

E-Bike User Manual
New Lighting King (NLK-60V)

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Foreword

Dear users:

Thank you for choosing our products. We sincerely hope you could provide us with your valuable advice and suggestions. Your satisfaction is our priority.

Our company is a professional manufacturer of electric vehicles. We design, develop, and produce electric vehicles with luxurious appearance, comfortable riding, simple operation, safe and reliable, long mileage, low noise, energy saving, and low maintenance costs. The advantage is the ideal new generation of green transportation. In order to make the electric car serve you better, please read the instruction manual carefully before use, and fully understand the car's expansion and use and maintenance methods, so that it can be properly used and maintained to make it perform optimally , reduce failure and extend service life.

Do not lend it to others who cannot steer an electric bike. You must strictly abide by the traffic rules. Please ride on a slow lane.

The user should decelerate slowly and increase the braking distance to ensure safety in circumstances of rain, snow, and slippery roads. The rear hanger and toolbox are convenient for users to put some light items (such as ponchos, books, chargers, etc.). Children are strictly prohibited.

I. Precautions for Safe Driving

Please obey the traffic rules, control the speed within the safety zone. (Note that the safety speed of this vehicle is 20km / h).

Before you drive, familiarize yourself with the contents of this manual. Then, find an open field training to fully grasp the driving essentials of the car and familiarize its structure.

Warning: Do not lend or allow unfamiliar and non-driving personnel to use it. Driving with one hand or large Caesar put, drunk driving is very dangerous.

- Drivers should pay more attention to safety in rainy and snowy days.

- In rainy and snowy days, avoid driving at high speed.

Please take special care when steering. Please brake in advance to prevent accidents!

- Use helmet properly

Wear a suitable safety helmet on your head and fasten the strap.

- Dress properly

Dress brightly and move freely. Wear clothes that are not tight and with cuffs that are not low-heeled.

Note:

- In order to facilitate maintenance, repair and service, each car produced by our company has its own frame number and motor number to help the dealership provide you with better services. The frame number is embossed on the lower part of the front box of the car. The motor number is stamped on the outer cover of the motor.

- Loads should not be too heavy

With different loads, the handle could be different. If there are too many loads, the handle will easily tremble and become dangerous. The rated load of the car is 1 person, and the load

of the storage box is less than 2kg. The more the load is, the greater the danger will be, and the vehicle parts will be damaged.

II. Schematic diagram of the complete vehicle and parts



III. The name of each part



● Use of luxury models



1. Speed control lever; 2. Turn signal; 3. Headlight; 4. Front fork (shock absorption); 5. Brake; 6. Front rim; 7. Tire; 8. Rear backrest; 9. Saddle; 10. Motor

Serial #	name	Features
1	Speedometer	Indication of driving speed
2	Gear meter	3 Gears in total. Indicating the gear
3	Voltmeter	Indicate battery voltage status
4	Capacity meter	Indicate battery capacity status

1. Speedometer: The speed displayed on the dial is the speed of your ride, measured in kilometers per hour. The safe speed of this car is 20km / h.

2. Gear table: under normal circumstances, gear 1 is 44km / h, gear 2 is 56km / h, gear 3 is 62km / h.

3. Voltmeter: Turn on the power switch, the number displayed on the instrument panel is the actual voltage of the battery, that is, the full voltage is 60V, and the undervoltage is 48V, which means no electricity.

4. Electricity meter: When the battery is fully charged, it is displayed as a full grid, when the battery is empty, it is displayed as a space, please charge in time.

IV. The use of the switch

1. The power switch ON (on) key is turned on in this position, and the motor can be started. OFF (Off) Cut off the power supply and the motor stops. The key can be removed to prevent theft of the car.

Warning: When you leave the car, please add an anti-theft lock.

2. Headlight switch

Turn the headlight switch on to turn on the headlights. Dial again to turn off the headlights.

3. Speed control handle

Rotate inward to speed up and spin out to slow down. When the reset is released, the motor stops accelerating.

4. Horn switch

The power switch is in the ON position, and it will ring immediately when you press the horn button; please do not use

it when it is not necessary and the horn is not allowed to prevent noise pollution.

5. Steering switch

Use this switch when turning or changing lanes, turn left when turning left, turn right when turning right, turn the button to the middle, the signal indicator will go out.

Warning: The turn-off light goes out immediately after use to avoid misunderstanding for others.

● Opening the seat cushion

1. Insert the key into the lock hole of the cushion and rotate it to the right.

2. Lift the back cover of the seat cushion to open it, press to lock. 3. There is a tail box on the rear rack of the car for you to put raincoats and scattered items. (Some models)

Warning:

- The contents of the container should not exceed 2KG.
- Do not place items with high temperature, low heat resistance, food and flammable items inside the box.
- Do not place valuables inside.
- Avoid soaking in water when washing the car.
- Don't forget to lock the rear box of the seat cushion. To check, lift it up slightly.,
- Do not place chemicals or sharp objects.
- To clean the container, it is best to wipe it with a vacuum cleaner or a soft cloth.

V. Correct driving operation

- Starting method

Before starting: Stand on the left side of the car to support the middle bracket, and check whether the vehicle is abnormal.

1. Insert the electric key into the lock of the power switch, turn it to the ON position, and then press the switches to check whether the indicators and speakers are normal. Check whether the power-off function of the left and right brake levers is normal after trial running the motor.

2. Motor start

The handle should be accelerated slowly, to avoid instant acceleration of wasted power, which could cause easy damage to electrical components. It is better to assist with the use of the pedal.

Warning: Do not turn the speed adjustment handlebar until the rear wheels are on the ground.

- Speed adjustment

Acceleration and deceleration can be adjusted by the speed adjustment handle. Accelerate slowly as the spin accelerates.

- Use of brakes

Brake successively for best results.

1. After quickly resetting the speed control handle, hold the left and right brake handles firmly.
2. It is ideal to brake slowly and then tighten when braking.
3. Avoid sharp braking and sharp steering. Emergency braking and sharp steering are the main factors causing sideslips or rollovers, which are extremely dangerous, especially on rainy days.

Warning: Only breaking the front or rear wheels can cause the car to slip and become extremely dangerous.

- Precautions when driving

1. On the premise of ensuring safety, you should minimize braking and start as much as possible to save power.
2. In the wind, climbing or starting, with the help of feet can make the battery motor cost-effective and extend the service life.
3. On rainy and snowy days, the road is wet and easy to slide. You must concentrate your energy and prepare to brake in advance at any time. After cleaning the vehicle or driving in the water, pay special attention to the working condition of the brake. When driving slowly, pay attention to safety, and gently brake until the normal state is restored.
4. In heavy rain, surface water is in lower position than most wheel motor. Please do not ride in the water, to avoid the failure of performance motor, the rear brakes may arise. This car is not afraid of rain and snow but cannot wading. When the

water level floods the controller cover, electrical wiring and motor hub, a short circuit may occur and damage the motor.

- Parking method

1. Send a signal to approach the parking place.
 - A. Turn on the turn signal in advance and pay attention to the rear and side vehicles, and slowly stop at the side of the road.
 - B. The speed control is reset, and the front and rear brakes are used early.
2. When the vehicle is completely stopped, the turn signal switch is centered, and the power lock key is turned to the OFF position and removed.
3. When parking, a person stands on the left side of the car and steps on the middle support pedal, presses down firmly, and lifts with his right hand, the car can stop.

Warning:

Do not park on the floor of a soft slope to prevent the vehicle from falling over.

If the storage time is not long, the side stand can be used, but the key switches a constant to be removed.

When you leave the car, to prevent the car from being stolen, be sure to lock the anti-theft lock and take away the key.

Note: Do not allow children and items to ride on the pedals.

Follow traffic rules and keep in mind to drive safely.

VI Charging and maintenance of batteries

1. This car uses maintenance-free Lithium batteries. The operating temperature is in the range of -15C to 45C, preferably 20C \pm 10C. Too low will reduce its effective capacity. Therefore, in winter or cold areas, it is normal for the mileage to continue to decrease after a single charge. When the temperature rises above 20 ° C, its function naturally recovers. The battery is an important part to protect the good performance of the vehicle. Please pay attention to proper protection. Please do not use the power to the minimum allowable voltage every time you ride. When the under-voltage indicator flashes, you must charge the battery.

2. Charge frequently and develop the habit of charging as you use. Keeping the battery always fully charged is a magic weapon to improve the life of Lithium batteries.

3. If the vehicle is idle and not used for a long time, the battery must be recharged regularly once a month. Conversely, loss of power will shorten battery life.



4. Hazard Warning

- Forbid Disassemble Batteries

The battery has protective component and circuit internally to avoid danger. Mishandling such as improper disassembly will destroy its protective function and make it heat, smoke, distort or burning.

- Forbid Short-circuit Batteries

Do not touch the plus and minus contacts with metals. Do not put the battery with metal element together in either storage or movement. If the battery is short-circuiting, it carries magnified current , which will cause damage and make the battery heat, smoke, distort or burning.

- Forbid heat and burn the batteries

If heating or burning the battery, it will cause the isolated element in the battery dissolved, protection function stopped or the electrode burning, over heated, which will make the battery heat, smoke, distort or burning.

- Avoid charging near fire or in the sunlight

Otherwise, it will cause internal protection circuit and its function lost or abnormal chemical reactions, which will lead to heating, smoking, distortion or burning.

- Danger in using non-indicated chargers.

Charging in abnormal condition, the battery will cause internal protection circuit and its function lost or abnormal chemical reactions, which will lead to heating, smoking, distortion or burning.

- Forbid Damage Batteries

Do not allow damage the batteries with the metals gouged, forged or dropped etc. , otherwise, it will cause over-heated, distort, smoke or burning, even in danger.

- Do not touch the leak-out batteries

The leak-out electrolyte will cause the skin uncomfortable. If it drops into eyes, do not rob the eyes but wash in time, and go to hospital for treatment.

- Charger for use and maintenance

1. Carefully check whether the rated input voltage (AC110V) of the charger is consistent with the grid voltage.

2. Ensure that the Battery Voltage of 60V is consistent with the use of Battery Charger voltage of 60V. or 60V Voltage Battery only use 60V Battery Charger

3. The battery can be charged directly in the car. It can also be removed and brought to a suitable place such as indoors for charging. It should be charged indoors in cold winter.

3. Please connect the output plug of the charger to the charging socket of the battery properly. Then connect the input plug of the charger to AC power, and the power indicator light is on. This procedure is not allowed to operate in reverse.

4. At this time, the charging indicator of the charger is red, indicating that the battery is being charged. When the green indicator is on, the battery is fully charged. The charging time is about 5-7 hours (the length of the charging time depends on how much battery power is left).

5. In special cases, the maximum continuous charging time is not more than 12 hours.

Notes on charging

- Ensure Consistency between Battery voltage (60V) with Charger voltage (60V) or 60V Voltage Battery only use 60V

Battery Charger

- While charging, keep the car in a safe place out of the reach of children. It is strictly forbidden to start using the battery without full charge, otherwise it will affect the battery life.

- Do not use other brands of chargers, and other types of batteries are not suitable for this charger.

- The charger contains high voltage circuits. Do not disassemble it by yourself.

- During use and storage, prevent liquid and metal filings from penetrating into the charger. Be careful not to drop or bump. So as not to cause damage.

- Do not cover the charger while charging. This charger is for indoor use. Please use it in a dry and well-ventilated environment.

- When you are in the process of charging, if you smell favor or the temperature is too high, or do not turn the green light for a long time, please stop charging immediately and take it to the maintenance department for inspection.

VII. Inspection before riding

Inspection of tires

1. Is the tire air pressure normal

Determine whether the air pressure is appropriate according to the depression of the part in contact with the ground. Generally, the normal air pressure is 125KPa for the front wheels and 175KPa for the rear wheels.

2. Whether the tire is cracked or abnormally worn.

3. There are no nail stones, glass embedded in the wheel.

Note: Steering failure could cause tire pressure abnormalities, tire cracks, damage and abnormal wear, which might lead to tire burst.

4. The depth of the tire grooves. When the bumps on the tire have worn away, 2/3, you must replace the new tire.

- Check the indicator lights of the instrument and whether the brake power is normal.

1. Open the electric door lock: power lamp display, power display. Operation switch:

Headlights, taillights, and direction lights are displayed, and the headlight beam changes are displayed. Is the horn sound normal?

2. Check the left and right brake levers separately, whether the brake power failure is effective.

- Image inspection of rearview mirror

1. From the driving position, see if the rear-view mirror can clearly see the rear and side conditions.

2. Check the rearview mirror for dirt or damage.

- Dirt and damage to reflectors and license plates

1. Check the reflector for dirt and damage.

2. Check whether the license plate is installed firmly, the serial number is clear, and there is no dirt and damage.

- Inspection of handlebars and saddles

1. Are the handlebars and saddles adjusted and fastened?
2. Whether the brake system is properly adjusted and reliable.

If problems are found after inspection, please read the relevant contents of this manual. Or contact your dealer to provide you with comprehensive after-sales service.

- Use and maintenance of motor and controller

1. Regularly check whether the cap screws at both ends of the motor are loose.
2. Regularly check the motor wiring and insulation of the case.
3. Check the controller wiring regularly for looseness.
4. Check regularly for loose fuses.

VIII. Inspection and maintenance

In order to extend the service life of the vehicle and make it safe and comfortable to drive, please regularly check and maintain it. When the vehicle is stopped for a long time, it should also be checked regularly

Check and maintain when the new car travelled 300KM.

- Pay full attention to safety when inspecting
 1. Choose a spacious and flat place and support the middle bracket.
 2. When driving inspection is required, it should be carried out in a safe place, and at the same time pay attention to the surrounding safety.
 3. If any abnormality is found through inspection, please drive the vehicle after eliminating the abnormality. If you have difficulty solving the project, you can entrust the maintenance station to carry out the inspection.

- Inspection of operating parts

1. Check whether the fork is bent or damaged.

If the front fork is damaged, shake the handlebar up and down to check for any abnormal noise caused by the bending of the front fork. If the fork is abnormal, please go to the service station for inspection and repair.

2. Inspection of the brake

Whether the brake clearance is within the specified range (1.5-2mm). Measurements show that if it is not correct, it should be adjusted. Serious brake pads (more than 2/3) require timely replacement.

Note: After adjusting the brake, be sure to tighten the brake wire fixing screw to prevent danger when driving.

3. Brake effect and inspection

When driving on a dry, flat road at low speed, use the front and rear brakes to check their braking effect.

Note:

Hold the left and right brake levers tightly. If it still does not work, you should adjust the distance between the brake pads and the wheel bar or adjust the line.

Increase the braking distance when riding in rain or snow.

If you do not have special tools and measuring tools, please go to the repair station for inspection and replacement. Do not disassemble them before you master the technology to avoid damage to other components.

4. Inspection of tires

With the tires cooled, check with a tire pressure gauge.

Note: The tire pressure disorders, cracks, damage and abnormal abrasion is not caused by turning one of the reasons good, the tire burst.

Your vehicle is often in contact with the ground. Stones, glass, and nails on the ground will cause damage to your vehicle, so

you must pay attention to it when driving. In addition, check the tire's contact surface and side for obvious cracks, damage, puncture stones, glass and other sharp objects, and check for abnormal wear caused by long-term driving.

- Depth of tire flute

See tire wear, check the depth of the flutes, 2/3 tires wear out more bumps should change a tire. When the tire is abnormal, go to the repair station to check or replace it with a new one. Recommended rear wheel locking torque is $\geq 30\text{N.m}$. Front wheel locking torque is $\geq 18\text{N.m}$.

- Inspection of battery fluid volume

This car uses a maintenance-free sealed battery, no need to check or replenish the battery fluid.

Note: The battery must not be disassembled. If it is not used for a long time, it will naturally discharge, and the power will

gradually decrease. Therefore, the battery box should be removed and stored.

- Luxury car (air switch) one cycle use
- Replacement of a fuse in a simple car

Turn the power switch to OFF to check if the fuse is installed. If the fuse is open, replace it immediately.

1. Pull out the fuse box.
2. Open the fuse box and remove the fuse tube.

Note:

- If the insertion part of the fuse is loose, the fuse may heat up and cause an accident.
- When replacing a blown fuse, be sure to use a fuse of the specified type and relative specifications.
- Use of fuses that exceed the specifications may cause the main harness to heat up or burn out.

- If the fuse blows out immediately after replacement, you should consider factors other than the fuse, and wait for the cause to adjust and replace with a new fuse. When cleaning the vehicle, care should be taken to avoid hitting the fuse tube with a strong current.

VIII. Main technical parameters and specifications

Amateur size (Length x Width x Height)	1750×650×1070mm
Front and rear center track	1090mm
Vehicle weight	65kg
Climbing ability	≥30°
Top speed	≤52km/h
Mileage on one charge	≥70km
Rated speed	550±10 r/min
E-bike Rated voltage	60V
Rated efficiency	≥85%
Rated power	1100W
Rated torque	87-90N.M

Charging consumption per 100 kilometers	≤ 2.1 kWh
Type of battery	Maintenance-free lithium battery
Battery Voltage	60V
Battery Charger	JYV72 charger
Capacity	25AH/30AH
Charger input voltage	AC110V60Hz
Charger serial number	FP60V5A
Undervoltage protection value	51 ± 1 V
Charging time approx.	5-7 hours
Overcurrent protection value	$100A \pm 10A$

Note: Due to the continuous improvement of the product, the listed performance parameters are subject to change without notice.

IX. Failure phenomenon and elimination

No.	Failure phenomenon	cause of issue	Method of exclusion
1	Speed failure or maximum speed reduced	(1) The battery voltage is too low; (2) The magnetic steel connection in the speed control handle is loose.	(1) Fully charge the battery; (2) Clamp after re-soldering; (3) Find a supplier to replace the spring.
2	Switch on the power, the motor hub does not work	(1) Battery wiring is loose (2) The speed-adjusting turn pulls off the pull wire (3) The wiring plug of the motor wheel is loose or damaged.	(1) Repair and reconnect; (2) Repair and replacement; (3) Find a professional to repair or repair the station.
3	Insufficient mileage after one charge	(1) Insufficient tire pressure; (2) Insufficient charging or charger failure; (3) The battery is aging or damaged (4) There are many uphill's, large headwinds, frequent braking and heavy loads.	(1) Sufficient gas: (2) Whether the charger is fully charged or the charger plug is in poor contact; (3) Replace the battery; (4) It is recommended to use human foot to assist in these situations.

4	The charger is not charging	<p>(1) The charger socket is disconnected, or the plug is loosely connected to the socket;</p> <p>(2) The fuse in the battery box is blown</p> <p>(3) The battery pack wiring is disconnected.</p>	<p>(1) Fasten the socket and connector</p> <p>(2) Replace the fuse;</p> <p>(3) Welding connecting wires.</p>
5	Other faults	<p>(1) When you encounter a failure that cannot be eliminated by yourself under the above guidance or a failure that cannot be determined;</p> <p>(2) When the motor hub, controller, charger, battery pack is damaged.</p>	<p>When encountering the above situation, please find the supplier or service station, and never open the above parts without authorization. otherwise. Will lose our company's warranty</p>