



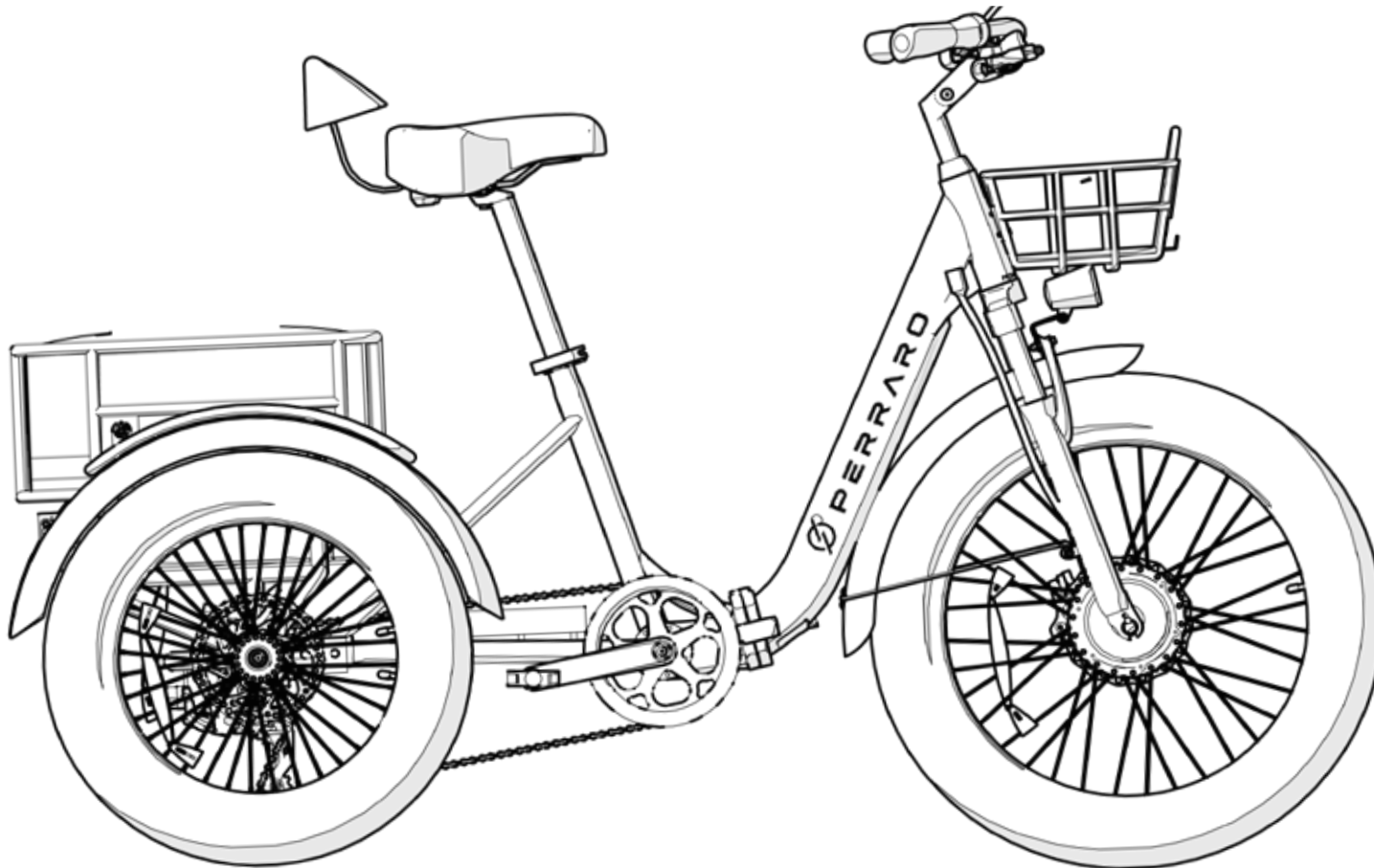
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info@perrarolectricbike.com



PANDA ELECTRIC TRIKE USER MANUAL

V1.1 2024

To prevent PROPERTY DAMAGE, SERIOUS INJURY, or DEATH, you should read, understand, and follow the warnings and instructions in this manual. Keep for future reference

INTRO.

WELCOME TO THE PERRARO ELECTRIC BIKE FAMILY

Thank you for purchasing a Perraro Panda Electric Trike.

Please read this Owner's Manual carefully before setting up your eTrike and riding. You should become thoroughly familiar with the proper operation of your Panda Electric Trike, its features, capabilities, and limitations. To ensure a long, trouble-free life for your Perraro Electric Trike, provide it with the proper care and maintenance as described in this manual. Of course, it is not practical or possible to warn you about all of the hazards associated with operating or maintaining your Perraro Electric Trike; for this, you must use your own good judgment.

For replacement parts and accessories, you should always use Perraro Electric Trike approved parts, as they have been specially designed for your bicycle and manufactured to meet Perraro Electric Trike's demanding standards.

This manual should be considered a permanent part of your bicycle and should remain with the bicycle when it is sold. If you need any assistance, please do not hesitate to contact us.

CONTACT INFORMATION:

EMAIL: CONTACT@PERRAROELECTRICBIKE.COM

PHONE: 949-414-8003

WEBSITE: WWW.PERRAROELECTRICBIKE.COM

PERRARO HELP CENTER: SUPPORT@PERRAROELECTRICBIKE.COM

FRAME NUMBER:

PLEASE RECORD YOUR BICYCLE'S FRAME NUMBER IN THE SPACE BELOW. THE SERIAL NUMBER IS LOCATED ON THE HEAD TUBE OF YOUR BICYCLE. REFER TO "FRAME NUMBER" FOR THE LOCATION OF THE SERIAL NUMBER.



CONTENTS.

01. IMPORTANT SAFETY INFORMATION	6
02. INTRODUCTION	12
03. ASSEMBLY	14
04. FEATURES	24
05. LCD DISPLAY	28
06. YOUR FIRST RIDE	34
07. BATTERY INFORMATION	36
08. MOVING AND STORING YOUR ETRIKE	42
09. TROUBLESHOOTING	44
10. MAINTENANCE	46
11. LEGAL	48

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01 IMPORTANT SAFETY INFORMATION

Welcome to Your New Ride! Before you embark on your journey, we encourage you to take a moment to read through this guide. It's filled with vital information to ensure your riding experience is both safe and enjoyable.

Safety First!

- **Check Your Trike:** Prior to each ride, perform a quick inspection. Ensure that the brakes, tires, and electric components are functioning properly.
- **Know the Risks:** Be mindful that cycling carries inherent risks. Stay alert and prioritize safety.
- **Electric Specifics:** Your electric trike has special features, such as a battery and motor. Treat these components with extra care to prevent hazards like fire or electric shock.

Riding Right

Start Slow: Familiarize yourself with your trike's handling and braking dynamics before riding at full speed.

Follow the Rules: Adhere to traffic laws and ride responsibly, just as you would with any bicycle.

Maintenance Matters

Interested in deepening your knowledge about maintenance or riding techniques? Explore classes or resources available at your

Learning More

- **Regular Check-Ups:** Similar to a car, your bike requires consistent maintenance. Regular check-ups help prevent future issues.
- **Need Help?** If you're uncertain about any aspect of your bike, seek advice from a professional at your local bike shop or reach out to us for assistance.

Understanding Your Legal Responsibilities as a Rider Stay informed and safe! Riding your Perraro Electric Bike is not only about enjoyment; it also involves being aware of and complying with the rules.

Key Regulations to Check:

- **Minimum Age:** Ensure you meet the legal age requirement for riding.
- **License Requirements:** Find out if a driver's license or special permit is necessary.
- **Insurance and Registration:** Determine if insurance is required and whether your bike needs a license plate.
- **Traffic Laws:** Abide by the same rules that apply to other vehicles on the road.
- **Speed Limits:** Be aware of the maximum speed limits for electric bikes.
- **Different Places, Different Rules:** Be aware that the regulations for riding an electric bike can vary from state to state and city to city.

YOUR RESPONSIBILITY:

As a rider, it's your duty to understand and obey these laws. Ignorance of the law is not a valid excuse and non-compliance can lead to legal repercussions.combined with another logo, mark, graphic or other visual element

Understanding the Intended Use of Your Perraro Electric Bike Purpose and Safety First Your Perraro Electric Bike is a great mode of transport and leisure but remember, it's essential to use it the way it's meant to be used. This ensures your safety and keeps the bike in good condition.

Who Can Ride:

- **Adults Only:** This bike is designed for adult riders.
- **Experienced Cyclists Preferred:** Ideally, the rider should already be confident and skilled in cycling on paved surfaces.

Where You Should Ride:

- **Opt for Paved Surfaces:** The bike is perfect for paved roads, bike lanes, and smooth paths. It's ideal for general transportation and recreational purposes.
- **Avoid Pedestrian Paths:** It's not meant for pedestrian lanes or sidewalks.

Activities to Avoid:

- **No Off-Roading or Jumping:** This electric bike isn't designed for rough terrain, mountain biking, or any form of jumping.
- **Suspension is Just for Comfort:** The bike might have suspension features, but these are intended to make your ride smoother on normal roads, not for rugged use.
- **Safety Reminder:** Using your electric bike for anything other than its intended use can lead to serious injury or even death. Always ride responsibly and within the bike's capabilities.

Safety Messages



To ensure your well-being and prevent serious injury or even death, it's important to adhere to the following safety guidelines:

General Safety

- Carefully read and understand all safety warnings and instructions.
- Ride within both your own capabilities and the limits of your Perraro Electric Bike.
- This bike is intended for users who are at least 18 years of age. Riders must possess the necessary physical coordination, reaction skills, and mental capabilities to safely control a bicycle, navigate traffic, handle road conditions, and respond to sudden situations while complying with laws and safety instructions.

Health and Substance Use

- Avoid riding under the influence of drugs and/or alcohol.
- Consult with a doctor if you have any medical conditions or issues that could affect your safety while engaging in physical activities. This includes, but is not limited to, pregnancy, heart or respiratory conditions, back or joint problems, high blood pressure, difficulty with physical exercise, or any restrictions on physical activity.

Bike Safety and Maintenance

- Keep small bike parts out of reach of children to prevent choking.
- Never modify your bike's frame or other components. Avoid sanding, drilling, filing, or removing parts, and do not install incompatible hardware.
- Use proper lifting techniques when handling your trike, as it may be heavier than traditional bikes without a battery and motor.

01 IMPORTANT SAFETY INFORMATION

Helmet Use

- Wearing a helmet is crucial. Choose a helmet that meets or exceeds CPSC standards and check the accompanying manual for proper use.
- Ensure your helmet fits securely and comfortably. It shouldn't rock forward, backward, or side to side.
- If you're using a child's seat, make sure the child wears a properly fitted helmet at all times.
- Familiarize yourself with your helmet's manual for correct adjustment and fitting instructions.

Follow Electric Trike Regulations

- Be aware of and adhere to electric trike regulations in your area. These may include specific rules about where you can ride, minimum rider age, and required equipment. It's your responsibility to know and follow these local regulations.

Riding Safely and Responsibly

- Keep both hands on the handlebars and brake levers within reach at all times.
- Avoid distractions while riding. Refrain from using mobile phones, music players, or other technologies that can divert your attention.
- Never ride while using headphones or a cell phone to talk or text.

- Ride defensively, keeping an eye out for potential hazards that could cause sudden swerves or loss of control. Be cautious when braking and steering simultaneously.
- **Anticipate and Brake** Early When riding your Electric Trike, remember it may be moving faster and is heavier compared to a regular bicycle. This means you need to react and brake earlier. Be aware that other road users might not expect you to be traveling at higher speeds, which increases the risk of a crash.
- **Approaching Corners** Stop pedaling well before you reach corners to avoid entering them too quickly. Pay extra attention to terrain conditions, as you might approach obstacles faster than you expect.
- **Riding at Night** Nighttime riding poses more risks due to decreased visibility. Increased caution is advised during these conditions.
- **Use Lights:** Turn on the front headlight and rear taillight for better visibility. Make sure they are adjusted so other people on the road can see them clearly. Check your front and rear wheel reflectors as well.
- **Wear Reflective Clothing:** Enhance your visibility by wearing reflective gear. Consider attaching additional flashing lights to your clothing or helmet.
- **Riding in Wet** Conditions Wet conditions require extra caution as braking and stopping distances increase, and tires may slip when turning. The risk of crashing is significantly higher in wet weather.
- **Trike's Water Resistance:** Your Electric Trike can handle light rain and small splashes. However, it is not designed for heavy rain or submersion in water. Its components are rated IP65, and water damage is not covered under the warranty.

PRE-RIDE SAFETY CHECKLIST

It's crucial to go through a pre-ride safety checklist before and after each ride. Ensuring that all components of your trike are in good working order is key to a safe and enjoyable ride. This checklist is not a substitute for a detailed service manual. Always refer to your owner's manual before riding or repairing your trike. If you're not confident in performing these checks, we recommend having a detailed safety check

- Inspect for Damage:** Before each ride, check your Electric Trike for any damage. Do not ride if any damage is found..
- Axles Security:** Verify that the front and rear axles are securely fastened.
- Tire Pressure Check:** Ensure the front and rear tire pressure is within the recommended range indicated on the tire sidewall.
- Brake Functionality:** Test the brake levers to confirm that the brakes are functioning properly. Adjust if necessary.
- Visual Inspection:** Look over the trike for any signs of damage or unusual aspects.
- Lighting:** Turn on the lights, particularly important for night riding.
- Hardware Tightness:** Confirm all hardware is tightened according to the recommended torque specifications in the owner's manual.
- Frame Folding Latch:** Check that the frame folding latch is securely closed and locked.
- Handlebar Stem:** Verify that the handlebar stem is inserted past the minimum insertion point, indicated near the bottom of the stem.
- Stem Clamp Bolt:** Check that the handlebar Stem Clamp Bolt is closed and tightened to 10-12 N•m and the Stem Riser to 20 N•m or until it leaves an impression on your hand.
- Seat Post:** Ensure the seat post is inserted past its minimum insertion point, indicated on the post.``
- Seat Post Collar and Clamp:** Confirm the seat post collar and clamp are closed and tightened to 20 N•m or until it leaves an impression on your hand..
- Seat Position:** Check that the seat cannot be twisted out of position and set its height for easy mounting and dismounting.
- Chain Condition:** Examine the chain for cleanliness and lubrication needs.
- Helmet and Visibility:** Always wear a helmet and high-visibility clothing.
- Weight Limits:** NEVER exceed the total maximum weight limit of 415 lbs. (188 kg). This includes a maximum of 75 lbs. (34 kg) on the rear rack, 35 lbs. (16 kg) on the front rack, and a rider weight maximum of 330 lbs (150 kg).
- Cargo Management:** Carry only necessary cargo, as extra weight impacts battery life and trike handling.
- Component Security:** Ensure all components, including the battery, are properly secured and that the battery is fully charged.

01 IMPORTANT SAFETY INFORMATION

Congratulations on Your New Perraro Electric Trike!

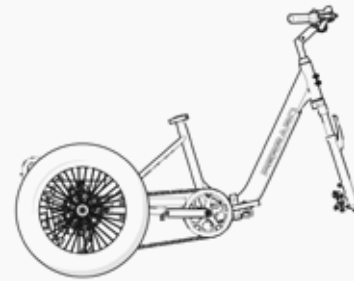
We are thrilled that you have chosen a Perraro Electric Trike for your cycling adventures. Inside your box, you will find your trike along with various related accessories. To ensure a smooth start, follow these initial steps:

- Before you start removing the packing foam, carefully take out all the parts from the box. This is a crucial step to verify that all components are present and accounted for.
- If you notice any parts missing or any damage, please don't hesitate to get in touch with Perraro customer service immediately at support@perraroelectricbike.com for assistance.

Your Perraro Electric Trike arrives 85% preassembled, making the final setup more convenient for you. While the remaining assembly can be completed by yourself, we strongly recommend seeking professional help for this process. Opting for a local, certified trike mechanic not only guarantees the best performance of your trike but also ensures your safety during rides.

- Opt for a local, certified trike mechanic to ensure that your trike is assembled correctly and safely. This not only guarantees the best performance of your trike but also ensures your safety during rides.
- Before removing the packaging material from your bicycle, remove all items from the box and make sure you have the following:

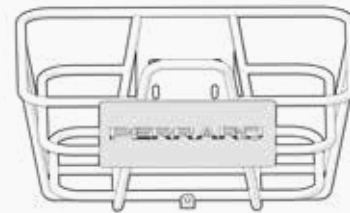
What is in the box



1 x Panda Electric Trike



1 x Front Wheel & Hub Motor



1 x Front Basket

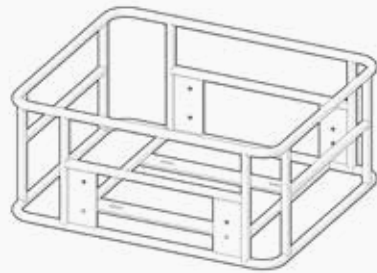


1 x Backrest Seat

What is in the box



1 x Cooler Bag



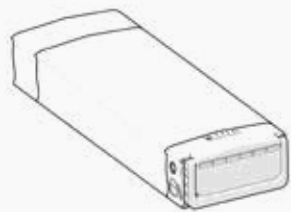
1 x Rear Basket



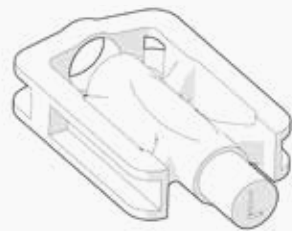
3 x Fender



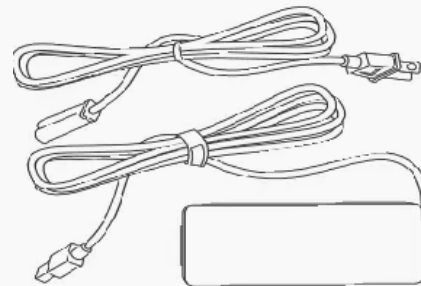
2 x Fender Holder



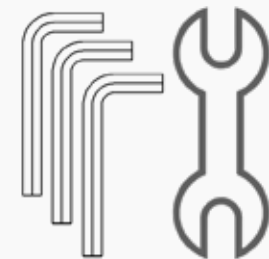
1 x Battery



2 x Pedal

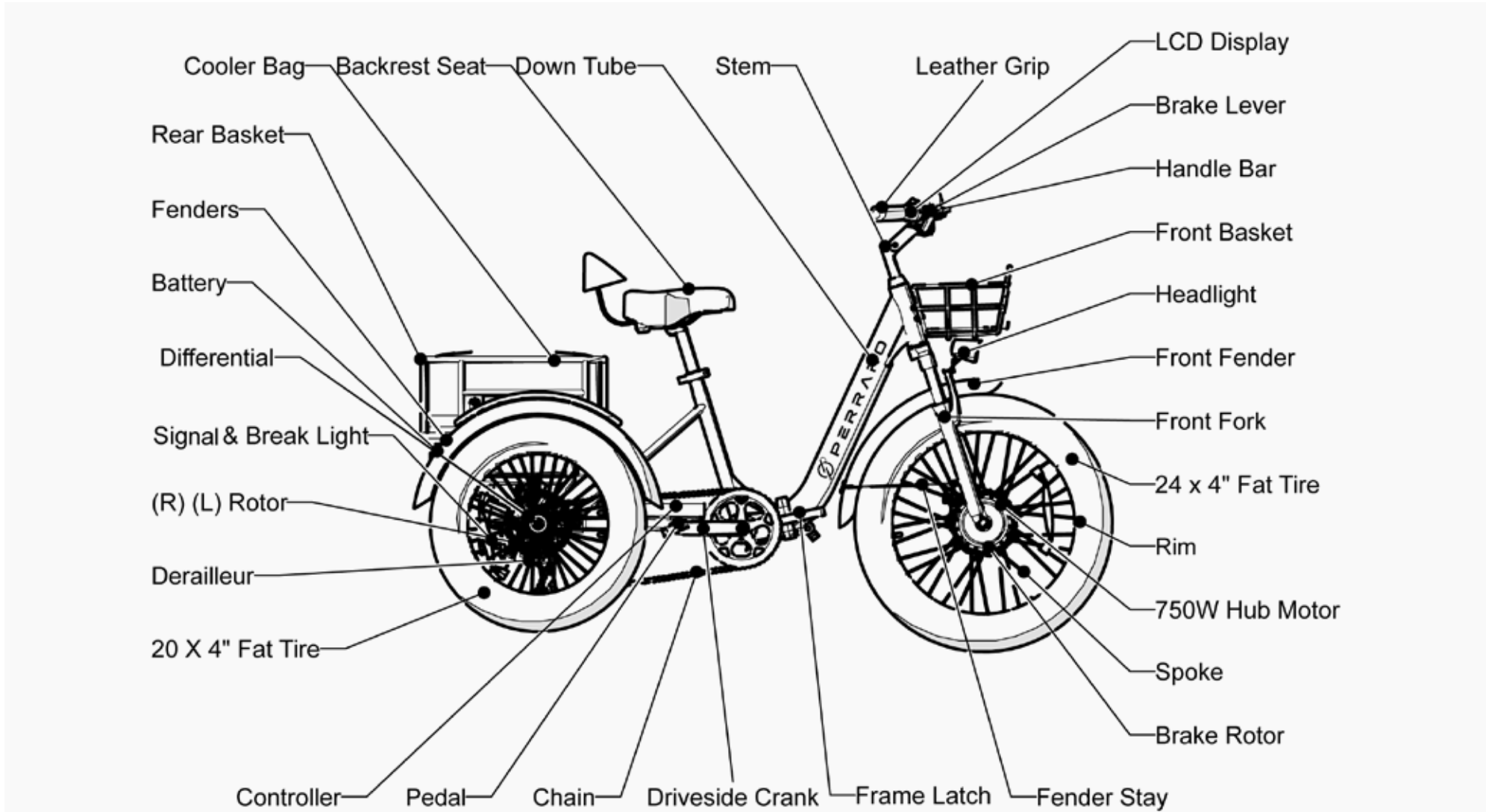


1 x Charger



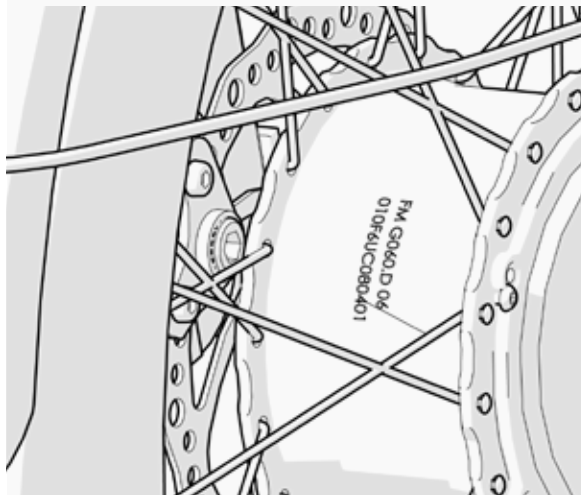
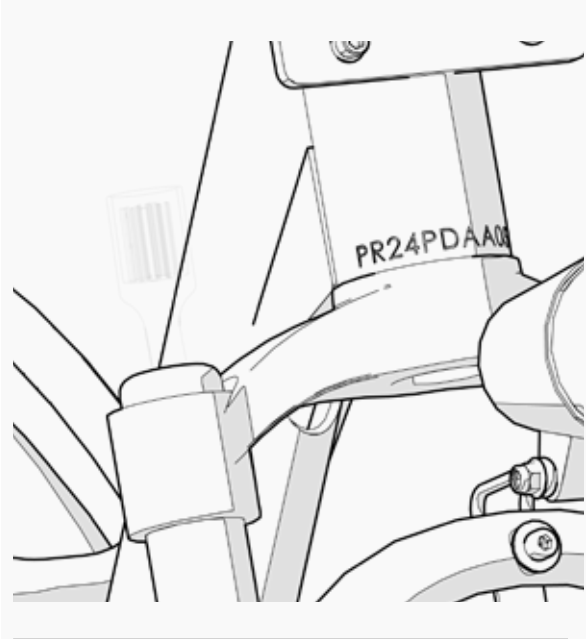
1 x Toolbox

02 INTRODUCTION



2.1 FRAME NUMBER

The frame number for your trike can be found on the head tube of the bicycle, as illustrated in the diagram below. We highly recommend that you write down this number inside the front cover of this manual for safekeeping. This serial number is not only crucial for any warranty claims you might need to make but also serves as an important identifier in the unfortunate event that your bicycle is stolen. Providing this number to law enforcement can significantly aid in the recovery of your trike.



2.2 MOTOR NUMBER

The motor number for your Perraro Electric Trike is engraved on the casing of the motor, which is located in the front hub. This engraving provides a unique identifier for your trike's motor, essential for servicing and warranty purposes.

TIGHTENING TORQUE

Part	Tool	Torque
Axle Collars	5mm hex wrench	8 Nm
Bottom Bracket	BBT-22	35 Nm
Brake Caliper Mounting Bolts	5mm hex wrench	6 Nm
Brake Lever Clamp Bolts	4mm hex wrench	2.5 Nm
Crank Bolts	8mm hex wrench	35 Nm
Disc Rotor Mounting Bolts	T-25 Torx	5 Nm
Fender Mounting Bolts	6mm Phillips screwdriver	2 Nm
Headlight Mounting Screw	5mm hex wrench	2.5 Nm
Headset Compression Bolt	5mm hex wrench	2.5 Nm
Motor Nut	19mm hex wrench	30 Nm
Pedals	14mm hex wrench	20 Nm
Rear End Bolts x6	17mm hex wrench	25 Nm
Seat Rail Binder	14mm hex wrench	12 Nm
Spokes	spoke wrench 2	120 KGF
Stem Clamp Bolt	5mm hex wrench	10 Nm
Stem Pinch Bolts	5mm hex wrench	14 Nm
Wheel Axle Nuts	Rear: 5mm hex wrench	12 Nm
Wheel Axle Nuts	Front: 19mm wrench	30 Nm
Front Basket	5mm hex wrench	4 Nm
Rear Basket	12-13 wrench	10 Nm

03 ASSEMBLY

We are excited for you to begin the journey with your new Perraro Electric Trike. As you gear up to complete the assembly of your vehicle, we want to provide you with essential information to facilitate a smooth and safe setup process.

Your trike has been crafted to arrive 85% preassembled, simplifying the final steps needed to get you on the road. While the assembly process is designed to be user-friendly, we highly recommend enlisting the services of a professional trike mechanic to ensure that all components are correctly installed and finely adjusted. This attention to detail is vital for the safety, performance, and longevity of your trike.

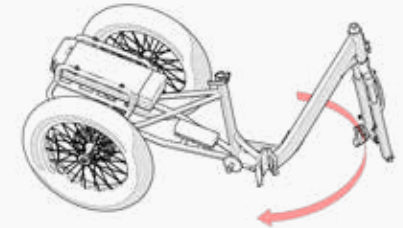
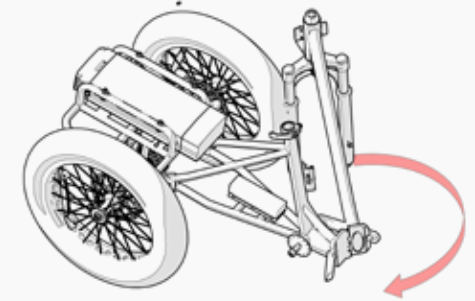
A professional mechanic’s involvement is beneficial for quickly diagnosing and addressing any potential issues, thereby offering you peace of mind and conserving your time. Furthermore, their expertise in fine-tuning will ensure that your trike operates at peak performance, enhancing your riding experience from the outset.

Should you opt to undertake the assembly on your own, we urge you to adhere to the provided step-by-step instructions meticulously. For any assistance or if you encounter uncertainties, please reach out to Perraro Customer Service at **949-414-8003** or via email at **support@perraroelectricbike.com**.

The final assembly is not just about putting parts together; it’s about ensuring the reliable operation and safety of your trike. We’re here to support you in this exciting venture.

3.1 Unfolding the Trike Frame:

- Stand beside the trike and gently grip the stem headtube.
- Slightly lift the trike off the ground and pivot it to the open position.
- Firmly press in the frame latch until it clicks securely into place. Give the latch a tug to ensure it has locked and the frame is stable.



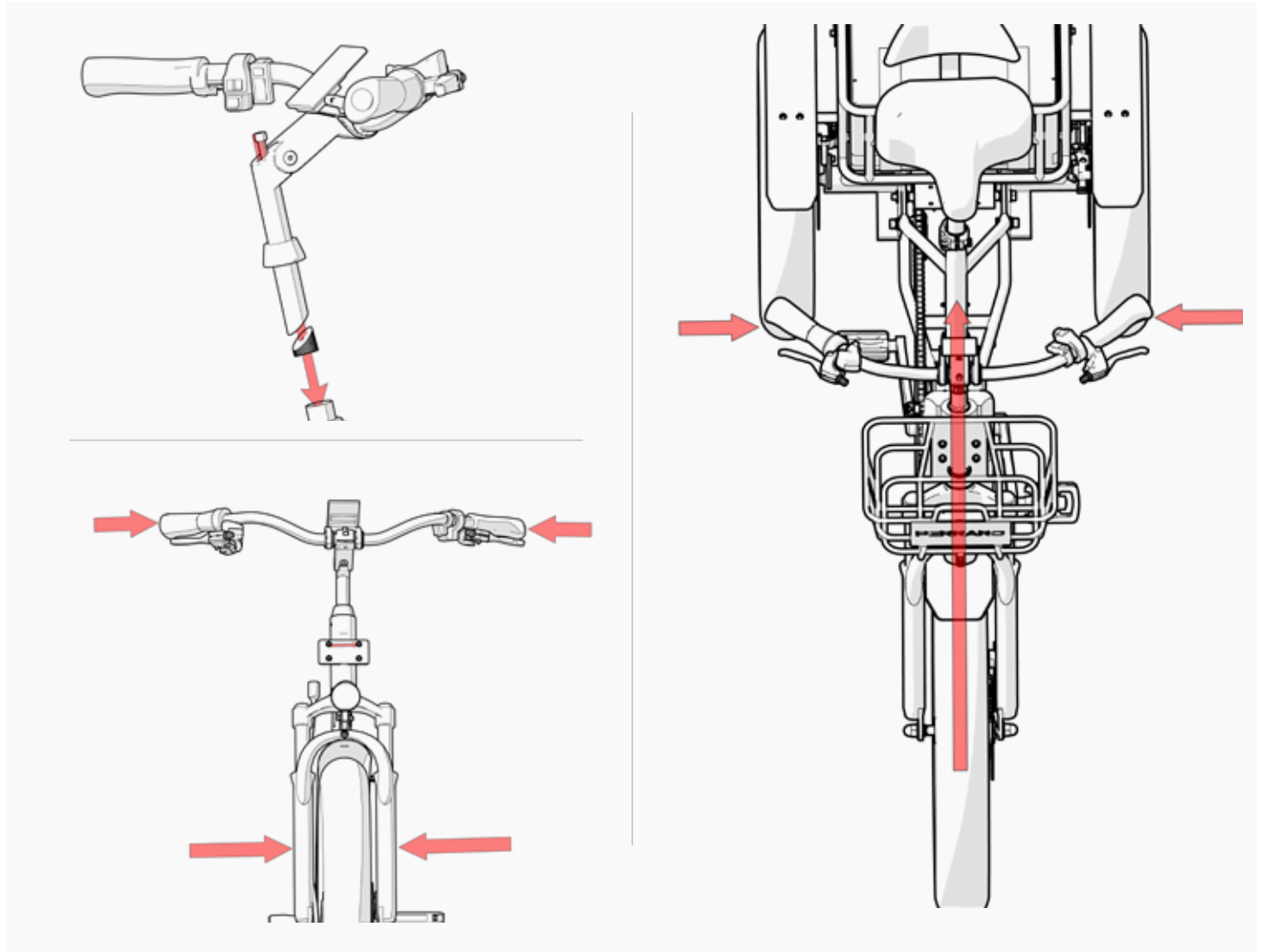
3.2 Folding the Trike Frame:

- To fold the frame back, begin by sliding the switch “open” to the right.
- While holding the switch in the “open” position, pull the latch. This will allow you to fold the trike by guiding the front tire to slot in between



3.3 Handlebar Installation

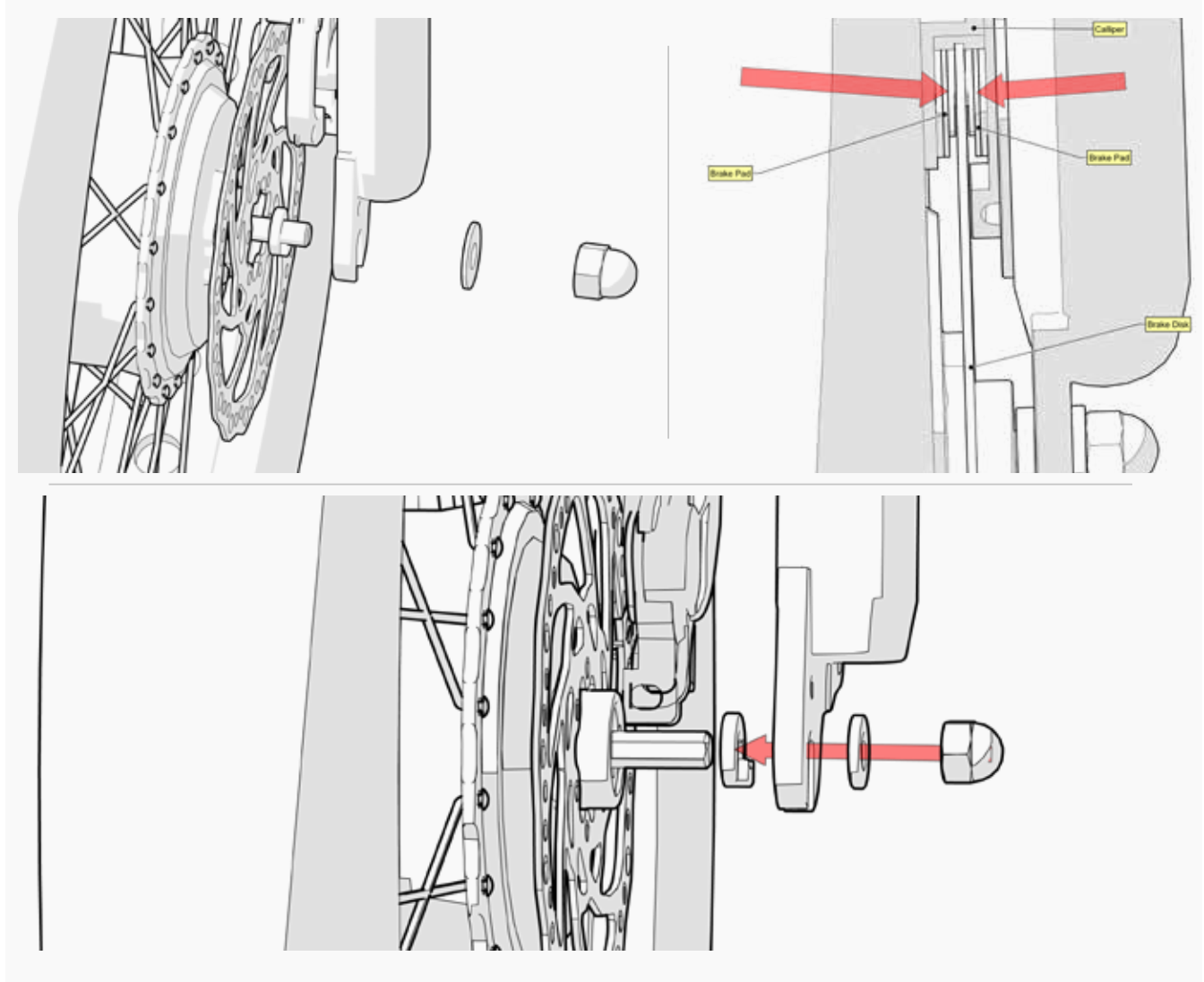
- Slide the bottom of the stem into the top of the head tube.
- Insert the stem into the head tube past the min mark to ensure it is safely within the head tube.
- Once inserted to the correct depth, locate the stem tightening bolt,
- Hand-tighten the bolt to hold the stem in place temporarily.
- Use an Allen key or appropriate tool to tighten the bolt further.
- Make sure the stem is aligned both vertically and horizontally with the front wheel and the center of the trike.



03 ASSEMBLY

3.4 Front Wheel Installation

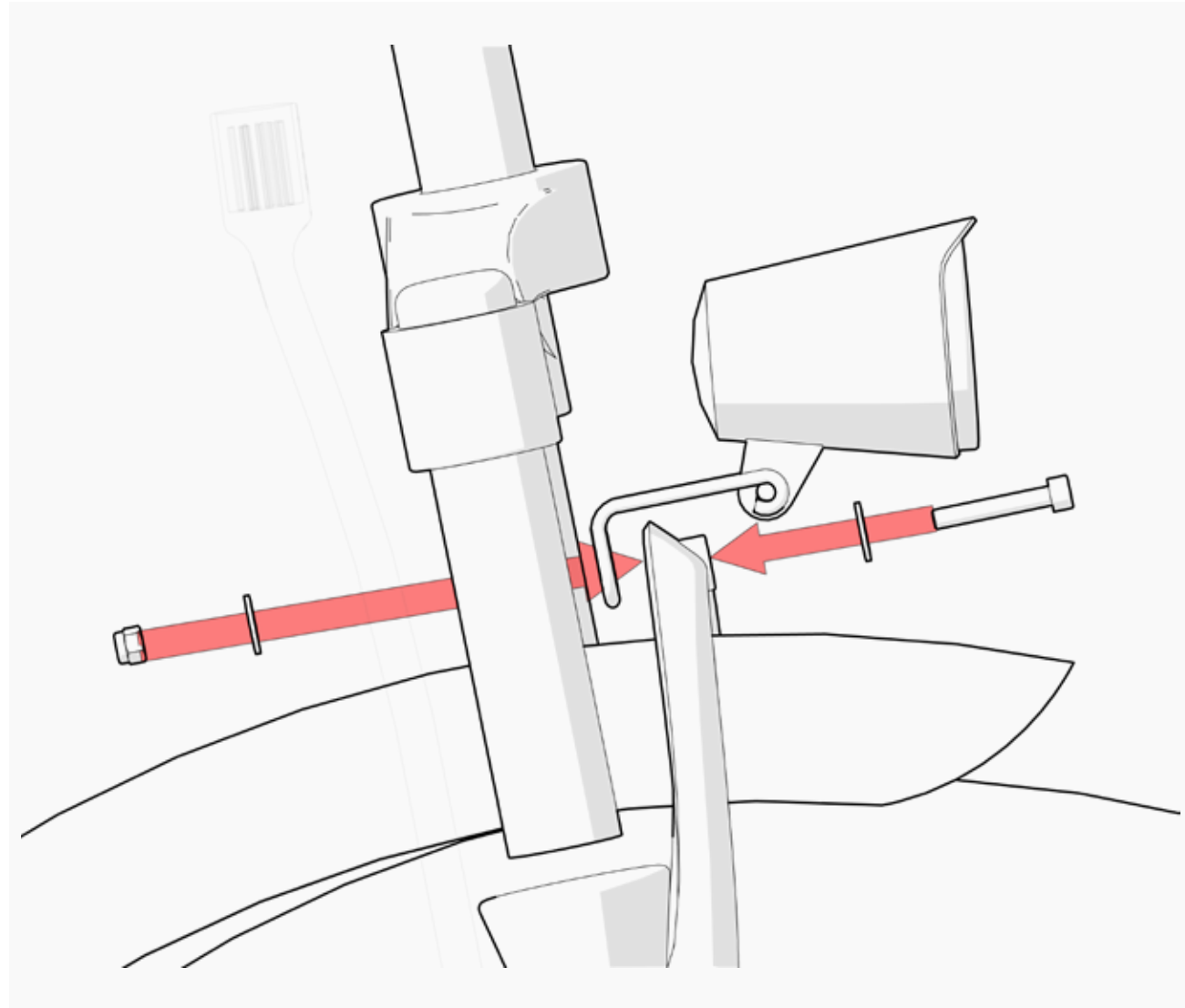
- Take off all nuts and washers from the axle.
- Attach the non-turn washer, teeth facing outward.
- Slot the wheel into the fork, ensuring the rotor enters the brake caliper and centers.
- Align the washer's teeth with the fork notch.
- Place the regular washer on the axle.
- Hand-screw the acorn nut.
- Check the non-turn washer's position.
- Firmly tighten the nut with a wrench.
- Connect the motor cable after the wheel is secure.



3.5 Headlight and Front Fender

Put a washer on the cap screw.

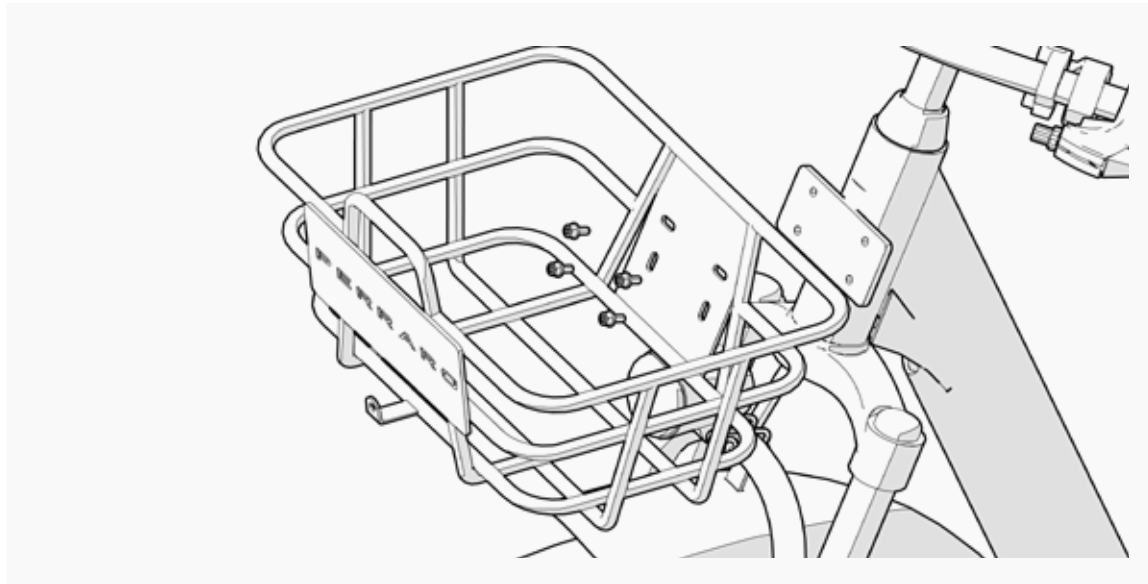
- Position the headlight on its bracket.
- Feed the screw through the headlight and fender bracket.
- Add the second washer behind the bracket.
- Tighten the nut onto the screw to fix the headlight.
- Secure all parts and set the light angle.
- Attach fender supports to support mounts with screws
- Finally, connect the headlight cable.



03 ASSEMBLY

3.6 Front Basket

- Align the mounting bracket with the trike's frame and attach with provided bolts, leaving them slightly loose for now.
- Place the basket onto the bracket, lining up the holes.
- Insert and hand-tighten the bolts to connect the basket to the bracket.
- Fully tighten all bolts with the Allen key to secure the basket.
- Perform a safety check: Gently tug on the basket to ensure it's stable and does not hinder the trike's functionality.



3.7 Pedal Set Installation Guide

Identifying Pedals

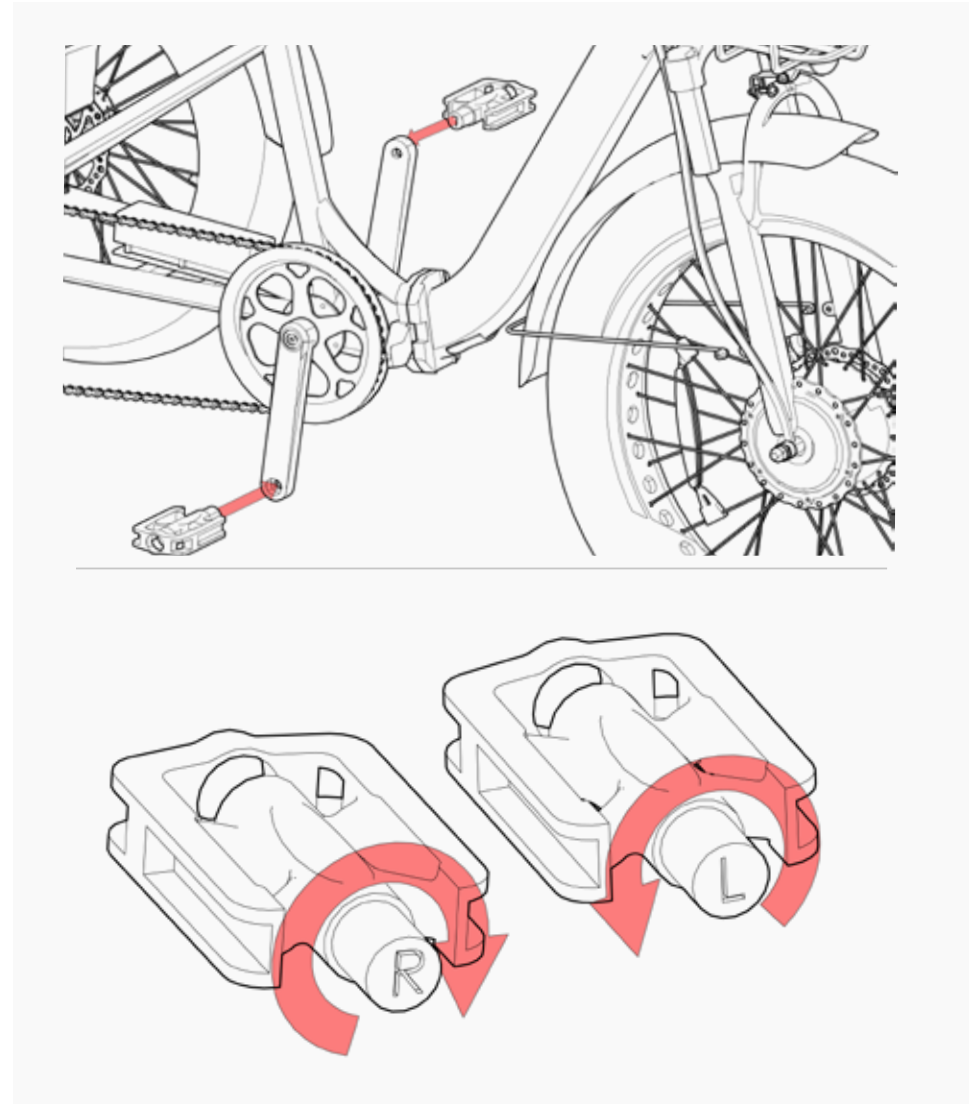
First, identify the side markings on each pedal: “L” for Left and “R” for Right. Ensure the pedal marked “R” aligns with the right-hand crank arm, and the pedal marked “L” with the left-hand crank arm.

Attaching the Pedals

Thread each pedal carefully by hand into the corresponding crank arm. Once hand-threaded, use a 15mm wrench to securely tighten the pedals.

Note: Rotation Directions

Remember, the left-side pedal tightens counterclockwise, whereas the right-side pedal tightens clockwise. This process ensures that your pedals are attached correctly and securely for a safe riding experience.



03 ASSEMBLY

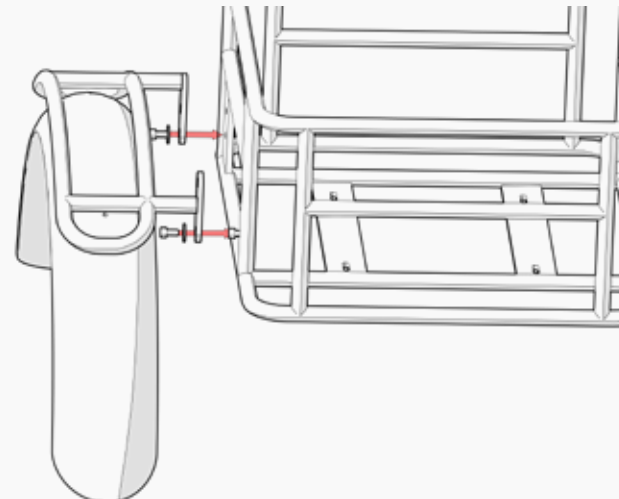
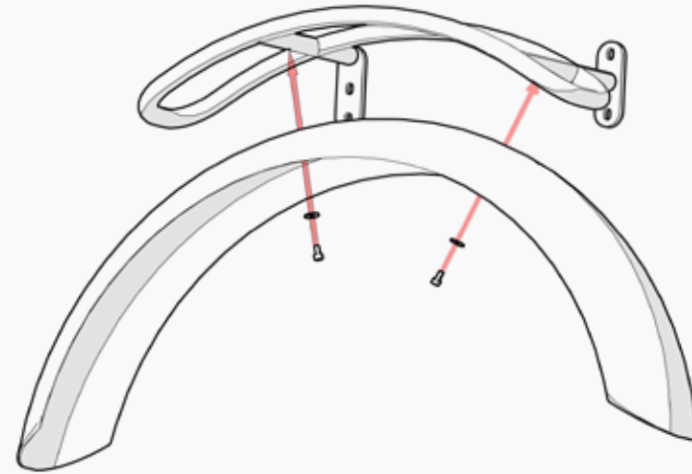
3.8 Rear Fender Assembly

Fender to Bracket Connection

Position the fender so that its holes line up with the fender bracket protruding from the rear of the trike's frame. Insert bolts through each matching set of holes.

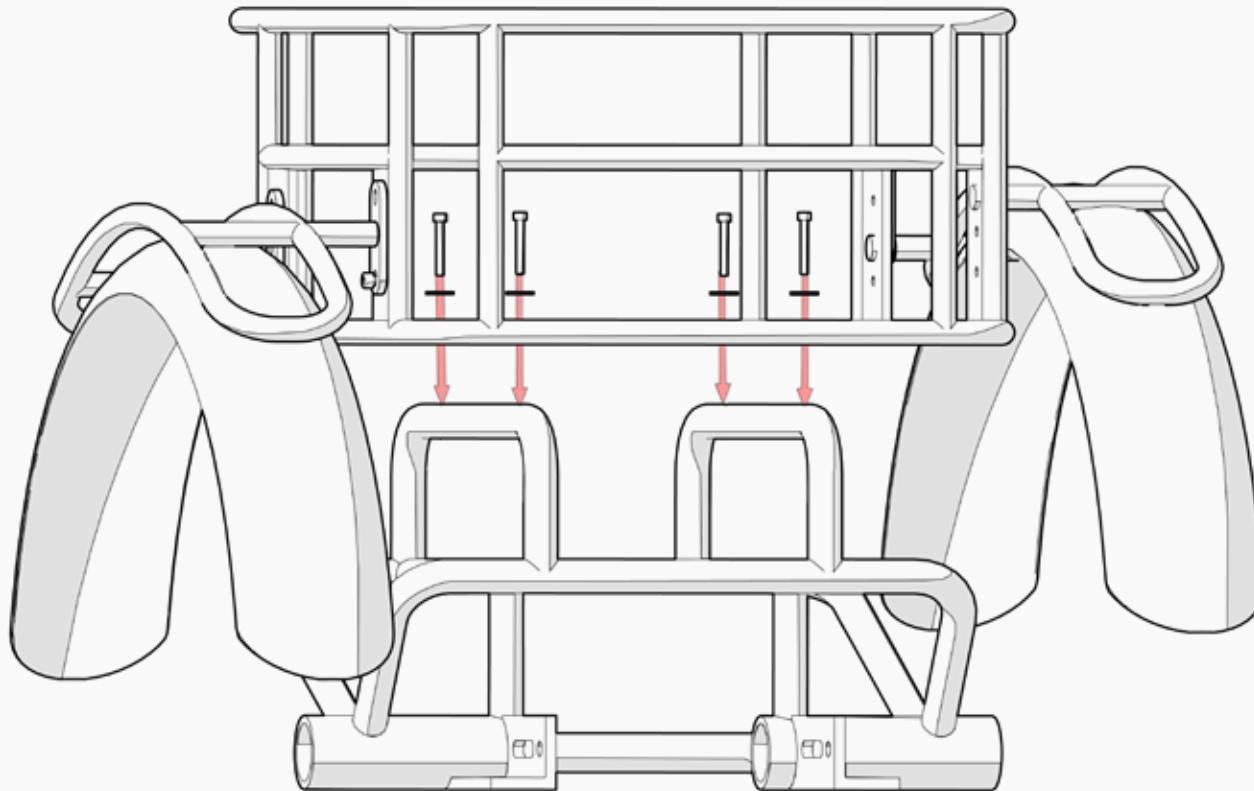
Bracket to Basket Connection

Locate the points where the fender bracket meets the trike's rear basket. Secure the bracket to the frame using the bolts and nuts provided.



3.9 Rear Basket Assembly

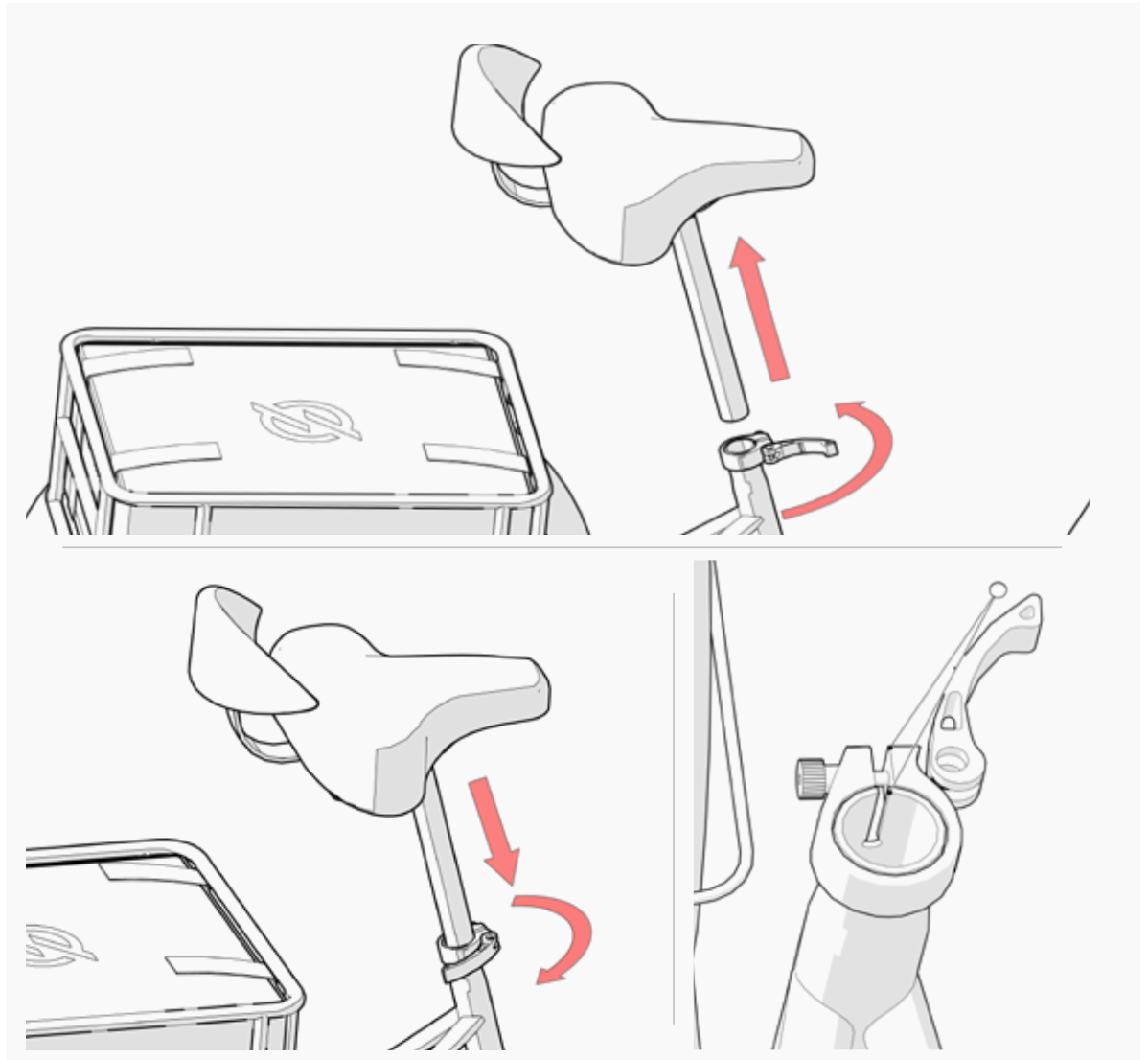
- Align the rear basket's mounting points with the corresponding points on the trike's frame. Ensure that the basket is centered and level.
- Insert and tighten the bolts through the rear basket and into the frame's mounting points. Use a suitable tool to tighten the bolts, ensuring the basket is firmly attached to the frame.



03 ASSEMBLY

3.10 Seat Post Installation

- Position the quick-release lever to the open setting.
- Insert the seat post into the frame's seat tube to your desired height.
- Ensure the 'min insert' line on the seat post remains inside the tube.
- Close and lock the quick-release clamp firmly by hand.
- Ensure the seat post is securely fastened and the height is comfortable for riding.



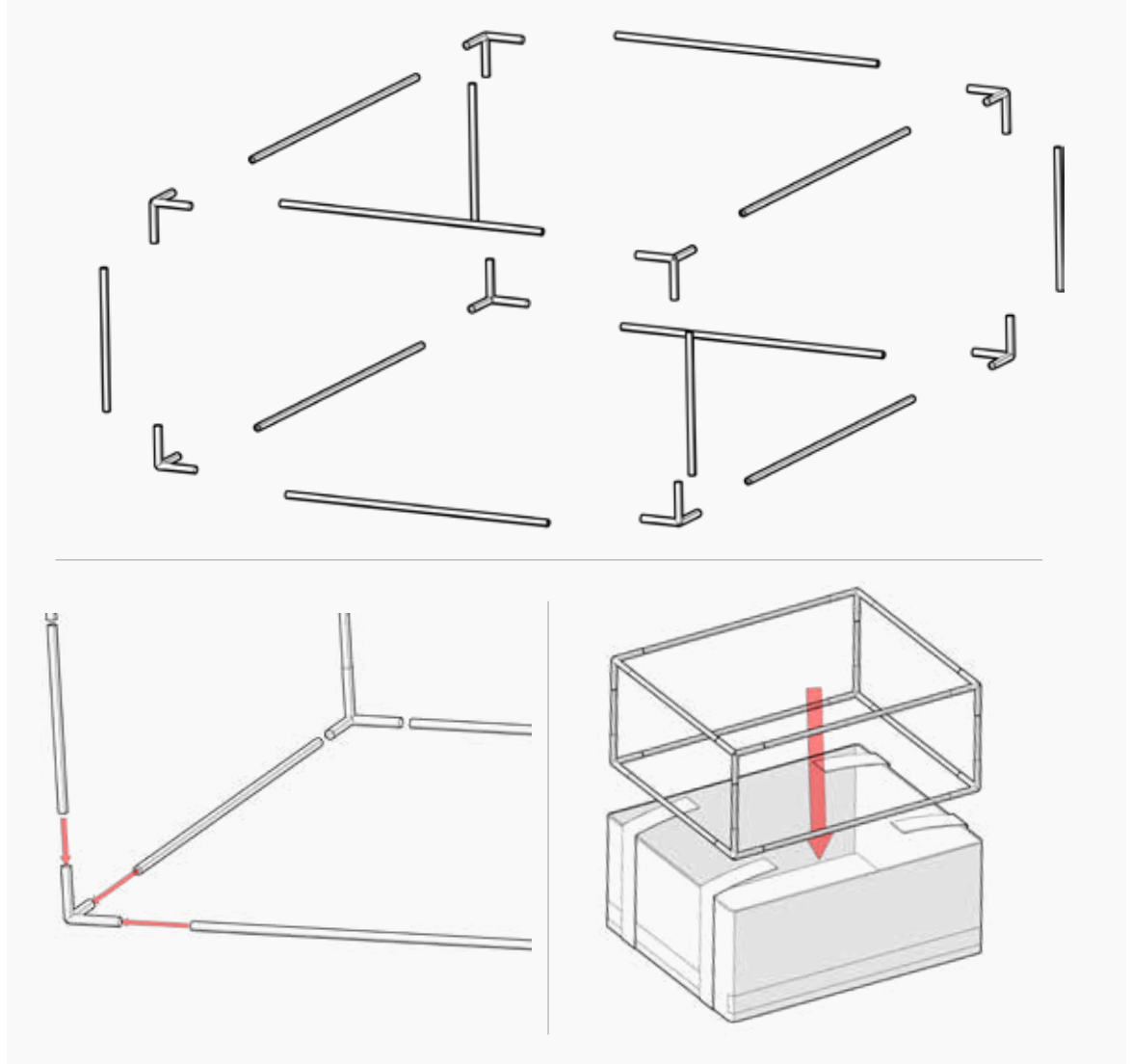
3.11 Construct the hard plastic frame by connecting the pieces as shown in the image.

Position the assembled frame inside the cooler bag, aligning it with the designated attachment points.

Secure the frame within the bag, ensuring it fits tightly and maintains the bag's structure.

Confirm that the frame is fully spread out so the bag stands firm and taut, now ready for packing.

Make sure the frame is correctly assembled to provide sturdy support for the items you plan to carry.



04 FEATURES

Never modify your frame or bicycle in any way as this could cause serious injury or death. Do not sand, drill, file, or remove parts from your bicycle. Do not install incompatible components or hardware.

Motor

To prevent serious injury or death:

- **Do not open the drive unit yourself.** The drive unit must only be repaired by qualified personnel using only original parts. This will ensure that the safety of the drive unit is maintained. Unauthorized opening of the drive unit will render warranty claims null and void.
- All components fitted to the drive unit and all other components of your Perraro Electric Trike PAS system (e.g. chainring, chainring receptacle, pedals) must only be replaced with identical components or components that have been specifically approved by Perraro Electric Trike. This should help protect the motor from overloading.
- Always remove the battery pack from your Perraro Electric Trike before beginning work (e.g. inspection, repair, assembly, maintenance, work on the chain, etc.), moving it with a car or on an airplane, or storing it. Battery pack removal should prevent unintentional activation of your Perraro Electric Trike.
- Do not make any modifications to your Perraro Electric Trike or attach any other products that might increase the performance of your Perraro Electric Trike.
- Doing so will generally reduce the service life of the system and risks damaging the drive unit and the bicycle. You also run the risk of losing the guarantee and warranty claims on the bicycle you have purchased. By handling the system improperly, you are also endangering your safety and that of other road users, thus running the risk of high personal liability costs and possibly. Even criminal prosecution in the event of accidents that can be attributed to manipulation of the bicycle.
- Under extreme conditions, such as continuously high loads at low speed when riding up hills or carrying loads, parts of the motor can reach high temperatures.



PRE-RIDE SAFETY CHECKLIST

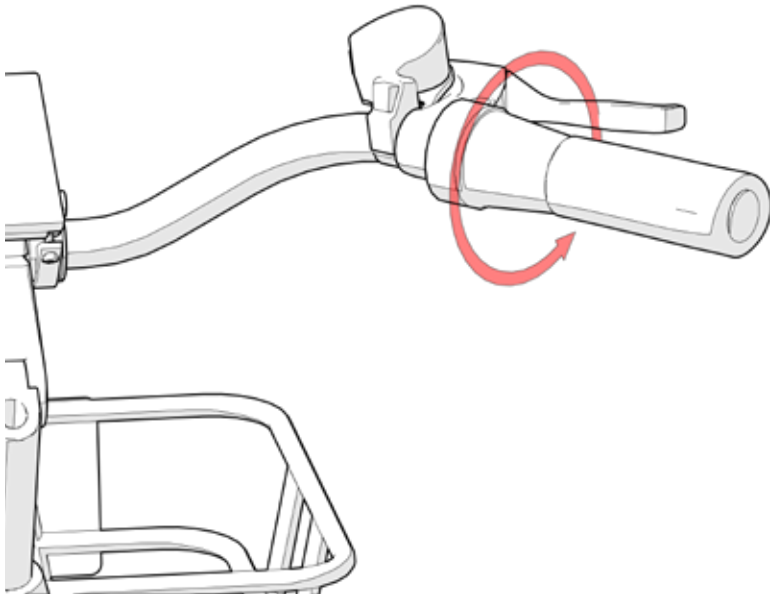
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Throttle

The right handlebar features a half-twist throttle.


To operate:


Check that the Pedal Assist (PAS) level is set above 0, then twist the throttle back slowly to achieve your desired speed and acceleration.



Disc Brakes

Your Perraro Panda Trike is equipped with disc brakes. To prevent serious injury or death:

 ALWAYS apply right brake lever (rear wheels) before and during use of the front brake.


 ALWAYS apply even pressure to both brake levers when slowing down or stopping. If only the front brake is applied while slowing or stopping quickly, you may be ejected over the front handlebars. Before riding, check to ensure the brake levers do not touch the handlebars when fully applied. If either lever touches the handlebars, call Perraro Electric Trike to determine next steps. You will likely need your brakes bled.

To brake the rear wheels:

Pull right brake lever to activate rear brakes.

To brake the front wheel:

Pull left brake lever to activate front brake.

 Disc brake rotors will become hot during use and will stay hot for a short period after use. To prevent burns, do not touch the disc rotor right after use.

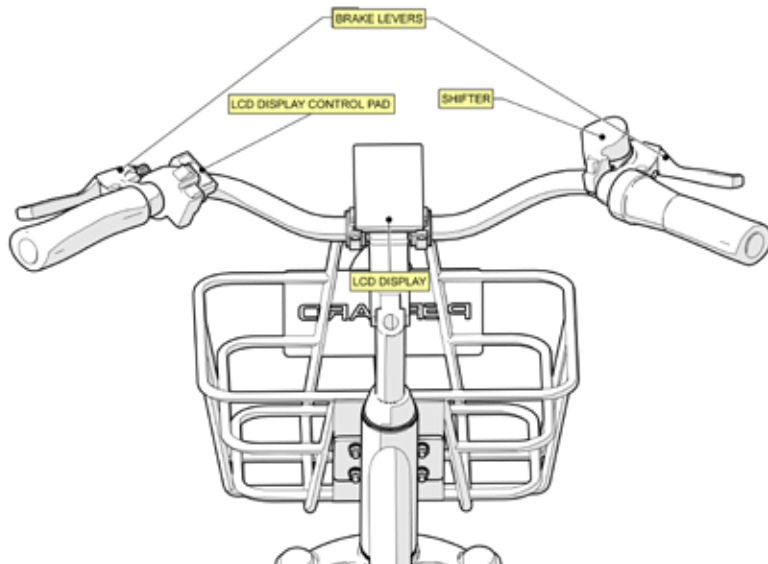
04 FEATURES

Parking Brake

Your trike is equipped with a front and rear parking brake. Activate by squeezing the brake lever in all the way and then pressing your parking latch into place. Squeeze the brake lever to release.

COCKPIT SYSTEM

Cockpit Instruments



Pedal Assist Overview

When does the Pedal Assist activate?

Pedal Assist (PAS) functions only when you are pedaling. If you do not pedal, the PAS will not activate. The motor output always depends on your pedaling and the PAS level you have set. PAS automatically switches off at the maximum speed set for your Perraro Electric Trike. When the speed falls below the maximum set speed, PAS automatically becomes available again.

You can also use your Perraro Electric Trike as a normal bicycle without assistance at any time, either by switching the Cockpit System power button OFF, or by setting PAS to 0. If the battery needs to be charged, PAS will not function.

When the bicycle has not been used for 5 consecutive minutes, the display will automatically shut down. The PAS and throttle features will no longer work when the display is OFF.

**To prevent serious injury or death:**

- Do not allow yourself to be distracted by the display. If you do not concentrate on the traffic around you, you risk being involved in a crash. If you want to change any settings other than the PAS level, always stop before changing the settings or display.
- Set the display brightness such that you can adequately see important information like speed or warning symbols. Display brightness that is incorrectly set can result in dangerous situations.
- The Electrical components on the bicycle are not waterproof. The Electrical components on the trike have an IP rating of 65.
- Check the display and plug. If damage is detected, do not use the display. A damaged display or cables or plugs increase the risk of a fire, explosion and personal injury.
- Do not disassemble the display. There are no user serviceable parts inside the display. Incorrect reassembly or damage may result in fire or explosion.

05 LCD DISPLAY

Introduction to the Perraro Electric Trike LCD Display

Welcome to the advanced interface of your Perraro Electric Trike – the LCD Display. This user-friendly display is designed to enhance your riding experience by providing essential information at your fingertips. Engineered with precision, it offers a clear, easy-to-read panel that integrates seamlessly with the sophisticated technology of your electric trike.

The display is your command center, offering real-time data about your ride. From tracking your speed and battery level to customizing assist settings and monitoring your journey's distance, the LCD display puts control into your hands. Whether you're navigating urban streets or exploring scenic trails, this display will keep you informed and in command of your ride.

With intuitive controls and a wealth of features, the Perraro Electric Trike LCD Display is more than just a screen; it's a vital companion that enhances every aspect of your cycling adventure. Get ready to experience the convenience, efficiency, and enjoyment of riding with this cutting-edge technology.

Understanding Your Trike's LCD Display

- **Headlight Indicator:** This icon appears when the headlight is active. If the headlight is off, or if the trike lacks this feature, the icon will not be displayed.
- **Speedometer:** Shows your current speed. You can view this in either kilometers per hour (KM/H) or miles per hour (MPH).
- **Assist Level Indicator:** Indicates the current level of power assist, ranging from 1st to 5th gear, with 1st gear set as the default on startup. A '0' indicates that the power assist is off.
- **Battery Indicator:** A five-segment display representing battery charge, along with a power percentage (compatible with communication battery BMS).
- **Power Output:** Displays the instantaneous power output in watts and uses a 10-segment indicator to reflect motor power levels.
- **Ride Timer:** Displays the duration of your trip in hours and minutes.
- **Odometer:** Shows the distance traveled during a single trip.
- **Range Estimator:** Provides an estimated range remaining based on the current battery level and assist gear (requires communication battery BMS support for accurate calculations).

To activate the LCD display of your trike, press and hold the Power button for 2 seconds. To turn the display off, press and hold the Power button again for 2 seconds, and the display will power down. Additionally, the display is equipped with an automatic shut-off feature: if it detects no activity (with the speed reading 0) for 5 minutes, it will automatically turn off to conserve battery power.



Operating the Headlight Switch on Your Electric Trike

To operate the headlight on your trike, if you have a specific headlight button, just press it to toggle the lights on and off. If your trike doesn't have a dedicated headlight switch, activate the headlights by long-pressing the "+" button for 2 seconds. This action will turn on the headlights and illuminate the headlight indicator icon on the display. To turn off the headlights, simply long-press the "+" button once more for 2 seconds.



05 LCD DISPLAY

Pedal Assist (PAS) Level Selection

To adjust the pedal assist level on your electric trike, press the “+” or “-” buttons. The PAS has five levels, with “1” being the lowest and “5” the highest, enhancing the motor’s power output. By default, the PAS level is set to “1” at startup. When the display shows “OFF,” the system is in a neutral state without assistance.


How Pedal Assist Works

Pedal assist is a feature that provides power from the motor as you pedal, making it easier to ride. At PAS level “0,” both the throttle and the pedal assist are inactive, meaning you’ll be pedaling like a traditional trike without any motor assistance.

The power-assisted level selection interface is as shown in the figure below:



Walk Assist Mode Operation

To activate the walk assist mode on your electric trike, press and hold the “-” button. After holding for 2 seconds, the display will enter the walk assist push state, and the PAS display area will show “Walking Icon ”. To exit walk assist mode, simply release the “-” button. The walk assist mode is especially useful for helping you push your trike when walking it, providing a gentle motor assist.



Understanding the Power Meter on the Display

The power meter on the display of your trike shows real-time motor power output through a vertical bar on the right side. This bar moves up and down, reflecting the current power level. When the motor is not providing any power assist, the bar will be at its lowest point. Conversely, when the motor is at full power assist, the bar reaches all the way to the top.

This visual indicator is a convenient way to quickly gauge the amount of assist your motor is delivering as you ride, helping you to adjust your effort or the trike’s settings as needed. The rising and falling of the bar correspond directly to increases or decreases in power assistance from the motor, offering an intuitive understanding of your ride dynamics.



Battery Indicator and Voltage/Percentage Display

- The battery indicator on your trike’s display, located on the left side, not only shows the battery’s charge level through a scale of 1 to 5 bars but also provides the battery’s voltage or percentage. This feature gives you a real-time understanding of the remaining battery capacity.
- As the battery drains, the number of bars will decrease. When the battery level dips below 5%, the display will show 0 bars, and the battery icon will flash, indicating an immediate need for charging.
- Additionally, you can view the battery level as either voltage or percentage, based on your preference. This choice can be adjusted in the settings menu of the display. Switching between voltage and percentage gives you flexibility in monitoring the battery’s status in the format most convenient for you.
- This comprehensive battery monitoring system ensures you are always informed about your trike’s remaining power, allowing for better planning of your rides and timely recharging.



05 LCD DISPLAY

Setting Instructions for Your Electric Trike’s Display

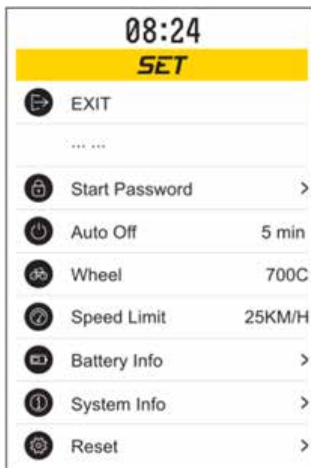
To customize the settings on your electric trike’s display, follow these steps:

Accessing Settings

Turn on the display. Within the first 10 seconds, press and hold the “M” button for 2 seconds to enter the settings menu.

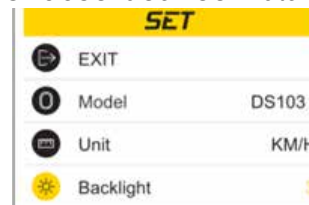
Navigating Settings

- Use the “+” and “-” buttons to scroll through the various setting options.
- Press “M” to select and confirm your choice.



Options Available in Settings:

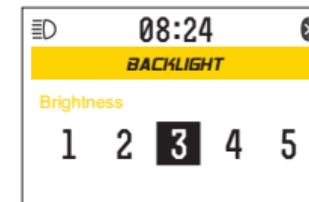
Background Color: Choose between black and white for the display background.



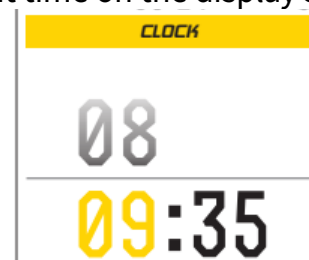
Units: Switch the distance measurement between kilometers (km) and miles (mi).



Backlight Brightness: Adjust the display backlight with levels 1-5 for brightness.



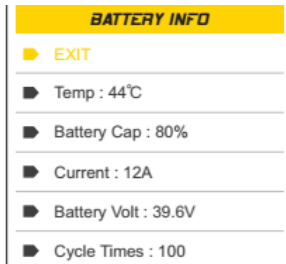
Clock: Set the current time on the display’s clock.



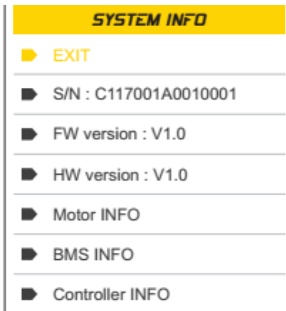
Set Password: Enable a startup password for added security.



Battery Info: Select to display the battery level either as a percentage or in volts



***System Info:** View information about the trike's system settings.



Understanding the Fault Interface on Your Perraro Electric Trike LCD Display

The LCD display on your Perraro Electric Trike is equipped to alert you to potential issues with the trike. When the system detects a fault, the display will show a specific fault code, with each code corresponding to a different type of issue. These codes help in identifying and troubleshooting problems. Note that the specific fault codes are defined by the trike's controller. Below is a reference guide for common fault codes and their descriptions:

ERROR	Fault description
21	Current anomaly
22	Handle anomaly
23	Motor out of phase
24	Hall signal of the motor is abnormal
25	Abnormal braking
26	undervoltage
27	European standard functional safety



06 YOUR FIRST RIDE

YOUR FIRST RIDE

The acceleration of your Perraro Electric Trike may be faster than anticipated and may feel unusual at first. Before your first ride, you should use the lowest level of pedal assist (PAS 1) and become familiar with the operation of your Perraro Electric Trike by practicing starting, stopping, cornering, and navigating obstacles in a safe environment away from other bicycles, pedestrians, and/or vehicles. You should also pay particular attention to terrain conditions as you may approach obstacles faster than expected.

The Pedal Assist may be activated as soon as you step onto the pedals and the bicycle is in motion. ALWAYS be seated on the bicycle and engage at least one brake before starting to pedal. DO NOT place one foot on a pedal then throw your other leg over the bicycle or your Electric Trike could accelerate unexpectedly. Refer to “Pre-Ride Safety Checklist” before you go on your first ride.

How to Start Your Ride

- Insert key and turn counterclockwise to the LOCK position.
- Hold down the power button located on the left handlebar until the display comes on.
- Select a Pedal Assist (PAS) level using the plus (+) and minus (-) buttons. PAS 0 provides no motor assist. PAS 1 is the lowest level of assist and PAS 5 is the highest level of assist.

To prevent serious injury or death:

- Exercise extreme caution when using the twist throttle. When at a complete stop with the bicycle turned ON, be careful not to twist the throttle or the bicycle could accelerate and cause you to crash.
- Mode when riding or sitting on your Perraro Electric Trike. Holding the minus (-) button will engage the motor up to a walking speed.

How to End Your Ride:

When the bicycle is at a complete stop, press and hold the button to turn the display OFF. This ensures the motor will not activate until the display is turned ON again and you are ready to ride.

07 BATTERY INFORMATION

BATTERY PACK

The term battery pack refers to all original Perraro Electric Trike battery packs.

The safety of both our customers and our products is important to us. Our Electric Trike batteries are lithium-ion batteries, which have been developed and manufactured in accordance with the latest technology. We comply with or exceed the requirements of all relevant safety standards. When charged, these lithium-ion batteries contain a high level of energy. If a fault occurs (which may not be detectable from the outside), in very rare cases and under unfavorable conditions, lithium-ion batteries can catch fire.

Take care when using and charging your battery. Failure to follow the guidelines below could result in damage to property and/or serious injury. Contact Perraro Electric Trike immediately if you have any questions regarding battery safety.

Your Perraro Electric Trike battery must not be opened, even for repairs. There is a risk your Electric Trike battery could catch fire, e.g. due to a short circuit. This risk increases if an Electric Trike battery which has already been opened is reused at a later point in time. Do not attempt to repair an Electric Trike battery in the event of a fault. Have it replaced with an original Perraro Electric Trike battery pack.

The battery is protected against deep discharge, overloading, overheating, and short-circuiting by Electronic Cell Protection (ECP). In the event of a fault, a protective circuit switches the battery pack off automatically.



Battery Safety

Only use original Perraro Electric Trike batteries for your Electric Trike. Using other batteries can lead to injuries and pose a fire hazard. Perraro Electric Trike accepts no liability or warranty claims if other batteries are used.

To prevent serious injury or death:

- Do not leave your battery unattended while charging.
- When removing the battery, unplug the rubber stopper on the charging point.
- Always charge your battery in temperatures between 50°F – 77°F (10°C – 25°C). For an optimum service life, operate your Perraro Electric Trike battery at temperatures between 32° F -104° F (0°C-40°C).

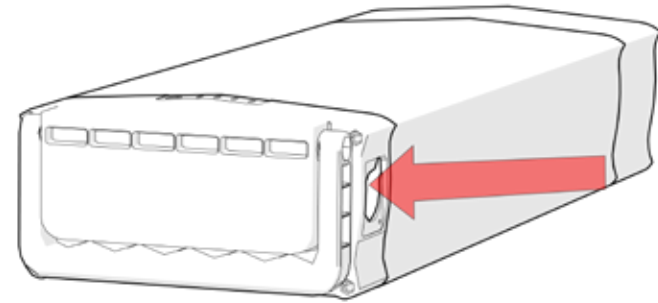
- Battery leakage may occur under extreme usage or temperature conditions. Avoid contact with skin and eyes. Battery liquid is caustic and could cause chemical burns. If battery liquid comes in contact with skin, wash quickly with soap and water. If the liquid contacts your eyes, immediately flush eyes with water for a minimum of 15 minutes and seek medical attention.
- Always remove the battery from the bicycle when not in use and store in a secure location to prevent unauthorized use.
- Do not submerge the battery in liquid of any kind.
- Do not touch the terminals on your battery.
- Turn display OFF when not in use and before removing battery pack.
- The battery pack should not be excessively difficult to insert or to remove. Do not force the battery pack in or out of the trike frame.
- Battery charging times may increase with battery age and usage.
- Only grab the charger by the plug and not the cable when plugging and unplugging from the wall.
- If the battery has trouble charging, stop charging and contact Perraro Electric Trike immediately.
- Do not puncture or crush the battery pack. Do not impact the battery pack or modify it in any way. Do not use the battery pack if it shows visible damage. The aforementioned can increase danger of fire or explosion.
- Protect the battery pack from heat (e.g., temperature >140°F), fire, and immersion in water. The aforementioned can increase danger of fire or explosion.
- Always remove the battery pack before beginning work (e.g. inspection, repair, assembly, maintenance, work on the chain, etc.) on your Perraro Electric Trike, moving it via car or airplane, or storing it. Unintentional activation of the Perraro Electric Trike poses a risk of injury.
- Do not open the battery. There is a risk of short circuiting. Opening the battery voids any and all warranty claims.
- When the battery is not in use, keep it away from paper clips, coins, keys, nails, screws, or other small metal objects that could make a connection from one terminal to another. A short circuit between the battery terminals may cause burns or a fire. Short circuit damage which occurs in this instance voids any and all warranty claims against Perraro Electric Trike.
- Avoid mechanical loads and exposure to high temperatures. These can damage the battery cells and cause the flammable contents to leak out.
- Do not place the charger or the battery near flammable materials. Ensure the battery is completely dry and placed on a fireproof surface before charging. There is a risk of fire due to the heat generated during charging.
- Your Perraro Electric Trike battery must not be left unattended while charging.
- If used incorrectly, liquid may leak from the battery. Contact with this liquid should be avoided. If contact occurs, rinse off with water. If the liquid comes into contact with your eyes, seek additional medical attention. Liquid leaking from the battery may cause irritation or scalding.



07 BATTERY INFORMATION

- Batteries must not be subjected to mechanical shock. If battery is dropped or struck with another object, the battery may be damaged.
- The battery may give off fumes if it becomes damaged or is used incorrectly. Ensure the area is well ventilated and seek medical attention should you experience any adverse effects. The fumes may irritate the respiratory system.
- Only charge the battery using original Perraro Electric Trike chargers. When using chargers that are not made by Perraro Electric Trike, the risk of fire cannot be excluded.
- Use the battery only in conjunction with your Perraro Electric Trike. This is the only way in which you can protect the battery against dangerous overload.
- Use only original Perraro Electric Trike battery packs that the manufacturer has approved for your Electric Trike. Using other batteries can lead to injuries and pose a fire hazard. Perraro Electric Trike accepts no liability or warranty claims if other batteries are used.
- Keep the battery away from children.
- Always turn display OFF before removing the battery pack.
- Always remove the key from the battery pack after each use. This prevents both unauthorized use of the powered features of your Perraro Electric Trike and removal of the battery by unauthorized persons when your Perraro Electric Trike is not in use. Failure to secure your bicycle from unauthorized use can result in death or serious injury to others.

Charging



Locate the charge port on the side of the battery. You can charge the battery from this port while the battery is in or out of the bicycle.

To prevent serious injury or death:

- Do not leave your battery unattended while charging.
- Do not connect the battery pack to the charger until it has reached an allowable charging temperature.
- Do not charge the battery with chargers other than the charger provided by Perraro Electric Trike.
- Only charge the battery indoors and in dry spaces which are not excessively hot or cold (within 10°F of room temperature).
- Ensure there are no flammable items, dirt or debris nearby when using the charger.

- The charger will automatically stop charging once the battery reaches its full capacity.
- The light on the charger will be red when the battery is charging, and will turn green when charging has finished.
- Avoid leaving the charger plugged in when the battery is fully charged.
- Do not charge the battery if you notice the battery is damaged, excessively hot, leaking, smells, or is discolored.
- Charging the battery should take approximately 6-8 hours if the battery is mostly empty.
- Store the battery indoors in a dry space, away from heat or flame sources and out of direct sunlight.
- The charger may get hot (>165°F) when charging. Use caution and avoid touching the body of the charger.
- To reduce risk of injury, charge only batteries of your Perraro Electric Trike. Other types of batteries may burst, causing personal injury and damage.
- Only charge Perraro Electric Trike approved lithium-ion battery packs. The battery pack voltage must match the battery pack charging voltage of the charger. Otherwise, there is risk of fire and explosion.
- Do not expose the charger to rain or wet conditions. If water enters a charger, there is a risk of Electric shock.
- Only use the original Perraro Electric Trike battery charger supplied with your Electric Trike or one approved for your Electric Trike by the manufacturer and purchased from a trusted source. Bypassing the battery charger or the use of a non-approved or counterfeit battery charger can lead to death or serious injury.
- Keep battery charger clean. Contamination can lead to the risk of an Electric shock. Clean only with the use of a damp cloth (mild soap/water).
- Always check the charger, cable, and plug before use. Stop using the charger if you discover any damage. Do not open the charger. Damaged chargers, cables, and plugs increase the risk of Electric shock.
- Do not operate the charger on an easily ignited surface (e.g. paper, textiles, etc.) or in a flammable environment. There is a risk of fire due to the charger heating up during operation.
- Take care if you touch the charger while it is charging. The charger can get very hot, especially when the ambient temperature is high.
- The battery may give off fumes if it becomes damaged or is used incorrectly. Ensure the area is well ventilated and seek medical attention should you experience any adverse effects. These fumes may irritate the respiratory tract.
- Batteries must not be subjected to mechanical shock. There is a risk of damage to the battery pack.
- Keep the battery charger away from children. This will ensure that children do not play with the charger.
- Persons who are not capable of safely operating the charger because of their physical, sensory, or mental limitations, or because of their lack of experience or knowledge, may only use this charger under supervision or after having been instructed by a responsible person. Otherwise, there is a risk of operating errors and injuries.



07 BATTERY INFORMATION

- Note the household voltage! The voltage of the power supply must correspond to the specifications given on the battery charger nameplate.
- Damage to your Electric Trike's Electrical system caused in any manner, including water intrusion, can lead to battery failure, Electrical system malfunction, or Electrical fire and consequent property damage, injury, or death. Follow all recommendations to minimize chance of water damage. If you have any questions, contact Perraro Electric Trike.
- Keep battery charger clean. Contamination can lead to the risk of an Electric shock. Clean only with the use of a damp cloth (mild soap/water) when the charger is unplugged from both the wall and the trike.
- Keep the rubber plug inserted into the battery any time the battery is in the trike to prevent water ingress.



To reduce the risk of fire, connect only to a circuit provided with 10 amperes maximum branch circuit overcurrent protection in accordance with the National Electrical Code, ANSI/NFPA 70. Never use extension cords with your Perraro Electric Trike charger provided with the purchase of your Electric Trike, after sales service, or warranty charging devices.



Using a damaged battery or charger can create additional trike damage or a fire hazard. Stop using your battery and charger and contact Perraro Electric Trike immediately if any of the following occur:

- Your charger's flexible power cord or output cable or any of the Electrical cables on your trike is frayed, has broken insulation, or any other signs of damage,
- Your battery or charger is physically damaged, non-functional, or performing abnormally,
- Your battery or charger experienced a significant impact from a fall or crash, with or without obvious signs of damage, or
- Your charger becomes too hot to touch (it's designed to get warm with normal use), gives off an odor, or shows other signs of overheating. Store any damaged battery or charger in a safe location and, as soon as possible, recycle or otherwise dispose of it according to local rules. Contact Perraro Electric Trike if you have any questions or to purchase a compatible replacement battery or charger.

Battery Charging Information

- Check the charger, charger cables, and battery for damage before beginning each charge.
- Always charge in a safe area that is cool*, dry, indoors, away from direct sunlight, dirt, or debris, in a clear area away from potential trip on the charging cords, or for damage to occur to the trike, battery, or charging equipment while parked and/or charging.
- Always charge your battery in temperatures between 50 °F – 77 °F (10 °C – 25 °C).
- The battery can be charged on or off the trike. To remove the battery see instructions “Installing and Uninstalling Battery Pack”
- The battery should be recharged after each use, so it is ready to go the full range per charge next ride. There is no memory effect, so charging the battery after short rides will not cause damage.
- Charging the battery normally takes 3-7 hours. In rare cases, it may take longer to allow the battery management system to balance the battery, particularly when the trike is new or after long periods of storage.
- The charge indicator light will show red while the battery charges. When charging is complete, the charging indicator light will turn green. Ensure the lights face 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. Detach the charger as soon as possible once the green light indicates a complete charge to avoid unnecessary wear of charging components.

- Never charge a battery for more than 12 hours at a time.
- Do not leave a charging battery unattended.

To Charge:

1. Plug the cable from the charger into the port on the side of the battery pack.
2. Plug the charger power cable into an Electrical mains wall socket.

Note: Use only the supplied input connection: standard AC power cord when connecting to the household Electrical supply. Note: The charging process is only possible when the temperature of your Perraro Electric Trike battery is within the permitted charging temperature range.

After charging is complete and the light on the charger is green, disconnect the cable from the battery port and power cord from wall socket. If you have charged the battery in the bicycle frame, carefully insert the rubber plug after charging, so that no dirt or water can enter the battery port.

08 MOVING AND STORING YOUR ETRIKE

Moving and Storage Instructions

Charging Battery Pack Before and During Storage

When the battery pack will not be used for weeks or months, remove it from the Electric Trike and store the battery pack at about 60 % charge as indicated by the Energy Bar on the display. At about 60% charge, the battery will degrade less, compared to higher charge levels. Every 2-3 months check the battery charge level and recharge to 60%, if necessary.

Note: If the battery is stored with no charge for an extended period of time, it may be damaged despite the low self-discharge and may reduce the battery capacity.

For optimum service life for your battery pack, charge the battery pack to 100% a few hours before you plan to ride. For example, if you ride the bicycle and the charge level falls to 50% but you plan to use the bicycle again in a few days, wait until the day before you plan to use it again to charge it to 100%.



DO NOT charge battery unattended or leave battery connected to charger overnight.

Leaving the battery permanently connected to the charger is not recommended.

As the battery pack ages, capacity will diminish, and the battery pack will eventually need to be replaced. A significantly reduced operating period after charging indicates that the battery pack is worn out

and must be replaced. You may replace it yourself by purchasing a replacement battery pack from Perraro Electric Trike.

Storage Conditions

If possible, store the battery pack in a dry, well-ventilated place. Protect it from moisture and water.

Always store your Perraro Electric Trike battery pack in a location that:

- Is in a room with a smoke alarm;
- Is away from combustible or easily flammable objects; and
- Is away from heat sources.

For an optimum service life, operate your Perraro Electric Trike battery at temperatures between 32° F -104° F (0°C-40°C).

Make sure the maximum operating temperature is not exceeded. Do not leave the battery in your car during the summer, for example, and store it away from direct sunlight.

NOTE: Leaving the battery installed on the bicycle for long-term storage is not recommended.

Failure to follow Battery Charging & Storage Best Practices 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.

Issue	Most Common Solutions
Charging indicator lights do not illuminate.	<ol style="list-style-type: none"> 1. Check that the cord is connected to the charger. 2. Check power availability at the main plug location. 3. If the battery does not charge, unplug and contact Perraro Electric Trike. Do not attempt to repair cord or charger.

MOVING AND STORING YOUR PERRARO ELECTRIC TRIKE

Please observe storage temperatures for your Perraro Electric Trike. Protect the Drive Unit, Cockpit System, and Battery Pack against extreme temperatures (e.g. from intense sunlight without adequate ventilation). Extreme temperatures can cause the components (especially the battery) to be damaged.

To prevent serious injury or death:

- Always remove the battery pack before moving your Perraro Electric Trike on a bicycle rack mounted on your vehicle.
- Always use a bicycle rack that is compatible with your Perraro Electric Trike. Check your bicycle rack manual to be sure your rack has sufficient capacity. Overloading a bicycle rack could cause the rack to fail and your Electric Trike to be damaged.
- Never attempt to use a roof-mounted bicycle rack. ONLY use hitch-mounted racks.
- Always use proper lifting techniques when lifting your Perraro Electric Trike. Electric bicycles are generally heavier than bicycles.

09 TROUBLESHOOTING

Issue 1: Bicycle will not turn ON.

Most Common Solutions :

1. Charge the battery until the light on the charger turns from red to green. This may take up to 8 hours.
2. Insert key in the battery and turn counterclockwise to the LOCK position. Then press and hold the button to turn ON.
3. Follow the cable coming from the display down to the quick plug. You may need to unravel some of the plastic wrapping to access it. With a quick pull (do not twist), unplug the quick plug, inspect both sides of the plug, and reconnect by lining up the arrows on both ends. After checking the quick plug, press and hold the button on the display control pad to turn on.

Issue 2: Pedal assist or throttle do not work.

Most Common Solutions :

1. Check that the PAS level is set between 1-5.
2. To test if PAS is working, do not operate the throttle.
3. To test if the throttle is working, do not pedal.
4. Check all quick plugs.

Error Codes

The display can prompt and warn the whole vehicle fault, and when the fault is detected, the display interface displays the fault code (the specific fault code needs to be defined by the controller).

The fault interface (reference) is as follows:

ERROR	Fault description
21	Current anomaly
22	Handle anomaly
23	Motor out of phase
24	Hall signal of the motor is abnormal
25	Abnormal braking
26	undervoltage
27	European standard functional safety

If you have any questions at all regarding the basic troubleshooting below, reach out to Perraro Electric Trike customer support by email at support@perraroelectricbike.com, or call **949-414-8003**.

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to be left blank.**

10 MAINTENANCE

To prevent serious injury or death:

- NEVER open any of the components, including the battery, display, motor, or PAS sensor. Service should only be performed by a bicycle repair shop.
- Always remove the battery pack before performing any bicycle inspection, maintenance, or repair.
- If you suspect that something is loose, do not ride your bicycle. All nuts, bolts, and screws require the proper tightening force. Too little force and the fastener may not hold securely. Too much force and the fastener can strip threads, stretch, deform, or break. Either way, incorrect tightening force can result in component failure, which can cause you to lose control and crash. Take your bicycle to a bicycle repair shop for service.
- Do not paint any components of your Perraro Electric Trike as they may cause premature failure of the component.
- Do not submerge your Perraro Electric Trike or its components in water or use a pressure washer to clean.

Caring for Your Electric Trike

Always observe the operating and storage temperatures of your Perraro Electric Trike and its components. Protect motor, display, and battery pack against extreme temperatures (e.g. from intense sunlight without adequate ventilation). Extreme temperatures can damage components (especially the battery pack).

Please have your Perraro Electric Trike serviced at least once a year.

Tune-Ups

100 Mile Tune-Up

After 100 miles, or 5 full battery charge cycles, have the following services performed at a bicycle shop:

- Brake cables may need to be adjusted and tensioned properly.
- All hardware should be adjusted to the specified “Tightening Torque” . If any hardware is damaged, it may need to be replaced by a bicycle mechanic.

Monthly (or about every 250-500 miles)

- Inflate tires to pressure within the recommended range printed on tire sidewalls.
- Lubricate chain.
- Check that all hardware is tightened to the torque specifications listed in the “Tightening Torque” section of this manual.
- Check your brake pads for signs of wear. Replace if necessary.
- Clean the bicycle with low residue cleaner and dry completely. Lubricate after cleaning where necessary.
- Check spoke tension and adjust if necessary. See “Tightening Torque”

Quarterly (or about every 750-1500 miles)

- Check all items on the monthly service list above.
- Check tire tread for excessive wear. Replace if necessary.
- Check that electrical connectors and cable housings are secured away from moving parts and are free from damage.



USER MAINTENANCE INSTRUCTIONS

You should have your bicycle maintained at regular service intervals at your local bicycle shop.

Do not tamper with your bicycle. Tampering is defined as removing or replacing any original equipment or modifying your bicycle in any way that may change its design and/or operation. Such changes may seriously impair the handling, stability, and other aspects of the bicycle, making it unsafe to ride. Tampering can void your warranty and render your bicycle noncompliant with the applicable laws and regulations. Perraro Electric Trike is not responsible for any direct, incidental, or consequential damages. This includes, without limitation, damages for personal injury, property damage, or economic losses due to tampering.

To ensure safety, quality, and reliability, use only original parts or Perraro Electric Trike authorized replacements for repair and replacement.



Cleaning

Do not submerge your Perraro Electric Trike or its components in water, or use a pressure washer to clean.

Clean your Perraro Electric Trike carefully with a soft, damp cloth (using only mild soap and water). Rinse with water. The Electrical components on your Perraro Electric Trike are IP 65 rated.

11 LEGAL

Warranty

PERRARO ELECTRIC TRIKE WARRANTS TO THE ORIGINAL REGISTERED PURCHASER THAT PERRARO ELECTRIC TRIKE SHALL BE FREE FROM ALL DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF DELIVERY.

DISCLAIMER OF CONSEQUENTIAL AND INCIDENTAL DAMAGES: THE ORIGINAL REGISTERED PURCHASER OF THIS TRIKE, SUBSEQUENT OWNERS AND ALL OTHER INTENDED AND UNINTENDED USERS OF THIS TRIKE, SHALL NOT BE ENTITLED TO RECOVER FROM Perraro Electric Trike ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES.

THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

The warranty is non-transferable and only applies to the original owner. This warranty gives you specific rights and purchasers may also have other rights, which may vary from state to state. Damage caused by failing to follow instructions in the manual, acts of God, accident, misuse, neglect, abuse, commercial use, alterations, modification, improper assembly, installation of parts or accessories not originally intended or compatible with the Perraro Electric Trike as sold, operator error, water damage, extreme riding, stunt riding, or improper follow-up maintenance is not covered under this warranty. Warranty parts will only be shipped within the continental United States and Canada.

Parts covered by the warranty: frame, forks, stem, handlebars, headset, seat post, saddle, brakes (excluding brake pads), lights, bottom bracket, crank set, pedals, rims, wheel hub, freewheel, cassette, derailleur, shifter, motor, throttle, controller, wiring harness, display (excluding damage due to water), kickstand, reflectors, and hardware. The battery warranty does not include damage from power surges, use of 3rd party charger, improper maintenance or other such misuse, normal wear, or water damage (including rust).

Accessories sold on perraroelectricbike.com are not covered under warranty.

Stolen trikes are not covered under warranty.

Necessary precautions must be taken to ensure the trike and battery are not exposed to severe weather conditions. Exposure to very wet, hot, or cold conditions may void the warranty.

Perraro Electric Trike will replace any parts deemed to have been damaged during shipping. Shipping damage must be reported to Perraro Electric Trike within 14 days of shipment arrival. This applies to all products, including trikes and accessories.

You will NOT be refunded as compensation for your time or efforts replacing damaged parts.

Replacement parts will not be sent until photographic evidence has been provided to Perraro Electric Trike. Perraro Electric Bike may request additional documentation (such as video) to assist with accurately diagnosing the problem and processing the warranty claim.

Most warranty parts are fulfilled 1-10 business days after the request is put into our system by a customer service representative. Warranty parts are sent using USPS First Class, FedEx Express, or FedEx Ground, depending on the size of the part. Warranty parts will not be expedited.

Items including the chain, tires, wheels, rims, tubes, battery handle, brake rotors, brake pads, cables and housings, grips, and spokes are considered wear items. These items wear down with normal use and are not covered under warranty. You are responsible for replacing and maintaining these wear items.

Any unauthorized alterations or repairs are not covered and may void this warranty.

For warranty services, please contact Perraro Electric Trike' online support by email at **contact@perraroelectricbike.com**. Bikes or parts returned without proper documentation may result in delayed service or denied warranty coverage. Warranty return shipping costs along with duties and taxes are the responsibility of the claimant. All unauthorized returns will be refused.

Note that your insurance policies may not provide coverage for accidents involving Perraro Electric Trike. To determine if coverage is provided, you should contact your insurance company or agent. Damage as a result of an accident is not covered under this warranty, and Perraro Electric Trike is not responsible for repair or replacement of damaged trikes or parts.

Perraro Electric Trike reserves the right to change its warranty at any time and without notice.

- Any action, lawsuit or other proceeding, under this warranty or otherwise related to the trike must be commenced within ninety (90) days after expiration of the one-year warranty period.
- THIS WARRANTY GIVES THE ORIGINAL REGISTERED PURCHASER SPECIFIC LEGAL RIGHTS AND YOU MAY HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

Trike Performance Disclaimer

- The trikes listed range and top speed are estimates (not guarantees) of expected performance. Performance will vary with rider weight, cargo weight, rider/cargo shape (both contribute to drag), terrain, tire pressure, brake adjustment, throttle vs PAS usage, pedal power, battery charge level, ambient temperature, and wind conditions.
- Under certain conditions it is possible to get ranges and top speeds that are different from the listed estimates.

Liability Disclaimer

Riding any kind of bicycle comes with inherent risks and dangers that cannot be predicted or avoided. These dangers could result in a serious accident, injury, or death of the rider. It is the sole responsibility of the rider to become properly educated and prepared to ride safely. Once in possession of the trike, Perraro Electric Trike strongly encourages and recommends that all customers have a certified and reputable bicycle mechanic complete a full inspection

11 LEGAL

of each component on the bicycle to ensure it is safe for operation. Perraro Electric Trike makes no claims or guarantees that the brakes, battery, frame, motor, motor controller, display, Electrical cables, Electrical cable housings, fasteners, grips, fork, stem, shifters, headset, seat post, seat post clamp, handlebar stem clamp, saddle, wheel hubs, handlebars, spokes, rims, tires, tubes, derailleur, freewheel, cassette, throttle, kickstand, lights, reflectors, hardware, bottom bracket, or any other part or accessory, will be properly secured and adjusted

upon arrival. Before every ride, fully inspect your bicycle to ensure everything is secured and adjusted properly.

Under no circumstances is Perraro Electric Trike responsible for any damage resulting from damaged, defective, or improperly secured parts. This includes, but is not limited to, damage to personal property, personal injury, or death.



WARNING - When using this product, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
2. To reduce the risk of injury, close supervision is necessary when the product is used near children.
3. Do not put fingers or hands into the product.
4. Do not use this product if the flexible power cord or output cable is frayed, has broke insulation, or any other signs of damage.
5. For and off board charging system provided with a field wiring terminal or leads, the installation instructions shall state that the installation is intended to use copper wires only.
6. For and off board charging system, when a pressure terminal connector, or the fastening hardware, are not provided on the unit as shipped. The instruction manual shall indicate which pressure terminal or component terminal assemblies are for use with the unit.
7. With reference to (f), the terminal assembly packages and the instruction manual shall include information identifying the wire size and the manufacturer's name, trade name, or other descriptive marking by which the organization responsible for the product is identified.
8. instructions for using the tool shall be included in the installation instructions.



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Latest Version

THE LATEST VERSION OF YOUR ASSEMBLY VIDEO IS AVAILABLE AT [PERRAROELECTRICBIKE.COM/PAGES/ASSEMBLY-VIDEO](https://perrarolectricbike.com/pages/assembly-video)



USER MANUAL

V1.1 2024

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