



USER MANUAL

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Vmoto Soco

www.vmosoco.com

Please do not use bike before you read this manual carefully and know function of it.
Please keep this manual carefully.

USER INSTRUCTION

To ensure your safety, please read this manual carefully before riding and make sure you are always following the requirements below:

- 1 Fully understand the information in this manual, include but not limited to the relevant instruction, precautions and warnings.
- 2 Fully understand the operation and contingency measures of VS1 smart electric bike.
- 3 Be Fully aware of warning labels of VS1 smart electric bike.
- 4 Don't disassemble vehicle or any parts, if need replacement, please contact local dealer.
- 5 Please keep this manual carefully.



All parameters of this vehicle have been permanently set according to the national standard before leaving factory. The company is not responsible, if the original electrical or circuit has changed and caused excess, such as increase the speed.

SAFETY INSTRUCTION

To ensure the safety of you and others, please make sure to observe the following matters:

- 1 Don't lend your vehicle to someone who can't operate it in order to prevent any hurts.
- 2 Please comply with local laws and regulations to drive on the road.
- 3 Do not ride after you take medications which may affect your riding ability, drink alcohol, or when you are unwell.

USER INSTRUCTION

- 4 Observe traffic regulations and traffic signs, according to the provisions of laws and regulations to carry man and cargo. Confirm the surrounding road conditions and bike condition any time,so as to actively avoid danger.
- 5 In rainy and snowy weather, braking distance will be extended, please slow down, Avoid travelling in bad weather such as storms and typhoons.
- 6 Wear safety equipment, such as helmet, and appropriate protective clothing if necessary, such as gloves and mask.
- 7 To ensure the safety of you and others, please avoid using the high beam under good lighting conditions. Continuous use of the high beam will cause visual obstacles to the opposite vehicles and pedestrians and affect the safe driving
- 8 Please turn off the power and remove the key immediately after use. Do not allow children to play, so as to avoid loss to your family and property.
- 9 Perform a basic check each time before riding, and regularly go to VMOTO Service Center for maintenance.
- 10 Check before riding. If there is any abnormality, please timely carry out maintenance or seek professional maintenance.
 - a. Check the status of power circuit, lighting circuit, etc.
 - b. Check whether the front and rear brakes work normally.
 - c. Check fixing of handlebars、 front and rear wheels
 - d. Check tire pressure.

QUICK START

- 01 -

Check accessories items



× 2

Intelligent remote control



× 1

Rear view mirrors



× 1

Certificate, Operating manual



× 2

key



× 1

Rear view mirror wrench

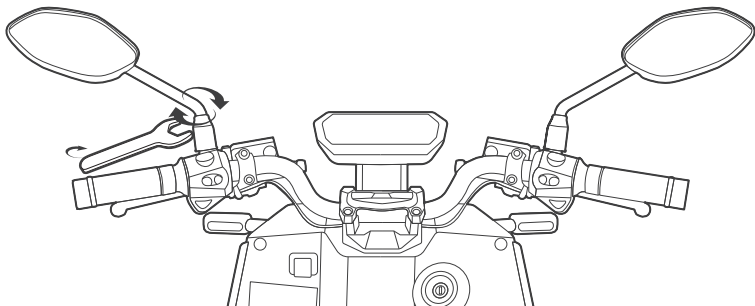


× 1

Charger

- 02 -

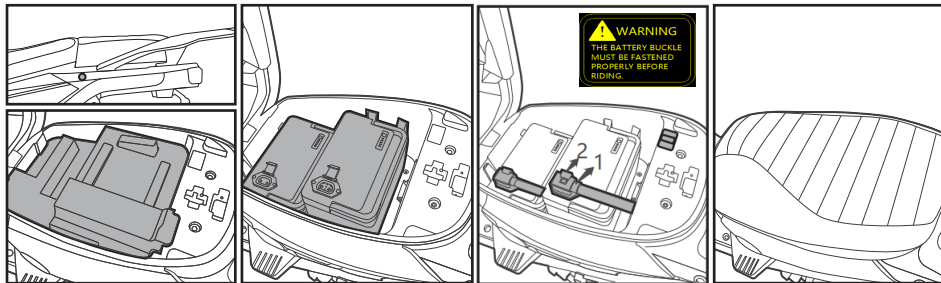
Assemble the rear view mirrors



QUICK START

- 03 -

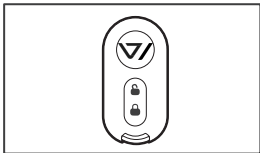
Install battery pack



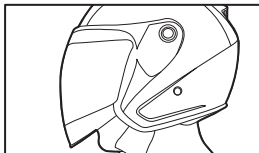
- 1 Open battery compartment under the seat and remove the segregation board.
- 2 Put in the battery pack.
- 3 Plug-in the main connector (marked 1), make sure the battery buckle (marked 2) must be fastened properly before riding.
- 4 Put the segregation board back and put down the seat.

QUICK START

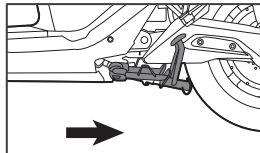
- 04 - IGNITE VS1



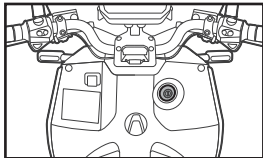
- 1** Press 'UNLOCK' on remote control.



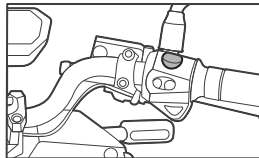
- 2** Wear helmet.



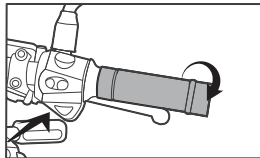
- 3** Ride on VS1, kick side stand and main stand out.



- 4** Press 'Power' on remote control or turn the key to ignition switch "On" position, power on



- 5** Press 'Parking' button, unparking VS1, parking symbol off, READY light on.



- 6** Turn accelerator gently, VS1 run.

- 05 -

Download APP

VS1 smart electric bike has GPRS function,can connect with your smart phone.

By APP,you can use smart phone to manage and query your VS1.

Only IOS and Android are currently available now,please confirm your smart phone operating system in advance.

IOS system:APP only supports Apple ISO 9.0 system and above.

Android system: APP only supports Android 4.4 system and above.

Download and install the **VMOTO APP** by QR code in this manual or key box.



VMOTO

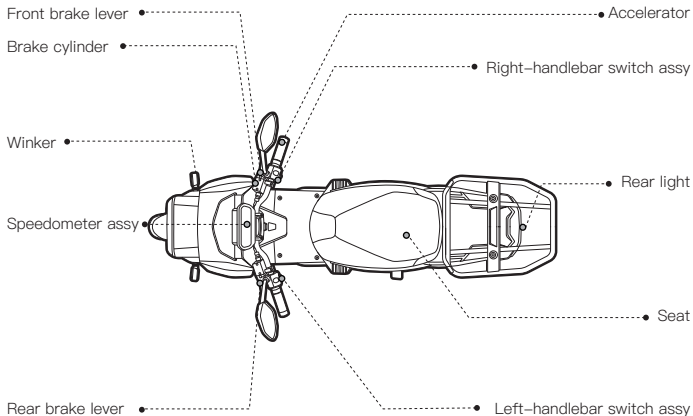
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DESCRIPTION OF COMPONENTS AND PARTS

a. Speedmeter diagrammatic sketch

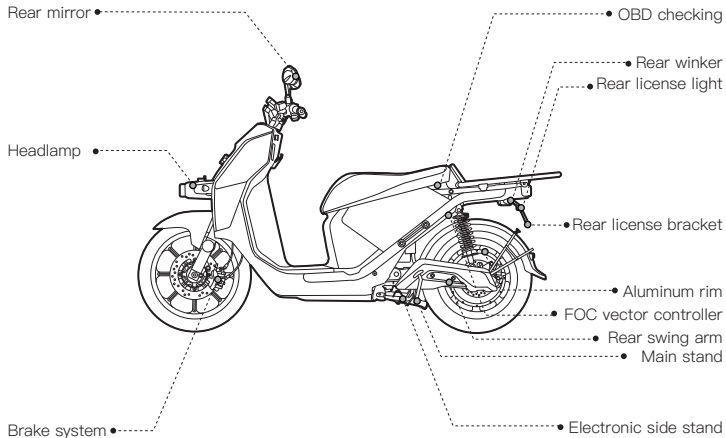
TOP VIEW



DESCRIPTION OF COMPONENTS AND PARTS

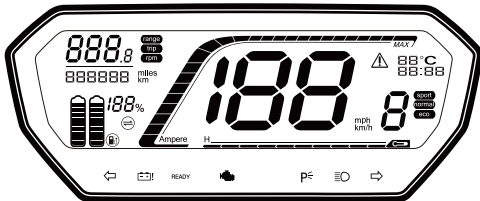
a. Speedmeter diagrammatic sketch

SIDE VIEW



DESCRIPTION OF COMPONENTS AND PARTS

b. DESCRIPTION OF COMPONENTS AND PARTS



⚠ Errors

🔋 Charging light

⚡ High beam indicator

🔋! Battery error/Charging now

↔ Winker indicator light

P Parking Light

1 ECO Mode

2 NORMAL Mode

3 SPORT Mode

F VS1 in moving forward position

R VS1 in reverse position

🔍 OBD checking error codes

RANGE Remaining distance per charge. RPM Current rotating speed.

TRIP Current riding distance.

TURN ON SWITCHING ADJUSTMENT MODE

1. Press the high beam switch for 3 times (i.e., the high beam indicator flashes for 3 times) in continuous time such as 4 seconds;
2. At this time, the current display mode (driving range/ single mileage/ revolving speed) is flashing, indicating that the motor has entered the adjustment mode;

DISPLAY SWITCHING (DRIVING RANGE / SINGLE MILEAGE / REVOLVING SPEED)

Turn on switching adjustment mode, and turn on or off the high beam switch to toggle the display mode (driving range / single mileage / revolving speed) once.

Cycle the switching in this way.

REMOVE SINGLE MILEAGE

If not in trip state: debug to single mileage state (trip) ,

Turn on and off the high beam 6 times within 4 seconds, at which time the instrument's single mileage returns to zero.

SWITCH THE DISPLAY UNIT (KM AND MILE, KM/H AND MPH)

Retract the side stand, and enable the switching adjustment mode. Toggle the "parking brake handle switch" from OFF (P gear indicator on) to ON (in 2 seconds), and then to OFF, thus switching the display units (km and mile, km/h and mph); toggle the "parking brake handle switch" from OFF to ON (in more than 2 seconds), and then to OFF, thus turning on the LCD backlight. (Remarks: now the brightness is fixed at the brightest level).

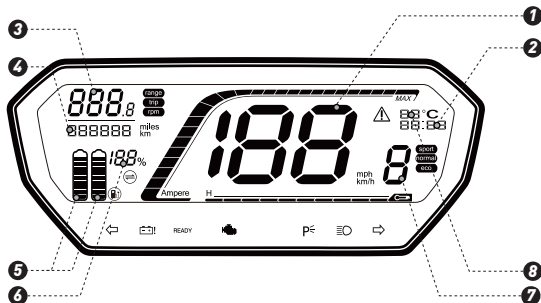
See page 16 FAQ & TROUBLE SHOOTING

READY Start lighting

VS1 is **READY** to ride when ready in display

DESCRIPTION OF COMPONENTS AND PARTS

b. DESCRIPTION OF COMPONENTS AND PARTS



1 Speed

Display current speed

2 Time

Display current time

3 Endurance Mileage

Display current endurance mileage

4 Total mileage

Display the total mileage

5 Power display bar

Display current A、B battery power

6 Battery percentage display

Display current A、B battery power percentage
(When work with two battery, battery percentage display the higher battery)

7 Gear display/Forward,reverse status display

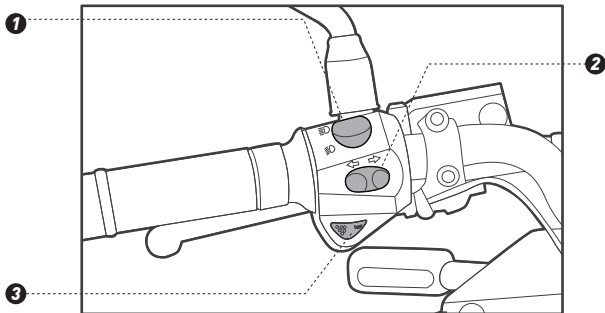
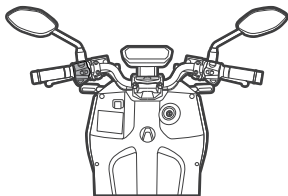
Display current gear/Forward,reverse status.

8 Controller temperature

Display current controller temperature

OPERATION GUIDE

a.LEFT SWITCH



1 High/low beam switch

Up position, high beam on;
Down position, low beam on.

2 WINKER SWITCH

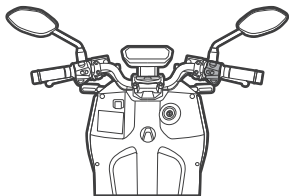
Turn to left, left winker on;
Turn to right, right winker on.

3 HORN SWITCH

Press, horn on; release, horn off.

OPERATION GUIDE

b. RIGHT SWITCH



❶ Mode switch

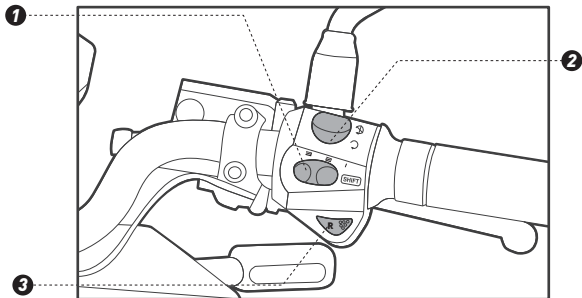
VS1 is set with 3 modes: 1: ECO mode 2: NORMAL mode 3: SPORT mode. Position at left, mode 1; position in the middle, mode 2; position at right, mode 3.

❷ Parking switch

Press the parking switch up, VS1 at parking position, parking indicator (P) light on; press the park switch down display (READY), VS1 at unparking status.

❸ Forward reverse switch

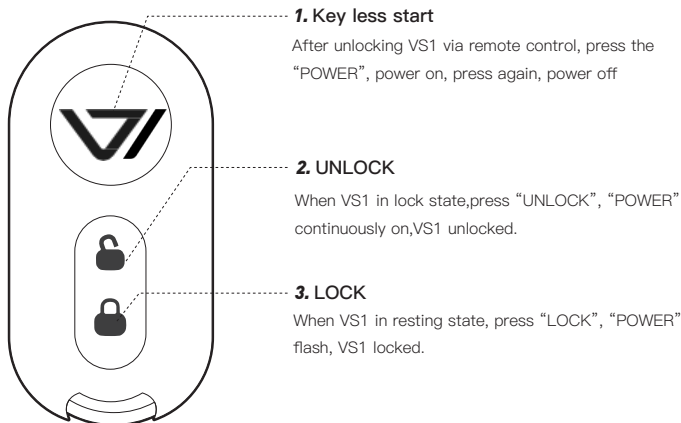
Gently press two times forward reverse switch R, display mode number change to "F", VS1 is ready to move forward, turn accelerator gently, VS1 can drive forward; press again, VS1 in reverse position, keep pressing "R" button, turn accelerator gently, VS1 can move backward; press again, display show mode number as normal, VS1 in normal driving position.



OPERATION GUIDE

c. REMOTE CONTROL

VS1 use second generation smart remote control, within 50 meter radius, press the button, can lock or unlock your VS1.



OPERATION GUIDE

d. Mechanical key



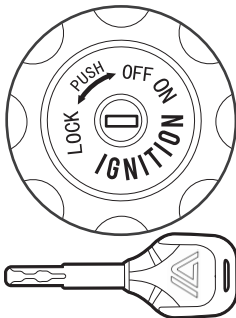
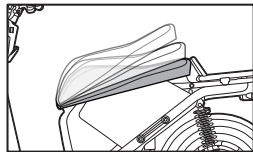
1. Mechanical key start

After unlocking VS1 via remote control, turn the key to "ON" position, power on, turn the key back to "OFF" position, power off.



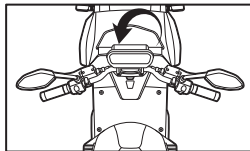
3. Open storage & seat

Put key in storage & seat lock, turn key to right direction, when hear sound "click", storage & seat open. Press "unlock" 3s via remote control, when hear sound "click", storage & seat open.



2. HANDLEBAR LOCK

1. VS1 in parking position, turn handlebar to the extreme left position, put key in handlebar lock, and turn the key to right position, handlebar locked.
2. Put the key in handlebar lock, turn the key to left position, handlebar unlocked.



Put in the key and press then turn left

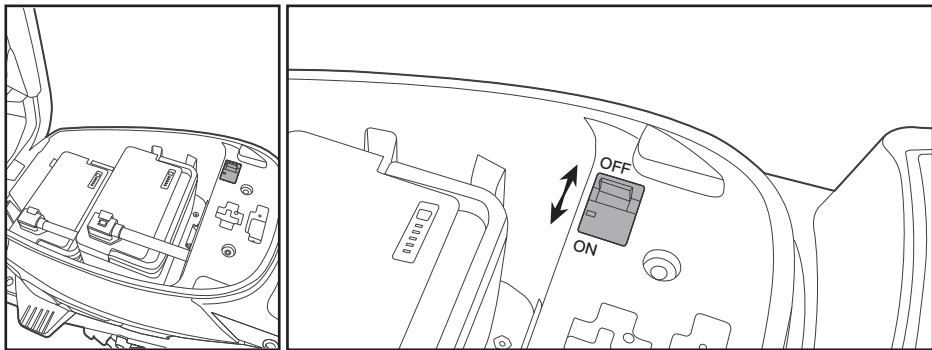


Put the key in then turn left

OPERATION GUIDE

g. KILL SWITCH

Kill switch, protect power, when current over than set range cause by abnormal situation or short circuit, kill switch will stop the connection between battery and VS1 automatically, for safety reason.



TIPS: For your own safety, please put kill switch at “OFF” position:

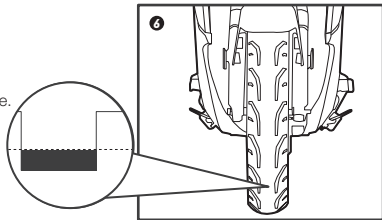
- A. Before taking out battery pack;
- B. Before cleaning and washing;
- C. Long time storage.

RIDING GUIDE

a. CHECKING LIST BEFORE RIDING

Make sure to check the following items before riding your VS1

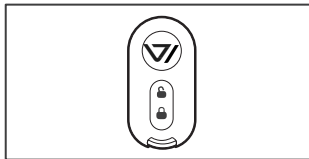
- ❶ Whether the handlebar is stable and flexible when turning.
- ❷ Whether the right and left switches on the handlebar can work properly or not.
- ❸ Whether the accelerator can work properly or not.
- ❹ Make sure the tyre pressure is correct. The recommended tire pressure is 175Kpa for front wheel, 200kpa for rear wheel(without passenger),225kpa(with passenger)
- ❺ Check tyre surface, make sure no cracks, damage, and foreign matter puncture or attachment.
- ❻ Whether the tread depth is enough,such as worn to the black shadow position on the sketch ,tyre need to be replaced.
- ❼ Whether any error warning light in the speedometer with power on or not.
- ❽ Whether the battery capacity is enough for your trip.
- ❾ Whether all light work properly or not.
- ❿ Whether the horn work properly or not.
- ⓫ Whether the mirrors are clean and adjust them to the appropriate angle.
- ⓬ Whether the brake oil is enough, whether the brake lever and brake system work properly or not.



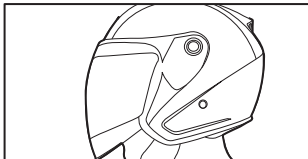
Any exceptions or operational doubts, please contact VMOTO official dealer's service center. **18**

RIDING GUIDE

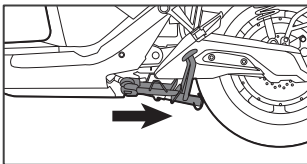
b. POWER ON



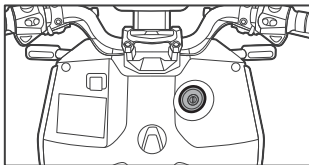
1 Press “UNLOCK” on remote control



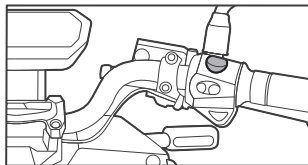
2 Put on helmet.



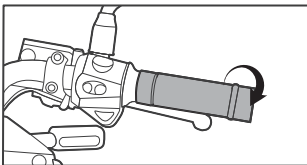
3 Riding VS1, kick out side stand and main stand.



4 Press “POWER” or turn the key to on position in ignition switch, power on



5 Press ‘Parking’ button, unparking VS1, parking symbol off, READY light on.



6 Turn throttle gently, VS1 run.

RIDING GUIDE

TIPS:

- ❶ Before riding, make sure side stand and main stand is kicked out, handlebar is unlocked.
- ❷ DON'T press "PARKING" during riding, in case any dangerous due to motor power off and in parking status. DON'T put side stand at standing position, in case any dangerous due to motor power off and in standing status.
- ❸ VS1 need to power on under steady standing status. In case any unusual situation, please move the bike to side of the road, in case any dangerous, please don't restart the bike when it still running or in the middle of the road.

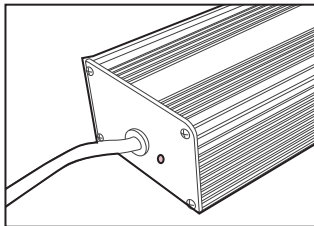
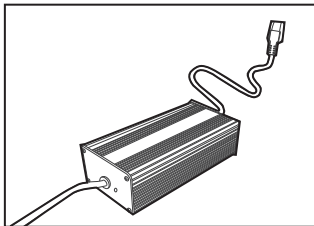
c. Riding guide

- ❶ After the riding start, it should accelerate slowly to avoid excessive starting current caused by instantaneous rapid acceleration and increase energy consumption
 - ❷ Under the premise of ensuring safety, try to keep a constant speed on the way you are driving, reduce frequent starts, brake, instant acceleration, etc.
 - ❸ The maximum load of VS1 is 240KG(50KG for rear shelf , 30KG for front basket).Overload is strictly prohibited
 - ❹ When push bike moving forward manually, please press "packing" button, in order to prevent accidents
 - ❺ caused by sudden start of the vehicle due to unintentional turning of the throttle.
- 20 Please turn off the power while packing and remove the key

BATTERY USE INSTRUCTION

a. Charging on-board

- ❶ Connect the charger to VS1 charging port.
- ❷ Connect the charger with power supply, during normal charging, red light keeps on.
- ❸ When fully charged, green light keeps on.



Battery Charging Display

Charging: Red light on.

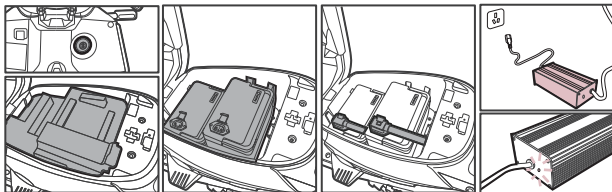
Full Charged: Green light on.

Error: Red light, green light blink.

BATTERY USE INSTRUCTION

b. External charging

- ❶ Open the seat, switch off circuit protector, take out storage cover.
- ❷ Disconnect the power plug, take out the battery from bike.
- ❸ Connect charger with battery, then connect charger with power supply, charger working, red light keeps on.
- ❹ If only use one battery, please cover the connector cover with another main connector.



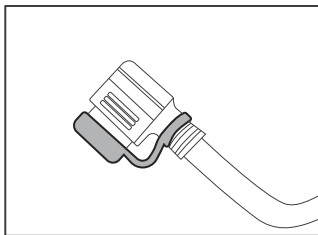
TIPS:

- Keep battery pack away from water;
- Charging temperature: 0–40°C, discharging temperature: –15°C–45°C;
- Charging battery pack after using, if don't use the bike for long time, must take out battery pack from bike.
- Forbidden to short circuit positive and negative pole at battery pack input and output position.
- Forbidden to children touch the battery pack and put the battery pack into fire;
- Forbidden to strong impact and press on battery pack;
- Must use official charger, forbidden to use any other charger to charge battery pack;
- Before delivery, battery pack already passed quality checking, forbidden to open the battery pack;

BATTERY USE INSTRUCTION

c. Storage、maintenance、transport

- 1** In case long time no use battery, please charge it till 50%.
Disconnect the battery from bike when storing them. Store in dry ventilated place, at least charge 2 hours each 3 months.
- 2** Battery pack and charger need to be stored in clean, dry ventilated place, avoid connect with corrosive material, stay away from power, fire, heat place.
- 3** Battery storage condition: temperature :0–25 °C, humidity \leq 65%RH.
- 4** To avoid electric shock, when using single battery, please cover the battery plug with the rubber cover.



APP

VS1 smart electric bike has GPRS communications, GPS locate and other functions which can be connect to your smart phone. You can manage your bike, query and do other operations by VMOTO APP.

- ❶ At present, the mainstream mobile phone system version is iOS and Android operating system,
- ❷ please confirm the operating system of your smart phone before installation

VMOTO



Apple IOS 9.0 version and above is supported



Android 4.4 version and above is supported



VMOTO

Bind vehicle and download APP please scan the QR code on the last page.

MAINTENANCE

Regular maintenance can enhance the service life and driving safety of VS1. Please refer to the following suggestions and take care of your VS1

a. DAILY CLEAN AND MAINTENANCE

The new bike must do the first inspection and maintenance in the official VMOTO Service Center when it reaches 1,000 km or two months (whichever comes first).

The motorcycle is recommended to do a regular inspection and maintenance in the official VMOTO Service Center when it reaches each 3,000 km or six months (whichever comes first).

All service and maintenance must operate by official VMOTO Service Center, use parts from VMOTO manufacturer.

b. DAILY CLEAN AND MAINTENANCE

Cleaning: Please use clean water and neutral detergent to clean it, and use soft cloths and sponges to clean the surface; it is prohibited to use metal brushes, sandpaper or the like to clean it, in order not to scratch the parts surface. After cleaning, dry it with soft cloths.

c. TIPS:

- 1** Please switch off the kill switch before cleaning.
- 2** Do not use high pressure water to wash it directly, in order to avoid the default of mechanical parts caused by water invasion.
- 3** In case don't use for long time, please turn off kill switch and disconnect the battery from bike, prevent over discharging, please charge the battery at least 4 hours in each 2 months.
- 4** After long-term storage, please fully charge it before use.

COMMON PROBLEMS AND TROUBLESHOOTING METHODS

a. FAQ & TROUBLE SHOOTING

Error	Causes	Solutions
No power, “start” not on	1. Battery is poorly connected 2. Circuit protector not on	1. Please check the battery main connector 2. Please switch on circuit protector
Power on, turning handlebar, motor not work	1. low battery 2. Side stand not kick out 3. Packing switch not switch off. 4. Accelerator fault 5. Controller plug is loosen 6. Controller fault	1. Charge the battery 2. Please kick out side stand 3. Please switch of packing switch 4. Please change accelerator 5. Please re–plug controller plug 6. Please replace controller
Speed is slow or mileage is short	1.Low battery 2.Flat tyre 3.Heavily overloaded 4.Brake pads need to be changed 5.Battery aging or being scrapped normally	1.Charge the battery 2.Inflate the tyres to normal tyre pressure before riding 3.Form a good habit that keep appropriate load 4.Please change the brake pads on time and check the brake system before riding 5.Change the battery
Battery can not be charged	1.Poor connect of charger plug 2.Do not use right charger. 3.battery aging or being scrapped normally	1.Check whether the charger plug is well connected or not. 2.Please use VMOTO official charger 3.Change the battery

COMMON PROBLEMS AND TROUBLESHOOTING METHODS

Error	Causes	Solutions
Error 99 on instrument	Controller communication error	Please contact with after-sales service or dealer
Error 98 on instrument	Controller stops working (possibly over current, blocking, under voltage, over temperature)	Please park for a while then start again
Error 97 on instrument	Controller power tube error	Please contact with after-sales service or dealer
Error 96 on instrument	Controller hall sensor error	Please contact with after-sales service or dealer
Error 95 on instrument	Controller handlebar error	Please check the wire of handlebar or contact with after-sales service for replace
Error 94 on instrument	Battery communication error	Please check the battery connector status, contact with after-sales service or dealer
Error 93 on instrument	Charging over current	Stop charging then check the charger
Error 92 on instrument	Charging over voltage	Stop charging then check the charger
Error 91 on instrument	Battery over temperature	Stop charging, stop riding, try to ride after the temperature of battery dropping

COMMON PROBLEMS AND TROUBLESHOOTING METHODS

Error	Causes	Solutions
Error 99 on instrument	Controller communication error	Please contact with after-sales service or dealer
Error 98 on instrument	Controller stops working (possibly over current, blocking, under voltage, over temperature)	Please park for a while then start again
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Error 93 on instrument	Charging over current	Stop charging then check the charger
Error 92 on instrument	Charging over voltage	Stop charging then check the charger
Error 91 on instrument	Battery over temperature	Stop charging, stop riding, try to ride after the temperature of battery dropping

COMMON PROBLEMS AND TROUBLESHOOTING METHODS

Error	Causes	Solutions
Error 90 on instrument	Battery discharge over current	In case it shows error 90 all the time, stop riding, wait for a moment
Error 89 on instrument	Charging low temperature	Take out the battery and charge in warm indoor place
Error 88 on instrument	Discharging low temperature	Store the battery or e-bike in warm indoor place , wait for a moment
Error 87 on instrument	Abnormal network connection	Please move the bike to open area,contact with after-sales service or dealer
Error 86 on instrument	Abnormal GPS connection	Please move the bike to open area,contact with after-sales service or dealer

COMMON PROBLEMS AND TROUBLESHOOTING METHODS

c. Battery troubleshooting

Status	Errors	Causes	Solutions
Before using	Battery no power “start” not on	Low battery	Charge battery
In use	When riding with low power, power off occurs when battery capacity drops below 10%	Low battery, low voltage protection, normal phenomenon	Charge battery
In use	Error 88 on instrument	Discharging low temperature	Store the battery or e-bike to warm indoor place, wait for a moment
In use	Error 90 on instrument	Discharging over current	In case it shows error 90 all the time, stop riding Wait for a moment
In use	Error 91 on instrument	Discharging over temperature	Stop riding, turn off air switch. Wait for a moment
In use	Error 94 on instrument	Battery communication error	Please check the battery connector, Contact with after-sales service or dealer.
In use	Instrument capacity drops after night or a day	CPU, controller, warning devices consume battery, Normal phenomenon	Use normally

COMMON PROBLEMS AND TROUBLESHOOTING METHODS

Status	Errors	Causes	Solutions
In use	Mileage is different from official announced	Official announced mileage is the one in special surrounding and status, related to road conditions, whether, temperature, wind drag and load.	Any questions, please contact with after-sales service or dealer.
Storage	Start e-bike, "power" not on	Store battery too long, low Battery.	Charge battery, if can't charge, please contact with. After-sales service or dealer.
Charging	Error 89 on instrument	Charge low temperature	Take out the battery then charge it in warm indoor place.
Charging	Error 92 on instrument	Charge over voltage	Stop charging and check the charger
Charging	Chargers become hot during the charging process	During the charging process, inner current of charger is too large, heat emission is too large, metal shell can effectively emit heat, that will lead the temperature of shell is high.	Use normally, use the charge in dry, ventilated place
Battery flooding water	Can't use battery normally, can't start the e-bike	Water spray, water immersion, running into deep water cause battery flooding water	Stop using, please contact with after-sales service or dealer.
Battery case break down	Impact and fall on the battery cause damage and crack to the shell	Use causes damage to the battery shell	Stop using, please contact with after-sales service or dealer.



Apple iOS 9.0 version and above is supported



Android 4.4 version and above is supported






VMOTO

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Bind APP to vehicle



PASTE
BARCODE

CHECK LIST	1000KM 3 months	3000KM 6months	6000KM 12months	9000KM 18months	12000KM 24months	15000KM 30months	18000KM 36months	21000KM 42months	24000KM 48months	Torque (N·m)
Brake fluid"	<input type="radio"/>		<input type="radio"/>							
Tire pressure and wear"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		"FR 175 KPa RR 225 KPa"
Front and rear lining pad wear"		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		
Front and rear brake disc wear"			<input type="radio"/>							
Fasten front axle nut and rear wheel bolt"	<input type="radio"/>		<input type="radio"/>							59
Fasten the swingarm nut"	<input type="radio"/>		<input type="radio"/>							59
The motor and the motor retainer bolt fastening nut"	<input type="radio"/>		<input type="radio"/>							80
Fasten Front and rear shock bolt fastening"	<input type="radio"/>		<input type="radio"/>							F.Upper 22/ F.Lower 32/R45
Steering column locking nut"										74
Fasten front caliper bracket (coated glue thread)"	<input type="radio"/>		<input type="radio"/>							26
Fasten front brake disc (coated glue thread)"	<input type="radio"/>		<input type="radio"/>							42
Fasten rear caliper bracket (coated glue thread)"	<input type="radio"/>		<input type="radio"/>							26
Fasten rear brake disc (coated glue thread)"	<input type="radio"/>		<input type="radio"/>							42
Battery"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		

Note: Check the lithium battery balance by BMS reading and manual measurement.

MAINTENANCE RECORD:

Content:

Date:

MAINTENANCE RECORD:

Content:

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