Check tire pressure with a tire pressure gauge while the tires are cold.

2.Inspect for cracks, damage, and abnormal wear and tear on the tires.

3.Check for loose spokes on the wheel rim.

4.Check the tension of the chain. The vertical movement of the chain should be 10~20mm.

5.Tread Depth Inspection.

Inspect the tire wear and check the tread depth. Replace the tire when the wear reaches two-thirds of the block depth. If there are abnormal noises or vibrations from the tires while driving, please

contact the after-sales or designated authorized service centers for inspection and repair.

Recommendation: The tightening torque for the rear wheel axle nut is 40N.m, and for the front wheel axle nut, it depends on the front fork.

Note: If squeezing the brake handle does not achieve the desired braking effect, check the cleanliness and thickness dimensions of the disc brake pads. If the issue persists, please contact the after-sales authorized service center for inspection.

Battery Inspection:

1. Check Battery Capacity.

The bike uses a sealed lithium-ion battery. When checking, the battery should be fully charged, and then the voltage of the positive and negative terminals should be measured using a multimeter. The voltage when fully charged should be within the range of 66.2~67.2V, which is normal.

2. Check Battery Appearance.

Inspect whether the battery is damaged. If there is any damage to the upper or lower sealing covers of the battery or to the battery level indicator, it may lead to the risk of water ingress after sealing failure. Please contact the after-sales or designated authorized service centers.

Note:

1. Before installing or removing the battery, close the key switch and air switch, and seal the charging port with the sealing cap.
2. If the battery cannot be inserted into the battery compartment, do not force it. Instead, remove the battery and check if any foreign objects are causing the battery to jam.
3. During winter storage, it is recommended to store the battery indoors at a temperature above 0°C and regularly check its capacity.

Battery Charging and Charger Usage:

1. Only use a charger that matches the original model of the bike for charging. Do not use chargers of other models to avoid damaging the battery or posing a risk.
2. Check whether the input voltage of the charger matches the voltage of the power grid.
3. The charger will automatically shut off when fully charged. However, it is best to avoid leaving the charger connected to the power grid for an extended period. The maximum charging time after reaching full charge should not exceed 6 hours.
4. Users are strictly prohibited from disassembling the battery themselves to avoid damage and danger.
5. When the battery enters over-discharge protection, it needs to be activated by charging with the charger. Refer to section 7 on page 25 (Troubleshooting and Remedies) for activation methods.

Use and Maintenance of Electrical Components:

1. Regularly check whether the motor fixing screws are loose.

2. Regularly check whether the motor and controller connections are loose and the insulation condition.

3. Regularly check whether the air switch connections are loose.

4. Avoid driving in excessively deep water to prevent affecting the lifespan of brake pads and the operation of the motor.

Note: When the motor temperature, controller temperature, or battery level is too low, the vehicle will automatically reduce power operation, which is not a malfunction.

Maintenance and Care for the Motor

Usage

1. During operation, if the controller malfunctions and the bike cannot be started directly.
2. During operation, there should be no intermittent or abnormal sounds or vibrations.
3. During operation, if gear oil (add GL-4 85W-90 oil, about 100mL) has not been added, the bike cannot be started directly.

Maintenance

Around 1000 kilometers of travel, the entire bike should do the first maintenance. During the first maintenance, the gear oil in the reducer needs to be replaced, and the iron filings adhered to the oil drain plug need to be cleaned, and the remaining iron filings in the reducer need to be cleaned. Clean the dust and foreign objects around the vent plug to keep it unobstructed. Check the signals of various sensors and the tightness of bolts.

After the first maintenance, maintenance inspections should be carried out on the entire assembly according to the vehicle maintenance requirements, as follows:

a.Check the sensor signals of the motor. If broken wires or damaged signal lines are found, they should be replaced in time.

b.Check the suspension of the entire assembly and whether the bolts in various parts

are loose. If looseness is found, it must be tightened immediately.

c.Check the sealing surfaces and oil seals of the entire assembly, and replace damaged oil seals in time to ensure the sealing performance of the entire assembly.

d.Clean the area around the vent plug to keep it clear.

e.According to the bike's riding conditions, the gear oil should be changed every 3 months or every 5000 kilometers traveled (whichever comes first), and iron filings should be cleaned out.

12、After-sales Service and Warranty Coverage

Rawrr all-terrain off-road ebike after-sales service

In order to better protect your rights and interests, please keep this manual properly. When purchasing the vehicle, please inspect and debug it on the spot, and request the salesperson to provide correct usage methods and maintenance instructions, as well as effective receipts, warranty cards, maintenance addresses, contact numbers, etc.

When you use this bike and find any quality issues, you can bring the purchase invoice and warranty card to our company's authorized maintenance station for repair and maintenance services. The specific warranty items are as follows (repair faults refer to non-human factors):

NO	Name		Fault Factor	Warranty Period	Remarks
1	Motor	Brushless Motor	Wire Harness Damage	12 month (1,000 miles)	Excluding Human Factors (Ensure the Motor in Its Original Packaging)
			Unable to Operate Normally		
2	Battery	Lithium-ion Battery	Capacity Below 60%	12 month (1,000 miles)	Excluding Human Factors
3	Electrical Components	Controller, Charger	Failure Occurs and Cannot Be Repaired	12 month (1,000 miles)	Excluding Human Factors Products Must Remain in Their Original Condition
		Dash, Throttle, Main Wiring Harness	Failure Occurs and Cannot Be Repaired	1 month (100 miles)	
		Function Switches, Horn, Other Connecting Wiring Harnesses	Failure Occurs and Cannot Be Repaired	1 month (100 miles)	
4	Structural	Entire Bike, Rear Shock	Fracture or Shock Failure	1 month (100 miles)	Excluding Human Factors (Brake Parts Excluding Brake Pads)
		Front Shock	Shock Failure	1 month (100	

	Compo nents			miles)	
		Chain, Sprocket, Wheel	Performance Malfunction	1 month (100 miles)	
		Brake	Oil Leakage or Ineffective Braking	1 month (100 miles)	

During the warranty period, if any of the above components fail and cannot be repaired to normal working condition, they will be replaced free of charge.

The following items are considered consumable parts: tires, brake pads, steering bearings, front and rear mudguards, seat cushions, lights, etc. Except for quality issues, customers can contact the repair station or dealer for paid replacement or repair.

Warranty Start Date:
For offline purchases, the date of the purchase invoice is considered the starting date (counting from the date of the first occurrence);
For online purchases, the date on the delivery receipt is considered the starting date (counting from the date of customer receipt).

The delivery receipt and purchase invoice are valid proofs. In the absence of proof or unclear documentation, the system record of the sales date will be used as the basis.

13、Regular Maintenance Record Card

Scheduled Maintenance Record Card		
Maintenance Period	Maintenance Requirement	Maintenance Person / Unit Seal
300Km / 1 month	Tightening of all vehicle fasteners, inspection of chain, tension wheel adjustment (motor, brakes, spokes, etc.)	
1000Km / 3 month	Inspection of all vehicle safety components, inspection of high-current circuits, inspection of chain and tension wheel adjustment, inspection of brake pads, spokes, etc.	
2000Km / 6 month	Inspection of high-current circuits, inspection of brake oil circuit, inspection of brake pads, inspection of spokes, chain, and tension wheel adjustment	

Note:
1. Users must timely perform the mandatory maintenance items specified in the "Scheduled Maintenance Record Card" at designated authorized service centers.
2. Failure by users to adhere to the scheduled maintenance items is considered a waiver of warranty.

Warranty Record Card		
Maintenance Date	Warranty Status Record	Maintenance Person / Unit Stamp

Warranty Record Card		
Maintenance Date	Warranty Status Record	Maintenance Person / Unit Stamp