Carried Standard: GB17761-1999

Owner’s Manual

(Battery Type: Lithium Battery)

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Contents

Congratulations on your purchase of Vivana electric bicycle.

Dear users! For your and others' safety and also for ensuring the excellent and stable performance of the bicycle, please ride your bicycle only after your careful reading this manual.

The daily form and maintenance knowledge offered in this manual will enable you to be familiar with the steering of the bicycle. Any improper operation may damage your bicycle.

Owing to the constant technical improvements to the bicycle, the material object may be a little different from the explanations presented in this manual. Therefore, everything is subject to the material object.

Please read carefully and observe the contents indicated by the symbol " ⚠ ".

1. Notes 

- Before riding, for your riding safety, please read the manual carefully and check the components are functioning properly. Contact your dealer if there are problems.
- Please observe traffic regulations; slow down in rain, snow and icy conditions; increase the braking distance to guarantee your safety when to brake.
- This bicycle is rain and snow proof, but not water-proof. Pay great attention to that the inner circuits of the whole bicycle could be short circuited and the electric instruments are damaged when the hub of the rear wheel motor is submerged in water.
- The battery adopted by the bicycle belongs to safe power supply, but more than two hard contacts on the output end of the battery rack cannot be touched with wet hands at the same time, much less with the metals. Otherwise, great short-circuit current may be caused, which, in turn, may result in accidents. Please pay more attention to this point!
- Do not dismantle the components by yourself. For replacing the components, please purchase the standard ones from our company.
- For the safety of other people, please do not lend the bicycle to anyone who is unfamiliar with it so as to avoid accidents.

2. Bicycle type & use condition

There is a wide range of electric bicycles. Ours are LEV (light electric vehicles). Each type of the electric bicycle is designed and assembled in accordance to the particular purpose and use condition. The bicycles (or components) may go wrong if they bear the ultimate pressure. The use condition for the electric bicycles is presented in this section. Please consult your dealer when you are not sure of the bicycle type you are using.

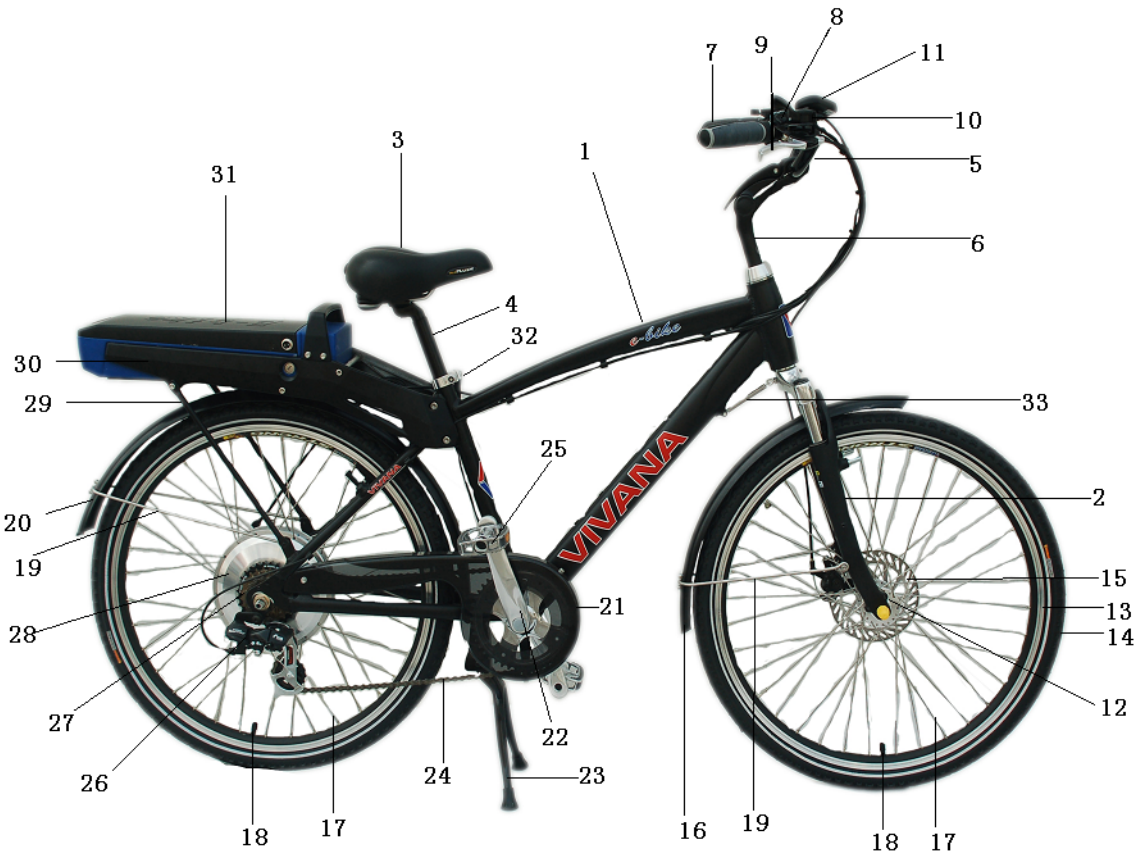
✓ **Use condition**

Bikes designed for riding on a paved surface where the tires do not lose ground contact.

Bikes designed for riding on smooth gravel roads and improved trails with moderate grades where the tires do not lose ground contact.

The maximum weight of the rider is about 300 lbs (136 kg).

3. Structure figure of E- bicycle



（1） Frame
（2） Front Fork
（3） Saddle
（4） Seat Post
（5） Handlebar
（6） Handlebar Stem
（7） Grip
（8） Gear Lever
（9） Brake Lever
（10）Bell
（11）Console
（12） Front Hub
（13） Rim
（14） Tyre
（15） Front Brake
（16） Front Mudguard
(17） Spokes
（18） Tire Valve
（19） Mudguard Stay
（20） Rear Mudguard
（21）Chain Guard
（22）Crank Arm
（23）Kickstand
（24）Chain
（25）Pedal
（26）Rear Derailleur
（27）Freewheel
（28）Hub Motor
（29）Rear Rack Stay
（30）Rear Rack
（31） Battery Pack
（32） Seat Post Clamp
（33）Frame Pullback Spring

4. Safety height mark

✓ **Saddle position**

When you sit on the saddle, your legs can slightly straighten with both feet on the ground, and then the saddle height is the most suitable. If your feet can not touch the ground when riding, you may fall. Therefore, you must adjust the saddle height carefully.

✓ **Seat post MAX mark**, also insertion mark, can not be raised beyond the quick release collar. If improperly used, serious injury may be caused to the rider (See Figure 1).

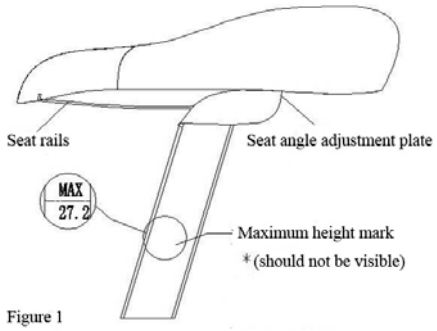


Figure 1

✓ **Saddle angle**: for preventing the rider leaning forward when riding, the front end of the saddle is preferably upwarped slightly; adjust the saddle forward or backward according to your height, generally, it is preferable that the seat post is fixed in the middle of the saddle.(see Figure 2)

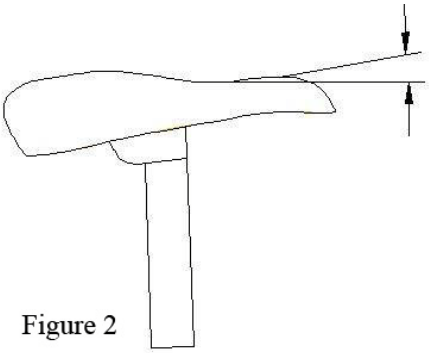


Figure 2

✓ **Handlebar stem height**

Handlebar stem height can be adjusted according to your preference, but the

maximum height mark should be invisible. If improperly used, serious injury may be caused to the rider. (See Figure 3)

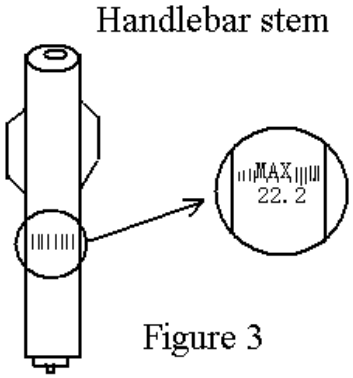


Figure 3

5. Before the first ride

- **Make sure the bicycle fits**

Your dealer should fit you with the proper size of bicycle. There should be at least 1inch (25 mm) clearance between the top tube and the rider when standing over the bicycle (Figure 4). For mountain bikes, 2-3 inches (50-75 mm) clearance is recommended. The seat and handlebar may be adjusted to offer the best comfort and performance.

- **Know how the bicycle performs**

The features of your bicycle, if misused, may cause you to lose control of the bike. Before riding fast or in more difficult conditions, learn the function and performance of all the mechanisms of your bike by riding at slower speeds in a flat, empty parking lot.

If you want your bicycle to perform differently, or if you have special needs that require different parts for the safe operation of your bike, consult your dealer.

- **Learn the power of your brakes**

The stopping power on bikes varies according to the intended use of the bike. If you would like your bike to have more, or less, stopping power, consult your dealer about brake adjustments or other brake options for your bicycle.

WARNING

Misuse of the braking system, including over-use of the front brake, can cause you to lose control and fall. Avoid improper braking by understanding and practicing proper application of your brakes as explained in this manual.

➢ **Avoid your feet touch the front mudguard**

When riding slowly, do not pedal if the handlebar is turned. It may be possible that at very slow speeds, when the handlebar is turned, your feet may contact the front wheel or mudguard (Figure 5). At normal riding speeds, the handlebar does not turn enough for this to occur.

WARNING ⚠

Contact between your feet and the front wheel or mudguard can cause you to lose control and fall. Avoid pedaling when turning at slow speed.

➢ **Stop riding, if the frame or front fork has problems**

Occasionally riders experience problems with their frame or fork. If a frame or fork has any problem, do not ride the bicycle.

As an example, in very rare cases, some riders may experience a “shimmy” or “harmonic oscillation” or “frame vibration” at certain speeds. If you are experiencing a shimmy, slow down immediately. Take your bicycle directly to a dealer for inspection and repair.

WARNING ⚠

A shimmy, or steering wobble, can cause you to lose control and fall. If you experience a shimmy, slow down immediately. Take your bicycle to your dealer for inspection and repair.

Figure 4 Minimum stand-over height

1 = 1" (25 mm) for most bicycles

2-3" (50-75 mm) for mountain bicycles

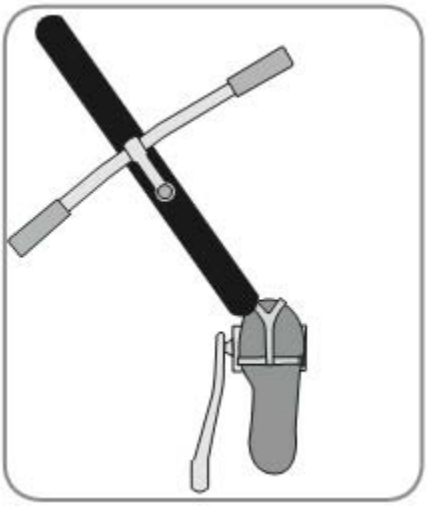


Figure 5 Toe-clip overlap

6. Before every ride

- **Checks before riding**

For your riding safety, checks before riding should include the following items below:

- ✓ Check tyre pressure.
- ✓ Check the front and rear wheels are tightened. The torque setting of the front wheel clamp nut is not less than 19.6 Nm and that of the rear wheel clamp nut is not less than 30 Nm.
- ✓ The torque setting of the clamp nuts of handlebar and handlebar stem is not less than 19.6Nm. The inserted part of the handlebar stem should be no less than 2.5 times the length of the diameter of handlebar stem(that is to say, the safety line around the handlebar stem should be invisible).
- ✓ The torque setting of the clamp nuts of saddle and seat post is not less than 19.6Nm. The inserted part of the seat post should be no less than 2.5 times the length of the diameter of seat post(that is to say, the safety line around the seat post should be invisible).
- ✓ There should be between 5-10 mm total vertical movement of the chain.
- ✓ The brake should be adjusted to be reliable and flexible. Increase the braking distance in rain and snow.
- ✓ Check to ensure the quick releases for the bicycles that can be folded are tightened!

7. Night riding

Riding a bicycle at night is many times more dangerous than riding during daylight hours. It can be more difficult for motorists and pedestrians to see you while riding your bicycle at night. However, a lighting system does not provide the same amount of light as daylight and therefore we remind you to ride at your own risk. We do advise that children should never ride at dawn, at dusk or at night and adults ride at their own discretion.

If you choose to ride under conditions of poor visibility, always check to ensure you comply with local laws pertaining to riding a bicycle at night and take the following strongly recommended additional precautions:

- ✧ Make sure your bicycle's lighting system is operating properly, is correctly positioned and securely mounted.
- ✧ Always wear reflective and brightly coloured clothing and accessories such as reflective vest, reflective arm and leg bands, and reflective strips on your helmet.

Any reflective device and bright lighting systems will help attract attention from motorist, pedestrians or other cyclists on the road.

✧ Ensure that none of your clothing or accessories are obstructing light fixtures or reflective pieces.

NOTE: *Please check your certified helmet manufacturer's warranty details to ensure that adding a reflective strip does not void the warranty before attaching anything to your helmet. If in doubt, contact your local dealer for assistance.*

While riding at dusk, dawn or in conditions of poor visibility, ride safely and cautiously. Avoid dark areas or areas with heavy or fast moving traffic. Avoid road hazards and if possible, ride on familiar routes. If this is not possible, try to find well-lit routes with minimal traffic.

WARNING: ⚠
Please remember that riding at dusk, dawn, at night or in conditions of poor visibility, without your lighting system operating properly is dangerous and may result in serious injury or death.

WARNING: ⚠
Check to see that your lighting system is operating properly and that the fixtures (front and back) are clean, straight, unbroken and securely mounted. Have your local dealer replace or repair damaged fixtures and straighten or tighten any that are bent or loose. Your dealer can also assist you in repairing any problems with the lighting system overall. It is a very good habit to regularly check to see that your lighting system is operating at peak performance.

8. Braking system

➢ **Brake levers**

The brake system allows you to slow or stop your bike, a function critical to your safety.

The brake system is difficult to adjust properly without the proper tools and training.

It is strongly recommended that adjustment of a brake be done by your dealer. If you need more specific information regarding your brake system, contact your dealer.

✓ **To adjust the position of a lever**

1. Locate the lever clamp bolt (Figure 6).
2. Loosen the clamp bolt 2-3 turns.
3. Position the lever.
4. Tighten the clamp bolt:

• *Regular brake levers: 6.0-7.8 N•m.*

✓ **To adjust the brakes**

See the Brakes section for brake adjustment procedures.

1. Loosen the take-up of brake cable.

2 Adjust the break cable to the proper length.

3 Inspect the brakes, and re-adjust as necessary.

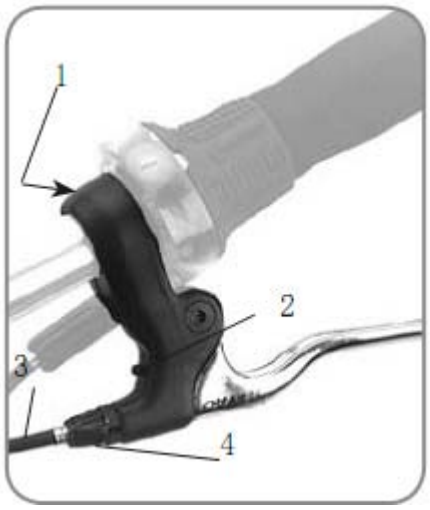


Figure 6 Lever clamp bolt, mountain lever

1- Lever clamp bolt

2- Reach adjustment screw

3- Cable

4- Barrel adjuster

➢ **Brakes**

Once a month, inspect brake pads for wear. If the grooves in the braking surface are less than 2 mm deep, or 1 mm deep for direct-pull brakes, replace the pads. Replace disc brake pads that are thinner than 1.0 mm.

✓ **To adjust brake pad clearance to the rim**

1. Turn the barrel adjuster. To increase the pad clearance, turn the barrel adjuster clockwise. To reduce the pad clearance, turn the barrel adjuster out anticlockwise.

For most direct-pull (Figure 7), or cantilever (Figure 8) systems, the barrel adjuster is

on the lever.

2. If the brake pads cannot be adjusted properly, loosen the cable clamp bolt and re-attach the cable.

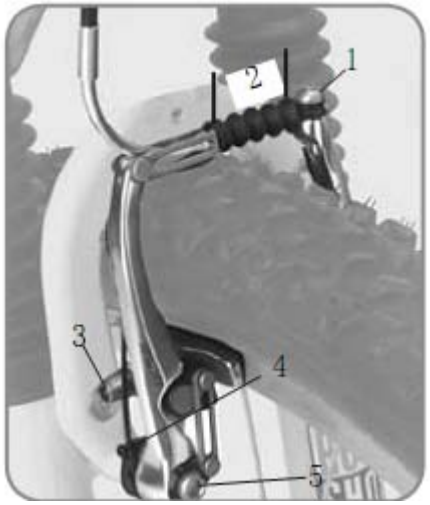


Figure 7- Direct pull brake

1- Cable clamp bolt
2- No contact
3- Pad fixing bolt
4- Centering screw
5- Arm fixing bolt

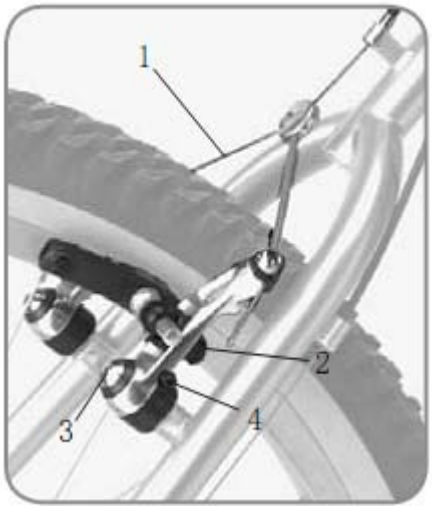


Figure 8- Cantilever brake

1- Linkwire
2- Pad fixing bolt
3- Arm fixing bolt
4- Centering screw

✓ **To center a cantilever brake**

1. Rotate the centering screw. Turn in small increments and check for centering.

2. If the brake has two centering screws, adjust the overall spring tension while centering the brake.

✓ **To adjust the alignment of the brake pads on a rim brake**

1. Loosen the brake pad fixing bolt.

2. Align the pads , and tighten the pad fixing bolts:

   • *Caliper: 4.5-6.8 N•m*

   • *Direct-pull or cantilever: 7.9-9 N•m*

3. After adjusting the brakes, test them by applying force to the levers. Ensure the cable does not slip, the pads close toward the rim at right angles, and the pads do not contact the tire.

✓ **To align a disc brake**

1. Loosen the brake mounting bolts.

2. Apply the lever fully, and gradually tighten the bolts to 11.3-12.4 N•m.

✓ **To align a cable-actuated disc brake**

There are several parts to this procedure:

✧ **To adjust right brake pad clearance to the disc**

1. Turn the fixed pad adjuster (Figure 9).
2. If the pads cannot be adjusted properly in this manner, follow the instructions *To adjust left brake pad clearance to the disc*, and re-set the right pad**.**

Figure 9- Disc brake

1- Mounting bolts

2- Fixed pad adjuster

3- Cable clamp bolt

✧ **To adjust left brake pad clearance to the disc**

1. Turn the cable barrel adjuster. To increase the pad clearance, turn the barrel adjuster clockwise. To reduce the pad clearance, turn the barrel adjuster anti-clockwise.
2. If the pads cannot be adjusted properly in this manner, loosen the cable clamp bolt and re-attach the cable**.** Tighten the cable clamp bolt to 5.7-7.9 N•m.
3. After adjustment, turn the locking nut clockwise to help prevent rotation of the barrel adjuster.

✧ **To align the brake with the disc**

1. Loosen the brake mounting bolts.
2. Slide a business card, or similar thin object, between the right brake pad and the disc.
3. Apply the lever fully, and gradually tighten the bolts to 11.3-12.4 N•m.

✓ **To remove disc brake pads**

1. Remove the wheel.
2. With your fingers or thin-tipped pliers, grasp the installation tang of the brake pad and pull out.

✓ **To open the brake for wheel removal**

✧ **For cantilever brakes**, release the linkwire. With one hand, squeeze the brake pads firmly against the rim. With the other hand, pull the leaded end of the linkwire from the retaining fork on the brake arm. Release the brake pads, and the brake will open.

To close the brake, reverse the instructions.

✧ **For direct-pull type brakes**, disconnect the pipe from the link arm. With one hand, squeeze the pads firmly against the rim. With the other hand, pull the pipe back from the link arm, and lift the pipe. Once disconnected, let go of the brake pads and the brake will open.

To close the brake, reverse the instructions.

✧ **For internal or drum brakes,** to remove the rear wheel, first disconnect the shift and brake cables.

- To disconnect the brake cable, press the cable carrier arm forward, and the cable clamp bolt rearward, so the bolt aligns with the larger diameter hole in the carrier. Pull the cable clamp bolt outward to disengage it from the carrier. Slide the brake cable stop forward to remove it from the brake arm. Undo brake strap bolt.

- To disconnect the shift cable, put the shifter in 1st gear. Pull the cable housing out of the shift cable housing stop. Rotate the shift cable fixing bolt until the washer flats align with the slit in the cog joint bracket. Remove the cable.

9. Shifting gears

➢ **Front derailleur**

✓ **To adjust the small chainring position**

1. Shift the chain onto the smallest front chainring and the largest rear cog.
2. Loosen the front derailleur cable clamp bolt (Figure 10) until the cable is free.
3. Turn the low gear adjusting screw (marked “L”) until the inner chain guide of the derailleur is approximately 0.5 mm from the chain.
4. Pull on the cable end, and down-shift the left shift lever several times so that it is

in the small-chainring position.

5. On the shifter or down tube, turn the shift cable adjusting barrel to its most clockwise position.
6. Insert the cable in the groove found next to the derailleur cable clamp bolt, pull the cable taut, and tighten the bolt:
   - *Front derailleur cable clamp bolt- 44-60 lb•in (5.0-6.8 N•m).*

✓ **To adjust the big chainring position**

1. Shift the rear derailleur to the smallest rear cog.
2. Turn the high-gear adjusting screw (marked "H") anti-clockwise until it cannot interfere with the motion of the derailleur.
3. Hand-turn the cranks, and use the shifter to carefully shift the chain onto the outside chainring.
4. Position the outer chain guide of the front derailleur approximately 0.5 mm from the chain.
5. Re-tighten the high gear adjusting screw until it meets resistance.

   If you have turned the screw too far, the front derailleur will move toward the small chainring.
6. Go through the various gear combinations. Make sure the chain does not fall off when you shift, and the derailleur cage does not rub on any part of the crankset.

✓ **To adjust the middle gear position, with three chainrings**

1. Shift the chain onto the largest front chainring and the smallest rear cog.
2. Rotate the cable tension barrel-adjuster (on the down tube or on the lever) counter-clockwise, increasing cable tension to align the inner derailleur cage until it just touches the chain.
3. Go through the various gear combinations to ensure the chain smoothly lines up with all the chainrings.

NOTE: *some front shifters have a 'tab' feature: slightly downshift the lever and the derailleur will move in slightly, no longer touching the chain.*

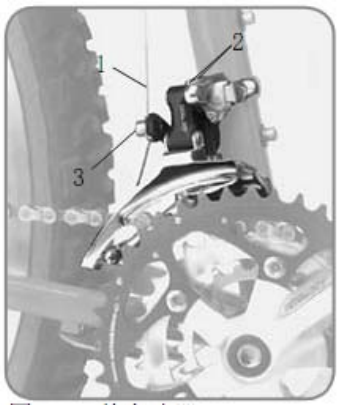


Figure 10- Front derailleur

1- Cable

2- Adjusting screws

3- Cable clamp bolt

➢ Rear derailleur

✓ To adjust the small cog position

1. Shift the chain onto the smallest rear cog and the largest front chainring.
2. Loosen the cable clamp bolt (Figure 11) until the cable is free.
3. Stand behind the bicycle to see that the smallest rear cog, the chain, and the two derailleur pulleys are in line.
4. If they are not aligned, turn the high gear adjusting screw (usually marked “H”,) until this line is established.
5. While pulling on the cable, up-shift until the shifter is in the small cog position.
6. On the shifter or down tube, turn the adjusting barrel all the way clockwise. Turn the adjusting barrel on the rear derailleur all the way clockwise, and then one turn anti-clockwise.
7. Insert the cable into the clamp bolt groove on the rear derailleur, pull the shift cable taut, and tighten the cable clamp bolt to 44-60 lb•in (5.0-6.8 N•m) .

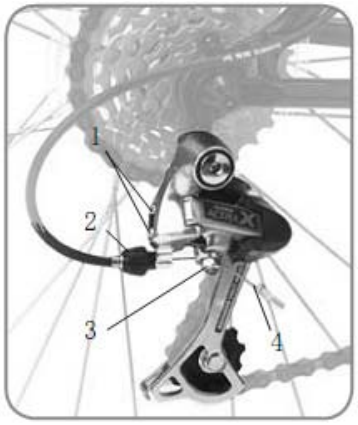


Figure 11- Rear derailleur

1- Adjusting screws

2- Barrel adjuster

3- Cable clamp bolt

4- Cable

➢ To adjust the large cog position

1. Turn the low gear adjusting screw on the rear derailleur (usually marked “L”) far enough counter-clockwise that it will not restrict the movement of the derailleur.
2. Carefully shift the chain onto the smallest front chainring and the largest rear cog. Do not over-shift the rear derailleur, or the chain may wedge between the large cog and the spokes.
3. Position the rear derailleur pulleys in line with the largest cog.

4. Turn the low gear adjusting screw clockwise until it meets resistance.

> *If you have turned it too far, the derailleur will move toward the outside of* the *bicycle.*

5. Go through the various gear combinations. Make sure the chain does not fall off when you shift.

- **To align the indexing system**

1. Shift the chain onto the largest front chainring and the smallest rear cog.
2. Shift one click with the rear shifter.
3. Check if the chain moves smoothly to the next gear.

> • *If the chain makes excessive noise or does not shift, turn the barrel-adjuster counter-clockwise in small increments and check again for a smooth shift.*
> • *If instead, the chain moves to the third smallest cog, turn the barrel adjuster clockwise until the derailleur pulleys align with the second smallest cog.*

4. Go through the gear combinations to ensure the chain smoothly lines up with all the rear cogs.

> *If the derailleur cannot be adjusted in this manner, the derailleur hanger may be out of alignment; take the bike to your dealer for service.*

10. Reflectors

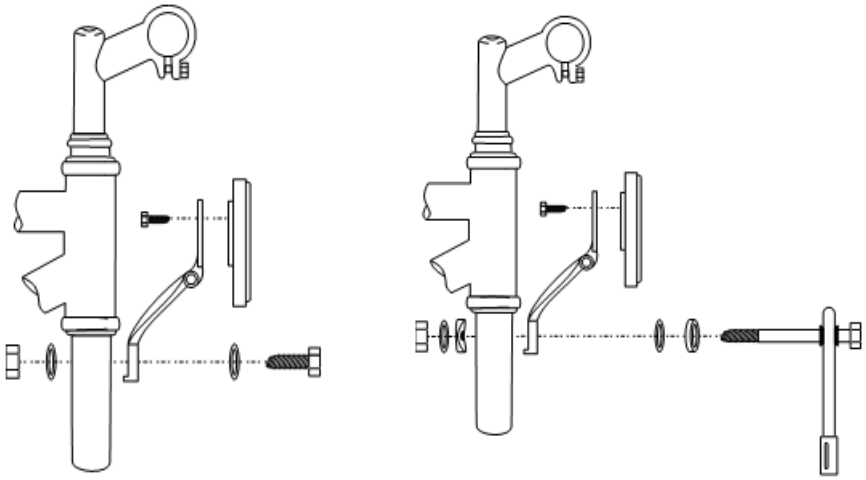
Your bicycle is supplied with one front (white), one rear (red), two wheel (white), and four pedal (orange) reflectors. These are an important safety and leg requirement, and should remain securely fitted and in good, clean condition at all times. Periodically, inspect all reflectors, brackets and mounting hardware for signs of wear or damage. Replace immediately if damage is found. Some bicycles require you to install your reflectors onto your bicycle. Please refer to the following section for instructions on all the types bicycle reflectors.

- **Fork mount reflector bracket assembly**

First, insert one washer onto the hex bolt and insert hex bolt through the reflector bracket and then through the fork. Next, insert a second washer onto the bolt and thread a hex nut onto the bolt behind the fork. Tighten bolts until snug, making sure the reflector is in an upright position. See diagram at the right.

- **Front reflector mount with caliper brake assembly**

First, remove the hex nut from the back of the fork and pull the brake from the fork. Insert a spacer, washer and the reflector bracket on to the caliper bolt. Insert the caliper bolt back into the fork and secure firmly with a concave spacer, washer and the hex nut. Finally, adjust the reflector such that it is in an upright position. See diagram at the right.

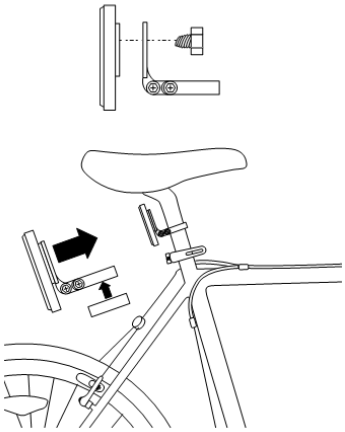


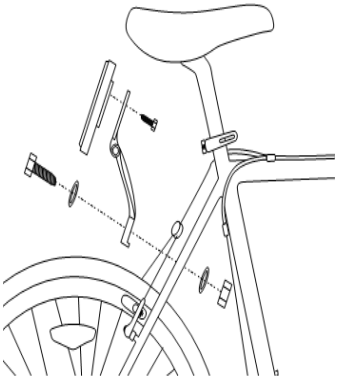
- **Seat and handlebar mounting reflectors**

First, attach the reflector to the reflector bracket with the reflector screw, see the top diagram. Next, remove the clamp screw and open the clamping reflector bracket. Place clamping reflector bracket around the handlebar or seat post. If the clamp is too loose, insert the shim inside of the clamp. Tighten the clamp screw to hold reflector assembly in place, see the second diagram. Finally, adjust the reflector assembly in place and ensure that it is upright and facing away from the bike.

- **Seat stay mount reflector bracket assembly**

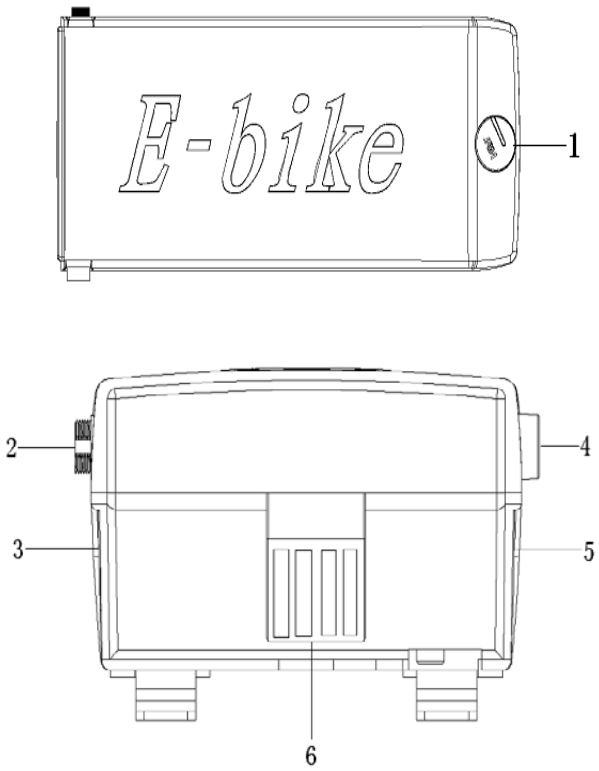
First, insert one washer onto the hex bolt and insert hex bolt through the reflector bracket and then through the seat stay bridge. Next, insert a second washer onto the bolt and thread a hex nut onto the bolt behind the seat stay bridge. Tighten bolts until snug, making sure the reflector is in an upright position. See the diagrams in the next page.





11. Use of battery pack

Structure of battery pack

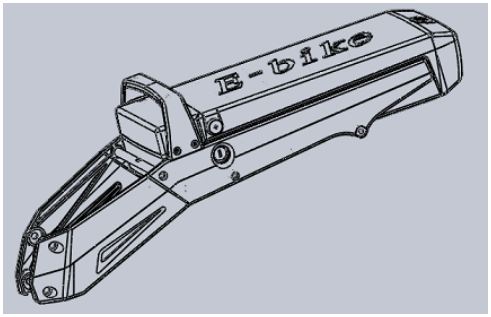


(1) Power Lamp (2) Charging Socket (3) Power Key
(4) Fuse Holder (5) Battery Pack Lock (6) Output Receptacle

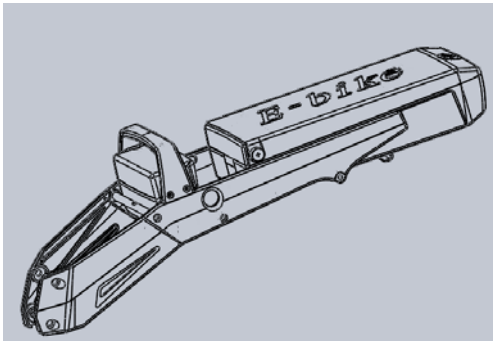
- **How to use the battery back**

Procedure:

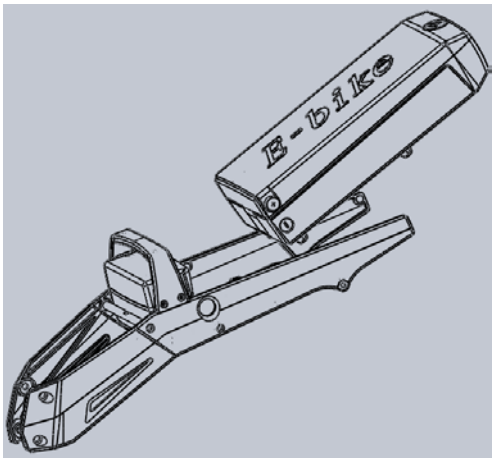
1. Normal condition of the battery pack



2. Unlock the battery pack with the battery pack key, pull the battery pack backward, and see the following figure.



3. Lift to take out the battery pack, see the following figure.



4. Slide the battery pack into the battery holder and lock it after charging.

12. Main technical parameters

- Main technical parameters of the entire bicycle

1. Weight：≤32kg
2. Maximum load：≤136kg
3. Maximum speed：32kph
4. Range: 60km (the range is reached by constantly riding without wind on a smooth road at 32kph with load of 75kg)
5.Slope climbing capacity：≤8°
6. Rated power: ≤240W
7. Power consumption: ≤1.2kwh

- Main technical parameters of battery

Type / Item	Lithium manganese oxide Li-ion battery (maintenance free)
capacity	36v/15Ah（48V/10Ah）
Rated voltage	36v（48V）
Charging time	7-8h
Power consumption	≤1.2kwh

- Main technical parameters of motor

Type / Item	36V motor	48V motor
Rated continuous output power	350W	500W
Rated voltage	36V	48V
Rated current	10A	10A
efficiency	≥80%	≥80%

- Main controller parameters

Type / Item	36V controller	48V controller

Under voltage protection value	31.5 V ±0.5V	42V±0.5V
Over current protection value	14A±1A	14A±1A

➢ **Features**

- Unique aesthetic appearance.
- It can be loaded the battery of 36V/15A; the range for each charge reaches 60km.
- The frame is designed according to ergonomics, material mechanics and aesthetics so as to achieve the optimum riding.
- The selected components can ensure your riding safety.
- Specially designed multimode PAS can ensure there is a mode suitable to each road condition.
- To ensure your safety, the electric system will be cut off automatically when braking.
- The electric bicycle is designed according to EN15194, the electric bicycle standard in EU. This will make you and your family relieved.
- The bicycle runs fast; the battery can be fully charged in 7-8 hours with the specific charger provided at the temperature of 25℃. The battery can be charged for two times in a day.
- The LED lamps on the battery pack indicate the battery capacity, which is very convenient to check the current capacity.

13. Charging ⚠

1. The red lamp on the charger will illuminate when the charger is connected to both the mains and the battery.
2. Standard charging time: please charge the battery according to the time regulated by the specific charger. The charging temperature is at about 25℃, and the charging time is 7-8 hours.
3. When the charging temperature in summer is above 40℃, please stop charging and recharge the battery when the temperature is lowered. In winter, please charge the battery after the battery is put into the room for more than an hour.
4. This charger is equipped with over current protection; long-time charging (*usually less than 18 hours*) will not impact the life of both the battery and charger.

14. Charging warnings ⚠

1、When charging the battery, keep the battery and charger away from children's reach.

2、Please use the battery when it is fully charged.

3、Do not use the chargers of other brands to charge our battery, and our charge is not suitable to other batteries, either.

4、Do not dismantle the charger because it contains high-voltage circuit.

5、When using and storing the charger, prevent the liquid and metal particles flowing into the charger. Falling and striking should also be avoided so as not to damage the charger.

6、Do not cover anything on the charger when it is in use.

7、This charger is designed to use indoors. Please use it in dry and well ventilated conditions.

8、When charging, if you smell something unusual or the charger appears to be overheating, stop charging and return it to your dealer for maintenance.

15. Start the bicycle & adjust PAS

1. Insert the power key into the battery on/off switch on the right side of battery pack and turn to "ON". The lamps on the battery pack will illuminate, which indicates the electrical system is connected.

2. Press the ON/OFF switch on the PAS command console to start PAS, then the bicycle is in the first mode, in which the ratio between manual pedal and motor assistance is 1:1. After turning the pedals, the motor will assist your riding by providing the corresponding power. Press the plus (+) button, the second lamp will illuminate. Then your bike will move forward at the speed of 6kph even without pedaling.

3. Press the plus (+) button one after another to increase assistance strength to save your own strength. Please note that do so when you mount the bike so as to avoid danger.

4. After riding, turn off PAS timely by press On/OFF switch for several seconds until all the indicators go out.

5. Cut off the electrical system timely and pull out the key when parking your bicycle.

PAS Command Console

16. Other notes ⚠

1. The maximum load of this bike is 136kg (including the weight of rider). Do not ride with overload.
2. When there is power, but the bicycle cannot move, please ride the bicycle with electrical system off, otherwise, the electric instruments would be damaged.

17 Simple trouble shooting

Problem	remedy
Power on, all capacity indicators illuminating, but indicators not illuminating when pressing ON/OFF on the PAS command console	1. Check battery is engaged with battery holder, and check the battery pack is locked. 2. Check the fuse is blown. If the fuse is blown, there is no power output; replace the fuse with one of the same type
Starting PAS, the chainring turning but no power output	Check the signal wire of sensor is connected.
After stop, when repedaling, no power assistance	Check the brake levers for restoration, that is, check whether the brake levers remain in auto power off mode.

Indicator light on charger not illuminating when charger is plugged into outlet	Check outlet for power
When charging, battery connected to the charger and all the green and red lamps on the charger illuminating	Check charger is plugged in

18. Maintenance

- **Maintenance schedule**

This maintenance schedule is based on normal usage. If you ride your bike more than average, or in rain, snow, or off-road conditions, service your bicycle more often than the schedule suggests. If any part appears to be malfunctioning, inspect and service it immediately, or consult your dealer. If a part is damaged, replace it before riding the bicycle again.

After initial break-in, new bikes should be checked for stretched cables and other normal conditions. Approximately two months after purchasing your new bike, have your dealer thoroughly inspect the bicycle. All bikes should be thoroughly serviced once a year, even if they have not been ridden much.

- **Recommended tools for proper bicycle maintenance**

Torque wrench with lb•in or N•m gradations
2, 4, 5, 6, 8 mm Allen wrenches
9, 10, 15 mm open-end wrenches
15 mm box end wrench
Socket wrench, 14, 15, and 19 mm socket
T25 Torx wrench
No. 1 phillips head screwdriver
Bicycle tube patch kit, tire pump with gauge, and tire levers
Special high pressure air pump for rear shock or suspension fork

Note: Not all bikes require all these tools

- **Periodic maintenance**

Please contact your authorized dealer to maintain your E-Bike periodically：

· Make sure the front and rear wheel in good condition.

· Maintain the battery pack and charger in good condition.

· Maintain the motor and controller in good condition.
· Check and maintain the brake system to keep it in good condition.
· Use lubricant to maintain metal parts of the unit, however do not lubricate the brake shoes.
· Check all electrical connections and mechanical parts are securely locked and fastened.

- **Routine maintenance**

· Check the tire tread and tire pressure are in good condition.
· Check the battery capacity remaining charge and charger in good condition.
· Clean up the surface of your unit without spraying over all electrical connections.
· Check the screws of the front and rear wheels are tightened.
· Check the joint connections are normal and the brake cable is well lubricated.

- **Cleaning instructions**

1. It is forbidden to clean the bike with water so as to avoid accidents caused by the wet electrical components and circuits
2. Use the rag with the neutral cleanser to scrub the stains on the surface of paint, plastics and rubber parts, and then wipe them clean with the dry rag.
3. Scrub the metal parts with lubricant to maintain the bike.
4. It is forbidden to grease the front and rear brakes, rim and tyres.

- **Lubrication**

Lubrication is an important item for electric bicycle maintenance. Scrub with oil or grease as required the front axle, central axle, freewheel, suspension fork and other components every half a year

Lubricated parts	lubrication interval	Recommended lubricant
Front fork set	One year	Grease(Lithium Based Grease)
Front and rear axle	One year	Grease(Lithium Based Grease)
Central axle	One year	Grease(Lithium Based Grease)
Pedal axle	One year	Grease(Lithium Based Grease)
sprocket	One week	oil
chain	One week	oil
Inner side of freewheel	One month	oil
Brake lever	One month	oil

19. Tips

1. There is no deep discharge to lithium battery.
2. If leave the bike unused for a long period, the battery must be stored with full charge and give it full charge and discharge cycles every half a year.
3. The riding range decreases 0.4km as the temperature drops 1℃ (the standard temperature is 25℃) in winter, be aware to adjust the riding range and charging time.

20. Important reminders ⚠

1. It is a good habit to recharge the battery timely after it is drained. It can prolong the battery life to fully charge the battery before the battery voltage decreases to the minimum allowable voltage (that is, only one capacity indicator lamp illuminates).
2. The ambient temperature can also influence the capacity of lithium battery. In general, the discharge performance is better in higher temperature. The battery capacity will decrease more than one third when the temperature drops below zero. Therefore, in winter or cold area, the reduced riding range is normal. Everything will go normally when the temperature increases above 20℃.
3. When to load and unload the battery pack from the rear rack, do not insert anything (like wire, key and so on) into the charging port of battery pack or connect anything to the positive and negative poles of battery output end so as to prevent short-circuit battery and spark striking from causing injury to you.
4. Keep the battery pack away from fire, flammable, explosive or corrosive gas.
5. Do not dismantle the battery pack arbitrarily so as not to damage the internal components.
6. It is forbidden to touch the positive and negative poles of the battery with wires or conductors so as not to damage the battery.
7. The battery should be handled with care to avoid crash and fall so as to prevent the shell being damaged and other accidents.
8. This bicycle is rain and snow proof, but not water-proof. Pay great attention to that the inner circuits of the whole bicycle could be short circuited and the electric instruments are damaged when the hub of the rear wheel motor is submerged in water.
9. It is forbidden to use the charger and other important components not provided by our company so as to avoid accidents.
10. Arbitrarily dismantle the bike body and modify the bike will bring troubles to your e-bike or may pose great danger. We are not responsible for the loss caused

thereby and you may also loss the warranty. Please contact the local dealer and the designated service center in case of troubles.

11. The minors and pregnant women had batter not use the e-bike.
12. It is prohibited to drive downhill over the speed limit. Do not use the front brake firstly to stop the bike when riding at high speed so as to avoid the accidents caused by weight forward.
13. It is prohibited to grease the brake parts so as to avoid accidents caused by poor brakes.
14. Check the brakes, saddle, frame, handlebar and wheels are fitted properly so as to avoid unexpected accidents
15. Do not ride your bike at high speed on bumpy, muddy and cobbled roads or stairs so as to avoid burst tyre, distorted rim to damage your bike.
16. Do not hang anything on the handlebar while riding so as to avoid accidents caused by lost control.