NWOW

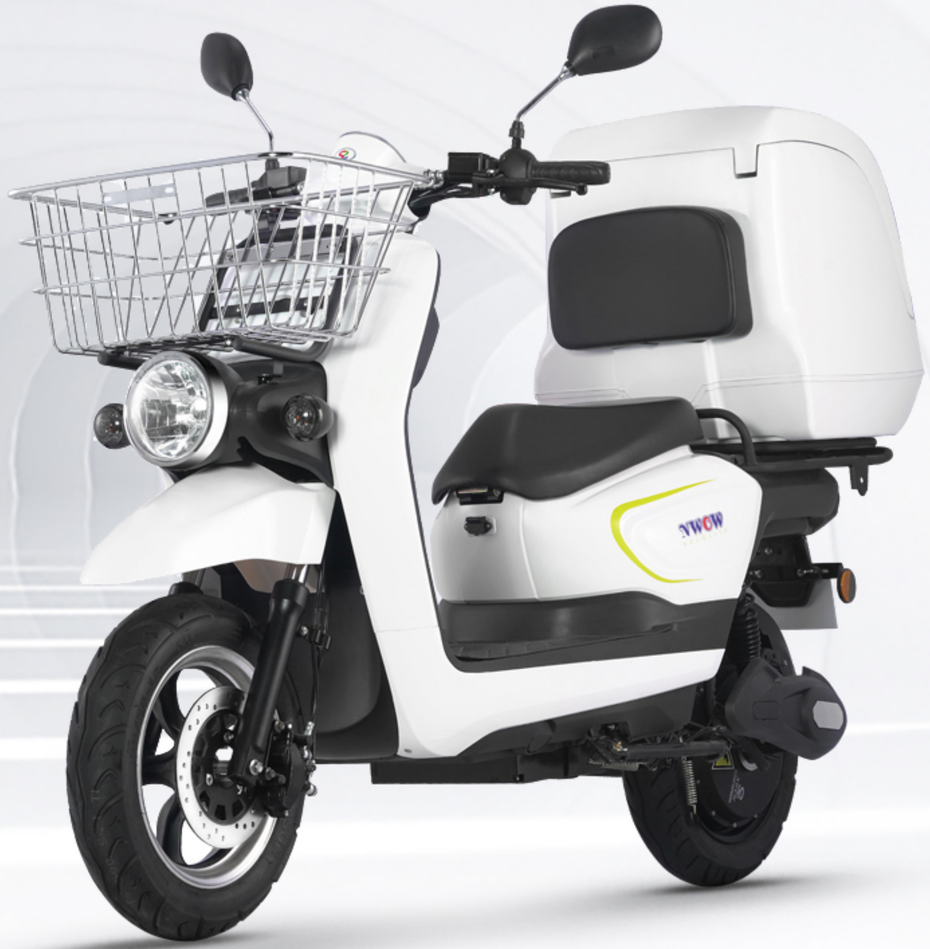
INSTRUCTION BOOK

Catalog:

1. Overview of NWOW-LOG20 electric motorcycle

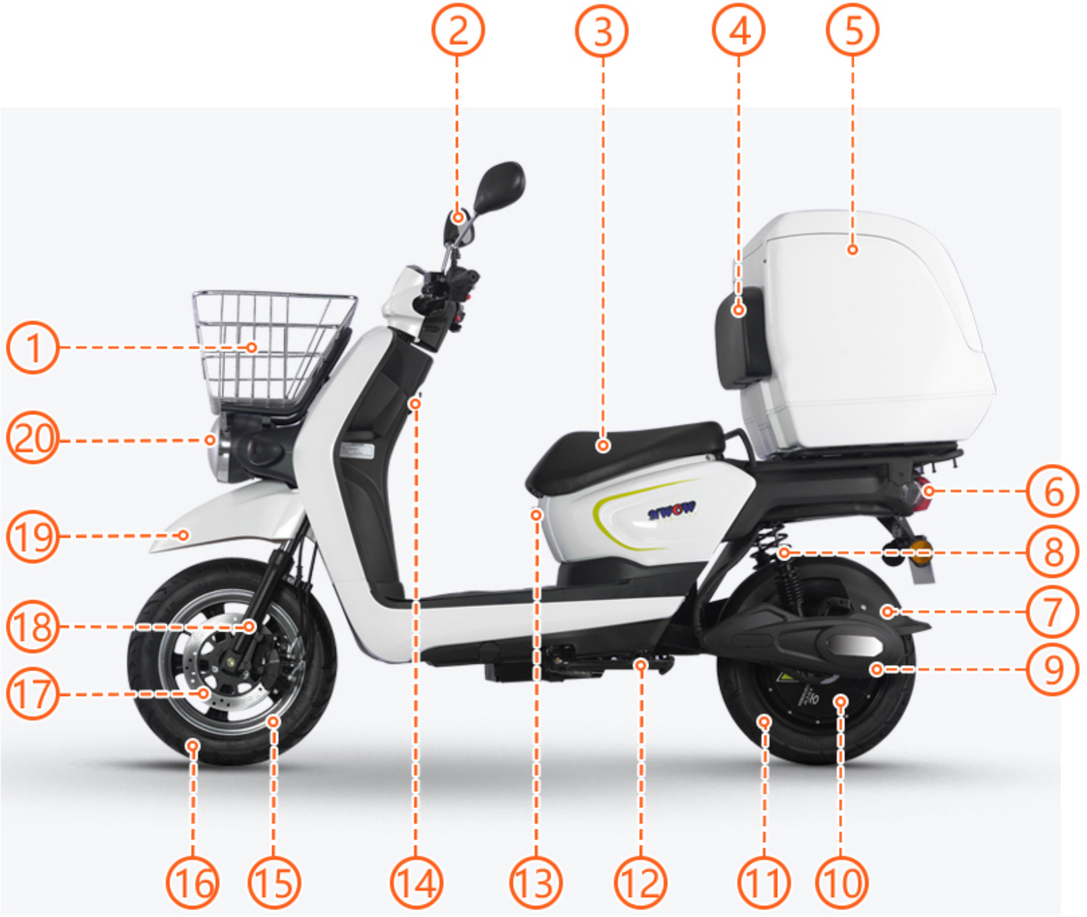
Dear customers:

Thank you for choosing model LOG20. Before practicing, please read carefully this instruction book, and keep it well. We kindly request you to practice it according to local laws and traffic regulations.



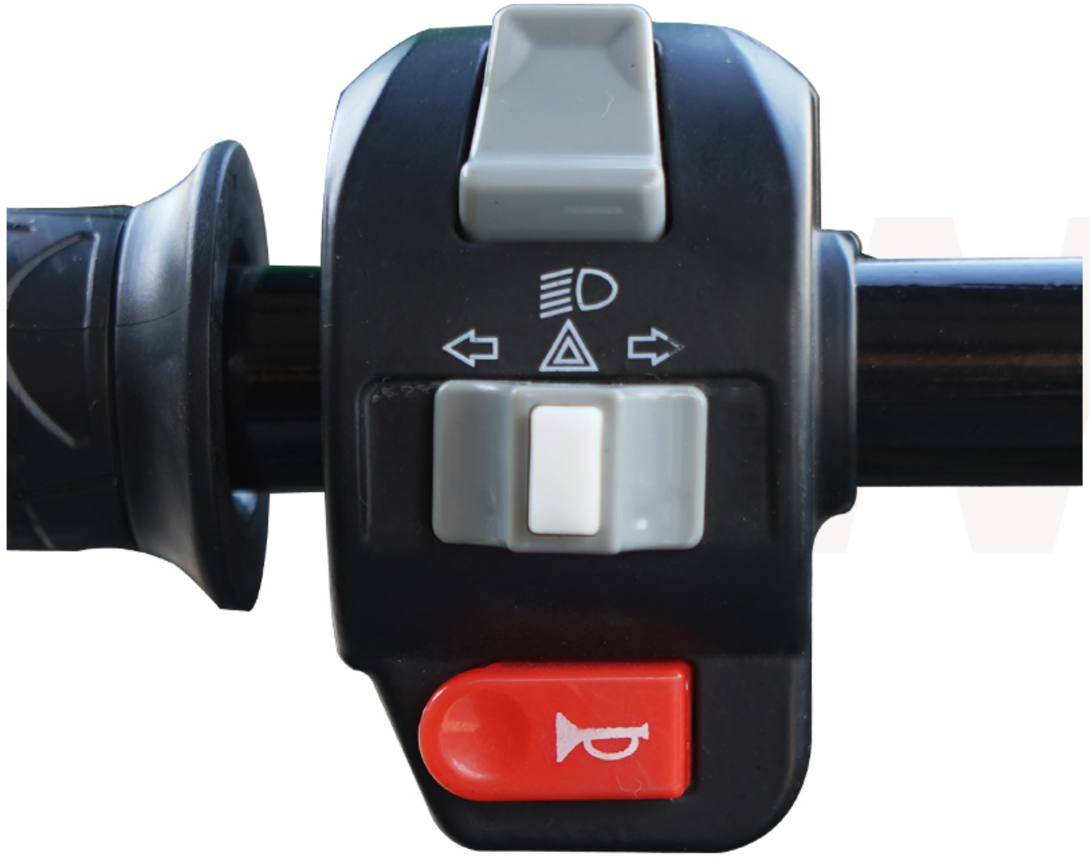
2. Vehicle structure diagram

No.	Name	No.	Name
01	front basket	11	rear tyre
02	side mirror	12	side stand
03	saddle	13	charging socket
04	back pad	14	hook
05	delivery box	15	front rim
06	tail light	16	front tyre
07	back fender	17	brake disc
08	rear absorber	18	front shock
09	swing arm cover	19	front fender
10	motor	20	front absorber



3. Indication of switches and panel board

a. Left combination switch



High and low beam：

indicates low beam

indicates high beam

Turn signal switch ：

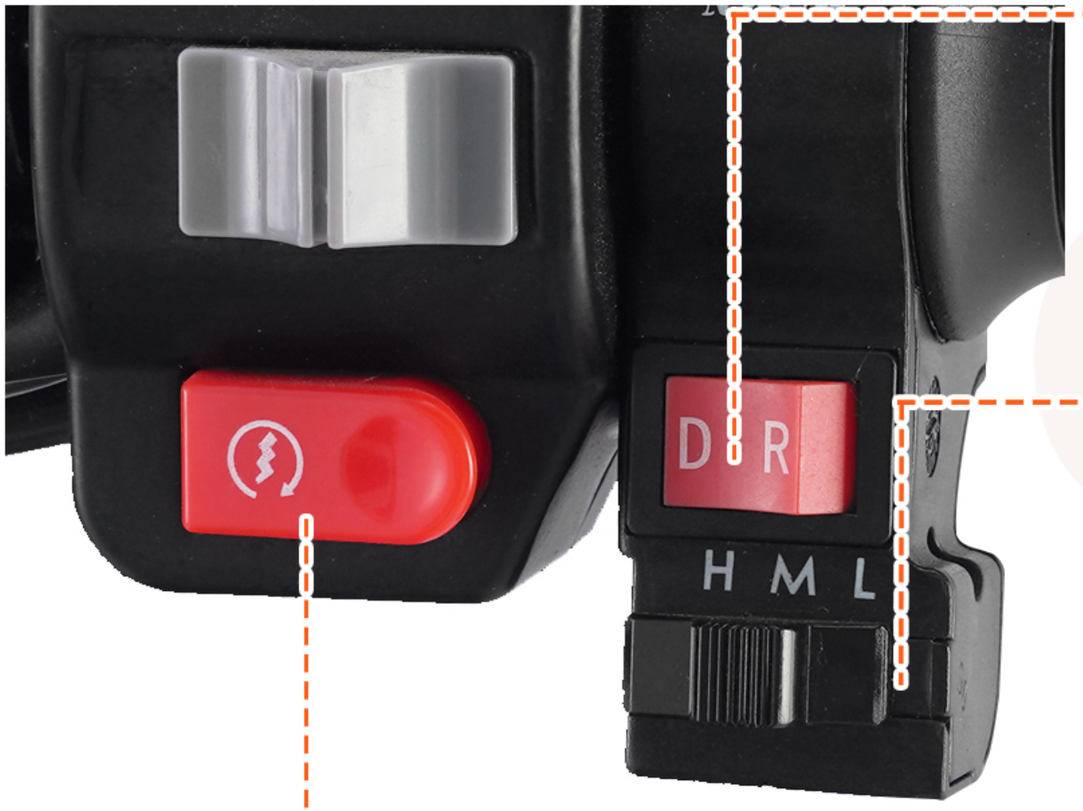
switch left to enable signal light left

switch right to enable signal light right

Horn button

3. Indication of switches and panel board

b. Right combination switch



Forward/Reverse

D direct

R reverse

Gearshift:

H indicates highest speed

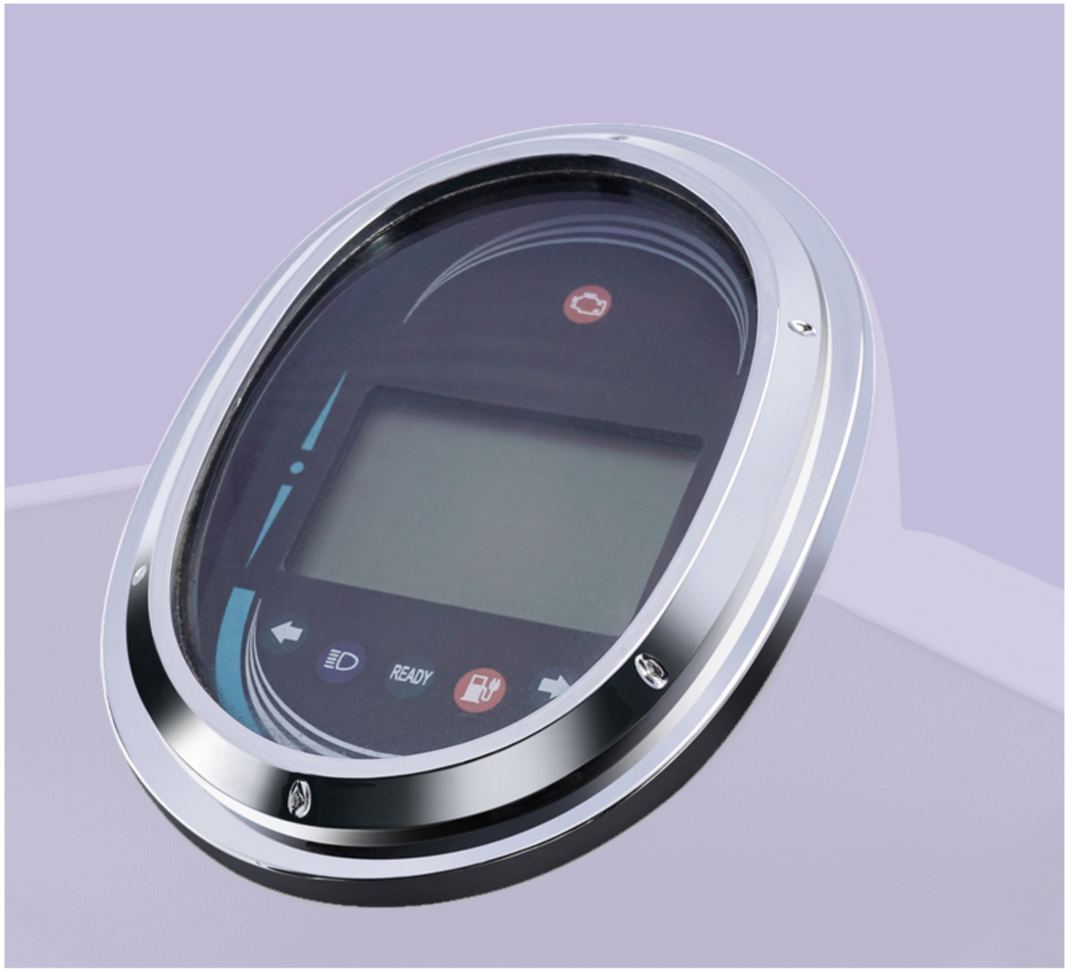
M indicates regular speed

L indicates lowest speed

Horn button

3. Indication of switches and panel board

c. Panel board indications



Battery and voltage

Riding speed

Riding time

Riding distance

04. Vehicle main specs

overview	dimension	1950*690*1300mm	**Motor**	motor type	72V400TT
	wheelbase	1350mm		rated power	1500W
	curb quality	97kg (without battery)		rated voltage	60V
	maximum load	300kg	**Braking system**	front	disc brake
	highest speed	80km/h		rear	
	range	90km			
Controller	voltage	60V	**Charger**	charging current	4A
	over-voltage protection	84±1V		charge time	6-8h
	under-voltage protection	63±1V		climbing slope	≈20°

05. Pre-riding check up

1. Tightness of steering handle, shock absorbers, rear handle, wheels etc.
2. Activation of power switch in brake lever, sensibility of brakes.
3. Tightness of wheel axle nuts.
4. Function of panel board, horn, switches.
5. Installation of mirrors, reflectors.
6. Tire pressure of tires.
7. Function of accelerator.
8. Wire connection among batteries.

06. Proper riding guide

1. Insert the key into the key lot, switch to start the power, then panel board is powered on.
   Slowly turn the accelerator to the maximum, speed goes from slow to fast , release the accelerator, the unit slows down until stop running.
   This bike has three-speed selector.

2. Both brake levers are installed with sensor to power off electricity of motor, activate it by braking.

3. To drive safely, brake as short(slight) as you can, brake constantly in a short time if quick brake is needed, these rules are not applicable under emergency.

4. Turn off the power or set on central stand, in case of accidentally moving accelerator to cause accidents.

5. Do not jet off vehicle when starting, slow starting is good for electic systems.

* Suggestion: even this bike can start quickly, it is suggested to start slowly by accelerating slowly which helps to extend the lifespan of battery and electric control system.

07. Warm tips of riding

1. For the safety of you and others, please consciously abide by the city traffic rules, no passengers allowed.

2. Do not ride without proper knowledge of the electric bike, do not lend the electric bike to those who do not know how to operate in order to avoid unnecessary damage or danger.

3. Do not disassemble the unit without permission so as to avoid any risks.

4. Do not oil the brake , so as to avoid brake failure. Please slow down and brake in advance in case of rain or snow.

5. It is forbidden to connect the positive and negative electrode of the battery with the conductor wire or conductor. Otherwise there will be a large short circuit current and accident.

08. Appropriate usage and maintenance guide of main electric parts

a. Appropriate usage of charger

1. It is recommended to use fully charged battery before each ride to extend its lifespan.
2. The indicator on the charger is red while charging normally, green when fully charged.
3. Before charging, first power off the vehicle and plug in charger with charing socket, then connect the charger with eletric power.
4. Do's and don'ts:
   - Never operate with wet hands.
   - Unplug charger from power first then remove charger from vehicle.
   - Keep charger away from children.
   - Once you find abnormal situation while using, stop it immediately and contact dealer for maintenance.
5. Do not disassemble the battery box or charger without authorization so as to avoid damage to the internal components.

* The charger will heat during charging, please place it away from inflammables while charging, such as wood floor or plastic.

08. Appropriate usage and maintenance guide of main electric parts

b. Notes for battery using

1. Batteries are consumables, the capacity of battery declines with time of using(charge and discharge cycle) ,the range of motorcycle declines as well, however, if the capacity was detected below 50% of standard capacity when it is in warranty period, it will be considered as factory defect, please contact local dealers for after sales service.

2. Keep batteries fully charged as frequent as you can, it shall be charged at least once per month if it is idle, fully charge it before each ride will extend its lifespan.

3. Avoid overusing of batteries, controller and batteries are designed with low voltage protection function, when the voltage showing on panel board is low enough to slow down speed of riding, don’t re-start vehicle repeatedly, it should be charged asap.

4. When batteries run out of life, it is suggested to replace new batteries from our authorized stores, recycle the old batteries will avoid environment pollution.

08. Appropriate usage and maintenance guide of main electric parts

c. Usage and maintenance of motor

1. The motor hub will emit some noise, and when brushless motor is in reverse mode, it feels a certain amount of resistance with slight sounds, these are normal phenomenons.

2. Hub motor usually do not need special maintenance.

3. In daily riding, you are suggested to check the screws and bearings near swing arm(those scews and bearings fasten motor), examination or maintenance is needed if any loose of screws are found.

08. Appropriate usage and maintenance guide of main electric parts

d. Guidances to the electric control systems

1. The electric control systems includes controller, panel board, accelerator, brake lever, swtiches, wires of ciruit ect. try not to expose it in water,it causes short-cut or even burn out the components.

2. The controller is the heart of the electric bike, the controller will be heating during work, the greater the current, the greater the heating, overheating will affect the lifespan of controller, please control the load weight and speed.

3. Don’t clean your electric motorcle with high-pressure water gun.

08. Appropriate usage and maintenance guide of main electric parts

e. Breif maintenance guide of consumable parts

No.	Part name	Lifespan	Maintenance way	Examination period
01	battery	1 years	change	3 months
02	brake cable	1 years	change	6 months
03	brake oil	/	change in every 2 years	12 months
04	disc brake pump	/	clean	3 months
05	brake sensor	50,000 times	change	12 months
06	converter	3 years	change	12 months
07	horn	50,000 times	change	6 months
08	relay	6 years	change	12 months
09	dynamo bearing	1 year	change	24 months
10	brake shoe	6 months	change	3 months
11	air switch	3 years	change	12 months

09. Simple trouble shooting

1. Brake failure treatment
   Brake failure will lead to risks of accident, especially when riding downhill, accidents are easy to occur, so users should check the brake performance before riding. If brake failure happens, Adjust immediately or ask professionals to adjust to the best condition for safe riding.

2. Suddenly power-off treatment
   There are multiple possibilities for suddenly power-off, mainly caused of weak connection among batteries or failure of brake sensor. Users are advised to check as per followings:

   ① Is the plug of the main power supply loose? If it is loose, please reconnect it.

   ② Whether the contact column in contact with the battery box is "contaminated" and whether the contact elasticity is normal. If yes, please remove dirt and stretch test.

   ③ In case of power failure in rainy days, check whether the brake sensor is short-circuited by water dampness. If water inside the sensor can be dried by hot air blower, then the sensor can work normally.

10. Warranty

Warranty card

1. This warranty card is to certify that customer will get warranty service if the purchased vehicle has quality problems according to warranty statements. The warranty comes into effect only under the stipulations of this manual. The designated dealers are responsible to provide warranty services to all sold products with free labour charge. The warranty period starts from the date of purchase.

2. Take good care of warranty card please be sure to fill up the warranty card correctly and in detail, so that the company can contact you on time to provide you with better service. When customer needs after sales services, please present purchase invoice and warranty card.

* Note: the interpretation right of this manual belongs to the JIANGSU NWOW TECHNOLOGY CO,. LTD

Products must be used correctly according to manul, any problems caused of misusing will not be provided warranty service.

11. warranty scope and period

a. Overview of scope and duration of warranty service

1. The warranty term of electric motorcycle is half year

2. Within 15 days after the bike is sold, if the rated capacity of the battery is less than 90%, the battery will be replaced. If the battery malfunctions within the period of warranty service or the rated capacity is less than 60% after testing, the battery can be maintained, but the maintained battery must reach more than 60% of the rated capacity, and the validity period of warranty service shall not be recalculated.

3. The warranty period after unit replacement shall be recalculated from the date of replacement, and the seller shall affix the replacement seal on the back of the unit replacement invoice, indicating the details of the service such as parts name, date of service, quantity and etc.

4. The validity of warranty period shall be extended according to number of legal holidays, if the last day of validity is on legal holiday, then it will be extended to next work day.

11. warranty scope and period

b. Terms and period for parts

Part name	Warranty period	Warranty circumstance	Notes
motor	5 years	performance failure	If the above mentioned faults occur and cannot be used after repair, the company shall replace them free of charge.
front fork (damping)	1 year	broken or unwelded	
frame (chassis)	5 years	chassis broken or unwelded	
controller	5 years	performance failure	
charger	5 years	performance failure	
accelerator	3 months	performance failure	
brake sensor	6 months	performance failure	
steering wheel handle	1 year	broken or unwelded	
wheel hub	1 year	broken or unwelded	
shock absorber	1 month	broken or unwelded	

11. warranty scope and period

c. Brangnew Battery

Personal use	Battery type	warranty period	1~6months	7~12months
	72V70A	12M	Change to new batteries any unartificial fault occurs	Unaritificial fault occurs to single battery: free maintenance till battery capacity reaches to 60% of standard value, if it is unrepairabe then change to aftersales version battery; Battery set fault: change whole set to aftersales version battery
Business use	Battery type	warranty period	1~3months	4~6months
	72V70A	6M	Change to new batteries any unartificial fault occurs	Unaritificial fault occurs to single battery: free maintenance till battery capacity reaches to 60% of standard value, if it is unrepairabe then change to aftersales version battery; Battery set fault: change whole set to aftersales version battery

11. warranty scope and period

c. Secondhand Battery

Personal use	Battery type	warranty period	1~3months	4~6months
	72V70A	6M	Change to new batteries any unartificial fault occurs	Unaritificial fault occurs to single battery: free maintenance till battery capacity reaches to 60% of standard value, if it is unrepairabe then change to aftersales version battery; Battery set fault: change whole set to aftersales version battery
Business use	Battery type	warranty period	1.5months	2~3months
	72V70A	3M	Change to new batteries any unartificial fault occurs	Unaritificial fault occurs to single battery: free maintenance till battery capacity reaches to 60% of standard value, if it is unrepairabe then change to aftersales version battery; Battery set fault: change whole set to aftersales version battery

11. warranty scope and period

d. It is under warranty service if the product is damaged already when unpacaking, or there is any flaws from manufacturer. It does not enjoy warranty service if one of below situation happened.

1. Warranty validity expired.
2. Problems caused of misuses.
3. No valid invoice or warranty card.
4. Tampered warranty card and or information unmatched.
5. The damage is caused due to the demolition and repair by third party.
6. Damage caused by external force collision, hammering, overload and chemical corrosion.
7. Damage caused by force majeure.
8. Appearance damage after sale.
9. Brake shoes, fuses and other consumables.

12. Warranty card

manufacturer	Jiangsu NWOW Technology co. LTD	registration date	DD / MM / YY
unit model		customer name	
unit color		customer address	
chassis number		purchase date	
battery number		contact number	
motor number		customer ID	
certificate number			
sales invoice		dealer	
service center address		dealer contact	
		dealer address	