



SHARK Pro Owner's Manual



<https://roll-road.com>

Take down your serial numbers here!

Bike frame number:

Battery serial number:

Motor serial number:

**If you reset a security passcode via Display Setting,
we suggest you write it down here in case you may forget:**

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◆ About Manual

This manual contains details of the product, information on its operation and maintenance, and other helpful tips for owners. Read it carefully and familiarize yourself with the Roll Road e-bike before using it to ensure safe use, reduce risk of damage and premature wear, and prevent accidents. Be sure to retain this manual as your convenient Roll Road e-Bike information source.

This manual contains many Warnings and Cautions concerning safe operation, and consequences if proper setup, operation and maintenance guidelines are not followed. All information in this manual should be carefully reviewed.



The safety grade color of Caution is orange, and if not avoided, may result in moderate or serious injury.



Users should also pay special attention to information marked in this manual beginning with “**NOTICE**”



The safety grade color of Warning is red, and if not avoided will likely result in serious injury or death.

Because it is impossible to anticipate every situation or condition which can occur while riding, this manual makes no representations about the safe use of our bicycles under all conditions. There are risks associated with the use of any bicycle which cannot be predicted or avoided, and which are the sole responsibility of the rider. You should keep this manual, along with any other documents that were included with your bicycle, for future reference, however all content in this manual is subject to change or withdrawal without notice. Visit <http://roll-road.com/> to download the latest version. Assembly and first adjustment of your Roll Road e-Bike requires special tools and skills, and it is recommended that this be performed by a trained bicycle mechanic if possible.

Basic Specifications

Frame	JYL 6061 Aluminum Alloy	Pedal Assist Intelligent	0-5 level pedal assist
Motor	1000W Brushless Hub Motor	Pedal	Aluminum Alloy
Display	Intelligent Color LCD Display with USB port	Weight	77 lbs
Color	Black Frame with Retro Orange Saddle	Length*Width*Height	71*26*43.5 In
Battery	48V 20Ah Lithium Battery with USB port	Fender	Full fenders
Fork	Adjustable Air Suspension/ Mechanical Lockout	Lights	2-in-1 Horn inside 1200 lumen LED headlight, water-flowing front and rear turn signals
Shift System	Shimano 7-Speed Gear Shift System	Cruise Control	Yes
Wheel Size	20 In	Cellphone Mount	Yes
Tire	Kenda 20*4 In	Total Payload Capacity	350 lbs
Chain	KMC Z51	Charging Time	6-8 Hours
Brake	Hydraulic Disc Brake	USB Charging Port	Yes
RIM	Aluminum Alloy Spoke Rim	Saddle	L*H: 24*4 In Soft long saddle
Electric Ride Mode	Half Twist Throttle+Pedal Assist Mode(individually 5 Levels)	Suspension	Front double shoulder air fork suspension

◆ **Bike Assembly Guide**



Take the accessories box out of the package and make sure it contains those components below:

A Headlight

Two Keys to the battery (tied on the handlebar)

A Charger

A Pair of Pedals

A Tool Box

NOTICE: Before assembling your bike, it's recommended to remove the battery for the reasons outlined below:

1. Determine if there's battery drain or damage during shipping.
2. Reduce the weight of the e-bike to make it easier to maneuver the bike while assembling.
3. Avoid battery damage during the assembly process.

◆ Recommended Torque Values

Hardware Location	Recommended Torque(NM)
Handlebar	12-18
Stem	12-18
Saddle	12-18
Front Wheel(For bikes with bolts on front wheel)	15-22
Rear wheel	30-38
Bottom Bracket Parts	30-50
Pedals	28-33
Disk Mounting Bolts	3-5
Disk Caliper Mount	6-8
Crank Bolts	32-36
Rear Derailleur Cable Pinch	3-5
Front Derailleur Clamp	3-6
Saddle Post Clamp	3-6

NOTICE: Using an impact driver to achieve the required torque is not recommended as it might cause damage. We suggest you use the wrench set we provided and extra tools to manually adjust nuts and bolts.

◆ Assembly Instructions

Step1: Remove the battery



Find the keys located under the saddle and remove them. Use the key to unlock the battery. Remove the battery to avoid possible damage during installation.

The battery serial number is on the back of the battery.

Step 2: Handlebar Installation



- ◆ Loosen the bolts on your bike stem;
- ◆ Make the handlebar upright, center your handle bars;
- ◆ Tighten the bolts in the border to the handle bar system.

Step 3: Brake Disc Installation



- ◆ Completely unscrew the 6 bolts, align the brake disc with the small holes;
- ◆ Tighten the bolts, pay attention to making the angle and force even, otherwise it will cause friction noise.

Step 4: Front Wheel Installation



- ◆ Carefully flip your bike upside down for the front wheel installation
- ◆ Align the fork dropouts with the axle of the wheel hub, make sure the dropouts are fully seated on the axle.



- ◆ Remove the thumb nuts and one of the cone springs, insert the quick release skewer through the hub.



- ◆ Tighten the thumb nut.
- ◆ Use the palm of your hand to close the quick release lever.
- ◆ Tighten the bolts of the front fender.

Step 5: Front Turn Signal Installation



- ◆ Hold the light bar in one hand and the nut in the other, tighten them tightly.

Step 6: Pedals Installation



- ◆ Please note the indicators: the right pedal "R" and left pedal "L" can be found on the bottom of the pedals;
- ◆ Start installing the pedal and rotating in the direction of pedal forward.

Step 7: LCD Display Panel and Headlight Installation



Put LCD display in the middle of the handlebar, then use 3mm hexagon to fix the screws.



Connect the LCD display joint to the controller.

There are two interfaces on the front of the bike, the upper one is to the display, the lower one is to the headlight. Please insert the corresponding pins as indicated by the arrow.



Step 8: Check the display, lights and electric mode



- ◆ Long press the M button to turn it on; press up and down button to adjust the speed level;
- ◆ Turn on the 1200 lumen retro light, left turn signal, right turn signal, brake light;



- ◆ USB Charging: There are 2 places for USB charging, one is on the color LCD display, the other is on the battery;
- ◆ Cover it to prevent water when not in use.

Step 9: Check the Cruise Control Mode

Holding the throttle for more than 5 seconds, it will automatically enter the cruise control mode. To twist the throttle again/hold the brake/adjust the speed, this mode exits automatically.

Step 10: Check the Braking System

Turn the wheels, see if there is noise caused by disc and lining rubbing. If there is and in order to eliminate the noise, here is a “how to” video: <https://www.youtube.com/watch?v=C6iN0YX8PEA>

◆ LCD DISPLAY MANUAL (COLOR)



1. Specifications

- 3.2 inches VA screen

- 24V/36V/48V/60V battery supply
- Current rate<40mA
- Off current loss<1uA
- Current from controller 100mA
- Working temperature-20~65℃

2 . Size and material

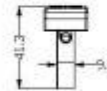
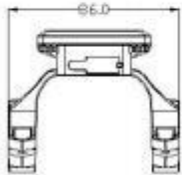
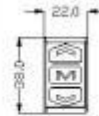
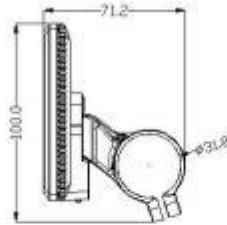
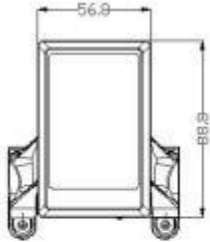
- Black ABS case, hardness transparent screen acrylic.



- Button case: ABS , Button: Rubber, dark gray , Hardness: Shaw A50±5° 。



➤ Size



➤ Diameter of the munt ring size: Φ **22.2mm**.

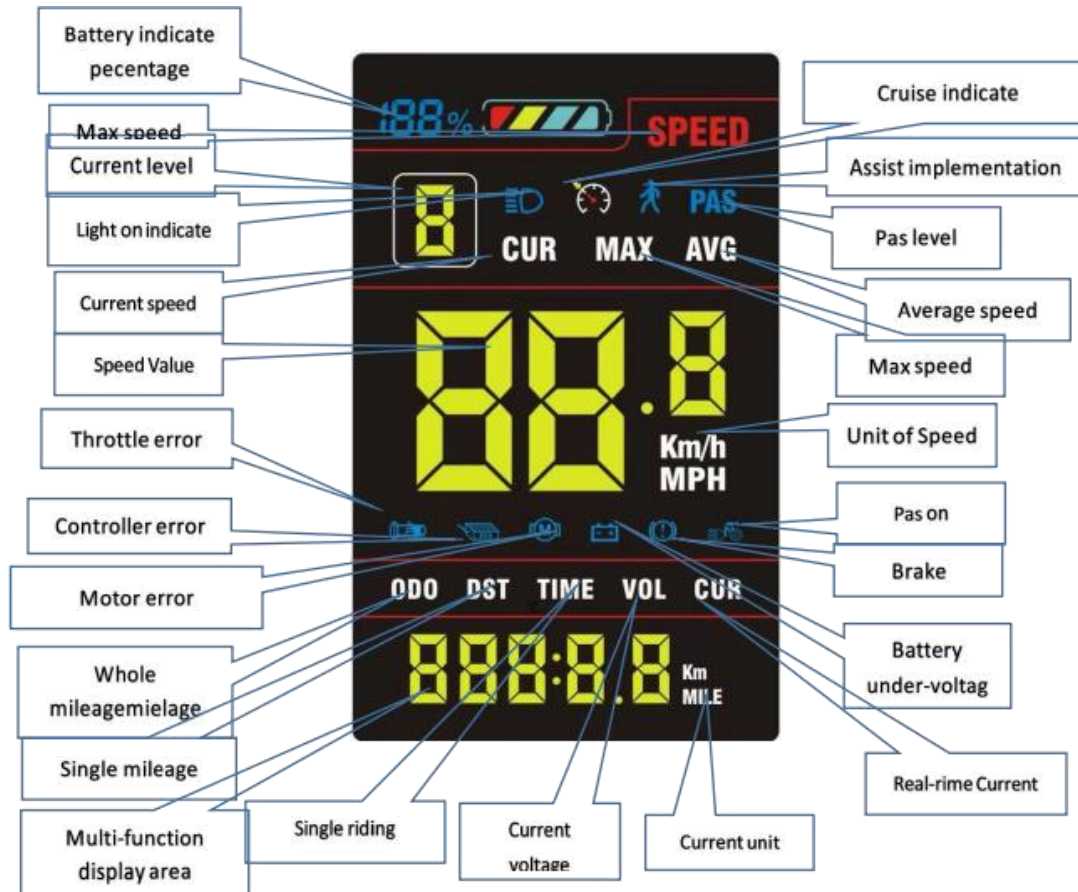
3 . Product introduces

➤ 3.2inches color VA screen;

➤ The external keys meet the requirements of ergonomics and comfortable to operate;

- ➤ Screen and components limit working temperature: $-25 \sim 70\text{C}$;
- Speed display CUR SPEED , MAX SPEED, AVG SPEED;
- km/mph : adjustable;
- Battery indicator Stable battery indicate display , not affected by motor's Rev.Stop
- Back light: 3 level from 1 to 3.
- Pas 9 level control, can adjust to 3/5/ 0 level
- Range total range ODO , single range: Trip , single ride Time;

4 . Display Specification



◆ 5.Button function



UP Button

M Button

Down Button

➤ **Turn on-off:**

➤ Long Pressing the M button for 3 seconds-- turn on or off;

➤ **Boosting function:**

On the main screen , to long press the “down” button, when one’s not riding the bike, it will enter the boosting mode and provide some pushing assist power when climbing steep hills.

➤ **Pas level change:**

On the main screen , short press” UP”or ”DOWN” to change the levels.

➤ **Speed display mode change**

On the main screen , long pressing” M ”+”UP” will go into the speed display mode change , long press will shift change one by

one Current speed(CUR) 、 max speed(MAX) 、 average speed(AVG)。

➤ **Range/riding time/voltage display change**

Short press "M", display one by one current mileage (DST) 、 whole mileage (ODO) 、 current riding time (TIME) 、 current battery voltage (VOL) 。

➤ **Parameter Setting (Pls do not adjust the parameters casually. The display /motor /controller are controlled and adjusted by these parameters. Improper adjustment will cause short circuit and damage)**

1). Press "up" +"down" together , enter/exit parameters setting interface; then push "M" to go to the next parameter, press up and down to change the numbers.

2).Parameter set details:

P01:back light adjust (1 darkest , 3:brightest) 。

P02:speed and mileage unit (0km , 1mileage)

P03:voltage level set

P04:Auto-turn off set (1-60mins , 0 means function off)

P05:PAS level set (UP button to set 3,5,9 level, Down button adjust have 0 level or not, some controller may don't have this option)

P06:wheel size , the smallest is 0.1 inch

P07:magnet number , 1-99 (If the motor is gear motor, should set it to :number of magnet* speed Reduction ratio)

P08:speed limit set , the unit is km/h

P09:Zero start/none-zero start (0:Zero start , 1:None Zero start)

P10: ride way (0 :PAS only , 1:Throttle only , 2:Both)

P11:Pas sensitivity set (1-24)

P12:Start the Torque sensor set (0:weakest , 5:strongest)

P13:PAS magnet choose (5,8,12)

P14:controller current limit set (need controller support)

P15:Throttle ride signal percentage (not support now)

P16: Cruise function (not support now)

P99: Date reset (on this screen, long press “up” , the display will change back to the original factory settings)

ODO: ODO Reset (on this screen , long press “up” , the whole mileage will be back to 0)

SHARK Default Parameters: (Pls do not adjust the parameters casually. The display /motor /controller are controlled and adjusted by these parameters. Improper adjustment will cause short circuit and damage)

P01: 00003

P02: 00001

P03: 00048

P04: 00010

P05: 005

P06: 0020.0

P07: 00050

P08: 00100

P09: 00000

P10: 00002

P11: 00002

P12: 00005

P13: 00012

P14: 00012

P15: 00100

P16: 00000

P99: 00099

◆ 6. Cable connection

Table: Mark the plug-in line order

The wiring sequence	Color of wiring	function
1	Red(VCC)	instrument power cord
2	Blue(K)	The power control line of the controller
3	Black(GND)	Instrument ground wire
4	Green(RX)	Instrument data receiving line
5	Yellow(TX)	Instrument data transmission line

(Only listed the factory default)

◆ 7. Error code

E-001: Motor problem

E-002: Throttle problem

E-003: Controller problem

E-004: Brake problem

E-005: Controller under voltage

E-006: No signal from controller

E-007: No signal from display

◆ Safety Checklist

<ul style="list-style-type: none">• Safety Check	<ul style="list-style-type: none">• Basic Steps
<ul style="list-style-type: none">• Brakes	<ul style="list-style-type: none">• Test front and rear brakes for proper function.• Ensure brake pads are not over-worn and are correctly positioned in relation to rims.• Check that brake control levers are lubricated and tightly secured to handlebars.

<ul style="list-style-type: none"> • Wheels and Tires 	<ul style="list-style-type: none"> • Inflate tires to within recommended limits displayed on sidewalls. • Check for bulges or signs of excessive wear. • Clean tires to ensure tread is exposed. • Ensure rims run true and have no obvious wobbles or kinks. • Check that all wheel spokes are tight and not broken. • Check the wheel balance in Pedal Only Mode. If you notice the riding is imbalanced or the rotation of the front wheel makes noise, it means the bolts were not completely tightened or not aligned horizontally.
<ul style="list-style-type: none"> • Chain 	<ul style="list-style-type: none"> • Check that chain is oiled, clean and runs smoothly. • Use extra care in wet or dusty conditions.
<ul style="list-style-type: none"> • Cranks and Pedals 	<ul style="list-style-type: none"> • Securely tighten pedals to cranks. • Ensure cranks are securely tightened and are not bent.
<ul style="list-style-type: none"> • Derailleurs 	<ul style="list-style-type: none"> • Check that derailleur(s) are adjusted and functioning properly. • Ensure shift and brake levers are attached to handlebar securely. • Check all brake and shift cables for proper lubrication.
<ul style="list-style-type: none"> • Motor Ride 	<ul style="list-style-type: none"> • Ensure hub motor is spinning smoothly and motor bearings are in good working order. • Check that all power cables running to hub motor are secured and undamaged. • Make sure hub motor axle bolts are secured and all torque arms and torque washers are in place.
<ul style="list-style-type: none"> • Battery Pack 	<ul style="list-style-type: none"> • Ensure battery is charged before use. • Check for any visible damage to battery pack. • Lock battery securely to frame. • Charging: Plug in the charger first, then plug the power supply.

◆ Safety Precautions

The following safety notes provide additional information on the safe operation of your Shark bike and should be closely reviewed. Improper operation, or failure to confirm correct installation, compatibility, and maintenance of any component or accessory may result in serious injury or death.

◆ Before Riding

- All users must read and understand this manual before the first use. Additional manuals for components used on your bicycle may be provided and should also be read before use.
- Ensure you understand all instructions and safety notes/warnings.
- Follow the safety checklist before the first use and at regular intervals to ensure correct tightening and setup of your bicycle.
- Ensure the bike fits you properly before the first use. Check local rules and regulations before riding.
- It is your responsibility to familiarize yourself with the laws and requirements of operation of this product in the area(s) where you ride.

◆ While Riding

- Always wear an approved bicycle helmet whenever using this product and ensure that all helmet manufacturer instructions are used for fit and care of your helmet. Failure to wear a helmet when riding may result in serious injury or death.
- Acceleration can be unexpectedly strong in pedal assist mode (Pedal Assist level 1-5), as when you pedal the motor assist will suddenly engage. Therefore, please pay careful attention when riding. We suggest you use Pedal Only Mode (Pedal Assist level 0) when you need to ride at a slow speed to cross roads, at intersections, or when pedestrian traffic is present, in order to avoid accidents caused by sudden acceleration.
- Make sure you securely close the quick-release lever of the front wheel, checking the wheel balance in Pedal Only Mode. If you notice that the bike riding feels imbalanced or the rotation of the front wheel makes noises, it likely means the bolts were not completely tightened or didn't align horizontally in the center.
- Off-road riding requires close attention and specific skills, and presents variable conditions and hazards which accompany the conditions.
- Wear appropriate safety gear and do not ride alone in remote areas.



Attention:

A. Electric bike riders must be at least 16 years old. Please abide by the local road traffic safety rules, wear a helmet when riding, and check the e-bike safety according to the safety checklist before riding.

B. Keep the key with extra care because there is only one pair, even the manufacturer doesn't own a back-up.

◆ **Shark Use and Care**

◆ **Considerations for safe riding**

- 1. Please observe traffic regulations and ride it safely. Please control the speed within safe speed range (note: safe speed of this bicycle is within 45km/h).
- 2. Before riding, get familiar with this Instructions first, and then perform exercise at an open site. Make sure that you fully master riding skills and get familiar with the structure and performance of this bicycle, which are the foundation for safe riding.
- 3. Do not lend it to those people who are not familiar with or unable to ride it or ask them to ride it. It is dangerous to ride it by one hand or even without hands or ride it when intoxicated.
- 4. Take more care when riding it in raining or snowy days: danger may occur due to wet ground in raining or snowy days! Thus, you should ride it at a low speed and pay more attention 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 riding. And 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.
- 6 Note: in order for ease maintenance, repair and service, each bicycle produced by our company is marked with a bicycle frame number and motor number, so as to assist distribution unit to provide better service for you. The bicycle 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 bicycle is 350LBS. As the feeling of handlebar with load is different from that without load, when many articles are loaded, holding handlebar will vibrate which may result in danger.

◆ **Methods for correct operation**

- **Riding method**

- 1. Keep the natural posture and free riding can be gotten.
- 2. Riding in sitting posture: please always keep your body in the middle of the bike to prevent load reduction of the front tire and danger caused by handle bar vibration.
- 3. Riding in standing posture: when speeding up, you should turn the handle slowly, therefore danger caused by instability due to sudden speeding-up should be avoided.
- 4. Ride it slowly on roads with surface damaged or that paved with gravels. In rainy or snowy days, wet ground will easily cause side slip, so you should ride it slowly with much attention.
- **Parking method** : 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. After parking it stably, turn the power supply lock rightwards to pull it out and take it down and then lock the bicycle with a lock.
- **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 is 20% of rated electricity; while each grid of the red light is 5% of rated electricity. 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 bicycle immediately.
- **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 riding, do not remove the key and switch off power supply, nor can you turn the key in counter clockwise direction to close the power supply lock. Once you switch off the power supply, the motor will stop running. After parking, you should turn the power supply lock in counter clockwise direction to switch off the power supply, and then pull the key out.
- **Half-twist throttle (speed-governing handle)** : Twist the throttle on the right hand, the bicycle will be sped up; and if it is released to turn back, the speed will be reduced.
- **Operation method of disc brake and considerations**

(1) Operation method of disc brake

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.

Replace the braking pad when braking pads are worn off by more than 1 mm 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).

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 great force, otherwise unrecoverable damage will be caused to braking pads and braking body. The correct operation method is to brake slightly during riding, so that there is appropriate friction kept between braking pads and the disc brake.

(2) Considerations

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

◆ Operation method of the charger and considerations

(I) Operation method

① when charging, plug in the plug of cell box first, then that of electric supply AC100V-230V. when charging is complete, take the counter procedures, that is, unplug the plug of electric supply AC100V-230V, then that of cell box.

- ② During normal charging, the indicator light of the charger shows red. when fully charged, it will turn green;
- ③ If 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°C, normal charging occurs.
- ④ If there is no cell connected during usage, what the charger output is a pulse voltage less than 42V. when testing, place a 1K0ohmic load between the positive and negative output terminal, then actual charging voltage of the charge can be obtained.

(2) Considerations

- 1 The charger can only be used indoors.
- 2 Charging in a closed space or under scorching sun or at a high temperature environment are strictly prohibited. Do not put the charger on a seat cask or inside the rear compartment for charging.
- 3 In case of no charging, do not connect the charger to an AC power supply without load for a long time. During charging, if the indicator light is abnormal and abnormal smell occurs or the housing of the charger turns too hot, please stop charging immediately, then repair or replace the charger.
- 4 Do not disassemble or replace the devices inside the charger by yourself.
- 5 Do not charge the charger that has been fully charged.
- 6 Do not use the charger in an environment with flammable gas, otherwise explosion or fire will be caused.
- 7 Do not submerge the battery pack in liquid or use it in wet areas, otherwise fire or electric shock may occur.
- 8 In 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.

(3) Charging

- 1 Only use the charger supplied with the bicycle. Irregular or non-conforming chargers may reduce life the cell or invalid the cell!!

2 The cell that has been fully discharged (the bicycle stop running) can be charged with more than 95% of electricity within 5h, and can be fully charged within 8h.

3 During charging, neither the positive end nor the negative end is allowed to be contacted metal.

4 when leaving factory, the cells electricity is about 80%. Prior to riding a new bicycle, charge it for 3~10h.

5 If the bike is left for more than one month, electricity will reduce by about 5%. It is recommended to charge it before use. Please charge the cell timely to ensure riding mileage.

6 During charging, the charger may became hot. As long as the temperature does not exceed 140° F (60° C) , it is normal. when charging, please put the charger and the whole bicycle at a stable and dry place which is free of flammable and explosive goods and is out of reach of children.

7 You should charge the cell within 24h after it is fully discharged, and charging time should not be less than 3h.

8 Do not short-circuit the battery pack's terminals.

(4) Discharging (use)

1 Do not use the cell for purposes other than the electrical bicycle of this model, otherwise warranty will not be provided.

2 Once 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. About 2 minutes after the short circuit is released and the fuse piece is replaced, the cell will work normally.

3 Damage or unreasonably configuration of the controller, motor, horn, lighting facility, etc. of electrical bicycle will all cause the cell to discharge at high current. At this time, the cell will stop output for protection, but will recover within 10s, which will not affect your riding.

4 Working temperature range of the cell: -10℃ —55℃ . Like other cells, its available energy will reduce with the rise of temperature, which is a normal phenomenon.

(5) storage

1 If 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 before usage.

2 The cell should be stored at a cool and dry environment.

3 During storage, prevent conductive objects connecting the positive pole with the negative one.

4 Do not use the cell near fire or heat source. (Do not disassemble the cell.)

(6) **warning**

1 If the cell is found to deform or become hot, you should stop using and seek 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 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.

◆ **Check, cleaning and maintenance**

(I) Regular or daily check

1. Check the whole bicycle 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 bicycle normally.

4. Check whether there are chaps, damage or abnormal wear on tires or whether there are such sharp objects as metal, pebble, glass embedded in

tires. If the lug on a tire has been worn off by 2/3, replace the tire. Check tires, air pressure according to sunken condition of the part of tires contacted with ground. The normal air pressure of front and rear tire is 1.5kg/cm².

5. Check whether the power supply voltage indicator indicates full capacity

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.

◆ Basic Troubleshooting

No	Symptoms	Possible Causes	Solutions
1	Speed-governing fault or max. speed reduced	<ul style="list-style-type: none"> ● Too low cell Voltage ● Speed-governing throttle damage ● Spring inside throttle goes stuck or fails 	<ul style="list-style-type: none"> ● Charge the cell ● Go for the distributor for replacement
2	Motor not working	<ul style="list-style-type: none"> ● The cells connecting line becomes loose ● .Speed governing throttle damaged ● Motor output line becomes loose or damaged 	<ul style="list-style-type: none"> ● Reconnect it: ● Ask the distributor for replacement ● Ask a repair store for help
3	Continuous riding mileage is not sufficient after charging.	<ul style="list-style-type: none"> ● Low tire pressure ● Low battery power or charger fails ● .Aging of the cell or damaged ● Driving on rough terrain 	<ul style="list-style-type: none"> ● Inspect tire ● Fully charge the cell or replace the charger ● Replace the cell

		<ul style="list-style-type: none"> ● Great headwind, frequent braking and starting, heavy load on bike 	<ul style="list-style-type: none"> ● Adjust route ● Adjust bike load, include pedal assist use
4	Charger fails to charge	<ul style="list-style-type: none"> ● Charger not properly connected ● Fuse inside the cell box fused ● Battery packs connecting wire falls off 	<ul style="list-style-type: none"> ● Inspect connections ● Replace the fuse ● Weld connecting wires
5	Other symptoms	<ul style="list-style-type: none"> ● Fault that you cannot determine; the inside of the motor, cell, controller, charger, etc. damaged 	Please ask the distributor for repair, do not open these parts by yourself. Otherwise, warranty will not be provided.

Quality Assurance and After-Sale Service

1. Administration of Quality and Technology supervision

In order to practically protect consumer's legal rights and interests, perfect the civil responsibility system about product quality and perform warranty obligation and responsibility, you can enjoy 2-year warranty service from the maintenance & service station designated by the bicycle-selling unit by virtue of the warranty card, and specific provisions are as follows:

2. Warranty authentication standard of e-bike

Number	Part name	Standard for replacement	Standard for non-replacement	Quality assurance time
1	Handle Tube	Broken	1. Damage caused by human factor or improper use; 2.The user changes the state by himself: 3. seriously defective accessories	2 years
2	Front Fork	Broken	Damage caused by human factor or improper use	2 years
3	Bottom Fork	Broken	1. Damage caused by human factor or improper use; 2. The user changes the state by himself: 3. seriously defective accessories	2 years
4	Bicycle Frame	Broken	1. Damage caused by human factor or improper use; 2. The user changes the state by himself: 3. seriously defective accessories	2 years
5	LCD Display	Broken	1. Damage caused by human factor or improper use; 2. The user changes the state by himself: 3. seriously defective accessories	1 year
6	Controller	Failure	Improper use or man-made damage	1 year
7	Lithium Cell	In case that the capacity fading all the 15th month as from manufacturing date is lower than 40%; in case that the capacity fading at the 16th -24th month as from manufacturing date is lower than 20%.	Housing damage caused by human factor of improper use, incorrect use of the charger, assembly and disassembly the cell by yourself, using the cell at high temperature (A60x*)- discharging at high current for a long time, short circuit caused by man-made immersion water	1 year

8	Rear Hub Motor	Failure	1. Damage caused by human factor or improper use; 2. The user changes the state by himself; 3. seriously defective accessories	1 year
9	Charger	Failure	Improper use or man-made damage	6 months
10	Headlight	Broken	1. Damage caused by human factor or improper use; 2. The user changes the state by himself; 3. seriously defective accessories	3 months
11	Disc brake	The upper or lower oil pump leaked or damaged; the braking handle broken due to manufacturing defect; oil tube damaged or leaked oil, etc.	1. Damage caused by human factor or improper use; 2. The user changes the state by himself; 3. seriously defective accessories	1 month
12	Tire	Broken	1. Damage caused by human factor or improper use; 2. The user changes the state by himself; 3. seriously defective accessories	1 month

Safety and Care Instructions

To ensure safe riding conditions and maximize e-bike longevity, you must follow the guidelines outlined below:

- To clean the e-bike, wipe the frame with a damp cloth soaked in a mild, non-abrasive, non-corrosive detergent mixture. Wipe or spray all unpainted parts with anti-rust treatment after being used in coastal areas or areas with salty air or water.
- Never immerse the bike or any components in water, as the electrical system may be damaged. If the hub and bottom bracket bearings have been submerged in water, they should be removed and re-greased (this will prevent accelerated bearing deterioration).
- Periodically check wiring and connectors to ensure there is no damage, and the connections are secure.
- Store under shelter, avoiding extended exposure to cold or inclement weather. If exposed to rain or excess moisture, dry your bicycle afterward and apply

anti-rust treatment to the chain and any other unpainted steel surfaces.

- Regularly clean and lubricate all moving parts, tighten components and adjust as required.
- Your cables, spokes, and chain will stretch after an initial break in period of 80-160 km, and additionally bolted connections can loosen with time and usage. Therefore, we suggest you contact a certified bicycle mechanic every two months to ensure your bike is safe and problem-free for years of use.
- If the paint has become scratched, or the metal chipped, use touch-up paint to prevent rust (clear nail polish can also be used as a preventative measure).
- Damage from corrosion is not covered under warranty, therefore special care should be given to protect and extend the life of your bike.

◆ Maintenance

◆ **Battery Maintenance**

1. Don't fully drain your battery. Turn off the power when the battery charge is low.
2. Fully charge the battery after each use, no matter how much power has been used. This will prolong the battery life. If the battery is not used for a long time, store the battery with a full charge and charge it once a month.
3. The Shark Bike can be safely ridden in light rain. However, riding through very heavy downpours or through flooded streets is not recommended, as the crank and/or motor can get wet, which may cause problems.
4. Keep the battery away from open flame or a high-temperature heat source. Do not expose the battery to direct sunlight or recharge immediately after use in high-temperature weather.

◆ **Chain Maintenance**

1. We recommend cleaning the chain after each ride, especially in rainy and humid environments. Use a dry cloth to wipe the chain and its accessories

clean. Use a brush to remove sand and dirt stuck in the chain, along with use warm soapy water if needed. Do not use strong acidic or alkaline cleaning agents (such as rust remover), because these chemicals can damage the chain.

2. Apply lubricating oil after cleaning to avoid rust. First, make sure the chain is dry, and then apply the lubricating oil into the bearings.
3. To prevent unnecessary chain wear, try to maintain a vertical chain position when shifting gears (do not use the smallest gear with the smallest fly wheel, or the largest gear with the largest fly wheel, etc.).

◆ **Front Fork Maintenance**

1. Always use a clean, oil-free lint-free cloth with plain or soapy water to clean your bike. To prevent water from flowing into the front fork, you can turn the bike upside down. Dry with a lint-free towel after washing. Pay specific attention to the inner tube and the dust seal to reduce wear and prevent thinning of the inner tube, which can lead to significant damage if the aluminum is exposed to air.
2. We recommend using a front fork dust cover to protect the inner tube of the front fork. This prevents dust from entering as well as hard objects from hitting the inner tube.

◆ **Brake Maintenance**

1. Pad replacement:

Pads should be replaced if they become contaminated or have less than 2.5mm thickness. (Metal plate & wear material)

2. Before riding:

Check the pads for wear or contamination.

Check the hose for cracking, wear or deformation. Replace if necessary.

Check if the brake system is operating correctly.

3. After riding:

Check the pads for wear or contamination.

Check the hose for cracking, wear or deformation. Replace if necessary.

Check if the brake system is operating correctly.

4. At regular intervals:

Check the oil level in the reservoir.

Lubricate the brake lever pivot with grease.

Check to make sure that all the bolts are tightened to the correct torque specifications.

Riding Limitations

Following are some limitations needing riders' careful attention to ensure the mid motor does not overheat or become damaged from excessive loading:

- Do not attempt to ride up hills steeper than 15% grade.
- Use the pedals to assist the motor when climbing hills and accelerating from a stop.
- Avoid sudden starts and stops.
- Generally accelerate at a moderate pace, rather than aggressively.

Range and Content Beyond Warranty

1. The fault caused by failure to use maintenance or adjustment by the user according to the Operation Instructions;
2. The fault against which technical evaluation and analysis cannot be done because original state is destroyed due to refit, disassembly, repair and dismantling by the user himself;
3. Accessories other than that provided by "Roll Road" are used;
4. The fault caused by improper use or maintenance by the user or by accidents;
5. The bicycle without warranty card or the bicycle that is not corresponding to the warranty card;
6. Three guarantees service will not be provided for easily-damaged parts and consumer goods;
7. The secondary fault caused by continuous use by the user after a fault occurrence.
8. The bicycle without certificate;
9. Unilateral amendment of invoice date or the part No. on bicycle.

◆ Warranty Principle

For the fault beyond warranty range and main accessories used after the warranty period expired, our company will still provide service, but a fee will be charged.

◆ Online Resources

For more information on best practices, maintenance, and more, please visit the Roll Road Bikes website (<https://roll-road.com/>)

If you still have questions after checking out our online resources, please contact us in any of these ways:

Website: <https://roll-road.com>

E-mail: support@roll-road.com

Phone: +1 (860)800-9375