



Owner's Manual

Ranger Step Thru Electric Bicycle

Version: 3.0

DISCLAIMERS:

All information, illustrations and specifications in this manual are based on the latest information available at the time of publishing. This e-bike is under a continuous improvement policy. Thus, information, illustrations and/or specifications to explain and/or exemplify a product, service or maintenance improvement may be changed at any time without notice. For any questions, our contact information can be found on page 1.

TABLE OF CONTENTS

ABOUT THIS MANUAL 2

GENERAL INFORMATION 2

WARNINGS AND SAFETY 5

SPECIFICATIONS 8

ASSEMBLY INSTRUCTION9

BATTERY CHARGING(LOCK&REMOVAL) 14

HOW TO USE THE DISPLAY 16

MAINTENANCE21

TROUBLE SHOOTING22

LIMITED WARRANTY 23

PRODUCT INFORMATION LABEL 26

ABOUT THIS MANUAL

This manual contains details of the product, and information on its operation and maintenance and other helpful tips for owners. Read it carefully and familiarize yourself with the Velowave Ranger Step Thru before using it to ensure safe use and prevent tragic accidents. Be sure to retain this manual as your convenient Velowave Ranger Step Thru information source.

This manual contains many Warnings and Cautions concerning the safe operation and consequences if safe setup, operation and maintenance are not performed. All information in this manual should be carefully reviewed and if you have any questions you should contact Velowave Bike immediately. The notes, warnings and cautions contained within the manual and marked by this triangular Caution Symbol should also begin with special care. Users should also pay special attention to information marked in this manual beginning with NOTICE.



Because it is impossible to anticipate every situation or condition which can occur while riding, this manual makes no representations about the safe use of bicycles under all conditions. There are risks associated with the use of any bicycle which cannot be predicted or avoided, and which are the sole responsibility of the rider. You should keep this manual, along with any other documents that were included with your bicycle, for future reference, however all content in this manual is subject to change or withdrawal without notice. Visit www.velowavebikes.com to download the latest version. Velowave Bike makes every effort to ensure accuracy of its documentation and assumes no responsibility of liability if any errors or inaccuracies appear within. Assembly and first adjustment of your Velowave Bike requires special tools and skills and it is recommended that this should be done by a trained bicycle mechanic if possible.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: To prevent fire or electric shock, follow these basic safety guidelines:

Read All Instructions: Before using this product, ensure you have read and understood all instructions.

Child Safety: Exercise close supervision when this product is used near children to reduce the risk of injury.

Avoid Contact: Keep fingers and hands away from the product's interior.

Cord Inspection: Do not use the product if the power cord or output cable is damaged, such as frayed wires or broken insulation.

GENERAL INFORMATION

Assembly and Fit

Correct assembly and fit are essential elements to ensure your bicycling safety, performance, and comfort. Even if you have the experience, skill, and tools to complete these essential steps before your first ride, Velowave recommends having a certified, reputable bike mechanic to check your work.

NOTICE: If you do not have the experience, skill, and tools to complete assembly and fit, Velowave highly recommends having a certified, reputable bike mechanic complete these procedures as well as any future adjustments or tuning.

NOTICE: A critical aspect of assembling your bike is securing the front wheel and checking the tightness of the rear wheel axle nuts. Velowave bikes use bolted on, through axle or quick release front wheel mounting

mechanism and the rear wheel is bolted on. These mechanisms may become loose or unsecured during shipment or over time. The torque and security of all wheel mounting hardware should be inspected upon arrival and on a regular basis. Both wheels need to be properly secured before operating your bike.

Mandatory Equipment and Use Locations

Before riding, ensure you have all required and recommended safety equipment and are following all laws pertaining to use an electric bike in your region. For example, these laws may specify the need for mandatory equipment, use of hand signals, and where you can ride.

Changing Components or Attaching Accessories

The use of non-original components or spare parts can jeopardize the safety of your ebike, void your warranty and, in some cases, cause your ebike to not conform with laws pertaining to your bike.



The replacement of original components or installation of third-party accessories or accessories not from Velowave explicitly recommended for your bike model is at your own risk. Using aftermarket accessories or components that have not been tested by Velowave for safety and compatibility may void your warranty, create an unsafe riding condition, damage property or your bike by Velowave, or result in serious injury or death.

Safety Check Before Each Ride

Always check the condition of your bike before you ride in addition to having regular maintenance performed. If you are unsure of how to conduct a complete check of the condition of your bike before everyride, you should consult a certified, reputable bike mechanic for assistance.

Electrical System

The electrical system powers several components on your ebike that control different operating conditions and user preferences. It is critical that you familiarize yourself with all aspects of your ebike's electrical system and check to see if it is working correctly before every ride. The front and rear brake levers contain safety power cutoff switches, which disable the hub motor's assistance when applied, and both levers should be checked for correct operation. The throttle should provide smooth acceleration when gradually applied. If the throttle, brake lever cutoff switches, pedal assistance, or lighting are functioning abnormally, intermittently, or not working, please discontinue the use of your ebike immediately and contact the Velowave Support team for assistance.

Brakes

Ensure that the brakes and their system components are free from damage, properly secured and working correctly. When fully squeezed, both front and rear brake levers should not be touching the handlebar. Take your bike to a certified, reputable bike mechanic to have the brakes repaired if you find a problem.

Tires and Wheels

Your wheels should always spin straight and must be repaired or replaced if they wobble side to side or up and down when spinning. If your wheels become untrue or spokes loosen, which can happen with normal use, we recommend that a certified, reputable bike mechanic performs all wheel tuning and truing operations on your bike from Velowave. Do not attempt to true wheels or tighten spokes unless you have adequate knowledge, tools, and experience. Ensure the tires and inner tubes are in good working condition without any visual damage and have the correct amount of air pressure. Always replace tires and inner tubes with punctures, cuts, or damage before you ride. Tires without the correct amount of air pressure can reduce performance, increase tire and component wear, and make riding your bike unsafe.

Accessories, Straps, and Hardware

Ensure all hardware is secured and all approved accessories are properly attached per the specific component manufacturer's instructions. It is good practice to look over all hardware, straps, and accessories before each ride and if you do discover something wrong or something that you are not sure about, have it checked by a certified, reputable bike mechanic.

Suspension, Handlebar, Grips, and Seat Adjustments

The suspension fork on your ebike will affect the handling of the bike so you must understand how it works before use. The suspension fork should be properly adjusted according to your weight and terrain. Ensure the handlebar and handlebar stem are properly aligned, fitted to the user, and secured to their recommended torque values. Handlebar grips should not move easily on the handlebar end. Loose, worn, or damaged handlebar grips should be replaced before you ride. The seat and seatpost should be properly aligned, fitted to the user, and the seatpost quick release should be properly tightened, fully closed, and secured before riding.

Battery Charged, Secured, and Unplugged

Ensure the battery is adequately charged and operating properly. Ensure the battery charger is unplugged from the outlet, battery, then stored in a safe location before you ride. The battery **MUST** be locked onto the frame battery mount properly before use. Do not operate the electrical system if the battery is removed. Make sure push hard enough while installing the battery into the frame, and hear the "CLICK" sound. Take off the keys from the battery lock before you ride.

WARNINGS AND SAFETY

Riding Safely and Responsibly

Like any sport, bicycling involves a risk of injury and damage. By choosing to ride a bicycle, you assume the responsibility for that risk, not the people who sold you the bike, nor the people who made it, nor the people who distribute it, nor the people who manage or maintain the roads or trails you ride on. It is your responsibility. So, you need to know and practice the rules of safe and responsible riding.

Riding an electrically assisted bike allows you to use less pedaling energy to attain the same or higher speeds than you would with a traditional bicycle. This requires a higher level of attention to traffic, pedestrians, and all the conditions that could affect your ride. Your Velowave is limited to a top speed of 28 mph, but this is a higher speed than you are probably used to on non-assisted bicycles, so additional care and awareness are required.

The Basics

- 1) Always perform the Mechanical Safety Check before you get on a bike.
- 2) Be thoroughly familiar with the controls of your bicycle.
- 3) Be aware that your e-bike may reach higher speeds more easily than non-powered bikes.
- 4) Be careful to keep body parts and other objects away from the sharp teeth of chain rings, the moving chain, the turning pedals and cranks, and the spinning wheels of your bicycle.
- 5) Always wear a cycling helmet that meets the latest Snell or ANSI standard.
- 6) Always wear shoes that will stay on your feet and will grip the pedals. Never ride barefoot or wearing sandals.
- 7) Wear bright, visible clothing that is not so loose that it can catch on moving parts of the bicycle or be snagged by objects at the side of the road or trail.
- 8) Don't jump with your bike. Jumping a bike, particularly a Velowave bike, can be fun, but it puts incredible stress on everything from your spokes to your pedals. Doing jumps on bikes risks serious damage to both the bike and the rider.

Throttle on Demand

With throttle on demand, you can throttle the bike from a complete stop. This feature is to help give you that extra push when you need it on a steep hill, when hitting multiple stops signs, etc. However, we strongly recommend to **pedal first and throttle second** to ensure proper stability and preparedness.

General Operating Rules

Notice: Pay special attention to all the general operating rules below before operating your bike from Velowave.

- When riding, obey the same road laws as all other road vehicles as applicable by law in your area.
- For additional information regarding traffic/vehicles laws, contact the road traffic authority in your area.
- Ride predictably, in a straight line, and with the flow of traffic. Never ride against traffic.
- Use correct hand signals to indicate turning.
- Ride defensively, to other road users you may be hard to see.
- Concentrate on the path ahead. Avoid potholes, gravel, wet or oily roads, wet leaves, curbs, train tracks, speed bumps, drain gates, thorns, broken glass, and other obstacles, hazards, and puncture flat risks.
- Cross train tracks at a 90-degree angle or walk your bike across.
- Expect the unexpected such as opening car doors or cars backing out of driveways.
- Be careful at intersections and when preparing to pass other vehicles or cyclists.
- Familiarize yourself with all the features and operations of the bike by Velowave Bike. Practice and become proficient at shifting gears, applying the brakes, using the pedal assist system, and using the throttle in a controlled setting before riding in riskier conditions.
- Wear proper riding clothes including closed-toe shoes. If you are wearing loose pants, secure the bottom using

leg clips or elastic bands to prevent them from being caught in the chain or gears.

- Check your local rules and regulations before carrying cargo.
- When braking, apply the rear brake first, then the front brake. If brakes are not correctly applied, they may lock up and lead to you losing control and/or falling.

Maintain a comfortable stopping distance from all other objects, riders and vehicles. Safe braking distances are based on factors such as road surface and light conditions among other variable.

Safety Notes

The following safety notes provide additional information on the safe operation of your bike from Velowave and should be closely reviewed. Failure to review these notes can lead to serious injury or death.

- All users must read and understand this manual before riding their bike from Velowave Bike. Additional manuals for components used on the bike may also be provided and should be read before installing or using those components.
- Ensure that you comprehend all instructions and safety notes/warnings.
- Ensure the bike fits you properly before your first use. You may lose control or fall if your bike is too big or too small.
- Always wear an approved bicycle helmet whenever riding a bike and ensure that all helmet manufacturer instructions are used for fit and care of your helmet. Failure to wear a helmet when riding may result in serious injury or death.
- Ensure correct setup, tightening, and torquing to recommended torque values is performed on your bike before first using it and check the setup, tightening, and condition of components and hardware regularly.
- It is your responsibility to familiarize yourself with the laws and requirements of operating this product in the area(s) where you ride.
- Ensure the handlebar grips are undamaged and properly installed. Loose or damaged grips can cause you to lose control and fall.
- Do not use this product with standard bike trailers, stands, vehicle racks, or accessories that Velowave has not tested for safety and compatibility and have verified as safe and compatible with the bike.
- Off-road riding requires close attention, specific skills, and presents variable conditions and hazards. Wear appropriate safety gear and do not ride alone in remote areas. Check local rules and regulations about whether off-road e-bike riding is allowed.
- **DO NOT ENGAGE IN EXTREME RIDING.** This includes but is not limited to jumps, stunts, or any riding that exceeds your capabilities. Although many articles/advertisements/catalogs depict extreme riding, this is not recommended nor permitted, and you can be seriously injured or killed if you perform extreme riding.
- Bikes and bike parts have strength and integrity limitations, and extreme riding, including but not limited to jumps, stunts, etc., should not be performed as it can damage bike components and/or cause or lead to dangerous riding situations in which you may be seriously injured or killed.
- Failure to perform and confirm proper installation, compatibility, proper operation, or maintenance of any component or accessory can result in serious injury or death.
- After any incident, you must consider your bike unsafe to ride until you consult with a certified, reputable bike mechanic for a comprehensive inspection of all components, functions, and operations of the bike.
- Failure to properly charge, store, or use your battery will void the warranty and may cause a hazardous situation.
- You should check the operation of the brake motor cutoff switches before each ride. The brake system is equipped with an inhibitor that cuts off power to the electric motor whenever the brakes are squeezed.
- Extreme care should be taken when using the pedal assistance sensor and throttle on this product. Ensure you understand and are prepared for the pedal assistance to engage as soon as pedaling is underway.
- Users must understand the operation of the thumb switch throttle and pedal assistance sensors before using the bike and must take care to travel at speeds appropriate for the usage area, riding conditions, and user experience level. Always use the lowest assist level until you are comfortable with the bike and feel confident in controlling the power.
- Any aftermarket changes to your bike from Velowave Bike not expressly approved by Velowave Bike could void the warranty and create an unsafe riding experience.

- Because electric bikes are heavier and faster than normal bikes, they require extra caution and care while riding.
- Take extra care while riding in wet conditions including decreasing speed and increasing braking distances. Feet or hands can slip in wet conditions and lead to serious injury or death.
- Do not remove any reflectors.

Helmets

When riding a bike, always wear a properly fitted helmet that covers the forehead. Many locations require specific safety devices. It is your responsibility to familiarize yourself with the local laws, rules, and regulations where you ride and to comply with all applicable laws, including equipping yourself and your bike as the law requires.

General Warnings

Like any sport, bicycling involves risk of damage, injury, and death. By choosing to ride a bike, you assume the responsibility for that risk, so you need to know, and practice the rules of safe and responsible riding and the proper use and maintenance of this bike. Proper use and maintenance of your bike reduces risk of damage, injury, and death.

Biking and controlled substances do not mix. Never operate a bike while under the influence of alcohol, drugs, or any substance or condition that could impair motor functions, judgement, or the ability to safely operate a bike or another vehicle.

The Ranger Step Thru is designed for use by persons 18 years old and older. Riders must have the physical condition, reaction time, and mental capability to ride safely and manage traffic, road conditions, and sudden situations, as well as respect the laws governing electric bike use where they ride, regardless of age. If you have an impairment or disability such as a visual impairment, hearing impairment, physical impairment, cognitive/language impairment, a seizure disorder, or any other physical condition that could impact your ability to safely operate a vehicle, consult your physician before riding any bike.

A Note for Parents and Guardians

As a parent or guardian, you are responsible for the activities and safety of your child. Ranger Step Thru is not designed for use by children under the age of 18. If you are carrying a passenger in a child safety seat, they should also be wearing a properly fitted and approved helmet.

Wet Weather

It is recommended to not ride in wet weather if avoidable. Ride in wet weather only if necessary. This electric bike is not meant for use in heavy rain, or streams. Never immerse or submerge this product in water or liquid as the electrical system may be damaged.

- In wet weather you need to take extra care when operating this bike.
- Decrease riding speed to help you control the bike in slippery conditions.
- Brake earlier since it will take longer to slow down and come to a stop than when operated in dry conditions.
- Take care to be more visible to others on the road. Wear reflective clothing and use approved safety lights.
- Road hazards are more difficult to see when wet; proceed with caution.

Night Riding

It is recommended to not ride at night if avoidable. Ride at night only if necessary.

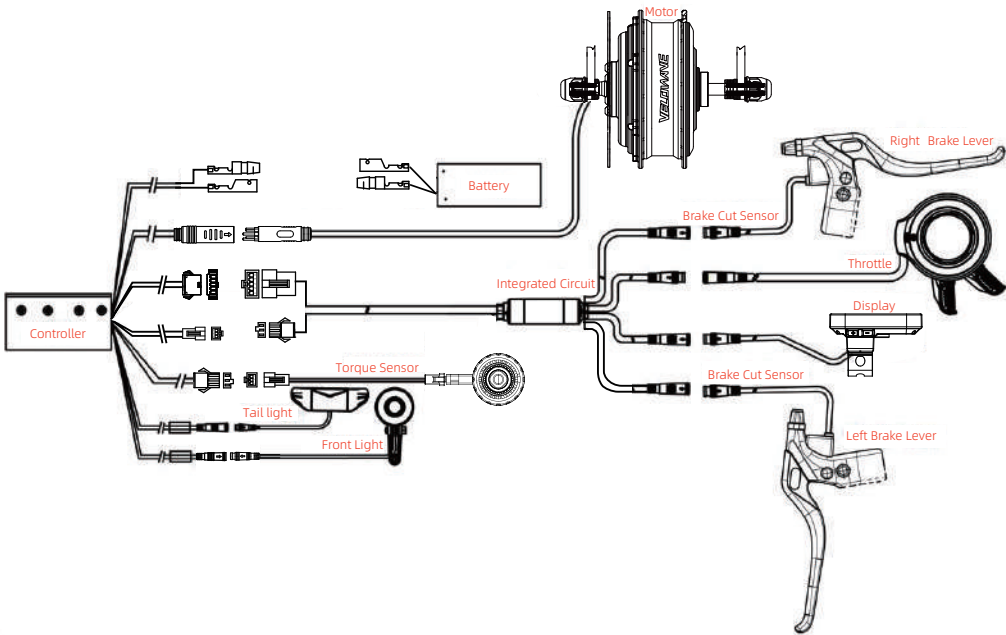
- Wear reflective and light-colored clothing.
- Slow down and use familiar roads with street lighting, if possible.
- Ensure tire wall, pedal, and other reflectors are installed and unobstructed.
- Ensure head light and tail light/brake light are functioning correctly and use them.

SPECIFICATIONS

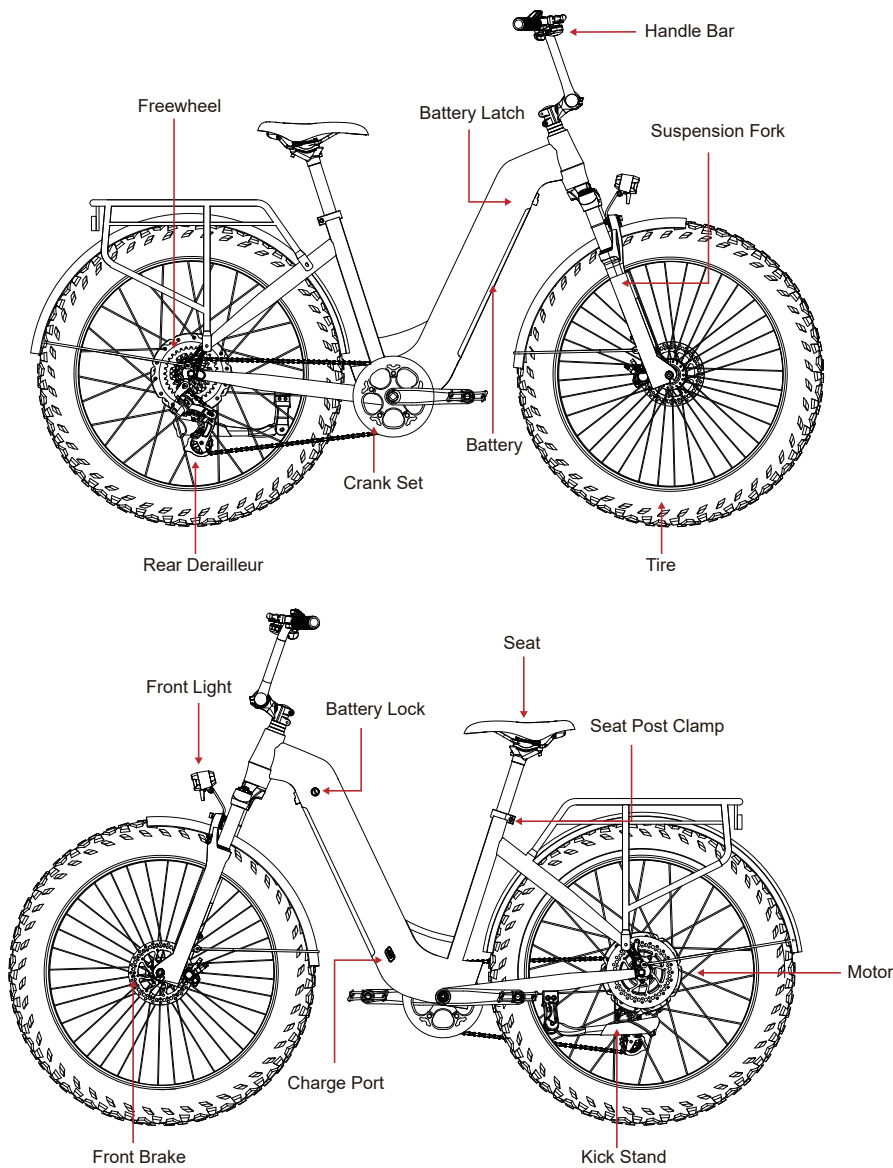
Model Name	Ranger Step Thru
Version	3.0
Max. Load Capacity	440 lbs / 200 kg (including cargo)
MAX.Speed	Up to 28 MPH on Pedal Assist; 20 MPH on Throttle
Motor	48V 750W Brushless Hub
Sensor	Torque Sensor
Battery	48V 15Ah 720Wh LG Li-ion cells
Range Average Per Charge	90+ Miles by Pedal; 30+ Miles by Throttle
Wheel Size	26 x 4.0" Front / Rear
Tire Pressure	Inflation to 30 PSI
Charger	48V 2A
Charging Time	Approx. 8 Hours
Water Resistance	IPX4
Weight	102.5 Lbs / 46.5kg
Light	Front / Rear light

Range Per Charge is measured under the conditions that power is sufficient, with a 75kg load, at 86°F(30°C), 70% humidity, on a level road, in pedal assist mode with level 1 assistance, and in pure electric riding mode by throttle. Actual results may vary based on differences in temperature, load, wind speed, road conditions and other factors.

Electronic Module



ASSEMBLY INSTRUCTION



WHAT'S IN THE BOX

- | | | | |
|----------------------------|----------------------|---------------------------|----------------------|
| 1 x Ranger Step Thru Ebike | 1 x Charger Box | 1 x Right Pedal | 1 x Hex Keys |
| 1 x 8-10 Wrench | 1 x Owner's Manual | 1 x Left Pedal | 1 x Front Light |
| 1 x 13-15Wrench | 2 x Combination tool | 1 x Rear derailleur guard | 1 x M5 Stem Bolts |
| 1 x Quick release axle | 2 x Cone springs | 1 x Self-sealing bag | 1 x Combination Lock |

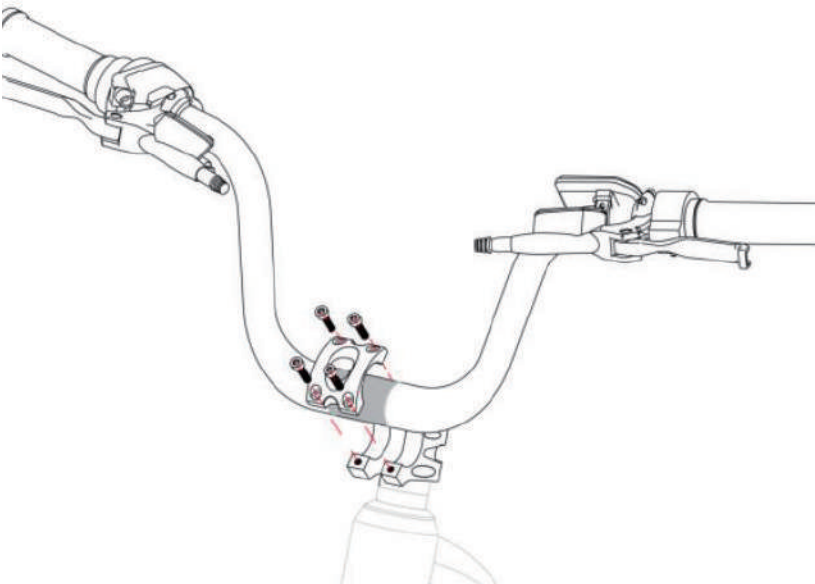
ASSEMBLY

- Read all of the instructions carefully. Be familiar with the proper operation of all items.
- This quick guide is intended to list the steps needed to assemble your bike with some mechanical skills. It is not a complete manual or training. If you do not feel comfortable or lack some of the skills to assemble it yourself, reach out to a cyclist friend, a local bike mechanic or one of our support technicians for guidance.
- Our QA mechanics have assembled and tested your bike beforehand.
- To assemble your bike, work on a clean area with enough space to maneuver.
- If installed, remove the battery from the bike to start the assembly.
- Inspect the bike completely to be sure no damage occurred during shipping.
- The kickstand is designed to support the bicycle only. Not the rider mounted.
- You can adjust your saddle position and the tilt on your handlebar items for comfort.
- Check all screws and parts are tight and properly fixed. We recommend a pre-trip inspection before your first rides.

NOTICE: The following steps are only a general guide to assist in the assembly of your ebike and are not a complete or comprehensive manual of all aspects of assembly, maintenance, and repair. Consult a certified, reputable bike mechanic to assist with assembly, repair, and maintenance of your ebike.

Step 1: Installing the handlebar

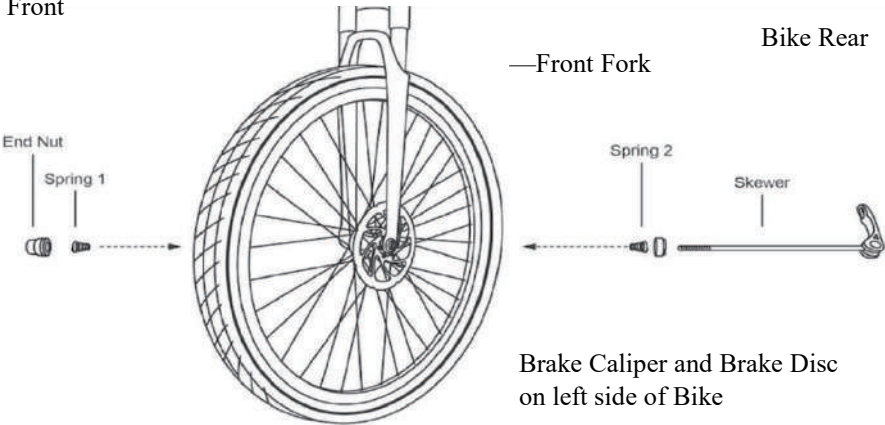
- 1) Place the handlebar in the handlebar mount being careful with the wires.
- 2) Face the mounting brackets on the front end of the mount with the round edges facing outward. Adjust the handlebar angle to your comfortable riding posture.
- 3) Secure the mounting brackets with four screws. (4mm allen wrench with 6Nm strength)
- 4) Verify your front tire lines up with your headset.
- 5) Check whether all headset items are tight.



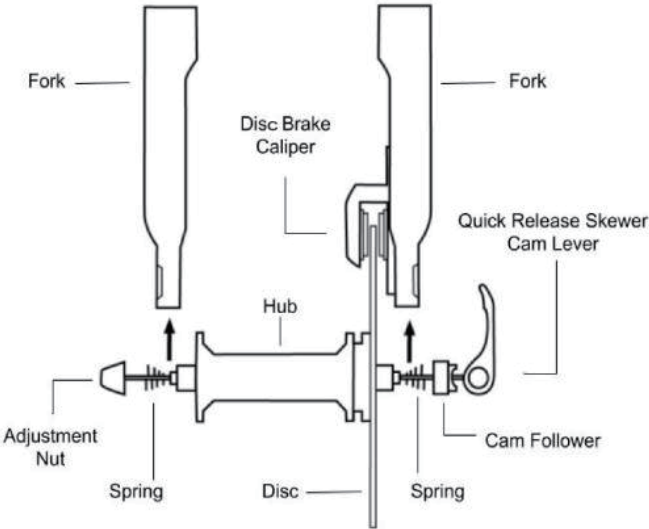
Step 2: Installing the front wheel

- 1) Insert the front wheel in between the front fork on the bike. Be sure the fork is resting on the outside of the axle.
- 2) Align the disk between the brake caliper as shown in below picture.
- 3) Insert the skewer into the wheel axle as seen shown. Keep the spring, cam follower, and lever on the LEFT side, nearest the disk brake. Keep the adjustment nut and spring on the RIGHT side.
- 4) Screw the skewer into the end nut until almost tight.
- 5) Lift the lever up until parallel with the front fork. You should feel the axle tighten into the front forks. Your front wheel is now installed.

Bike Front

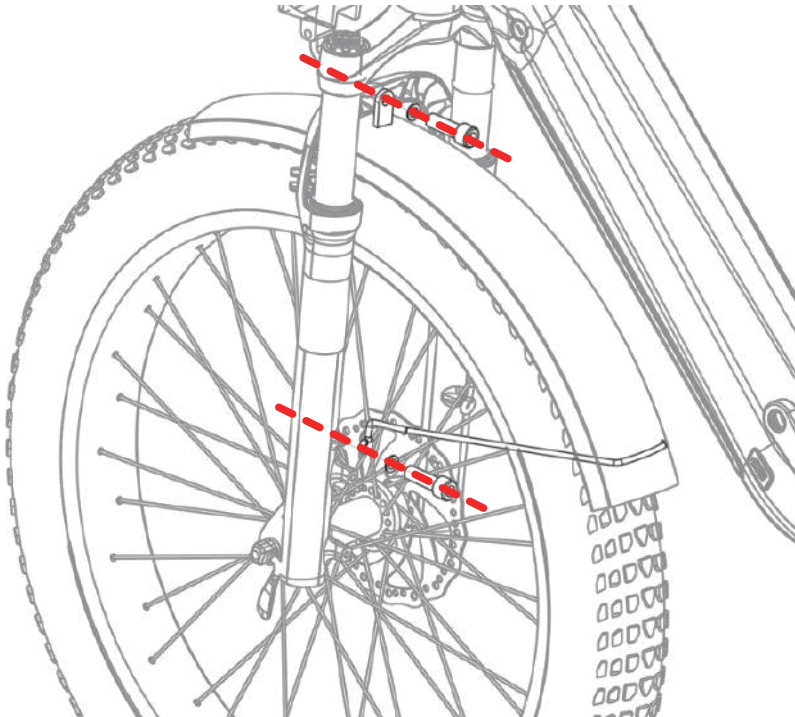


Brake Caliper and Brake Disc
on left side of Bike



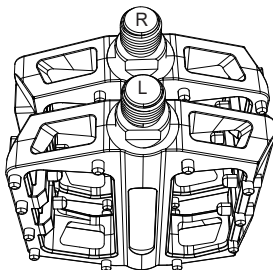
Step 3: Installing Your Front Fender and Headlight

- 1) Install the front fender first. Align the fender clamps on the left and right legs of the fork with the fender stay to enable the fender in the line with the wheel. Fix the stay with the screws provided on the clamp.
- 2) Put the headlight with its bracket in front of the fork gantry, put the lifting lug of the fender behind it. Link and secure the three pieces with the screw provided on the headlight (you might need to secure the opposite nut slightly so the screw doesn't turn).
- 3) Connect the headlight cable with the wire coming from the downtube.

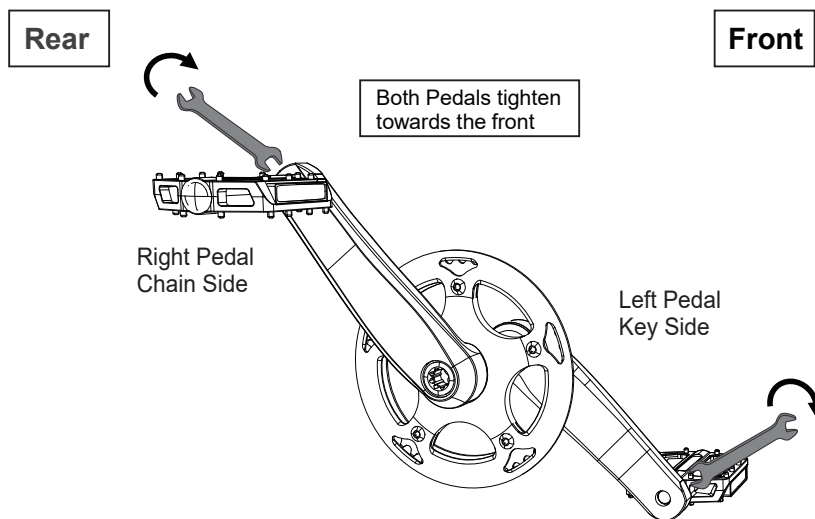


Step 4: Installing the pedals

- 1) **Warning:** Incorrect installation will cause damage. Please read the instructions and watch our videos if needed.
- 2) Identify the Left and Right markings on the pedals. They can only be installed in their respective side.
 - a. L is for the Left Pedal and it goes on the Left Crank Arm.
 - b. R is for the Right pedal and it goes on the Right Crank Arm (Chain Side).



- 3) Sitting on your bike the pedals go on the Left and Right side respectively.
 - 4) Keep the pedal Horizontal while hand screwing to get the thread started. Then Use your 15mm wrench to tighten them.
 - 5) Both pedals tighten towards the front of the bike. The left pedal is reverse threaded to allow this.
- Notice: The pedals need to be very tight (at least 25-35Nm torque), be sure to retighten after your first couple rides.

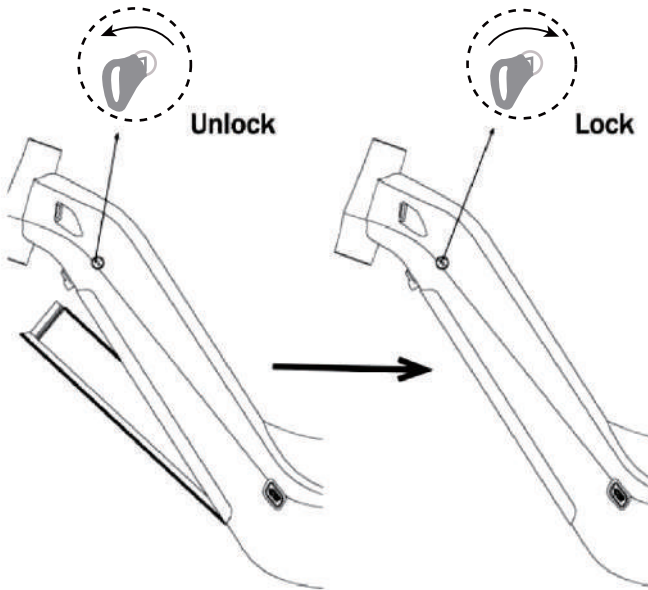


BATTERY CHARGING (LOCK & REMOVAL)

Step 5: Installing and removing the battery

- **To Install the Battery**

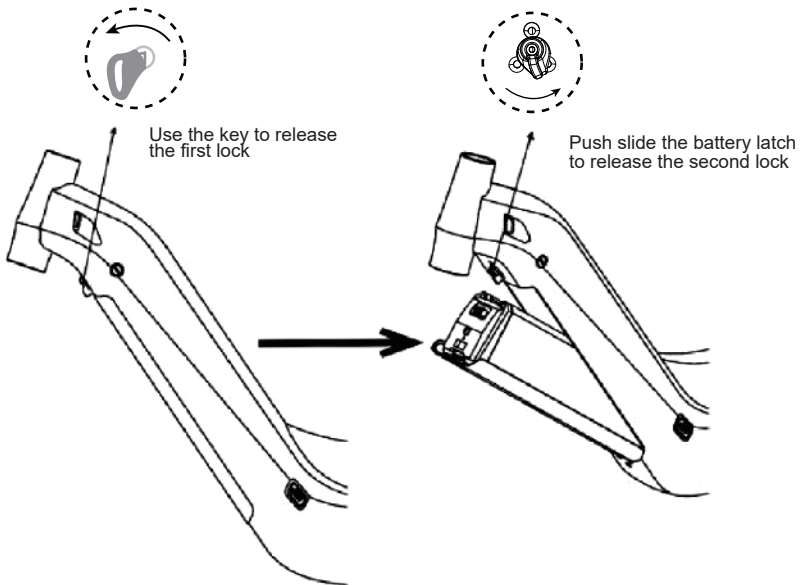
- 1) Turn the key counterclockwise to release the lock.
- 2) Seat the bottom of the battery into the receptacle first and push the upper side of the battery into the frame tightly until it gets locked with a clatter sound. Seat your battery securely, turn the key clockwise to lock the battery. Remove the key from the lock before each ride.



- **To Remove the Battery**

- 1) Turn off the LCD display.
- 2) The battery is secured with a double-lock mechanism. Use the key to release the first lock. Push slide the battery latch under the tube to release the second lock.

Notice: Please hold the battery tight with one hand at least as it will drop off when the lock is released.



HOW TO USE THE DISPLAY

1. Appearance and dimensions



1) Power on/off

Press the  button to turn on the display. Your bike will be ON. Press again to turn it off. The display will automatically shut down when there is no operation or riding for 5 minutes.

2) Adjust the assist level

Short press "+" or "-" button to change the assist level from 0 to 5. 0 is without assist. 5 is the max assist level.

3) Headlight

If your bike is installed with a headlight, press and hold "+" button for 1 second to switch on or switch off the headlight.

4) Walking mode

Press and hold "-" button for 2 seconds to shift into walking mode, the display indicates P and the bike will be propelled at walking pace (3.2 mph). Release the button to exit the walking mode.

5) Information menu

Press the  button for 1 second to shift into information menu, it will show TRIP, ODO and TIME.

6) Parameter setting menu

With the display powered on, if you quickly press the  button twice, it will shift into the parameter setting menu.

Users are NOT supposed to change the factory default settings. You may exit by quickly pressing the  button twice again or leave it without operation for 30 seconds.

HOW TO CHARGE THE BATTERY

There are two ways to charge your battery.

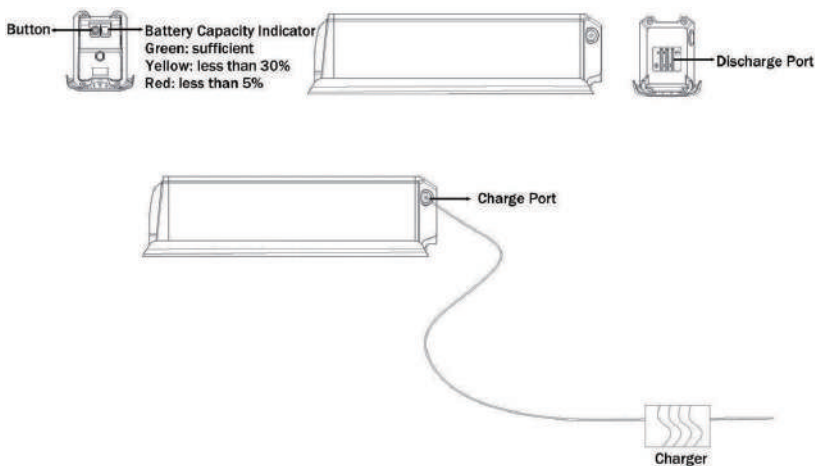
- **Charge the battery ON the bike**

- 1) Find the Charge Port at the bottom of the downtube.
- 2) Pull out the cover to show the charge port and insert the charger output plug into the port. Connect the input plug to the power supply.

- **Charge the battery OFF the bike**

- 1) Take off the battery from your bike.
- 2) Place the battery in a clean and flat place in room temperature.
- 3) Insert the charger output plug into the charge port. Connect the input plug to the power supply.

There is a capacity indicator at the top of the battery. Press the button beside to check the charge status. Green means sufficient of charge. Yellow means less than 30%. Red means less than 5%.



Notes of Charging:

- 1) Use only the charger Model DPLC110V55Y, made by WUXI DPOWER ELECTRONIC CO., LTD.
- 2) Charging time varies from 7 to 8 hours with a standard 2A charger.
- 3) The small LED light on the charger in RED indicates it is in charge; The small LED light on the charger in GREEN indicates it is fully charged.
- 4) Insufficient charging will not influence the battery lifecycle. AVOIDING deep discharge is helpful to protect the battery and extend its lifecycle.
- 5) Pay attention to check whether the surface temperature of the battery case rises too high during charging. It is FORBIDDEN to cover the battery during charging.

6) Due to high temperature in summer time, it is NOT advisable to charge it immediately after riding. In winter, it is FORBIDDEN to charge the battery in environment below 0°C. You are recommended to charge it in room temperature.

7) If the battery will not be used for a long period, take it off from the bike and discharge its capacity to 60%-80% for storage. Disconnect it from the charger and place it in a dry, ventilated place without direct sunlight. In order to maintain a long lifecycle, it is recommended to charge the battery every two months.



Always charge your battery in temperature between 32°F - 104°F (0°C - 40°C) and ensure the battery and charger are not damaged before initiating charge. If you notice anything unusual while charging, please discontinue charging or using the bike and contact Velowave Bike Product Support for help.

BATTERY CHARGING INFORMATION AND BEST PRACTICES

- Check the charger, charger cables, and battery for damage before beginning each charge.
- Be sure to charge in an area where it is clear and safe from any potential damage or tripping situations can occur while it is charging. Always charge your battery in temperature between 32°F - 104°F (0°C - 40°C).
- The battery should be recharged after each use, so it is ready to go the full range for your next ride. There is no memory effect, so charging the battery after short ride will not cause damage.
- Charging time varies from 7 to 8 hours with a standard 2A charger.
- The indicator light on the charger will show red light while the battery charges. When charging is complete, the indicator light will turn green. Ensure the light faces upward when charging.
- Remove the charger from the battery within one hour of the green light indicating a complete charge.
- The charger is designed to automatically stop charging when the battery is full, but unnecessary wear of the charging components could occur if the charger is left attached to the battery and a power source for longer than 12 hours.
- Never charge a battery for more than 12 hours at a time.
- DO NOT leave a charging battery unattended.
- Due to high temperature in summer time, it is NOT advisable to charge the battery immediately after riding. In winter, it is FORBIDDEN to charge the battery in environment below 0°C. You are recommended to charge it in room temperature.
- If the battery will not be used for a long period, take it off from the bike and discharge its capacity to 60%-80% for stock. Disconnect it from the charger and place it in a dry, ventilated place without direct sunlight. In order to maintain a long lifecycle, it is recommended to charge the battery every two months.



Failure to follow Battery Charging Information could result in unnecessary wear to the charging components, battery, and or charger, and could lead to an underperforming or non-functional battery and replacement will not be covered under warranty.

CHARGER SAFETY INFORMATION

- The charger should only be used indoors in a cool, dry, ventilated area, on a flat, stable, hard surface.
- Avoid charger contact with liquids, dirt, debris, or metal objects. DO NOT cover the charger while in use.
- Store and use the charger in a safe place away from children.
- DO NOT charge the battery with any chargers other than the one originally supplied by Velowave Bike or a charger designed for use with your specific bike purchased directly from Velowave Bike.
- The charger works on 110/240V 50/60 Hz standard home AC power outlets and automatically detects and accounts for incoming voltage. DO NOT open the charger or modify voltage input.
- DO NOT yank or pull on the cables of the charger. When unplugging carefully remove both the AC and DC cables by pulling on the plastic plugs directly, and not on the cables.
- The charger is expected to get relatively warmer as it charged. If the charger gets too hot to touch, you notice a strange smell, or any other indicator of overheating, discontinue using the charger and contact VelowaveSupport.



Charge the battery only with the charger originally supplied with the bike from Velowave Bike, or a charger purchased directly from Velowave Bike, designed for use with your specific bike model, as approved by Velowave Bike. Never use an aftermarket charger, which can result in damage, serious injury, or death.

LONG TERM BATTERY STORAGE

If storing your bike from Velowave Bike for longer than 2 weeks at a time, follow the instructions below to maintain the health and longevity of your battery.

- Charge (or discharge) the battery to approximately 60%-80% charged.
- DO NOT leave the battery attached to the bike frame. Remove it from the bike during long-term storage.
- Store the battery in a dry, climate controlled, indoor location between 32°F - 104°F (0°C -40°C).
- Check the battery every month, and if necessary, charge the battery to 60%-80% charged.



Please follow the above instructions for storing your bike and battery from Velowave Bike. Failure to follow proper battery storage procedures can result in a non-functional battery. Replacement will not be covered under warranty.



If the battery is physically damaged, non-functional, performing abnormally, or was dropped or involved in a crash, with or without obvious signs of damage, please discontinue use or charging and contact Velowave Bike immediately.



DO NOT cover up the charger while it is charging. The charger air cools and needs to be on a hard, flat surface in an open space. Use the charger with the indicator lights facing upward. DO NOT use with the charger inverted, which can inhibit cooling and reduce charger lifespan.



DO NOT open the battery housing, which will void the warranty and can result in damage to the battery, property or cause serious injury and/or death.

PARKING, STORAGE AND TRANSPORTATION

- Please follow these basic parking, storage and transport tips to ensure your bike is well cared for on and off the road.
- When pushing the vehicle manually, turn off the power to avoid accidental acceleration from the motor.
- It is recommended to park indoors.
- Switch the power off, and any lights to conserve battery. Remove the key from the bike and ensure the battery is locked to the frame or removed and brought with you for security.
- In public places, your Velowave bike must be parked in accordance with local rules and regulations.
- If you must park outdoors in rain, or wet conditions you should only leave your Velowave bike outside for a few hours and proceed to park the bike in a dry location afterwards to allow all the systems to dry out. Much like a regular bike, use in wet conditions mandates a more regular maintenance schedule to ensure your bike does not become rusty, corroded and to ensure all systems are always working safely.
- Do not park, store, or transport your Velowave bike on a rack that is not designed for the size and weight of the bike.
- Wide tires, as used on Velowave bike, cannot fit into all bike racks, please select an appropriate rack for the width of tires used on your bike.
- Locking up your bike is recommended to ensure your bike is secure and the chance of theft is reduced. Velowave bike makes no claims or recommendations on the proper lock hardware or procedures to secure your bike, but we do recommend you take the appropriate precautions to keep your Velowave bike safe from theft.
- When storing your bike or carrying your bike on a rack for transport, you can remove the battery pack to reduce the weight of the bike and make lifting and loading easier.

MAINTENANCE



If you do not have the experience, skill, and tools to complete maintenance and adjustment of your bike, Velowave Bike strongly recommends having a certified, reputable bike mechanic maintain, tune, and ensure the bike is safe to ride.

Recommended Service Intervals

Regular inspection and maintenance are key to ensure Velowave bike function as intended, and to reduce wear and tear on their systems. Recommended service intervals are meant to be used as guidelines. Real world wear and tear, and the need for service, will vary with conditions of use. We generally recommend inspections, service, and necessary replacements be performed at the time or mileage interval that comes first in the following table.

Interval	Inspect	Service	Replace
Weekly, 160-321 km (100-200 mi)	• Check hardware for proper torque. • Check drivetrain for proper alignment and function (including the chain, freewheel, chainring, and derailleur). • Check wheel trueness and for quiet wheel operation on (without spoke noise). • Check condition of the frame for any damage.	• Clean frame by wiping frame down with damp cloth. • Use barrel adjuster(s) to tension derailleur/brake cables if needed.	• Replace any components confirmed by Velowave Bike Product Support or a certified reputable bike mechanic to be damaged beyond repair or broken.
Monthly, 322-1287 Km (200-800 mi)	• Check brake pad alignment, brake cable tension. • Check bike is shifting properly, proper derailleur cable tension. • Check chain stretch. • Check brake and shifter cables for corrosion or fraying. • Check spoke tension. • Check accessory mounting (rack mounting bolts, fender hardware, and alignment).	• Clean and lubricate drivetrain. • Check crankset and pedal torque. • Clean brake and shifting cables. • True and tension wheels if any loose spokes are discovered.	• Replace brake and shifting cables if necessary. • Replace brake pads if necessary.
Every 6 Months, 1287-2092 km (800-1300 mi)	• Inspect drivetrain (chain, chainring, freewheel, and derailleur). • Inspect all cables and housings.	• Standard tune-up by certified, reputable bike mechanic is recommended. • Grease bottom bracket.	• Replace brake pads. • Replace tires if necessary. • Replace cables and housings if necessary.

Pre-Ride Safety Checklist

Notice: Before every ride, and after every 25-45 miles (40-72 km), we advise following the pre-ride safety checklist.

Safety Check	Basic Steps
Brakes	Ensure front and rear brakes work properly. Check brake pads for wear and ensure they are not overworn. Ensure brake pads are correctly positioned in relation to the rims. Ensure brake cables are lubricated, correctly adjusted, and display no obvious wear. Ensure brake levers are lubricated and tightly secured to the handlebar. Test that the brake levers are firm and that the brake, motor cutoff functions, and the brake light are functioning properly.
Wheels and Tires	Ensure tires are inflated within the recommended limits posted on the sidewalls and hold air. Ensure tires have good tread, have no bulges or excessive wear, and are free from any other damage. Ensure rims run true and have no obvious wobbles, dents, or kinks. Ensure all wheel spokes are tight and not broken. Check axle nuts and front wheel quick release to ensure they are tight. Ensure the locking lever on the quick release skewer is correctly tensioned, fully closed, and secured.
Steering	Ensure the handlebar and stem are correctly adjusted, tightened, and allow proper steering. Perform a handlebar twist test (as step 13 shows) to ensure the stem clamp bolt's security. Ensure the handlebar is set correctly in relation to the fork and the direction of travel.
Chain	Ensure the chain is clean, oiled, and runs smoothly. Extra care is required in wet, salty/otherwise corrosive, or dusty conditions.

Bearings	Ensure all bearings are lubricated, run freely, and display no excess movement, grinding, or rattling. Check headset, wheel bearings, pedal bearings, and bottom bracket bearings.
Cranks and Pedals	Ensure pedals are securely tightened to the cranks. Ensure the cranks are securely tightened and are not bent.
Deraillieur and Mechanical Cables	Check that the deraillieur is adjusted and functioning properly. Ensure shifter and brake levers are attached to the handlebar securely. Ensure all shifter and brake cables are properly lubricated.
Frame, Fork, and Seat	Check that the frame and fork are not bent or broken. If either frame or fork are bent or broken, they should be replaced. Check that the seat is adjusted properly, and seat post quick release lever is securely tightened.
Motor Drive Assembly and Throttle	Ensure hub motor is spinning smoothly and motor bearings are in good working order. Ensure all power cables running to hub motor are secured and undamaged. Make sure the hub motor axle bolts are secured and the torque arm, torque arm bolt, and torque washers are in place.
Battery	Ensure battery is charged before use. Ensure there is no damage to battery. Lock battery to frame and ensure that it is secured. Operating range of the battery, between 4°F - 113°F (-20°C -45°C), In a clean, dry and ventilated environment where the relative humidity is not more than 75%, avoid contact with corrosive substances and stay away from fire and heat sources Charge and store bike and battery in a dry location, between 32°F - 104°F (0°C -40°C). Let bike dry completely before using again.
Electrical Cables	Look over connectors to make sure they are fully seated and free from debris or moisture. Check cables and cable housing for obvious signs of damage. Ensure headlight, taillight, and brake light are functioning, adjusted properly, and unobstructed.
Accessories	Ensure all reflectors are properly fitted and not obscured. Ensure all other fittings on bike are properly secured and functioning. Inspect helmet and other safety gear for signs of damage. Ensure rider is wearing a helmet and other required riding safety gear. Ensure mounting hardware is properly secured if equipped with a front rack, rear rack, basket, etc. Ensure the taillight and taillight power wire are properly secured if fitted with rear rack. Ensure the fender mounting hardware is properly secured if fitted with fenders. Ensure there are no cracks or holes in fenders.

Tire Information

Ranger Step Thru uses 26 x 4.0 inch rubber tires with inner tubes. The tires are designed for durability and safety for regular cycling activities and to be checked before each use for proper inflation and condition. Proper inflation, care, and timely replacement will help to ensure that your bike's operational characteristics will be maintained, and unsafe conditions avoided.

Velowave Bike recommends 20-30 PSI for the stock tires on Ranger Step Thru. Always stay within the manufacturer's recommended air pressure range as listed on the tire sidewall.



It is critically important that proper air pressure is always maintained in pneumatic tires. Do not underinflate or overinflate your tires. Low pressure may result in loss of control, and overinflated tires may burst. Failure to always maintain the air pressure rating indicated on pneumatic tires may result in tire and/or wheel failure.

Deraillieur

On the right side of handlebar, next to the brake lever, you can see a rotary shifter with 7-1 gears. It is deraillieur shifter. By rotating the shifter, you can make the chain move to different gears to change your riding experience.

TROUBLE SHOOTING

SYMPTOMS	POSSIBLE CAUSES	MOST COMMON SOLUTIONS
• Throttle and pedal assist not working	• Battery off	• Turn on battery
	• Battery installation	• Reseat battery
	• LCD display not on	• Turn on LCD display
	• Discharged battery	• Charge battery
	• Brake sensors engaged	• Inspect brake lever
• Reduced speed	• Low battery power	• Charge battery

• Reduced battery range	• Low battery power	• Charge battery
	• Low tire pressure	• Inspect tire
	• Heavy load on bike	• Adjust bike load
	• Driving on rough terrain	• Adjust route
	• Using throttle only	• Include pedal assist
• Battery does not charge	• Charger not properly connected	• Inspect connections
	• Battery temperature	• Read the user manual for best practices
	• Damaged charger	• Replace charger
	• Issue with battery	• Contact Support Team
• E-bike making strange noises	• Loose hardware	• Tune-up and inspection needed
	• Issue on drivetrain	• Maintenance needed
	• Issue with motor	• Contact Support Team

LIMITED WARRANTY

At Velowave Bike, we take great pride in the quality and durability of our products. We're confident that you will be impressed as well, and we stand behind all of our products.

Every ebike we sell is covered by a limited warranty against manufacturing defects subject to the terms below:

COVERED PRODUCTS

- This warranty applies only to products, parts, and components (hereafter PRODUCTS) that have been manufactured, assembled, or sold in new condition by Velowave Bike.
- This warranty applies only to replacement/repair of PRODUCTS in case of a manufacturing flaw in materials or workmanship, in accordance with the Scope of Warranty Service, and subject to any and all exclusions, limitations, and procedures explained below.
- This warranty is not transferable in any way and may not be exercised by anyone other than the original retail buyer (hereafter BUYER) of the PRODUCTS, only if the BUYER has retained constant ownership of the PRODUCTS since their original purchase of the PRODUCTS and only to PRODUCTS purchased in new condition either.

WARRANTY PERIOD

- Battery packs are covered for a period of 2- year on manufacturer defects only. We DO NOT cover wear and tear or USAGE on your battery.
- Other electronic components are covered under warranty for a period of 2- year from the date of purchase.
- Bicycle frames are covered by a 2-year warranty against manufacturing defects.
- Mechanical components are covered by a 1-year warranty against manufacturing defects.
- For all PRODUCTS, this warranty period is counted from the date the PRODUCTS were delivered to the BUYER unless excluded from warranty or otherwise voided from coverage under warranty.
- New Bike Guarantee - we offer full replacement of defective parts with free shipping within the first 30 days of your bike order. After 30 days the customer is responsible for all return shipment costs to Velowave. Velowave Bike will pay for shipping to the customer only.

WARRANTY EXCLUSIONS

The intent of this warranty is to ensure that the BUYER of any new PRODUCTS sold by Velowave or any Velowave product sold by an authorized dealer will receive a quality product, free of manufacturing flaws. This warranty should not be considered to be an insurance policy against any damage occurring after the products are received, nor as explicit or implicit acceptance by Velowave of responsibility for the consequences resulting from the failure of any PRODUCTS, irrespective of whether the failure itself is covered by this warranty.

- In addition, the following situations are excluded from this warranty or lead to exclusion from this warranty:
- Normal wear and tear of the covered components.
- Consumables or normal wear and tear parts (including without limitation tires, tubes, brake pads, cables and housing, grips, chain and spokes).
- PRODUCTS with technical alterations that have been made without the approval of the manufacturer.

- PRODUCTS with alterations to or additions to which use incompatible or non-original parts.
- Damage to or failure of PRODUCTS resulting from weather or ordinary wear and tear.
- Theft, robbery, vandalism, intentional damage, damage resulting from bumps and scrapes after possession of the PRODUCTS has been transferred to the BUYER.
- PRODUCTS that haven't been manufactured or sold by Velowave.
- Incidental/consequential damage or injury.
- PRODUCTS that have been used or transported inappropriately or improperly (e.g., by loading a Velowavebike above the maximum weight recommendation).
- PRODUCTS with damage resulting from improper maintenance (e.g., storing battery fully discharged over the winter).
- Any electrical component that has been opened, altered, partially disassembled, or completely disassembled except by Velowave or an authorized Velowave dealer.
- Any PRODUCTS that have been disassembled in a manner not authorized by Velowave or that have had repairs attempted by anyone not authorized by Velowave.
- PRODUCTS that have been damaged due to improper adjustment or worn components.
- PRODUCTS with damage resulting from an accident.
- PRODUCTS that have been lent, leased, or rented commercially.
- Warranty shall not apply to PRODUCTS and/or situations in accordance with the terms of a specific sale (e.g., scratches and dents to scratch & dent discounted merchandise).
- Cleaning of any PRODUCTS.
- PRODUCTS that were not purchased by BUYER in new condition.
- Velowave will not pay for any third-party service or part replacement unless agreed upon prior to the fix.
- Velowave will not pay for return shipping on any damaged or defective product or component.
- Velowave will not cover any damage resulting in the use of a third-party battery charger.

Determining whether damage or defect to an ebike or covered component is protected by this limited warranty shall be in the sole discretion of Velowave.

THE SCOPE OF WARRANTY SERVICE

In case of a warranty claim within the warranty period for a non-excluded situation Velowave agrees to repair or replace the failed warranted PRODUCTS with equivalent parts/accessories/ components at the discretion of Velowave, by Velowave, an authorized Velowave dealer, or by a third-party with the approval of Velowave. Replacement parts may not be identical to those being replaced.

Any additional non-warranty work done concurrently with a warranty repair/replacement will be subject to ordinary parts/ labor fees. This includes anything not included by the warranty as well as anything excluded from the warranty.

No service, repair, or parts replacement provided under warranty will extend the original warranty period.

Credit Card Chargebacks

If any PRODUCT purchase becomes subject to a credit card chargeback in any amount, and you are still in possession of the PRODUCT, then this Limited Warranty shall be invalidated until the credit card chargeback has been resolved.

Warranty Claims Process

- If you suspect that any part/component is defective, do not attempt to repair or replace it yourself or to have it repaired or replaced before contacting Velowave—doing so may invalidate your warranty and may cause additional damage, not necessarily limited to the PRODUCTS in question, and may also create the risk of injury.
- Contact Velowave via email to submit your warranty claim: support@velowavebikes.com. Velowave Bike will not replace any part without first seeing photos or video of the damaged part.

- We will contact you to make plans for inspection and any warranty repairs.
- All claims to this warranty must be made through Velowave Bike. Proof of purchase may be required with any warranty request. Before making a warranty claim, we suggest that you contact our Technical Support team at support@velowavebikes.com as there may be a simple fix for your problem. Valid warranty claims will be processed through Velowave Bike within the respective warranty period.

SHIPPING DAMAGE CLAIMS

IMMEDIATELY inspect your product(s) for damage. Freight damage claims are extremely time sensitive. We will not accept freight damage claims later than 14 days from receipt of the product. Note any damage to your product(s) on the Bill of Lading before you and the driver sign-off on the shipment. Take pictures of any damage that is found, and date the images when possible. Keep all packaging and paperwork until the inspection process is complete. Whenever possible, report damage claims within 10 days of delivery to a Velowave Bike's customer support representative. Please contact our Customer Support team for return/replacement instructions at: support@velowavebikes.com.

THE REMEDIES DESCRIBED ABOVE ARE YOUR SOLE AND EXCLUSIVE REMEDIES AND VELOWAVE'S ENTIRE LIABILITY FOR ANY BREACH OF THIS LIMITED WARRANTY. VELOWAVE'S LIABILITY SHALL UNDER NO CIRCUMSTANCES EXCEED THE ACTUAL AMOUNT PAID BY YOU FOR THE EBIKE, NOR SHALL VELOWAVE UNDER ANY CIRCUMSTANCES BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES OR LOSSES, WHETHER DIRECT OR INDIRECT.

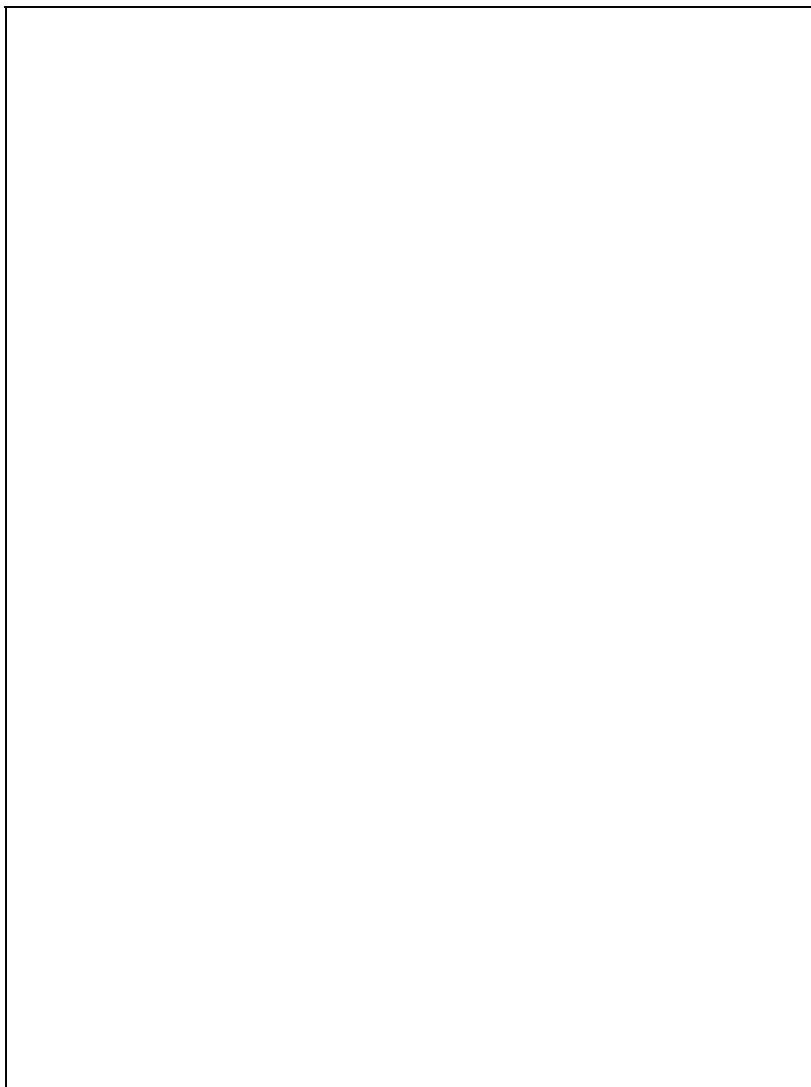
SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

TO THE EXTENT PERMISSIBLE UNDER APPLICABLE LAW, VELOWAVE DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE FOR THE DURATION OF THIS EXPRESS LIMITED WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

PRODUCT INFORMATION LABEL

A large, empty rectangular box with a thin black border, intended for a product information label. The box is oriented vertically and occupies most of the page area below the header.

www.velowavebikes.com
support@velowavebikes.com