

CHAPTER 1 INTRODUCTION

This scooter is designed with 3D technology, with a beautiful model. It is fashionable and casual, and is of a unique style. Its structure is very simple but not common, and noble but not arrogant. You will love it at the first sight! Its main features are as follows:

1. Lithium cell: The product has passed all the tests required by CE, ROHS and UN38.3 certification standards, thus it is very safe and reliable. Its service life is 3 times longer than that of lead-acid cells, so replacement is almost not needed -overlong service life. Its weight is 1/3 of that of lead-acid cells, very light. The voltage is sufficiently high for climbing and rapid speeding-up-high energy. It is a kind of recognized green power, and hence there will be no pollution occurred during the whole production and usage.
2. Battery box: They are placed underneath the seats, removable and easy for charge.
3. Motor: It is made of high-quality magnetic steel and silicon steel sheet, with thick coils, a precise bearing and a thick motor shaft. Thus, it has strong power and capacity and is durable.
4. Tyres: It uses FEIBEN brand tyre, which acquired CE/COC certificate. Such tyres are thick and firm, with better stability, stronger holding capacity and super-short braking distance. And what's more, you do not have to worry about tyre burst. They will bring you a safe, comfortable and smooth cycling.
5. Scooter frame: From three-dimensional virtual design and assembling to technology-advanced numerical-control pipe bending and argon arc welding, all these operations are accomplished without stopping. Super-large frosted (for slip-resistance) pedals will bring you safe and free cycling, whether you stand or sit down, and will also bring you worry-saving loading experience;
6. Disc brake :A compact and fine oil disc brake is adopted. The pump body adopted aluminum alloy forging technology and advanced CNC processing technique makes the whole bicycle brake flexible and freely.
7. Handlebar: It is of streamline ergo leisure design, and is very firm, so will make you handle freely.
8. Turning bar: Injection molding by soft rubber material mould is adopted for it, so it will bring you comfortable holding.
9. Cushion: It adopts brand new plastic plate, highly flexible foam and high-level anti-slip leather, with well designed exterior, perfect manufacturing and suitable saddle height, which will make you ride comfortably, even for a long time.
10. Intelligent charger: It is of full-automatic and portable design. When charging, no care is needed. Wherever there is 110V-240V AC power supply, charging can be done.
11. Controller :It has been calibrated specifically and starts up flexibly without pause, which makes cycling more safe.

CHAPTER 2 PARTS NAME AND OVERALL VIEW OF THE WHOLE

SCOOTER



NO.	Part Name	NO.	Part Name
1	Speedometer	5	Electric motor
2	Headlamp	6	Controller
3	Key startup+alarm	7	Front shock
4	Portable battery	8	Stop lamp/Rear turn lamp

CHAPTER 3 MAIN TECHNICAL PARAMETERS

1.Main technical parameters of the whole bicycle

1. Overall dimension:1810*810*1160mm

2. Wheel base: 1350mm

3.Seat height: 750mm

4. Weight of the whole scooter:58~65kg

5.Tyre specification: 225/55-8, 31N

6. Max. load: 150kg

7. Designed max. speed: $\leq 45\text{km/h}$

8. Continuous mileage: 60~120km

9. Max. torque: 95n/m

10. Max. slope: $\leq 25^\circ$

11. braking performance (speed 20km/h): Dry condition: $\leq 1.2\text{m}$; Wet condition: $\leq 3.1\text{m}$

2. Main technical parameters of the storage cell

1. Cell type: power lithium cell
2. Capacity: 12Ah 24Ah 20Ah 40Ah
3. Nominal voltage: 60V
3. Main technical parameters of the motor
 1. Motor type: brushless direct current hub motor
 2. Rated power: 600W
4. Main technical parameters of the controller
 1. Current-limiting protection value: $\leq 25 \pm 1A$
 2. Under-voltage protection value: $52 \pm 0.5V$
5. Main technical parameters of the charger
 1. Input voltage (AC): AC100 ~240V 50/60Hz
 2. Output voltage (DC): 67.2V 2.0A/3.0A
 3. Charging time (depending the remaining electricity): 8~10h

Note: when above parameters are changed, we will not give further notice. SEE our technical parameters database for parameters of a specific scooter!

CHAPTER 4 OPERATION METHOD AND CONSIDERATIONS

1. Considerations for safe driving
 1. Please observe traffic regulations and drive it safely. Please control the speed within safe speed range .
 2. Before driving, get familiar with this instructions first, and then perform exercise at an open site. Make sure that you fully master driving skills and get familiar with the structure and performance of this scooter, which are the foundation for safe driving.
 3. Do not lend it to those personnel who are not familiar with or unable to drive it or ask them to drive it. It is dangerous to drive it by one hand or even without hands or drive it when intoxicated.
 4. Take more care when driving it in raining or snowy days: danger may occur due to wet ground in raining or snowy days! Thus, you should drive it a low speed and take more care when turning. You must particularly remember that you do have to brake in advance in raining or snowy days to prevent accidents!!!
 5. Wear a helmet correctly: wear a helmet correctly and tighten the belt when driving.
 6. Wear suitable clothing: do not wear tights so that your whole body can move freely. You should wear clothing with sleeves unopened and low-heel shoes as practicable as possible.

Note: in order for ease maintenance, repair and service, each scooter produced by our company is marked with a scooter frame number and motor number, so as to assist distribution unit to provide better service for you. The scooter number is engraved on the seat plate, and the motor number is engraved on the outer housing cover of the motor.

 7. Do not overload: the max. load of this scooter is 150kg. The handling feeling of handlebar with load is different from that without load. When many articles are loaded, holding handlebar will vibrate, resulting in danger. The stable load of this scooter is one person, it will be very dangerous to load articles or person at the front pedal.

2. Method for correct operation

1. Driving method

- ① Keep the natural posture, and free driving can be got.
- ② Driving in sitting posture: please always keep your body at the center of the cushion to prevent load reduction of the front tyre and danger caused by handlebar vibration.
- ③ Driving in standing posture: when speeding up, you should turn the turning handle slowly. Danger caused by instability due to sudden speeding-up should be avoided.
- ④ Drive it slowly on roads with surface damaged or that paved with gravels. in raining or snowy days, wet ground will easily cause side slip, so you should drive it slowly with much attention. meanwhile, braking performance will decrease, which will cause accidents easily.

2. Parking method

- ① When parking, please pay attention to those vehicles and pedestrians around. Park it to the right side of flat road slowly. do not park it on a slope.
- ② After parking it stably, turn the power supply lock rightwards to pull it out and take it down, and then lock the scooter with a lock.

3. Operation method for electricity indication

After the power supply lock is connected, the voltage indicator light will be turned on. At full charge of capacity, there are green, yellow and red light, with 5 grids in total. The green light has three grids, with each grid of 25% of rated electricity; each grid of the yellow light going out while the red light going on indicates that there is no electricity left, so when you find that the blue light goes out, you should charge the scooter immediately.

4. Operation method for power supply lock

After the key of the power supply lock is turned by a shift in clockwise direction for connection, the motor can be started up. During driving, you do not remove the key and switch off power supply. Once you switch off the power supply, the motor will stop running, After parking, you should turn the power supply lock in counterclockwise direction to switch off the power supply, and then pull the key out.

5. Turning handle (speed-governing handle)

If the turning handle is turned towards the driver, the scooter will be speed up, and if it is released to turn back, the speed will be reduced. After reset, cut off the power supply of motor.

6. Operation method of disc brake and considerations

(1) Operation method of disc brake

- ① Brake clearance adjustment: turn the adjusting screw which is located between the braking handle and the handlebar tube using a 2mm Allen wrench, adjust the clearance between braking pads and the braking disc until your hand feeling is comfortable.
- ② Replace the braking pad when braking pads are worn off by more than 1mm or the adjusting screw of braking pads are adjusted to the end position or every half a year. When replacing braking pads, press in one of braking pads using a clean slotted screwdriver to vacate space for taking out the other braking pad. After replacement is complete, it is needed to return the adjusting screw of braking pads to a suitable position (a position that makes your hand feeling comfortable).
- ③ Run-in period: the run-in of disc brake surface needs a certain time. After complete run-in,

braking force will increase significantly. The first week in which you use a new disc brake is the run-in period. During run-in period, do not brake with too much force, otherwise unrecoverable damage will be caused to braking pads and braking body. The correct operation method is to brake slightly during driving, so that there is appropriate friction kept between braking pads and the disc brake.

④Oil replacement: this disc brake adopts mineral oil, which should be replaced (2~3 years in general) when the braking handle is felt weak. Replace oil using an injector.

(2)Considerations

①Do not use lubricating oil around the disc brake and braking pads,as well as the calliper.Do not touch the surface of disc brake and braking pads with hands , otherwise braking performance will be reduced significantly.

②You' d better not shower a new brake to prevent a small quantity of lubrication grease in assembling clearance from contaminating braking pads.

③Oil hydraulic disc brake has strong braking force, you need to do much exercise at a safe place, so as to adapt to the difference from a common brake to avoid braking with too great force, resulting in injury due to wheel lockup.

7.Operation method of the charger and considerations

(1)Operation method

①When charging , plug in the plug of cell box first, then that of electric supply AC110-240V.When charging is complete,take the counter procedures,that is , unplug the plug of AC110-240V,then that of cell box;

②During normal charging, the indicator light of the charger shows red,when fully charged, it will show green;

③If charging ambient temperature is too high, the red light will flash,which indicates that the charger is in the temperature protection state. Please take the charger to a cool or well-ventilated place.When the inside temperature of the charge lowers to 60℃ , normal charging occurs.

④If there is not cell connected during usage, charger output is a pulse voltage less than 44V. When testing, place a 1KΩ ohmic load between the positive and negative output terminal,then actual charging voltage of the charge can be obtained.

(2)Considerations.

①The charger can only be used indoors.

②Charging in a closed space or under scorching sun at a high temperature environment is strictly prohibited. Do not put the charger on a seat cask or inside the rear compartment for charging.

③In case of no charging,do not connect the charger to an AC power supply without load for a long time.

④During charging,if the indicator light is abnormal,there is a abnormal smell or housing for the charger is too hot, please stop charging immediately, and repair or replace the charger.

⑤Do not disassemble or replace the device inside the charger by yourself.

⑥Do not charge the charger that has been fully charged.

⑦Do not use the charger in an environment with flammable gas, otherwise explosion or fire will be caused .

⑧Do not place the charger near water source or wet it ,otherwise fire or electric shock may occur;

⑨In the event that inside parts are exposed due to charger damage caused by collision ,etc.,do

not touch them with hands, otherwise you may be injured due to electric shock.

8.Operation method of the cell and consideration

(1)Charging

- ①Make sure to charge using the charger specifically equipped by our company,irregular or non-conforming chargers may reduce life the cell or invalid the cell.
- ②The cell that has been fully discharged (the scooter stop running)can be charged with more than 95%of electricity within 5h and can be fully charged within 8h.
- ③During charging,neither the positive end nor the negative end is allowed to be contacted with metal.
- ④When leaving factory ,the cell ' s electricity is about 80%.Prior to driving a new scooter,charge it for 3-10h.
- ⑤If the scooter is left for more than one month, cell ' s electricity will reduce by about 5%.it is recommended to charge it before use.
- ⑥Please charge the cell timely to ensure driving mileage.
- ⑦During charging, the charger may become hot.As long as the temperature does not exceed 60°C,it is normal.
- ⑧When charging,please put the charger and the whole scooter at a stable and dry place which is free of flammable and explosive goods and is out of reach of children.
- ⑨You should charge the cell within 24h after it is fully discharged,and charging time should not be less than 3h.
- ⑩Make sure that there is not short-circuit at the charging port.

(2)Discharging(use)

- ①Do not use the cell for purposes other than the electrical scooter of this model ,otherwise warranty will not be provided.
- ②Once short-circuit occurs, the cell management system will provide automatic protection ,and the fuse piece connected in series with power line will fuse,giving dual protection for your cell.At about 2min after the short circuit is released and the fuse piece is replaced ,the cell will work normally .
- ③Damage or unreasonable configuration of the controller,motor,horn ,lighting facility,etc.,of electrical scooter all will cause the cell discharge at high current .At this time,the cell will stop output for protection ,but will recover within 10s,which will not have any effect on your driving.
- ④Working temperature range of the cell:-10~55°C .Like other cells,its available energy will reduce with the rise of temperature ,which is a normal phenomenon.
- ⑤Make short out the discharging port.

(3)Storage

- ①If long-time storage (more than one month)is needed, it is recommended to charge the cell to 60%~80% of electricity.During storage ,it is needed to charge the cell every 3 months,and charging is also needed because usage .
- ②The cell should be stored at a cool and dry environment .
- ③During storage, prevent conductive objects connecting the positive pole with negative one.
- ④Do not use the cell near a fire source .
- ⑤Do not disassemble the cell.
- ⑥Do not refit the cell.

(4)Warning

- ① If the cell is found to deform or become hot ,you should stop using and look for help from our company or repair department .
- ② In case of fire , do not quench the fire directly using water. It is recommended to quench it using sand ,foam extinguisher or thick clothing soaked with water.
- ③ For the cell fault caused by delayed charging fully-discharged cell ,warranty will not be provided.
- ④ Do not discard the cell haphazardly.

3. Check, cleaning and maintenance

(1) Regular or daily check

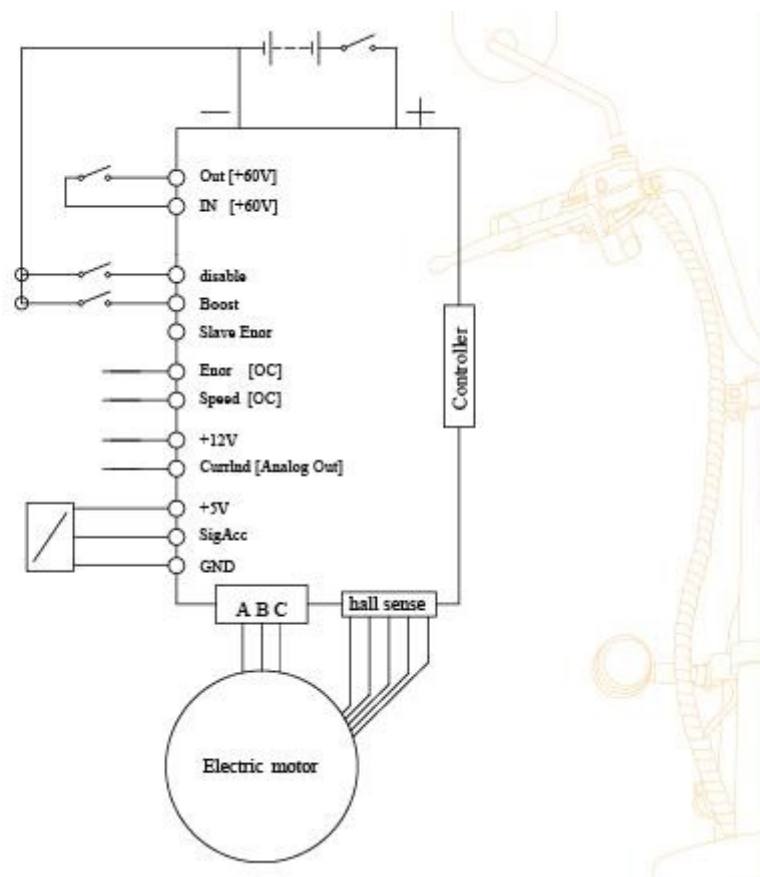
1. Check the whole scooter at a safe place .
2. Check whether the abnormal part found the day before impacted running.
3. Braking effect of the brake :check whether the braking handle can be holding and pinching gently and whether the clearance is appropriate .Check whether it can brake scooter normally .
4. Check whether there are chaps, damage or abnormal wear on tyres or whether there are such sharp objects as metal, pebble, glasses embedded in tyres .If the lug on a tyre has been worn off by 2/3, replace the tyre. Check tyres' air pressure according to sunken condition of the part of tyres contacted with ground . The normal air pressure of front and rear tyre is 225kpa.
5. Check whether the power supply's voltage indicator indicates full capacity (according to Point 3 of Item 2 under Chapter 4).
6. Steering system :swing the handle and front fork upwards, downwards, forwards, backwards, leftwards and rightwards to check whether tightness is suitable and steering is flexible , and whether there are such problems as abnormal sound caused by collision ,steering system loosening, collision sound . If there are ,please contact the distributor ,so as to provide perfect after-sale service for you .
7. Check whether the front and rear wheel shaft become loose .

4. Common fault and removal method

1	Speed-governing fault or max speed decreased	Too low cell voltage; Speed-governing turning handle damaged ; The spring inside speed-governing turning handle got stuck or failure	Charge the cell; Ask the distributor for replacement ; Ask the distributor for replacement;
2	The motor does not work after power supply is switched on.	The cell's connecting line becomes loose ; Speed-governing turning handle damaged ; Motor output line become loose or damaged	Reconnected it; Ask the distributor for replacement ; Ask the dedicated maintenance station to repair it;
3	Continuous driving mileage is not sufficient after charging .	Air pressure of tyres is too low; Low power or the charger failed ; Aging of the cell or it damaged ; Much climbing, great headwind, frequent braking and starting ,heavy load;	Fill enough air Fully charge the cell or replace the charger ; Replace the cell Such condition will be

			improved when driving condition charges.
4	The charger fails to charge.	The socket of the charger falls off or the connection between plug and sock becomes loose; The fuse inside the cell box fused ; Battery pack's connecting wire falls	Fasten the socket or connectors ; Replace the fuse inside cell box; Weld connecting wires.
5	Other fault	If there is a fault that you can not determine ; If the inside of the motor ,cell controller ,charger,etc.damaged.	Please ask the distributor or dedicated maintenance for repair,do not open these parts by yourself, otherwise warranty will not be provided.

CHAPTER 5 ELECTRICAL SCHEMATIC DIAGRAM



CHAPTER 6 QUALITY ASSURANCE AND AFTER-SALE SERVICE

According to the Law of the PRC on the Protection of the Rights and Interests of Consumers, in reference to spirit of relevant documents of the State Administration of Quality and Technology Supervision, in order to practically protect consumers' legal rights and interests, perfect the civil

responsibility system about product quality and perform “ three guarantees ” as follows:

1. “Three guarantees” range

1.When you purchase a scooter, you should check it on site, and have the right to require the sale personnel to provide operative instrument and warranty card, as well as address and phone number of the maintenance unit.

2.After purchasing a scooter, you should carefully read the Operation Instructions, and master correct operation method and the considerations for daily maintenance. If you are to lend your electrical scooter to a person who is not familiar with operation method,you should offer him explanation to prevent accidental damage.

3.If performance fault occurs within 7 days after sale date, you may choose to repair it, provided that you use it correctly according to the Product Instructions.

2 “Three guarantees” authentication standard for car.

Number	Part name	Standard for replacement	Standard for non-replacement	“Three guarantees”period
1	Handle tube	Broken	Hand tube deformation,breakage,etc.caused by human factor or improper use	One year
2	Front fork	Breakage,desoldering, open welding	Hand tube deformation,breakage,etc. Caused by human factor or improper use	One years
3	Bicycle frame	Desoldering or open welding of key parts	1. Damage caused by human factor or improper use; 2.Welded nut fallen off; 3.Bicycle frame’s structure changed; 4.The whole bicycle’s structure changed.	Two years
4	Tyre cover	Aliquation steel wire exposed	1. The groove of tyre cover worn heavily; 2. Tyre cover tore due to human factor or improper use,and there is narrow and deep scratch on the tyre cover.	Three months
5	Motor	The bearing broken,the housing damaged	1. Deformation , breakage,etc. Cause by human factor or improper use; 2. The outer is corroded or contaminated; 3. Missing parts,unmatched parts. 4. Damaged or deformed appearance	One years
6	Controller	Failure	Improper use or man-made damage	One year
7	Charger	Failure	Improper use or man-made damage	One year
8	Lithium cell	In case that capacity fading at the 15 th month as from manufacturing date is lower than 80%,	1. Upon charging and discharging test,the specified capacity can be achieved; 2. Housing damage caused by human factor or improper use,incorrect use of the charger,assembly and disassembly the cell by yourself.using the cell at high temperature ($\geq 60^{\circ}\text{C}$).discharging at high current for a long time.short circuit caused by man-made immersion in water	Six months
9	Disc brake	The upper or lower oil pump leaked oil or	1. Damage caused by human factor or improper use; 2. The user changes state by himself;	One year

		damaged;the braking handle broken due to manufacturing defect; oil tube damaged or leaked oil,etc.	3. Seriously defective accessories	
10	Bottom Fork	Broken	1.Damage caused by human factor or improper use; 2.The user changes state by himself; 3.Seriously defective accessories	One year
11	Main bicycle frame	Broken	1. Damage caused by human factor or improper use; 2. Changed or repair by the user himself(e.g. additional welding,etc.)	One year
12	Main cable	Short circuit.breakage or erosion caused by bonding during use	1. Self-change cable's structure or cable damage; 2. The surface of cable worn(no a problem of the whole bicycle)	Three months