



www.eZeebike.com

USER MANUAL

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Simply Moving

Congratulations on the purchase of your eZee bike. You're one step closer in realizing a whole new way of commuting that is fast, fun and friendly to the environment.

The hub motor is brushless and uses a technology called Pulse Wave Modulation control, so that it's not subject to wear like a regular DC brushed motor. Planetary reduction gears incorporated into its hub gives it a very strong torque, working in unison with your leg power to flatten out those hills and to overcome headwinds.

Under normal cruising conditions (20 kmph, 12.5 mph), the motor draws about 5 amps at 150 watts with 5 Nm torque and has an efficiency about 80%. Its electric consumption is about 1.0 kWh for 100 km / 62 miles at about 20 kmph in ebike mode - even less energy than the food you would consume riding by leg power alone. Making it by far the most efficient vehicle ever made.

While eZee pledge to quality means our components are high value and reliable. It's your part to understand safety implications and the possible risks of cycling. So please take some time and read this manual. It explains the bike in detail, how to take care of it, so that you can enjoy using the bike for many years to come.

Legal Regulations

EU regulations state that your vehicle is an Electric Powered Assist Cycle (EPAC) when the following conditions are met, and is now governed by the latest European regulation EN15194:2009 for EU. In USA it is governed by Consumer Product Safety Commission 16 CFR Part 1512 requirements for low speed electric bicycles.

[EU directive 2002/24/EC Chapter 1 Article 1 1(h)]

“Cycles with pedal assistance which are equipped with an auxiliary electric motor having a maximum continuous rated power of 0.25 kW, of which the output is progressively reduced and finally cut off as the vehicle reaches a speed of 25 km/h or if the cyclist stops pedaling.”

Conforming to EN reg., the power assist of an eZeebike only functions while the rider is pedalling. The means of controlling the power level of the assistance adjusted by the power setting from the console or throttle.

USA regulations allow a power assisted maximum speed of 20 mph. eZee bike made for the USA has a motor nominally rated at 500 watts but up to a maximum power of 800 watts. For markets that are not subject to EN reg. the bike comes with default mode that allows PAS or ebike mode instantaneously.

Electric bicycles does not require a license or moped certificate, there is no age limit and you can take cycling paths. It conforms to regulations of normal bicycles. Legal requirements concerning insurance of your bicycle may differ, so do find out about the rules and regulations in your country.

Guarantee Conditions

The following guarantee conditions complement your legal rights.

How the guarantee applies

As the manufacturer, we guarantee against possible material or construction defects. Provided the following conditions are satisfied:

- Proof of purchase. The guarantee starts on the date of purchase.
- Only the first owner is entitled to the guarantee.
- The bike is guaranteed for 2 years, this comprises of the frame, fork, all mechanical and electrical parts, except normal wear and tear items.
- Battery warranty up to 70% depth of discharge from its original rated capacity. You need to verify the warranty period with your dealer.

How the guarantee does not apply

- When the bicycle is used negligently or results in damage due to accident.
- Damage ascribed to normal wear and tear.
- Poor maintenance, or modifications that no longer complies with regulations or original technical specifications.
- Damage due to external causes.
- The bicycle is put up for hire or commercial use.
- The battery pack is used incorrectly or tempered with.
- Compensatory costs arising from damages or accidents, or cost incurred by loss of the bicycle's usage.

How the guarantee covers

- Original defective parts that are sent to the manufacturer for assessment will be replaced by the same or equal value part.
- Labour and transportation or all other charges are not included. These are borne by the owner.
- eZee exclusively makes the decision whether or not the guarantee applies.

Technical Data



Europe EN 15194:2009, USA CPSC 16 CFR Part 1512

Motor	DC brushless hub motor 200 W Australia, 250W (EU) , 500W (US) with planetary reduction gears
Battery Pack	Lithium Ion with battery management circuit 37V 10Ah (370 Wh capacity) 3.1 kgs / 6.83lbs 37V 14Ah (518 Wh capacity) 3.8 kgs / 8.38lbs 37V 20Ah (740 Wh capacity) 5.4 kgs / 11.90lbs Low voltage protection 28 V Discharge temperature limit -15°C to +55°C
Controller	PWM LED self diagnostic system Overload protection 20 amps for EU 25 amps for USA
Charger	4 amps Charge time 4 hrs for 14Ah Charging temperature +5°C +35°C
Interface	Forward magnetic motion sensor 12 pole and dual hall 5 levels Power and speeds settings and or throttle application. 5 levels battery gauge
Fuse	30 amps

Part Identification



1	Brake cables	20	Chainguard
2	Front LED lighting	21	Shimano roller brakes
3	Mudguards	22	Shimano Nexus Internal gears
4	V-Brakes pivots	23	Tensioning bolt and plate
5	Rims	24	Rear LED lighting
6	Spokes (13g)	25	Al. luggage rack
7	Hub motor	26	Controller / Ignition
8	Reflectors	27	Battery
9	Tyres 26" x 1.95"	28	Saddle flip catch
10	Suspension front fork	29	Saddle
11	Motor wire casing	30	Seat post
12	Bearing race	31	Seat post clamp (quick fix)
13	Frame	32	Headstem
14	Pedals	33	Handle grip (Throttle)
15	Chainwheel 48T and crank	34	Brake levers
16	Pedal sensor	35	Gear shifter
17	Central support stand	36	Battery level gauge
18	Chain 1/2 x 3/32	37	Handlebars
19	Chain stay		

Assembly

If you have received your bike delivered instead of picking it up from your local bike specialist, please read this section before proceeding to assemble.

Unpack

Carefully remove the bicycle by lifting it straight out of the box. Be careful not to scratch yourself on the carton staples. Remove the packing material around the bike and stand the bike on a clean flat surface. Be sure to keep any part packages that comes along with the bike. Discard box and packaging material only.

Dispose responsibly, recycle when possible.

Check

This box should contain....the eZeebike!

An accessory box containing.

- a. 3 Ignition keys
- b. 1 Pair of pedals
- c. 1 Battery charger
- d. 1 Power cord
- e. 2 Fuses (30 amps)
- f. Nylon ties
- g. Heat shrink tubes (assorted pre-cut sizes)
- h. 1 Hex Key #5
- i. 1 Hex Key #3
- j. 1 eZeebike User manual
- k. Relevant component manuals
- j. 1 Battery

Check the box again for any additional purchases or variations that should be included.

Tools required

Tools are the first step to proper assembly, you will need

Allen / Hex key metric set

Philips head screwdriver

Open-end flat wrenches metric measurements 6mm - 17mm

Front wheel

Insert the hub motor wheel into the front fork, ensuring that it is properly seated in the dropout slots. Tighten the nuts alternatively on both sides till the wheel is secured.

Tightening torque 35 Nm

Seat post

Insert into the seat tube of the bicycle frame and align. Tighten clamps and ensure seat is firmly fastened.

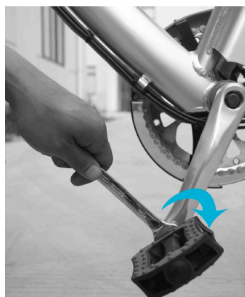
Tightening torque 16 Nm

Do not adjust the seat post beyond its maximum extension mark.



Handlebar / Stem

Handlebar and stem comes pre-assembled. Loosen bolts on the stem and insert



Pedals

Pedals are marked “L” and “R” for left and right respectively. Screw in clockwise for the “R” pedal and counter-clockwise for “L”. Tighten both with a wrench firmly but not excessively as the crank threads are made of aluminum alloy.

Front Mudguard

The supports are attached to the sides and top of the front fork, the mudguards are made of polycarbonate and should not rattle when they’re securely fastened.

Brakes

One of the most important safety features on the bicycle. To minimize the risk of injury, it is vital to ensure they are corrected adjusted. Ensure that that the disc brakes are centered between the brake calipers, and the wheel spins freely without the disc rotor touching the pads in the caliper.

For more information about the rear Shimano mechanical disc brake, please check the Shimano website.

If you have little experience with bicycle maintenance. We recommend you get this done with your local bike shop.

Accessories

Install any optional accessories you have purchased with your bike.

Read the manufacturer’s manual provided.

Battery

Insert key into keyhole located by the controller box and turn key counter clockwise while pressing it in, so that it arrives in the open position. Release the catch located at the underside of the saddle to flip it over. Locate the battery flanges in their slots in the battery holder; then push the battery firmly into the holder until the connecting pins are firmly in the battery sockets.

Battery (continued)

The fit can be tight when new, so it may be required to apply gentle pressure. Once the battery is in position, lock into place by turning the key one click clockwise to the “OFF” position. Ensure that the key is in “OFF” position until you are ready to ride.

Do not use excessive force to fit the battery, which could result in damaging the connection sockets or pins.

If there is an A/C outlet near to where your bicycle is parked. It may not be necessary to remove the battery from the bicycle to charge.

Tyres

Ensure that the tyres are inflated to the correct pressure of 45~ 60 psi. Well inflated tyres enhances the comfort, safety and efficiency of your ride. Do not make max. inflation of 75 psi, it makes an uncomfortable ride. Check recommended inflation pressure as marked on the tyres.

Checklist

Usage

The eZeebike is best described as a ‘commuters’ bike and is best suited for usage in urban environment and roads. While cycling, it is your responsibility to be attentive of your environment and traffic rules, as this concerns the safety of all who share the paths, especially you.

- a. Wear shoes that stay on your feet and grip firmly to the pedals.
No barefoot or sandals.
- b. Dress to be visible on the road and avoid loose clothes that will tangle with moving parts of the bicycle.
- c. Keep your speed at levels appropriate to road conditions
- d. Be aware of wet weather conditions, as these affect braking distance.
Brake earlier than you normally would on dry roads.
- e. Familiarise with the traffic rules in the country you are riding in.
- f. Avoid cycling in poor weather and visibility conditions such as fog, night, heavy rain and snow. Keep your lights on in such conditions.
- g. Familiarise yourself with the usage of the bike and how to maintain it.

Inspect

Before every ride, make a quick inspection of your bike’s mechanical and electronic features. Be safe, not sorry.

Frame & fork

Visually check for damage, do not ride if bent or fractured.

wheels and tyres Check for missing or damage spokes. Feel spokes to ensure tightness. wheels should be true (straight) and tyres inflated to its correct pressure.

Handlebar and stem

Tightened firmly in the 'face forward' positions, the handlebars will rotate the front fork and wheel, ensure that the grips are also firmly seated.

Brakes

Check brake functions on both front and rear brakes.

Brake cables should remain unobstructed by other cables or accessories.

Chain

Turn crank arms to ensure chain runs smoothly. Keep the chain lubricated and clean.

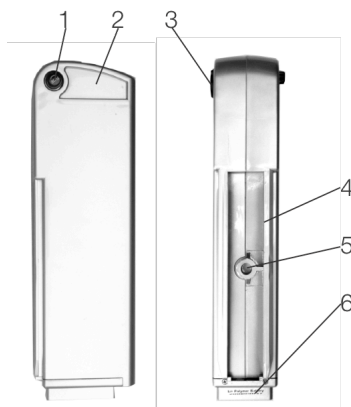
Chain tension may need adjustment or tightening if it is without sufficient tension.

Battery Charging

Before your first ride, the battery needs charging. Bring it to a wall socket. (220V - 230V AC EU other countries or 115V AC US)

- | | |
|---|------------------------------------|
| 1 | Fuse / Fuse holder (30 amps) |
| 2 | Battery grip |
| 3 | Charging socket |
| 4 | Battery slot guides |
| 5 | Batter lock slot |
| 6 | Serial number, battery information |

Insert charging plug into socket on battery and connect charger power cord to A/C outlet. Turn on A/C outlet. Turn the '1' switch on the charger.



Do not remove the plug by pulling the cord, always grip the charging port by its metal body.

Check the indicator lights on the front of the charger.

RED light indicates that the charger is connected and running from an A/C outlet.

YELLOW light indicates that the battery is charging

GREEN light indicates that the battery is fully charged

It will takes 3 hrs to charge the 10Ah battery and 4 hours to fully charge your 14Ah battery. You may interrupt the charging at any time.

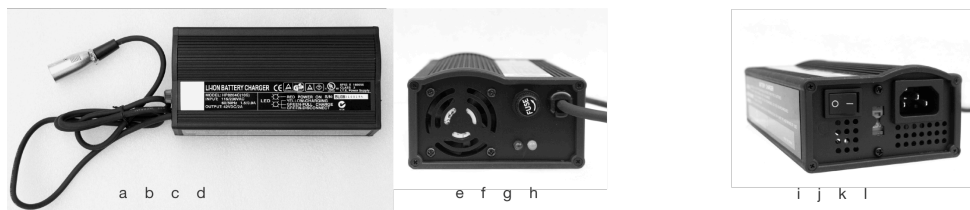
As Li Ion batteries do not suffer from memory effect, it is not required for the battery to be empty to commence a recharge.

Top-up charging everytime you've completed your cycle ride is recommended.

Kept in good condition Li Ion battery will perform at least 350 full charge cycles, with a retention of 70% from its original capacity.

Please use only the Li ion charger as provided.

A new battery might take 2 - 3 charges before it performs at its stated capacity.



- | | | |
|-----------------------|------------------------|---------------------------|
| a. Male charging plug | b. Charging cord | c. Charger specifications |
| d. Charger serial no. | e. Cooling fan | f. Fuse 10 Amps |
| g. Charger 'ON' LED | h. Charging status LED | i. Warning label |
| j. Power switch | k. A/C voltage switch | l. Power cord socket |

Sometimes after temporary disconnection, the charging status light may give a false green reading. To verify that your battery is fully charged, switch the charger off, wait for the charger lights to go out and switch it back on again. The charging status light should quickly return from amber to green, when the battery is fully charged.

The battery may be also charged on the bicycle, do make sure that the bicycle is switched off when charging.

If the battery refuses to accept a charge, refer to your eZee dealer for more information.

Battery charging is automatically regulated, there is no danger of overcharging. However, we strongly advise that you disconnect the battery and switch the charger off when the charging process is completed, and not to leave it on unattended.

Do not charge the battery in wet conditions.

Never allow children to play with the battery or charger.

Do not leave your battery in a fully discharge state for long periods of time. The battery will continue to self-discharge, resulting in damage.

Display Console

Power On

During power on, the battery gauge will do an initialization with all the LEDs light up for 2 seconds before entering normal operation. If all the LEDs fail to light up, there is a fault in the battery gauge. Try to switch On/Off the ignition key again to initialize.

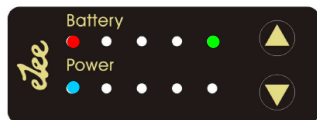
Basic Operation



Battery level shows the state of charge of the battery. As you continue to cycle and the battery power drops, the level gauge will correspond to the state of charge remaining. If the battery level shows 'red', it is nearly empty and need to recharge.

Power level in blue LED shows the level of electric assistance in pedelec or power assist mode. There are 5 levels of assistance and zero assistance (power off). At least one blue LED must be on to have any power.

Setup Menu



Hold the 'Down' button for about 5 seconds to enter setup menu. Use Up or Down button to select the appropriate settings. In menu setup, hold the 'Down' button for about 3 seconds to save.

Menu 1: Mode Selection

Mode 1 (Default): Pedelec / EBike (US): Power Led Bar shows the assist power level. When throttling, it switches to EBike mode.

Mode 2: Pedelec (EU): Power Led Bar shows the assist power level. Throttling will be in 6km EBike mode.

Mode 3: Not in used. For future development.

Mode 4: Pedelec (EAF): Responds to throttle/EAF. Power Led Bar shows the current (amps) level.

Mode 5: EBike (Cruise): Responds to throttle (from gauge). Power Led Bar shows the current (amps) level. 'Up' button set cruise.

The bike will come set up with the mode according to your country legal requirement. Any changes are made may affect the legal status of your bike.

How eZeebike works

Your first ride

Before you wheel your bike out into the world, we recommend you practice handling the bike in a safe area away from obstructions and traffic. The motor may look small, but it's powerful ! You'll be riding faster than you think.

Turn the key to the 'ON' position. A red LED will illuminate below the key socket. If the light flashes, read the Troubleshooting section of this manual. If it shines steadily, you're ready for the next step.

EPAC / Pedelec

As you pedal, rotation on the crank is picked up by a sensor in the bottom bracket. This allows the drive system to be engaged. There are 5 levels of speed/power selection on the console.

E-Bike

The motor runs as soon as you turn the throttle. Ensure that you are seated and ready to ride off before you use the throttle

In E-bike mode, the range of your bike will be approximately 40 kms (25 miles) with a 10ah battery. The hillier the terrain, the less you pedal, shortens your range. While EPAC, judicious use of gears, power assistance all contributes to increasing the mileage you can get out of your ride to about 60 kms (40 miles).

You can always choose to ride your bicycle as an ordinary push bicycle.

Battery level gauge

When riding a fully charged bicycle, the battery level gauge shows 'green'. As you continue to cycle and the battery power drops, the level gauge will correspond to the state of charge remaining. When it remains in 'amber' and dips into 'red', you have approximately 20% of the charge left. Best to recharge the battery soon.

Continued use of an empty battery by 'pulsing' will cause deep discharge, this is detrimental to the battery and reduce its life.

Lighting system

eZee bikes features wide angle high performance reflectors at the front, sides and rear. Front and rear LED lights are powered by the main battery, electrical consumption is negligible, be safe, use them often.

Lock

When parking your bicycle, turning the key to the 'OFF' position and removing it will shut the system off and lock the battery in place. Use a chain lock to further secure your bicycle when necessary. We also recommend you insure your bike against theft. Consult your eZee dealer or LBS for more information.

Central support stand

This spring loaded stand supports your eZeebike straight up. Use your feet to depress the stand downwards and pull the bike in reverse. Ensure the stand is firmly rested on the ground before leaving the bike.

Do not sit on the bike with the stand parked. The central support stand is made of aluminum alloy and meant to only take the weight of the bicycle and not with the rider on it.

Luggage rack

The luggage rack provided comes equipped with a spring loaded catch and elastic strap. If you plan to carry luggage on the rear, make sure everything is securely fastened and clear from the rear wheel. There are many useful accessories that can be fitted on the rear rack, from panniers to child seats. Do however, take note that the load limit is 25 kgs.

Maintenance

Maintaining your bicycle ensures you'll get the most out of every ride and out of the entire life of your eZee bike. How much of your bike's maintenance you can do yourself will depend on your knowledge, skill, experience and whether you have the necessary tools for the job.

Learning from available cycling literature and joining cycling communities can be an enjoyable way of improving your skill and knowledge about maintaining bicycles. Beyond this manual, it is good to consult your LBS and eZee dealer for advice regularly.

Before every ride

Mechanical safety checks, use a fully charged battery, visual inspection for damages.

Every 150kms (100 miles)

Clean the bike, incl. chain rings and sprocket. Clean and lightly oil the chain and gears.

Every 20 - 30 hours of riding

Squeeze the brakes and rock the bike to check for any looseness with each forward of backward movement. If the headset is loose, have your dealer check it.

Lift the front wheel and rotate handlebars to check for tightness of steering, it may be necessary to lubricate ball bearings.

Check and recalibrate the brakes, replace if worn out.

Every 20 - 30 hours of riding (continued)

Squeeze spokes in adjoining pairs between your thumb and index finger. They all should have the same tension. Have your dealer respoke or true the wheel if necessary. Check cables for rust, kinks and fraying, have your dealer replace them if necessary.

Repairing a punctured tyre.

If you have a punctured tyre, we recommend that you get a specialist to carry out the repairs. You can always of course consult a specialist and carry out the repairs on your own. As there are no electronic components on the rear wheel, its removal follow standard procedures as with normal bicycles with internal gears. Read the Shimano gear manual provided for more instructions.

As the front wheel contains the hub motor, there are additional steps in the case you require the entire wheel to be removed from the bike. A philips head screwdriver will be required to open the cable housing (shown on left) to first unplug the wires than run from the motor to controller. There should be 1 x 5 pin JST connector and 3 colour coded wire connections (Blue, Yellow, Green). Unplug these before proceeding to remove the front wheel. Be mindful of the tightening assembly sequence of washers, nuts and spacers.

Hub motor and general inspection

After 5,000 kms (3,000 miles) of cycling. We recommend you arrange to have a thorough inspection of your bicycle by an eZee dealer.

Serial Numbers

Record the serial numbers found on your motor, frame, controller, charger and battery here for reference. These are important data for us to understand and troubleshoot your eZeebike.

Motor s/no. :

Charger s/no. :

Controller s/no. :

Battery serial no. :

Frame no. :

Ignition key no. :

Proof of purchase

Keep your proof of purchase with vendor's receipt, with the date of purchase clearly marked.

3 Ignition / lock keys comes with the bike, please keep 2 keys in a place where you could remember where it is. Use only one key at a time.

Afterword

As people all around the world have begun to realize how easy and beneficial it is to ride our electric bike. At eZee, our mission is simple - to continue to make the best electric bike out there. We're on the constant lookout for ways to evolve our bikes, to find methods and adapt solutions for our bikes to enrich lives everywhere.

We also want to get to know and thank everyone of you. If you have anything to ask, to comment or suggest; perhaps you have an idea, a project to discuss, or simply would like share your stories and photos with us. Contact us directly, we want to hear from you !

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