



Model: Libra 604
User Manual



INTRODUCTION TO ELECTRIC BICYCLE

To caper throughout the town with ease and less money, usage of e-bikes are best. As urban areas are developing electronic bikes are being representing. It's usage is much beneficial as it uses less quantity of electricity and is less harmful to our environment as well as cause no noise pollution too as compare to other vehicles. Expenses of electric bikes are too minimum that it requires no parking, registration, license and also requires

fairly less maintenance if being compared to other vehicles. These are important because of low-profile and also are highly practical additions to urban mural. If we take a view of its internal functions we'll came to know that it's engine have few moving parts that show it's long term capability. Your Tao Motor is here due to experience of years, skilled and careful staff, advanced and updated engineers. We are expectant that you will enjoy the product and we'll have a good feedback from you people.

CONTEMPORARY LEGISLATION

New laws have been approved that allows cyclist to drive e-bikes but first aid them about the manipulation of bikes in most provinces of Canada, states in USA and many European countries.

SAFETY REQUIREMENTS FOR ELECTRONIC BIKES

- Weight of electric bikes should be of 120 kg (it includes weight of bike and battery)



- Coverage of electrical closings should be ensured.
- The diameter and width of wheel shouldn't be less than 35mm/ 350mm.
- The person driving and riding should wear helmets.
- Operator must be of 16 years.
- Motor should not be modified in such a way that it allows the exceed of a power output greater than 500W and speed greater than 32km/h.
- Two independent braking systems consistent with requirements for motorcycles and mopeds which applies force to each wheel and is capable of bringing the e-bikes manipulated at the speed of 30 km/h and stops within 9 meters from the point at which the brakes are applied.

DRIVING GUIDANCE :

This guidance includes the controlling and balancing of an ordinary bicycle before you struggle to ride e-bikes.

CAUTION:

It would be too precarious to ride e-bikes without having any experience of ordinary cycling and learning cycling with e-bikes.

ESSENTIAL INFORMATION:

- In drunken condition never ride on it as they are more speedy than ordinary bikes.
- Though e-bike is a motorized vehicle but obeying of laws is mandatory. Laws include traffic signals and cautions while turning.
- E-bikes are fleeting as they cover long distances with higher speed as compare to other vehicles. Driving rules should be kept in the mind while driving in a crowded traffic.
- E-bike's drivers can carry only one passengers.
- As e-bikes are new to many cities so when you are travelling on recreational trails or roads it is your first priority to stay cautious and thoughtful because many of us still don't know how to deal with such riders.

SCRUTINIZING YOUR ELECTRIC BIKE:

Scrutinizing your e-bike before every ride is a safety measure to check whether all functions are happening well or not. Once you became habitual of it you'll able to detect small problems. Mechanical and power issues in e-bike causes unbearable sound so always keep your attention on the change in sound bike makes. Maybe there is any issue in the bike which is causing it to make noises.



APPLYING OF BREAKS:

Applying breaks to e-bike is same as that of normal bike. To apply breaks easily, place your fingers over the brake levers and palm and thumb under the handle grips and for quick stop squeeze your hands and you'll be able to control your e-bike. That's the actual way to control an electronic bike.



TURNING ON AND OFF YOUR E-BIKE:

To switch on the bike insert the key into the ignition positioned below the dashboard and turn key to right. On the activation of e-bike battery charge will jump that indicates the power e-bike has and power indicator will lighten up. To turn off the bike, just turn the key to the left.



CAUTIONING:

On the activation of E-bike, battery becomes alive and any try of removing battery or adjusting electrical components can cripple severely because battery contains significant electrical charges. If such action have to be done turn off the bike and then perform it. Battery also contain electricity in it, and it can harm people in surrounding if it's not treated properly.

ACCELERATING AND DECELERATING:

On the handlebars, throttle is placed on the right-side hand grip. For acceleration turn the grip away from yourself (forward) and for deceleration, release the grip towards yourself. And avoid the over-rotation of accelerator as it can damage the battery and other electrical parts.



CAUTIONING:

Some steps should be kept in mind on the activation of accelerator. After settling on the bicycle, turn on the accelerator. Otherwise bike will outbreak and injure you as well as can cause severe damage to bike too.

CEASING:

E-bike contains two sets of brakes placed at the front and at the rear. For activation of the brakes pull the lever towards you attached to handlebars. For gentle break, use one break only and for quick break use both breaks at the same time. Another safe function is that power to the engine turned off automatically when brakes become activated. That's the actual safe way to stop your Electronic bike.

SAFETY HINTS:

- In the rainy weather, ride slowly because water makes brake functions less efficient because it lessens friction between brake pads and wheels.
- Check out your brakes and brake pads regularly for your safety. It will wear out through friction and have to be changed after a significant time period. Doing this can be preferable.

How To Signal:

The electronic bicycle had a horn button which helps you to signal others around you. This button is on the left handle bar. To activate the horn, you simply just have to press it.

TURNING SIGNAL LIGHTS:

Another feature of e-bike is turn signal lights. The activator of turn signal is on the left handle. To make it activate, push it left or right and some sound will be emit to make others know that you are turning to someone direction. To switch it off press the button at the middle. If you wish to disable the turning signal, you have to disable the visual signals as well.



LIGHTS:

Another main feature has been set to make you travel in the night, dark areas or in crowded traffic and it is headlight and taillight. These lights consume some electricity. The switch of these light is located on the right handlebar. If you keep them on, you can travel at one charge about 5%.

PEDALING:

The e-bike is accomplished to be a motor-assisted bicycle. You can work with the motor by pedaling that in turn increases the distance because it reduces the actual electricity you draw from battery.



MOTOR AND WATER:

Your e-bike is not designed to be ride in the water. Ensure first that level of water should not rise above the middle of tire because it will get into the motor and can cause short-circuits and damage to electrical systems.

RIDING IN FROZY WEATHER:

E-bikes have been designed to engage in the whole year. But at below 10 degrees Celsius, when there is slush on ground and snow everywhere, battery and brakes will not function well and same happens at warmer temperatures too. However Lithium- Ion batteries perform better than Lead-Acid batteries in extreme temperatures. But riding in such weathers will make you replace battery sooner than later.

OPERATING GUIDANCE:



USING THE REAR STORAGE COMPARTMENT:

On the purchase of bike you are provided with a key of a compartment that is being used to store important things that are relevant to your bike i.e charger(to charge your battery), associated cables, a locking mechanism i.e u-lock (security for parking). To close the compartment turn the key in the left direction and to open it turn it in the right direction.

OPENING THE SEAT TRUNK:

For opening the trunk of seat, insert the key in the lock that is at the left side below the seat and move it to right side. Or Turn the key to very left on ignition position. Seat will be opened and blooped. On closing of seat make sure that click sound should be produced that will be the sign of proper closage.



PARKING AND LOCKING YOUR E-BIKE:

Following steps should be followed when you are locking or parking your e-bike:

- Stop and locate it at you our own place.
- While getting off the bike, check out the balance.
- Stand to the side and slightly to the rear of the bike.
- For holding the weight of e-bike, hold the kickstand with one foot and hold the e-bike through rear basket bracket.
- Pull the bike towards yourself so kickstand will hold the bike in place
- At the end lock your e-bike or other secure objects through rear wheel frame.

WARNING:

Avoid breaking the balancing of e-bike, otherwise e-bike may fall and cause damage to exterior parts as well as to the components placed inside.

MAXIMUM LOAD:

In the guidance, load capacity has mentioned. And do not exceed from the load capacity because performance will be greatly affected and also cause damage to shocks, mechanisms, and to frame. It can also make your bike burn out.



DISCONNECTING THE CIRCUIT BREAKER:

When the circuit breaker is detached, power being supplied from your battery to e-bike will get blocked.

Some steps are needed to disable the circuit breaker.

- Open the seat compartment.
- Find out the circuit breaker switch.
- Activate the switch and e-bike's power will be disabled.



LONG-TERM STORAGE OF YOUR E-BIKE:

To store e-bike for a long period, disconnection of circuit breaker is required because it would be safer to store as it makes activation impossible even with a key. That circuit is found by opening the battery case that is placed between the battery and controller.

THE BATTERY:

It is the internal and most sensitive parts of e-bike so dealing with respect is essential. This section is to get detail about the battery that supplies power to your e-bike.

BATTERY POWER:

This feature help you know the power of battery available. And dashboard has a battery charge indicator. On the activation of e-bike, movement of needle will make you know that what is the power of your battery now.

DISTANCE AND POWER:

Your lead acid battery can carry from 35 to 50km and Litthium ion battery could carry above 70km. And battery's ability to power your bicycle is dependent on various variables i.e weight of rider, wind resistance, rider's driving habits, presence of steep hills or air pressure in the tires.

SAVING POWER:



If you have to cover long distances and at the same time want to save electricity than you must have to follow these driving habits.

- When you are going downhill or moving on a flat road surfaces try your best to use bikes' momentum and permit the bike to coast, without taking off the power of motor.
- Prefer to avoid stop and go movements because motor takes more power when it starts from an absolute point.
- Avoid burdening the bike because due to this motor draws power too.
- Tires must have proper air pressure because it lessens the dragging and increases the efficiency of bike.
- If head and tail lights remained on, it would reduce the power and bike could cover distance by about 5% only.
- Acceleration from absolute point will draw more power. To avoid this try pedaling

CHARGING YOUR E-BIKE.

Charging e-bike requires a simple procedure.

- The charger given with your e-bike.
- 110V household electrical outlet.



WARNING:

Never use batteries that are identical to the battery given with your e-bike. Use only battery given with your e-bike Otherwise it will cause serious damage to your electric system and also can harm you.

FOLLOW THESE STEPS TO CHARGE YOUR BATTERY:

- Switch off your bike and take the key out of the ignition.
- Plug the female end of the charger cable that is located on the outside casing of the e-bike present underneath the seat into the charging slot on the e-bike.
- Plug the male end of the charger cable into the wall socket. It should contain 110V electric supply. Portable generators can also be used but make sure it should have 110 V. Also charge you battery for about 6-8 hours.
- When the LED light on the charger glows, disconnect it because it shows that battery has been fully charged.

“IF LED LIGHT ON THE CHARGER IS NOT TURNING INTO GREEN PROLONGEDLY AND BATTERY ALSO GETTING HOT, THAN YOU SHOULD REPLACE IT OR TOOK IT TO YOUR LOCAL TAO MOTOR DEALERS”

CARE OF BATTERY:



Care of battery should be done otherwise you have to replace it before the expected period of time.

FOLLOW THESE STEPS TO MAINTAIN THE EFFICIENCY OF BATTERY:

- After your ride, charge it soon.
- Fully Charge your battery as it maintains the battery's lifespan. And avoid keeping your battery in the storage box with half charged.
- Charge your battery after 21 days, it would be sufficient.
- Keep your battery in a cool and dry place and don't drop the temperature of battery below 10 degree Celsius prolongedly.

AVOID PLACING THE LEAD-ACID BATTERY ON CONCRETE FOR AN EXTENDED PERIOD OF TIME BECAUSE BATTERY WILL LOSE THE ABILITY OF STORING ELECTRICITY AND CAN BE DRAINED OF POWER.

BATTERY HANDLING:

Battery contains some significant charges and also have some stored electricity. So it should be handled with great care else way it will cause a serious injury.

FOLLOWING INSTRUCTIONS SHOULD BE FOLLOWED:

- As we know battery contains some acids and harmful components So handling of battery with both hands and with great care is compulsory because on drop page it will cause a serious damage to human body.
- If any case leakage happens, avoid touching and try to seek help because it will directly affect your body severely. Also never open the battery too.
- As battery contains stored electricity and significant charges and also have two poles so avoid touching the poles at the same time because it will cause a short circuit and will harm you as well as the people around you and more probably your internal electrical system of e-bike too.
- As water is a good conductor of electricity so avoid handling the battery in a wet condition Otherwise you will experience serious electric shock.



TECHNICAL INFORMATION:

This section has been designed to guide you people about technical specification of your e-bike.

ASSEMBLING OF WHEEL AND MOTOR:

E-bike has 500-watt magnetic DC brushless motor on the rear wheel hub. E-bike has excellent low-end torque in it's dimension, when working. It also have speed-reduction gear and speed free clutch.

FREE-WHEEL:

Another feature is freewheels. It will help you move with fast speed while your engine is switched off especially when you are coasting or travelling downhill. The main advantage is that your electricity will be conserved and will let the motor to rest.

CONTROLLER:

Controller has so many advantages as it performs many functions. Tao Motor e-Controller is placed under the seat. It's function is to allow steeples speed reduction, discontinue the motor on activation of brakes, regulates the speed and electronic functions of e-bike. Fuses have been inserted in it that prohibit damage from excess current.

GOVERNOR:

The main component of controller is governor. This section is added to provide you the functions of governor i.e. it makes the motor to function effectively, prevents the motor if speed exceeds from 32 km/h. In case governor's function got disturbed, e-bike's range will be reduced and automatically the performance.

THE BRAKES:



E-bike contains disc brakes similar to gas scooters or ordinary bicycles and are designed to control and stop the bike.

CHAIN AND PEDALS:

Pedals are connected to rear wheel. Pedals shouldn't be removed.

SHOCK ABSORBERS:

Your e-bike is armed with **TAO MOTOR SHOCK SYSTEM SHOCK ABSORBERS**. This is a simple device but much effective. Their main function is to absorb energy when slamming and drenching and gives you comfortable ride. User is more beneficial because in their e-bike's shock system is more superior than normal shock system but still they are very resilient.

PLEASE NOTE THAT WHICH HEIGHT YOU ARE DROPPING BECAUSE DROPPING FROM A HEIGHT OF 15cm OR MORE WILL DEFINITELY DESTROY YOUR SHOCK ABSORBERS AND THEIR REPLACEMENT IS SO COMPLEX AND TIME-CONSUMING THAT OFTEN YOUR E-BIKE GOT USELESS JUST BECAUSE OF SOME CARELESSNESS.

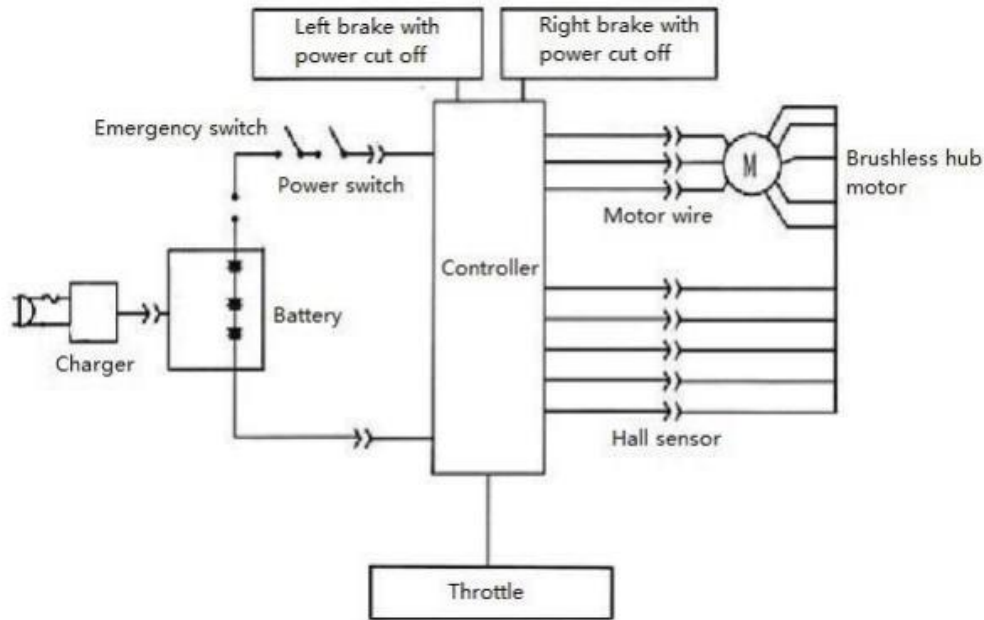
BASIC STATISTICS:

DIMENSIONS	WEIGHT	LOAD CAPACITY	SPEED AND MILEAGE	CLIMBING CAPACITY
2280x790x1145	110kg	200kg	Speed: 32km/h Mileage:50 km	25 Degrees

MOTOR	BATTERY	RATED VOLTAGE	CHARGER TIME	BATTERY LIFE
500w	Option	72V	6-8 hours	300 cycles



Wiring Diagram



TAO MOTOR E-BIKE TROUBLESHOOTING:

We have added this section to make you people aware of the problem and solutions too. But these ebikes have some section that a rider can't repair it and you have to take it to professional or Motor dealers but if warranty is available.

REPLACING OF FLAT tires:

Mostly of our bikes are tubeless, but if you need to replacing tubes of flat tires of e-bike is time-consuming and too much complicated as compare to other vehicles. You must have proper tools, technical skills and intellect. Servicing of rear wheel is difficult as compare to front wheel because it is connected to hub motor and mechanical parts of bicycle.



You can try it by own if you are familiar with mechanical parts of rear motor Otherwise it can cause serious problems.

THE CHAIN:

Lubrication and oiling of chain is compulsory for effective functioning.

THE PRESSURE:

Maintenance of pressure in tires is compulsory for balance and effective performance of e-bike. Weather also have direct influence on the air pressure of tires. In cold weather, air pressure will drop and in warm weather it will rise up even if there is no leak in the tire.

In any case if you have to replace the tires, you have to follow this procedure:

1. Use the tire rim as it shows the pressure required to the tire. Note that text carefully.
2. Find out the air valve present in the inner side of the tire rim.
3. Remove the valve cap and keep it in the secure place.
4. Over the valve put nozzle at the end of an air pump.
5. At the side of tire wall, level of air pressure has been described so according to that level pump the air in the tire
6. Remove nozzle carefully from the valve without allowing the air to get out of the tire.
7. Put the valve cap back on the air valve.

THE BRAKES:

Brakes are the safety feature as they control and stop the bike at accidental period. So regular checkup is required. If you are facing problem such as reduction in stopping power or breaks got looser. They require Service after year or half depend on how it has been used. Pads need to be changes when they wear down.

If you are having experience of service than do it by yourself otherwise attempt of service will lead serious damage.

WARNING:

If your bike contains drum brakes than don't lose it while driving otherwise you will be unable to stop the car and will face serious accident.



SHOCK ABSORBER:

If your ride is more bumpier and you doubted about the shock than first check out the air pressure of tires. But if the problem is with shock do not do anything with shock and bring it to your Local dealers

MOTOR:

Motor is quite sensitive and complex part of e-bike and servicing of motor requires high skill and expertise So repairing it by own is risky without having any expertise. In order to repair it bring it to your near **TAO MOTOR DEALER**. And it's maintenance should be done after every 100 hours

BRINGING E-BIKE FOR SERVICE:

If you have a complete understanding and knowledge of mechanical parts of e-bike than you can attempt to service it by your own Otherwise don't do this because it will harm your bike severely.

If e-bike is not working properly disconnect the circuit breaker and bring to **TAO MOTOR** dealers. If you haven't time to bring it sooner than don't store it without disconnecting the circuit breaker.

WARNING:

Tao motor will not be held responsible for any damage resulting from mistake due to improper servicing of mechanical parts.

OBLIGATIONS:

If damage or loss of profit occurs or any assertion from third person because of wrong use of product Then in this case Tao Motor will not be responsible. Tao motor will also be not responsible if problem in the service occurs being given from the third party that is not approved from our company. We have given you complete and accurate information but if you still find something missing contact us or go to our website. You can also go to your local Tao Motor dealers to get updated.



THE END

