

User Manual

CALR Electric Bike

(Version of Lithium battery 72V)



Introduction

Thank you for choosing CALR Electric Bike Lithium Battery Version!

We hope you may enjoy the most performance, comfort, enjoyment, and safety when riding the new model of electric bike. We would greatly appreciate any feedback from you when using our product. your satisfaction on our product is our greatest goal!

The electric bikes which we design, develop and produce can always provide the comfortable, safe and reliable riding experience. As we know, the electric bikes have several significant advantages such as luxurious appearance, simple and easy operation, long mileage, low noise, energy saving, and low maintenance costs.

These advantages make the electric bikes to be the most ideal new generation of green transportation.

In order to make the electric bike serve you better, please kindly read this user manual carefully before usage. This user manual would assist you to use the electric bike properly and effectively maintain the electric bike to prolong its service life. Therefore, please make sure that you fully understand the precautions and maintenance procedures.

It is strictly forbidden for person who is lack of riding experiences to use electric bikes.

Please always obey the local traffic rules and 2 passengers are strictly prohibited on this electric bike.

Considering the continuous update of products, some differences between the products and the user manual may exist.

I. Precautions for user's safe riding

Please always obey the local traffic rules and control the speed of CALR electric bike within the safety speed.

Warning: The safety speed of the CALR Electric bike is 25km / h

Even if user is an experienced bike rider, he/she still needs to read this manual and be familiar with this electric bike before using an electric bike.

It is recommended to find an open and controlled area which should be away from cars, obstacles, and other cyclists to try a riding and get the riding practice. After this step, user can start riding.

For user's own safety, please read the following tips for a safe operation.

Warning: Please do not lend the electric bike to no-riding experience people. Riding with one hand or with the handlebar released is very dangerous. Please do not ride the electric bike after taking medicine or drinking. Stay sober.

- Always wear a suitable safety helmet when riding, without the helmet. Without the helmet, user may get injured if any accidents occur. Please note that strap of the helmet must be fastened.
- We recommend using braking and start in a proper way. Riding at high speed should be avoided and users should take care in steering. He/She should brake in advance when riding on the wet ground either on rainy days or snowy days to avoid accident.
- Dressing in bright colors and low-heeled shoes are recommended. The user can move freely and his/her clothes that are not too tight.
- Do not exceed the load limit of electric bike. The touch feeling of handlebar varies when the electric bike is loaded or not loaded. If the load is close to the limit, the handlebar is more likely to vibrate, and riding would become dangerous.

The rated load of the electric bike is 150kg. The more the load is, the greater the risk factor will be.

Besides, overload may damage some parts of electric bike.

- When riding against wind or on a climbing slope, user should use feet pedal to assist. This method can benefit battery and motor of electric bike and extend their service life.

- On rainy days or snowy days, user should more concentrate on riding and prepare to brake in advance.
When user cleans the electric bike or rides on rainy days, the braking effect may be affected. Therefore, it is recommended that user pay more attention to the brakes, ride slowly and avoid rush brake to have a safe riding.
- If it is storming or raining heavily and the water on the road exceeds the lowest position of the motor, it is not recommended to ride by the electric bike. Otherwise, performance failures of motor and rear brake probably occur. Please note that this electric bike cannot be waded in water because if water submerges controller cover, electrical wiring and motor hub, a short-circuit will occur and the motor will be damaged.

II. Photos in details



III. Introduction of parts



01-Front position light

02-Headlight

03-Front left and right steering light

04-Front tire

05-Front disc brake

06-Front reduction

07-Motor

08-Post reduction

09-Rear hanger

IV. Operation Instructions

- Power switch: A power key is used to turn on and turn off the electric bike.



Turn power switch to 'ON' position : the motor can be started.

Turn power switch to 'OFF' position : the power supply is cut-off, motor stops rotating.

Please remember to remove power key to prevent theft of the electric bike.

Warning: When user leaves the electric bike, it is recommended to use an anti-theft lock.

- Switches on the handlebar



01- Front disc brake

02- Turn handle

03- Combination Switch- High and low beam light

04- Combination Switch- Steering indicator

05- Combination Switch-Left horn

06- Meter

07- Straight handle

08- Combination Switch-Headlight

09- Combination Switch-Right horn

02-Turn handle

Rotate inward to speed up and rotate outward to slow down. Release turn handle, the motor will stop accelerating.

05- Combination Switch- Left Horn & 09- Combination Switch- Right Horn

When the power switch is in the ON position, press the horn switch to warn others of the electric bike's approach or presence, or to call attention to some hazard. Please use horn only on necessary situations to prevent noise pollution.

06- Combination Switch-Steering indicator

Please use steering indicator switch in advance when user wants to steer, select the steering switch to give left turn or right turn indication. After steering, turn the switch back to middle, the steering indicator will be extinguished.

08- Combination Switch-Headlight

Press on switch-headlight 'on' to turn on the headlight. press again to turn off the headlight.

Warning: Turn off the steering indicator switch immediately after steering to avoid causing any confusions.

- Meter



No.	Name	Features
01	Steering indicator	Flashes when user is steering.
02	Gear display	Displays the gear motions during riding.
03	Speedometer	Displays the electric bike riding speed.
04	Headlight indicator	Indicates when the headlight is turned on.
05	Power display	Displays the remaining power of the battery.
06	Mileage	Displays the mileage.

01. Steering indicator

Before user would like to steer, select the steering switch to give left turn or right turn indication. This steering indicator flashes regularly which indicates that the left or right turn signals at the front and rear are lighting.

02. Gear display

There are 3 speed options: I: low speed, II: medium speed, III: high speed.

03. Speedometer

Speedometer displays the exact value of riding speed. The unit is kilometers per hour. Please note that safe speed of the electric bike is ≤ 25 km/h.

04. Headlight indicator

When user presses on the headlight switch, the headlight indicator appears, and the headlight is lighting.

05. Power display

When user turns on the power, indicator bar will indicate the remaining capacity of the battery. If the bar is full, it means the battery capacity is 100%. If the bar remains half, it means that the battery has been used for 50%. Please charge the battery before the indicator bar returns to zero.

06. Mileage display

After the power is turned on, the accumulated total mileage will be displayed, and the single mileage will be displayed during normal riding.

● Open seat cushion

1. Insert power key into the power switch, rotate it to the left.



2. Lift and open back cover of seat cushion and press it down, the seat cushion is locked again.

Warning:

- **Please do not leave valuables inside of seat cushion.**
- **Prevent water coming in the seat cushion when cleaning the electric bike.**
- **Chemical material or sharp objects is not allowed to store inside.**

V. Inspection before riding

- Inspection of tires

1. Check if the tire pressure is normal

Determine if the tire pressure is appropriate according to the depression of the tire in contact with the ground.

Generally, the normal tire pressure is 250KPa in the front tire and 250KPa in the rear wheel. If the tire pressure is insufficient, it will impact the riding speed and mileage.

2. Check if the tires are cracked or abnormally worn.
3. Check if there are nail, stones, glass embedded in the wheels.

Note: Tire pressure abnormalities, tire cracks, damage and abnormal wear may cause steering failure and tire burst.

4. Check the depth of tire grooves. When the patterns of tire have worn away about 2/3, user must replace the tire.

- Check if the indicators of meter display normal and if the brake cut-off power function is proper.

1. Turn on the power switch, the meter can indicator all status including lights, power capacity, speed etc.
2. Check if the functions of operation switches on the handlebar, including headlight, taillights, and direction lights, high and low beam changes, and horn sound are in normal.
3. Check the left and right brake levers separately, ensure the brakes cut-off power function work effectively.

- Inspection on rearview mirrors

1. User sits on the electric bike, then judge if rearview mirrors can clearly reflect the rear and two sides.
2. Check if rearview mirrors have dirt or are damaged.

- Inspection on reflector and license plate

1. Check if reflector has dirt or is damaged.
2. Check if license plate is fixed firmly, numbers on plate are clear, there is no dirt, and it is not damaged.

- Inspection on handlebars and saddle

Check if the handlebars and saddle are well adjusted and fastened.

If any problems are found during inspections, please contact local dealer to provide after-sales service.

VI. Riding instructions

● Starting

Before starting: Please stand on the left side of electric bike, step off the middle bracket hard to support electric bike and take an inspection to check if electric bike is in good condition.

1. Power ON

Insert the power key into power switch, turn to the ON position, and then press on every switch to ensure good conditions of the corresponding indicators, lights, and horns. Please make the motor rotate and make sure that the power-off functions of the left and right brake levers are in good condition and running well,

2. Start motor

Slowly rotate the handlebar inward to accelerate, avoiding rush acceleration which may damage electrical components and waste power.

Warning: It is forbidden to rotate the handlebar before the user sits steadily on the electric bike. Please make sure that both wheels of the electric bike are on the ground before user starts to ride.

● Speed Adjustment

User can accelerate and decelerate speed of electric bike by rotating the handlebar.

Please always remember to accelerate gradually.

● Braking

To get the best brake effect, for front brake and rear brake, user should apply the rear brake first.

1. After quickly releasing the handlebar, user must hold left brake handle and right brake handle firmly.

2. It is recommended to brake gradually.

3. Apart from in emergency situations, please always avoid sharp braking and sharp steering. Emergency braking and sharp steering can probably cause sideslips or rollovers, which are extremely dangerous, especially on rainy days.

Warning: If only breaking the front wheel or rear wheel may cause the car to slip and become extremely dangerous.

● Parking

1. User needs to give signals if he/she intends to park before approaching the parking lot.
 - A. Press on the steering indicator switch in advance. Then be careful to avoid the vehicles or pedestrians behind and beside the electric bike, then slowly approach the electric bike at the side of the road.
 - B. Use the front and rear brakes in advance.
 - C. Release the handlebar and turn the handlebar back to the original position.
2. When the electric bike is completely stopped, push the steering indicator switch to the middle position, and use the power key to turn the power switch to the OFF position, then remove the power key.
3. User should stand on the left side of the electric bike and step off the middle bracket hard and lift the electric bike with right hand at the same time to properly park the electric bike.

Warning:

To avoid the electric bike from falling over, please do not park on a soft slope surface.

If user park the electric bike in a few minutes, he/she may use the side bracket to support the electric bike, but power key should be taken away from the electric bike. To prevent the electric bike from being stolen, it is recommended to lock the electric bike with an anti-theft lock and keep power key with the user.

Children are forbidden to stand on the pedal.

Do not leave any objects on the pedal when riding.

● Charging and maintenance of battery

1. Maintenance-free lithium battery is selected for this electric bike, whose operating temperature is in the range of -15°C to 45°C , preferably in $20^{\circ}\text{C} \pm 10^{\circ}\text{C}$. Extreme low environment temperature will impact the battery capacity. Therefore, in winter or in cold areas, if compared with the mileage calculated in room temperature, it is normal that the mileage displayed on the meter decreases even though use fully charged battery. When the temperature rises to above 20°C , the battery's function would naturally recover.

As the battery is one of the most important components which can influence the performance of the electric bike, please pay attention to maintain the battery.

It is forbidden to use the battery below the minimum allowable voltage. When the under-voltage indicator flashes, user must charge the battery without any delay.

2. It is recommended to charge the battery frequently. Keeping the battery in a fully charged state can effectively benefit the service life of lithium battery.
3. If the electric bike is idle and not used for a short time, the battery should be charged at least one time per month to avoid over-discharge of battery.
4. Be careful not to drop or bump the battery. Otherwise, it may damage the battery.

Warning: It is strictly forbidden to disassemble battery!

The battery has its own protective component and circuit. Disassembling of battery will destroy its protective circuit and the battery may heat, smoke, distort or burn.

- Usage and maintenance of charger
1. Check if the grid voltage is correct for the charger.
 2. The battery can be charged directly in the electric bike. Indoor charging is strictly prohibited.
 3. Please first connect the output plug of the charger to the charging socket of the battery properly. Then connect the input plug of the charger to 110V AC power, now the power indicator light should be ON. This procedure is not allowed to operate in reverse.
 4. At this time, the charging indicator of the charger will be red, indicating that the battery is being charged. When the green indicator is on, the battery is fully charged. The charging time is about 4-7 hours (the length of the charging time depends on how much battery power is left).
 5. Even in special situations, the maximum continuous charging time should not exceed 12 hours.
 6. During the charging, if you smell strange flavor, the battery temperature is too high, or if the charger indicator keeps indicating red and do not indicate green (after 7h charging), please stop charging immediately and contact the maintenance department for inspection.
 7. Please charge in a safe place which is out of the reach of children.
 8. It is strictly forbidden to start using the battery without a full charge, otherwise it will affect the battery life.
 9. It is forbidden to use other chargers to charge the battery, this charger is not appropriate for other chargers.
 10. The charger contains high voltage circuits, please do not disassemble it without authorization.

11. Please prevent liquid or metal filings from penetrating into the charger during usage or storage.
12. It is prohibited to cover the charger with any objects while charging. The charger should be used in a dry and well-ventilated environment.

- Usage and maintenance of motor and controller

1. Please periodically check and ensure the cap screws at both ends of the motor are not loose.
2. Please periodically check and ensure the motor wiring and enclosure are insulation.
3. Please periodically check and ensure the controller wirings are not loose.

Please periodically check and ensure the fuses are not loose.

VII. Routine Inspection and Maintenance

In order to extend the service life of the electric bike and make it safe and comfortable to ride, please keep a regular check and maintenance plan. Periodic check should also be carried out even if the electric bike is not use for a long period.

Note: Every electric bike has unique frame number and motor number, which can support the after-sales service center to provide the better service.

Please choose a spacious and flat place to perform the inspection and do not forget to support the middle bracket.

When riding inspection is required, it should be carried out in a safe place, and please be aware to the surrounding safety.

If any abnormality is found during inspection, please contact the after-sales service center to solve the problems.

● Routine Inspection Steps

1. Please check if the fork is bent or damaged.

User can shake the handlebar up and down to check if there is any abnormal noise caused by the bending of front fork. If the fork has problems, please contact the local after-sales center.

2. Inspection on brake

Please measure and check if the brake gap is within the standard range of 1.5-2mm. If it does not meet the requirement, the brake should be adjusted. If the brake pads are seriously worn (more than 2/3), brake pad should be replaced immediately.

Note: After having adjusted, please tighten the screws to fix well with the brake wire to prevent any risks for the riding.

3. Brake effect inspection

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

Note:

Please 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.

It is recommended to increase the brake distance when riding on rainy days or snowy days.

Please contact the after-sales service center for further inspection. It is forbidden to disassemble electric bike to avoid damage to other components.

4. Inspection on tires

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

Please avoid stones, glass, and nails on the ground, which will cause damage to electric bike. Regular check the tires for obvious cracks, damage, puncture stones, glass, and other sharp objects. In addition, please check for abnormal wear caused by long time riding.

Check tire wear condition, check the depth of the groove, if 2/3 of the tire pattern is worn out, the tire should be replaced. When the tire is abnormal, please contact the after-sales service center to check or replace the tire. Rear wheel locking torque is recommended $\geq 30\text{N.m}$. Front wheel locking torque is recommended $\geq 18\text{N.m}$.

VIII. Specifications

Amateur size (Length x Width x Height)	2000×760×1100mm	
Front and rear center track	1700mm	
Vehicle weight	83kg	
Climbing ability	40°	
Top speed	55km/h-75km/h	
Mileage on one charge	45km~55km	
Rated motor speed	850rpm	
Electric bike Rated voltage	72V	
Rated efficiency	80%	
Rated power	2000W	
Rated torque	25-29N.M	
Charging consumption per 100 kilometers	25-30A	
Type of battery	Maintenance-free lithium battery	
Capacity	30AH	50AH
Charger input voltage	110V	110V
Undervoltage protection value	55-58V	56~60V

Charging time approx.	6~7 Hours	6~7 Hours
Overcurrent protection value	300±30A	310±40A
Battery Charger	72V5A	72V10A

Note: Considering the continuous product updates, key parameters may vary. The user can refer to the values of the parameters shown above.

IX. Troubleshooting

No.	Problems	Causes	Recommended Solutions
1	The electric bike fails to accelerate, or maximum speed cannot be reached.	(1) The battery voltage is too low. (2) The magnetic steel connection in the handlebar is loose. (3) The spring in the handlebar to adjust the speed failed.	(1) Fully charge the battery. (2) Clamp after re-soldering. (3) Contact the after-sales service center to replace the spring.
2	When power switch is turn to 'ON' position, the motor hub does not work	(1) Battery wiring is loose. (2) The handlebar wires pull off. (3) The wiring plug of the motor wheel is loose or damaged.	(1) Repair and reconnect. (2) Repair and replacement. (3) Contact the after-sales service center to repair.
3	Mileage cannot reach the rated value after fully charging the battery.	(1) Insufficient tire pressure. (2) Insufficient charging or charger failure. (3) The battery is aging or damaged. (4) There are many uphill roads, ride during large headwinds, apply frequent braking and carry heavy loads.	(1) Sufficiently inflate the tires (2) Please check if the battery is fully charged or if 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 working,	(1) The charger socket is disconnected, or the plug is loosely connected to the socket. (2) The fuse in the battery pack is blown.	(1) Fasten the socket and plug. (2) Replace the fuse. (3) Welding connecting wires.

		(3) The battery pack wiring is disconnected.	
5	Others	(1) When user cannot identify the problems. (2) If the motor hub, controller, charger, battery pack are damaged.	Please contact the after-sales service center for assist. Please do not disassembly the electric bike without authorization. Otherwise, the product will not be covered by warranty agreement.