



e-Tough Power M9 Electric Bike Owner's Manual

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1 - Introduction

Thank you for choosing MerkyBikes and purchasing the e-Tough Power M9 electric bike. As an independent family business based in the UK, we take pride in providing you with top-quality electric bikes that offer both adventure and sustainability. With our slogan "Riding dirty. Driving green.", we believe in the power of electric propulsion to enhance your mobility, extend your rides, and most importantly, increase your enjoyment!

Within this Owner's Manual, you will find essential information regarding the assembly, safety, riding, and maintenance of your e-Tough Power M9. We urge you to read it thoroughly before embarking on your first ride.

MerkyBikes do not condone the use of an unrestricted ebike on the roads within the UK. It's crucial to adhere to all Electric Assisted Bicycles and/or Motorized Vehicle regulations in your area while using our products. For your safety, we strongly advise wearing a helmet when riding this electric bike.

Should you have any questions or need further assistance after reading this manual, our dedicated team is here to help. You can visit the MerkyBikes website reach out to us via email, or give us a call on the provided phone number.

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Riding dirty. Driving green.



2 - General Warnings



Read the entire manual before operating the e-bike

Regular practice sessions are recommended when riding electric bicycles due to the inherent risks involved. The user or consumer accepts full responsibility of proper use and for any personal injuries, damages, or malfunctions of the bicycle or system, as well as any losses or harm to themselves, others, or property resulting from its use. Unforeseeable and unavoidable risks are associated with the use of electric bicycles, and it is solely the rider's responsibility to manage them. The bicycle, like any mechanical device, is subject to wear and intense strain. Various materials and components may respond differently to wear and fatigue. If a component exceeds its intended lifespan, there is a possibility of sudden failure, which could lead to rider injuries. Any signs of cracks, scratches, or changes in color in highly stressed areas indicate that the component has reached the end of its lifespan and should be replaced.

- **You must be over 14 years of age to ride an e-bike on public cycle paths or roads in the UK**
- **Do not operate the e-bike if you are under the influence of alcohol, drugs, or medications that may impair your ability to ride safely**

Always obey traffic laws and regulations

Disclaimer: This electric bicycle is shipped with a motor that exceeds the maximum power limit of 250W and a maximum speed that exceeds 15.5mph, as specified for Electrically Assisted Pedal Cycles (EAPCs) in the UK. Therefore as received, this electric bicycle is intended for off-road use on private land, with the permission of the landowner.

This bike includes a speed restriction option that can limit the maximum speed to 15 mph (25 km/h) in compliance with local laws and regulations. **To restrict the maximum speed, please refer to the instructions provided in section 6 'Ebike Usage Guidance' of this manual.**

Please note that while restricting the speed to 15.5 mph (25 km/h) may align with legal requirements, it does not automatically make the electric bicycle compliant with EAPC regulations. The owner acknowledges and assumes all responsibility and liability for any consequences resulting from the use or modification of this electric bicycle, including any non-compliance with local laws and regulations.

Please use this electric bicycle responsibly, adhering to all applicable laws and regulations. Failure to comply with the instructions and adhere to local laws and regulations may result in legal consequences and may compromise the safety and legality of the electric bicycle.

The manufacturer and seller of this electric bicycle disclaim any liability for the use or modification of this electric bicycle that does not comply with local laws and regulations. The owner assumes all risks associated with such use or modification.

Please keep in mind that each riding area may have its own set of regulations. It is crucial to respect these rules when riding your bike. Always show consideration for private property by refraining from trespassing. One of the utmost importance is to respect and prioritize the safety of others.

Off-Road Switch

This e-bike is equipped with an off-road switch that is specifically intended for off-road use only. It is crucial to understand that engaging the off-road switch may alter the performance characteristics of the bike, enabling higher speeds and increased power. However, please be aware that use of the off-road switch on public roads or in areas where it is prohibited by law is strictly forbidden and may result in legal prosecution, fines, or other penalties. Always abide by local laws, regulations, and restrictions regarding e-bike usage, and only activate the off-road switch in designated off-road areas or private properties where it is permitted. Failure to comply with these guidelines can jeopardize your safety, the safety of others, and lead to legal consequences.

3 - Safety Warnings



Please take your time to read all safety information before use, it's crucial to thoroughly understand the safety information.

- **Always use the e-bike with caution and maintain a safe speed appropriate for the riding conditions.**
- **Do not modify or alter this e-bike in any way that may impact its geometry or subject it to excessive stress.**

Such modifications can compromise the safety, performance, and durability of the bike. Moreover, any unauthorized alterations will result in the warranty being voided.

Mild start and avoid harsh braking

- **The motor possesses significant torque, and if used without considering appropriate gear selection, it can impose excessive strain on components.**

Improper use may lead to increased wear and potential damage to various parts. To prevent such excessive strain or harm, it is strongly advised to choose the lowest gears when selecting the high power settings or engaging the off-road switch from standstill. This precautionary measure ensures the optimal distribution of power and safeguards the longevity and integrity of the bike's components. Please refer to the bike's manual for detailed instructions on gear selection and power settings to ensure proper usage and minimize the risk of strain or damage to parts.

- **During your ride, the excess force on the front brake can cause you to lose balance and fall. This is an electric bike, it shares the same mechanical features as non-electric bikes.**

Your bike is outfitted with hydraulic disc brakes, which are unique compared to other common brake types found on bicycles. Disc brakes operate by squeezing a disk mounted on the hub between two pads. It's important to note that the braking effectiveness of your bike can vary based on adjustments as well as the thickness and condition of the brake pads. For advice on brake options and adjustments tailored to your specific requirements, we recommend reaching out to your local bike shop. They can provide valuable assistance and recommendations to ensure optimal braking performance based on your needs.

The braking power of disc brakes can differ based on adjustments and the condition of the brake pads. It's crucial to be aware that applying the front brake excessively or suddenly can cause the rider to be thrown over the handlebars, leading to severe injury or even death. Additionally, transportation may subject the brakes to potential damage. Prior to your first ride, carefully inspect the braking system to ensure it functions correctly and effectively. This proactive measure will help promote a safe and enjoyable riding experience.

- **Disc brakes come with sharp edges that may cause injury**

Make sure you or any other people take extra caution when touching it if they have to because of extremely hot after using, DO NOT touch it until it cooled down.

- **Never lay your bike on the chain side or rely on the kickstand alone. Avoid leaning it against any sturdy vertical object that can support the weight of the bike and keep it standing securely**
- **Keep the e-bike away from extreme heat, fire, or other sources of ignition**
- **Avoid using high-pressure cleaning jets**
- **Do not use thinners or other solvents to clean the components. Such substances can damage the surfaces**
- **Avoid water submerging, to keep the components protected**
- **Do not disassemble the motor or tamper with the electrical system**

It is essential to refrain from disassembling the motor or engaging in any tampering with the electrical system of the e-bike. Unauthorized disassembly or tampering can lead to malfunctions, safety hazards, and voiding of the warranty. To maintain the integrity and safe operation of the e-bike, always rely on authorized service personnel for any motor-related or electrical system-related needs.

Electric Shock Hazard. When attempting to charge the battery, there is a danger of electric shock. To charge the battery correctly, please follow these guidelines:

The battery may be charged on or off the bike.

- Ensure the charger is securely connected to the socket and battery before turning on your outlet's power switch.
- Check that all connections are secure and properly aligned.

Failure to follow these instructions may result in electric shock or other hazards. Always exercise caution and prioritize safety when handling the charging process. **Do not place the battery near flammable items or sources of heat while charging.**

Do not use the e-bike if any part of it appears damaged or if there are any malfunctions.

Inspect your bike before each ride.

Before each ride, make sure you go through the checklist below to ensure a safe ride. Never ride a bike with damages, defects, or malfunctions. Get it repaired, or turn to your local bike shop for repair.

- **Tire Pressure**

It is crucial to regularly check and maintain the correct tire pressure by referring to the markings on your tires. Using a reliable tire pressure gauge, confirm that the tire pressure falls within the recommended range of 30 psi to 40 psi. Proper tire pressure ensures optimal performance and safety during your rides. Make it a habit to inspect the tire pressure and refer to the markings on the tires for accurate inflation.

- **Tires and Wheels Maintenance**

Give each wheel a spin and carefully assess them for any signs of damage, such as cuts, bulges, or loose spokes. Inspect the tire condition, ensuring there are no cuts or abrasions present. If you happen to come across any of these issues, it is imperative to promptly replace the tire to maintain optimal safety standards.

Take a close look at the rim's trueness by giving it a spin and paying attention to any signs of side-to-side or up-and-down wobbling. If you notice any movement in the rim, it is highly recommended to refrain from riding the bike until the necessary repairs are made, ensuring your utmost safety.

- **Brake Functionality**

Test the brakes by applying them gently and ensuring they engage smoothly and bring the bike to a controlled stop. Properly functioning brakes are crucial for your safety and the ability to stop effectively, especially during emergency situations.

- **Handlebar Stem and Front Wheel**

Ensure that the front wheel and handlebar stem are properly aligned with each other. To test the connection of the stem to the fork, lock the front wheel between your knees and gently turn the handlebar from side to side. If you observe any movement or instability, it is crucial not to ride the bike until this issue is corrected.

Inspect the cable routing to ensure that the handlebars can turn freely without any binding or pinching of the cables. Additionally, check that the handgrips on the handlebars are in good condition and securely attached. Make sure the bars are not protruding through the grip, which can compromise your grip and control. Taking these precautions will help maintain the integrity and safety of your bike during rides.

- **Seat Position**

Properly adjusting the saddle is vital for a safe and comfortable riding experience. Take the following steps to ensure the correct fit:

1. Position the pedals at the 6 o'clock and 12 o'clock positions.
2. Place the ball of your foot on the lower pedal.
3. Your bottom leg should have a slight bend. If it is excessively bent, raise the saddle. Conversely, if you need to strain or cannot reach comfortably, lower the saddle.
4. Verify that the saddle is straight and level for optimal balance and comfort.

By following these guidelines, you can achieve an appropriate seat position that promotes safety and enhances your riding experience.

- **Seat and Seat Post**

To ensure a secure seating arrangement, perform the following checks:

1. Confirm that the seat is firmly mounted on the seat post by lifting and pressing down firmly on the seat. It should remain stable without any tilting or movement.
2. Proceed to examine the seat post's security within the frame by attempting to rotate the seat. If you observe any rotation, it indicates that the seat tube is not adequately clamped into the frame.

- **Chain and Drivetrain**

Check the chain's condition and ensure it is properly lubricated. A clean and well-lubricated chain enhances shifting performance and extends the lifespan of the drivetrain components. Additionally, inspect the gears and derailleurs for any visible damage or misalignment.

- **Lights and Reflectors**

To prioritize your safety, it is essential to verify that reflectors are correctly fitted and clearly visible on your e-bike. Reflectors play a crucial role in enhancing visibility, particularly during low-light situations or night rides. Additionally, we strongly recommend fitting lights to further improve your visibility, ensuring optimal safety for you and others around you.

- **Battery Charge**

Check the battery charge level before your ride. Make sure the battery is adequately charged to avoid unexpected power loss during your journey.

- **General Inspection**

Take a quick look at the overall condition of your e-bike, including the frame, cables, and other components. Look for any signs of damage, loose bolts, or unusual wear that may affect the bike's performance or safety.

By consistently performing these pre-ride checks, you can ensure that your e-bike is in proper working order, reduce the risk of accidents, and enjoy a safe and enjoyable riding experience.

We prioritize your safety, and to further ensure your well-being, here are some additional safety tips:

Wear appropriate protective gear, such as knee and elbow pads, when riding off-road or in high-risk environments.

Pay attention to your surroundings.

Do not ride in inclement weather conditions, such as heavy rain, snow, or ice, as it may affect the performance and safety of the e-bike.

Maintain a firm grip on the handlebars at all times and keep both hands on the handlebars while riding.

Avoid sudden or excessive braking, accelerating, or turning, as it may lead to loss of control.

Do not overload the e-bike with excessive weight or cargo beyond the specified limits.

When parking or storing the e-bike, ensure it is secured and cannot roll away.

An electric bike, like any mechanical device, undergoes fatigue, stress, and wear. Continuous usage and the effects of the environment can contribute to the deterioration of the frame and its components. Consequently, the bike's useful lifespan may be reduced. It is crucial to provide proper care and maintenance to prevent potential failures that could lead to severe injury or even loss of life.

3.1 - Battery Safety



- **Please keep the battery out of reach of children.**
- **Prior to servicing, making adjustments, or conducting maintenance on this electric bike, it is crucial to remove the battery.**

This precautionary step helps prevent the inadvertent activation of the motor during service or maintenance. Instructions for battery removal can be found in section 6.

- **Whenever the bike is stored or left unattended, it is recommended to remove the battery to prevent unauthorized use or accidental activation of the motor. Neglecting to remove the battery may lead to severe injury or even death.**
- **Do not use a broken battery. battery acid is highly corrosive and can cause serious burns if it comes in contact with your eyes or skin. Please turn to a doctor for medical assistance if this occurs.**

Charging Your eBike Battery

- Charge your e-bike battery by plugging it directly into a wall outlet. Avoid using power strips or extension cords for charging.
- Use only the original manufacturers' equipment to charge your e-bike battery. Do not use third-party or aftermarket charging equipment.
- Do not stack or cluster e-bike batteries together while charging.
- Ensure that the exit of your home is not blocked by a charging e-bike or e-bike battery. Always maintain a safe way to exit your home in case of any issues with the battery.

Storing Your eBike Battery

- Store your e-bike battery in a well-ventilated area.
- Choose an area with a fire detection system to store your e-bike battery.
- Keep your e-bike battery away from entry and exit doors.
- Avoid storing your e-bike battery in extreme temperatures.
- If storing the battery for an extended period, it is advisable to store it at a reduced state of charge, (50%) if possible.

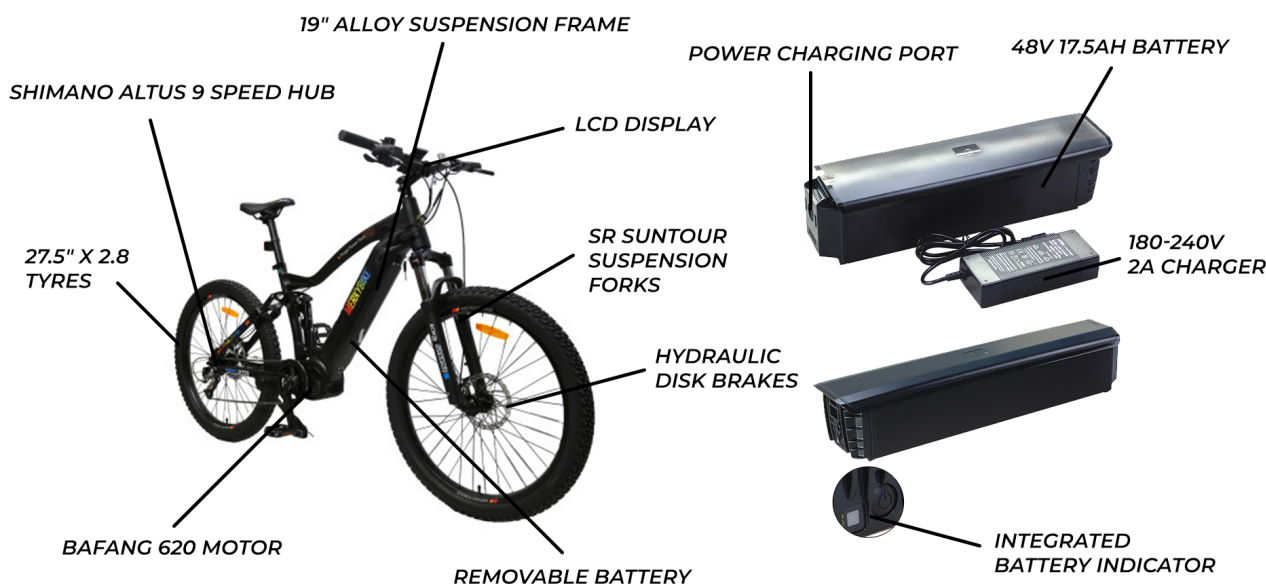
Following these separate guidelines for charging and storing your e-bike battery will help ensure the safe and proper use of your battery.

Here are some important rules to follow for the proper handling and care of your e-bike battery

- Do not attempt to disassemble, open, or service the battery . Any maintenance or repairs should be performed by authorized professionals only.
- Use only the designated battery specified for this product. Using incompatible battery packs can lead to malfunctions and safety hazards.
- Avoid crushing, puncturing, shorting external contacts, or disposing of the battery pack in fire or water. These actions can cause damage to the battery and pose a risk of fire or explosion.
- Keep the contact points of the battery pack clean and free from dirt or debris. Regularly inspect and gently clean the contacts to maintain good electrical connections.
- You must charge and discharge a minimum of once every three months.
- Do not reverse the polarity of the battery pack for any reason.
- Do not handle or store with metallic like necklaces, coins or hairpins, etc.
- Do not short circuit, over-charge or over-discharge the battery pack
- Do not expose the battery to extreme heat or flame.
- Do not immerse the battery pack in water or sea water, or get it wet.

By adhering to these rules, you can ensure the safe and reliable operation of your e-bike battery.

The Battery Pack contains Lithium and Special Consideration should be given to its safe disposal. Your Local Authority should have the necessary facilities in place.



4 - Unboxing and Assembling

For your safety and optimal riding experience, we highly recommend having your bike assembled, inspected, and adjusted by a professional bike mechanic or a trusted bike shop before you start riding. This ensures that your bike is properly set up and all components are in good working condition.

Upon receiving your bike, we encourage you to subscribe to our YouTube Channel, where you can find helpful videos demonstrating the unboxing and assembly process. These videos provide step-by-step instructions to assist you in correctly setting up your bike.

Please follow these concise instructions (steps 1 - 10) to properly unbox and assemble your e-bike. The bike is 85% assembled and packaged with cable ties securing all components. The battery is already installed on the bike, and the keys are attached to the frame using cable ties. Additionally, you will find a box containing the pedals, reflectors, and charger. Ensure you have the necessary tools, including hex keys, scissors or a cutting tool, a 15mm spanner, a Philips screwdriver, and a bicycle pump. Bike grease & A small torque key (optional).

Prepare a spacious and child-free area before beginning the assembly process.

1. Unboxing

- Carefully remove the bike from its packaging, taking care not to strain the cables.
- Remove the cable ties securing the front wheel, and any protective wrapping or cardboard.
- Take extra caution to prevent damage to the bike's wires while removing packaging materials and cable ties.
- Retain the packaging materials for future use, such as bike transportation or servicing.



2. Positioning the Bike:

- Ensure the bike is positioned securely, protecting both the bike and flooring. We recommend using a piece of foam from the packing materials to cushion the front forks.
- Confirm that the bike is stable and well-supported before proceeding.



3. Adjusting the LCD Display

- Loosen the screws on the attachment rings of the LCD display.
- Center the display on the handlebars, securely tighten the screws for a proper fit after the handlebar is installed.



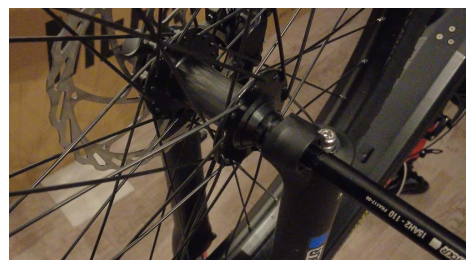
4. Handlebar Installation

- Remove the four bolts from the front of the handlebar stem.
- Position the handlebar carefully, ensuring wires are correctly placed in front.
- Fasten the handlebar by replacing and tightening the bolts evenly in the sequence 1, 4, 2, 3. **(5Nm) if using torque key.**
- Double-check the handlebar's stability and ensure it is firmly in place.



5. Front Wheel Installation

- With assistance or by carefully inverting the bike on its handlebars and seat, install the front wheel.
- Remove the front axle from the forks and the protective plastic clip between the front brake pads.
- Align the front wheel accurately, ensuring the brake disc fits between the brake pads.
- Screw the front axle securely back into place.



6. Pedal Attachment

- Remove the cable ties from the cranks.
- Attach the pedals, avoiding cross-threading, and tighten them loosely by hand.
- Apply a small amount of grease to the pedal threads before inserting them into the crank.



Note that the pedals are left and right-side specific, marked by "L" or "R" near the threads.

- Follow the correct threading direction: right pedal (normal threading), left pedal (reverse threading).

Use a spanner to tighten the pedals appropriately.

7. Reflector Attachment

- Assemble the reflectors by firmly slotting the two pieces together.

Attach the red reflector to the seat post and the white reflector to the handlebars.

- Ensure they are securely fixed in their designated positions.



8. Seat Post Height Adjustment

- Adjust the seat post height according to your preference and comfort using the quick release clamp. Ensure the seat is adjusted to the appropriate height for your leg length, allowing for a slight bend in the knee when the pedal is at the lowest point.
- Ensure that the saddle rail bolts are securely tightened.

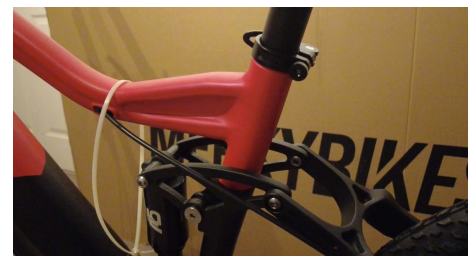
Check that the saddle is level, straight, and at the appropriate height.

9. Tire Inflation

- Inflate the tires to the recommended PSI, typically indicated on the tire sidewalls.
- Use a bicycle pump to achieve the desired tire pressure (recommended range: 30-45 PSI).

10. Final Check

- Conduct a thorough check to ensure all fittings are securely fastened.
- Refer to the safety check section in the provided manual for additional guidance and recommendations.



5 - Important information before your first ride

Perform a Pre-Ride Inspection

- Before each ride, visually inspect the e-bike for any signs of damage or loose components. **Please refer to the inspection checklist in section 3.**
- Check that the tires are properly inflated, brakes are functioning correctly, and all bolts and fasteners are securely tightened.

Check the Battery Level

- Ensure that the battery is fully charged before your first ride.
- Check the battery level on the display to ensure you have sufficient power for your intended ride.

Familiarize Yourself with the E-bike

- Take the time to understand the specific features and functions of your e-bike.
- Read the user manual provided by the manufacturer to familiarize yourself with the controls, display, and any unique features.

Helmet and Safety Gear

- Always wear a properly fitted helmet to protect your head during rides.
- Consider wearing additional safety gear such as knee and elbow pads for added protection.

Understand the Power Modes

- Familiarize yourself with the different power assistance modes available on your e-bike.
- Start with a lower assistance level if you are new to e-bikes and gradually increase as you gain confidence and experience.

Practice Braking

- Get a feel for the braking system and understand the sensitivity of the brakes.
- Practice gradual braking to ensure a smooth and controlled stop.

Start in a Safe Area

- Begin your first ride in a safe and open area away from obstacles.
- Practice starting, stopping, and maneuvering the e-bike to get comfortable with its handling.

Ride with Caution

- Start with shorter rides and gradually increase your distance and pace as you become more familiar with the e-bike.
- Ride defensively, anticipate weather conditions, and be aware of your surroundings at all times.

6 - Ebike Usage Guidance

Display Operation

This section will guide you through the operation of the display and its various functions. Please read this carefully to ensure a smooth and enjoyable riding experience.

1. Powering On and Off

To turn on the display, follow these steps:

1. Locate the power button on the display.
2. Press and hold the power button until the display lights up.
3. Release the power button once the display is illuminated.

To turn off the display, press and hold the power button until the screen goes blank.

2. Navigating the essential information

The display features a info feature that provides essential information about your ride. To cycle through these, use the "I" button located on the display. Each press of the "I" button will cycle through the different information screens, including trip, odometer, max speed, average speed, and riding time.

3. Pedal Assist Levels

By default, the display is set to "pas zero," where pedal assist is inactive. To adjust the pedal assist level, use the plus and minus buttons on the display. Pressing the plus button will increase the pedal assist level, providing more power and speed. Pressing the minus button will decrease the pedal assist level.

4. Walk Mode

The walk mode feature allows the motor to assist you at a walking pace. To activate walk mode, follow these steps:

1. Press and hold the minus button on the display.
2. The motor will engage, providing assistance while you walk alongside the bike.

5. Backlight and Display Settings

The display offers several customizable settings for your convenience. To access the display settings, follow these steps:

1. Press the "I" button twice quickly to enter the display settings menu.
2. Use the plus and minus buttons to navigate through the settings.

In the display settings menu, you can adjust the following:

- Units: Change between imperial or metric units.
- Brightness: Adjust the display brightness to your preference.
- Auto-Off: Set the amount of time the display remains awake before going to sleep.
- Power View: Choose to view motor power in watts or current.
- SOC View: Select battery indication to display either percentage or voltage.

- Trip Reset: Reset the odometer trip on the main display.
- Wheel Size: Set the correct wheel size for accurate speed calculation.
- Speed Limit: Adjust the desired speed limit. **This is where pedal assist can be restricted to 15mph.**
- Backlight Sensitivity: Modify backlight sensitivity for low light conditions.
- Password: Set a password to lock your display.
- Clock: Set the current time for the clock display.

To save any changes made in the display settings, press the "I" button again.

6. Additional Information

The display also provides access to battery information, mode drive motor details, and error code information. These options can assist in diagnosing issues and understanding your electric bike's performance.

To exit any menu or submenu, navigate to the "Exit" option and press the "I" button.

Note: For more detailed information on specific features and troubleshooting, please refer to the user manual provided in section 10.

Battery and charging

Your electric bike is equipped with a high-quality 17.5Ah 48V battery, designed to provide reliable power for your rides. Here are some important specifications and safety features of the battery:

Battery Information

- Battery Capacity: The battery has a capacity of 17.5Ah, which indicates the amount of energy it can store. This capacity allows for longer rides before recharging is required.
- Charging Time: It takes approximately 3 hours to fully charge the battery. This charging time may vary dependin

Power Brick LED Indicator

- Charging Status: When the battery is being charged, the LED on the power brick will be red, indicating the charging process is in progress.
- Fully Charged: Once the battery is fully charged, the LED on the power brick will turn green, indicating that the battery is ready

Safety Features

The battery is equipped with several safety features to ensure reliable and safe operation:

- Over Current Protection: The battery has over current protection, which safeguards against excessive current flow, preventing damage to the battery and connected components.
- Total Power Protection: This safety feature protects the battery from overloading by monitoring the power output and preventing it from exceeding safe limits.
- Over Voltage Protection: The battery incorporates over voltage protection, which safeguards against voltage spikes or excessively high voltage levels, ensuring the battery operates within safe limits.
- Short Circuit Protection: The battery features short circuit protection, which helps prevent damage to the battery and connected devices in the event of a short circuit.

To ensure optimal performance and maximize the lifespan of your bike's battery, it's important to follow these guidelines for charging and maintaining your battery.

Charging the Battery

Use only the charger provided with your e-bike or a replacement from the manufacturer. Cheap alternatives or non-branded chargers can pose risks to your safety and the battery.

Before your first ride, give the battery a full charge even if it has some initial charge. This initial charge is critical for the overall life of your battery. The recommended charging time is 3-4 hours.

The battery can be charged on or off the bike. To charge, plug the charger into the power socket and battery, ensuring all connections are secure before switching on. The charging indicator on the charger will turn red while charging and green when the battery is fully charged.

Charging and Maintenance Tips:

Charge your e-bike battery indoors to avoid exposure to water and extreme cold, which can reduce the battery's power capacity.

For regular use, avoid letting the battery charge level drop below 25%. Recharge within 24 hours rather than letting the battery run completely flat to maintain your e-bike's warranty.

Do not charge the battery for longer than 12 hours. The battery lasts longer when kept between 20% and 80% charge.

Store the battery in temperatures between 50°F and 77°F (10°C and 25°C). Avoid extreme cold or heat. Do not store the battery when it is empty. The optimal range for storage is between 30% and 70% charge. Store the battery on a flat, hard surface, and keep it clean from dirt, grime, or water.

Charge Battery on a Regular Basis:

Charge the bike battery when it reaches between 20% and 60% capacity remaining to avoid full battery discharge.

It is okay to allow the battery to go completely dead occasionally for a full system charge, but regularly draining it completely reduces its overall lifespan.

Consider charging your bike battery after each ride, depending on the distance you ride your electric bike.

Keep Battery at Moderate Temperature:

Extreme heat or cold can impact battery life. While riding, try to avoid excessively hot or cold conditions. When charging or storing the battery, ensure it is at a moderate temperature to prolong its life.

Consider Weight and Riding Conditions:

The overall range of your bike's battery will be affected by the weight the bike is carrying, including your weight and any additional load.

Riding in extremely hot or cold conditions can reduce battery life. Warmer temperatures are generally more favorable for the battery's performance.

Riding against headwinds or uphill will drain the battery faster as the electrical components work harder.

Riding Style:

Your riding style has a significant impact on battery life. The more you rely on electric assistance, the faster the battery will deplete.

High speeds and frequent starts and stops can drain the battery faster. Uphill starts require more power from the battery.

Other Battery Care Instructions:

Store the battery in a dry environment, preferably indoors or an area with a dehumidifier.

Keep a charge in the battery if you won't be using it for a few days or more to prevent it from completely discharging.

Take care of your charger by ensuring it is properly connected to the battery before switching on the mains power. Do not plug the charger into the mains power first and then connect the battery to avoid potential shorts in the system.

Removing and Fitting the Battery:

To remove the battery from the frame, please follow these steps:

1. Insert the key into the key lock located on the side of the bike frame.
2. Turn the key to release the battery lock mechanism.
3. With one hand positioned at the front edge of the battery, gently turn the release clip 90 degrees in the direction indicated by the arrows.

You may need to pull down slightly on the front edge of the battery to disengage it from the frame.

Take extra care to ensure that the battery does not drop, as impacts to the battery can cause a risk of damage, fire, or explosion.

To fit the battery back into the frame, simply reverse the above instructions:

1. Align the battery with the frame and slide it into the designated slot.
2. Ensure that the battery is securely in place.
3. Turn the release clip 90 degrees to lock it into position.
4. Lock the battery securely in place and remember to remove the key from the lock for safekeeping.

The battery is equipped with a power light indicator. Press the button on the battery, and if it displays a green light, it indicates that the battery has a charge.

Please remember to store one of the provided keys in a safe location for future use. If you have any difficulties or concerns regarding the battery, please consult the user manual or contact the manufacturer for assistance.

Proper Connection: Before connecting the charger, make sure the e-bike is turned off. Locate the charging port on the e-bike, typically positioned near the battery compartment or frame. Align the charger plug with the charging port and securely insert it.

Power Source: Connect the charger to a suitable power source, such as a wall outlet. Ensure that the power source is stable and provides the correct voltage and frequency as specified in the charger's user manual.

Charging Progress Indicator: Once connected, the charger may have an indicator light. A red light indicates that the battery is charging, while a green light indicates a fully charged battery.

Charging Time: Allow the battery to charge for the recommended duration 3-5 hours. It is essential to avoid overcharging the battery, so do not leave it connected to the charger for an extended period after it reaches full charge.

Disconnecting the Charger: When the battery is fully charged or when charging is complete, disconnect the charger from the power source first, and then disconnect it from the charging port on the e-bike. Always remove the charger plug gently to avoid any damage.

Storage and Maintenance: Store the charger in a safe and dry place when not in use, away from extreme temperatures or moisture. Avoid bending or damaging the charger's cable and ensure it is kept in a location where it won't be accidentally stepped on or tripped over.

Charger Safety Precautions: Only use the charger provided by the manufacturer or a compatible charger recommended for your specific battery model. Using damaged or non-approved chargers can pose a safety risk and may damage the battery.

Regular Inspection: Periodically inspect the charger for any signs of damage, such as frayed cables or loose connections. If any issues are detected, discontinue use and contact the manufacturer or an authorized service center for assistance.

Disconnect Power when Not in Use:

Remember to disconnect the battery from the e-bike when it's not in use for an extended period. This helps minimize any standby power drain and extends the battery's overall lifespan.

Quality and Certification

The battery is manufactured using high-quality materials to ensure durability, performance, and longevity.

Certification: The battery meets the standards set by reputable organizations, including FCC (Federal Communications Commission), CE (Conformité Européene), and RoHS (Restriction of Hazardous Substances), which certify that the battery complies with safety and environmental regulations.

These specifications and safety features aim to provide a reliable and secure power source for your electric bike, giving you peace of mind during your rides.

Note: For detailed information regarding charging procedures, safety precautions, and handling instructions, please refer to the safety information in this manual.

Guide to Selecting Gears for a Smooth Start with a High-Torque Motor

When riding an e-bike with significant torque, it's important to select the appropriate gear to ensure a smooth and strain-free start. Here's a guide to help you choose gears effectively, specifically for a 9-speed gear hub:

Start in a Low Gear: Begin by shifting to a low gear before coming to a complete stop or when preparing to start from a stationary position. This helps reduce strain on the chain and other components, allowing for a smoother and more controlled start.

Evaluate Terrain and Riding Conditions: Consider the terrain you'll be riding on and the riding conditions ahead. If you anticipate a steep incline or need to accelerate quickly, it's best to start in an even lower gear to provide ample power and torque.

Anticipate Gear Changes: As you gain momentum and increase your speed, gradually shift to higher gears to maintain a comfortable pedaling cadence. Anticipate gear changes by adjusting them before reaching a point where the current gear feels too easy or too challenging.

Listen to Your Motor and Pedaling: Pay attention to the sound and performance of your motor and how it interacts with your pedaling effort. If you notice the motor is working harder or straining, consider shifting to a lower gear to provide more assistance and reduce stress on the drivetrain.

Experiment and Find the Optimal Gear Range: Each rider and e-bike combination may have slight variations in the ideal gear selection. Take some time to experiment and find the gear range that allows for a comfortable start, smooth acceleration, and efficient pedaling.

Consider Cadence: Maintain a moderate to high cadence (number of pedal revolutions per minute) while pedaling. This helps reduce strain on the drivetrain and allows the motor to operate more efficiently. Aim for a cadence between 70-90 revolutions per minute, adjusting as needed based on personal preference and riding conditions.

Practice and Gain Experience: Becoming familiar with your e-bike's gear range and how it interacts with the motor's torque takes practice. Spend time riding in various terrains and situations to gain experience and develop a sense of which gears work best for different scenarios.

Remember, starting in a low gear and gradually shifting to higher gears ensures a smooth start, reduces strain on the chain and drivetrain, and maximizes the efficiency of your e-bike. By following these guidelines and adapting them to your specific e-bike's characteristics, you'll enhance your riding experience and prolong the lifespan of your components.

7 - Maintenance and Inspection

To ensure the longevity and safe operation of your e-bike, regular maintenance and inspections are essential. Please follow the guidelines below to properly maintain and inspect your e-bike:

1. Safety Inspection Checklist

- Before each ride, perform a safety inspection of your e-bike.
- Check for any signs of damage, wear, or loose components.
- Verify that the tires are properly inflated and have sufficient tread depth.
- Examine the brakes to ensure they are functioning properly and the brake pads are not worn down.
- Verify that all lights, reflectors, and signals are working correctly.
- Inspect the chain, gears, and drivetrain for wear and ensure they are properly lubricated.
- Test the suspension to ensure it is functioning smoothly.
- Ensure that the battery is securely attached and all electrical connections are intact.
- Refer to the safety information section of this manual for a comprehensive safety inspection checklist.

2. Motor and Screen Maintenance

- For maintenance and care of the motor and screen, please refer to the manufacturer's manual.
- Follow the manufacturer's instructions for cleaning and maintenance of the motor and screen components.
- Regularly inspect the motor and screen for any signs of damage or abnormal behavior.
- If you encounter any issues or require assistance with the motor or screen, consult the manufacturer's manual for troubleshooting steps.

3. Battery Maintenance

- Follow the manufacturer's guidelines for battery maintenance, including charging and storage procedures.
- Keep the battery clean and free from dirt and debris.
- Periodically clean the contacts using a dry cloth to ensure a good connection.
- Store the battery in a cool and dry place when not in use, avoiding extreme temperatures.

4. Lubrication

Regularly lubricate the chain and drivetrain components using a bicycle-specific lubricant. Apply the lubricant sparingly, wiping off any excess to prevent attracting dirt and grime. Consult manufacturer's manual for specific lubrication recommendations for components.

5. Professional Servicing

- Periodically, it is recommended to have your e-bike serviced by a qualified technician.
- Professional servicing can address any complex maintenance tasks, ensure proper functioning of components, and extend the lifespan of your e-bike.

Refer to manufacturer's manuals for recommended service intervals and procedures.

Please note: this manual provides general maintenance and inspection guidelines. For detailed maintenance procedures and safety information specific to components, refer to the manufacturer's manuals.

8 - Troubleshooting Guide

Battery and Power Issues:

- Issue: The battery doesn't hold a charge.
- Solution: Check the battery connections for any loose or corroded terminals. Ensure proper contact and clean if necessary. If the problem persists, the battery may need to be replaced.
- Issue: The battery doesn't charge.
- Solution: Confirm that the charger is properly connected to both the battery and power source. Check for any damaged cables or connectors. If the problem persists, try using a different charger to determine if the issue lies with the charger or battery. Contact the manufacturer for further assistance.
- Issue: The e-bike has no power.
- Solution: Check the battery charge level and ensure it is properly connected. Inspect the fuse or circuit breaker for any signs of damage or tripping. If everything appears normal, consult an authorized service center for further inspection.

Motor and Drive System Issues:

- Issue: The motor is not engaging or providing assistance.
- Solution: Ensure that the pedal assist or throttle settings are correctly configured. Check the display settings and make sure the pedal assist level is not set to zero. If the issue persists, consult an authorized service center for motor diagnostics.
- Issue: The motor is making unusual noises.
- Solution: Inspect the motor and drivetrain components for any loose or damaged parts. Check the chain tension and alignment. If the noise continues, contact a professional technician for further assessment.

Display and Control Issues:

- Issue: The display is not turning on.
- Solution: Check the battery connections and ensure they are secure. Confirm that the battery has sufficient charge. If the display still does not turn on, refer to the display's user manual or contact the manufacturer for support.
- Issue: The display shows incorrect or inconsistent information.
- Solution: Check the display settings and ensure they are properly configured. Verify that the wheel size setting matches your bike's tire size. If the issue persists, perform a factory reset on the display or refer to the display's user manual for assistance.

Brakes and Safety Issues:

- Issue: The brakes are not functioning properly.
- Solution: Inspect the brake pads for wear and replace if necessary. Check for any loose or misaligned brake components. Adjust the brake cable tension as needed. If the issue persists, seek professional assistance.

General Maintenance:

- Issue: Excessive chain noise or poor shifting.
- Solution: Clean and lubricate the chain regularly. Ensure proper tension and alignment. Adjust the derailleur if shifting issues persist. Consider professional servicing for complex drivetrain problems.
- Issue: Tire punctures or flats.
- Solution: Inspect the tires for any punctures or damage. Replace or repair the tube as necessary. Consider using puncture-resistant inner tubes or tire liners for added protection.

Please note: for specific troubleshooting instructions related to individual components such as the motor or display, refer to their respective user manuals provided by the manufacturer. **It is important to never disassemble the motor, battery, or electrical components yourself, as this may void the warranty and pose safety risks.** If unsure or for any major repairs, always consult an authorized service center or contact the manufacturer for assistance.

9 - Warranty

MerkyBikes electric bikes comes with a two year warranty covering the frame, motor and battery. Electronic components such as electronic cabling, LCD display, throttle and electronic brake cut off's also have a 2 year warranty. There is a 1 year warranty on the charger, lights and all non-wearing mechanical parts,

WARRANTY EXCLUSIONS

Contractual warranty excludes damage or defects caused by: abnormal use, lack of maintenance, accidental damage, prolonged exposure to moisture or liquid.

- Damage caused by incorrect maintenance
- External factors such as shocks, lightning storms, current surges, short circuit, etc
- Damage caused by excess exposure to the elements (e.g. rust caused by not storing bike indoors)
- Modification of electrical components or any modifications (e.g. additions not included when bought)
- Paint, varnish and bike graphics
- Wearing parts such as tyres, brake pads, brake cables, handle bar grips, freewheels etc.
- Spokes

If the end consumer's electric bike is intended for commercial use (e.g. rental company, messenger service), the warranty period lasts 12 months. Certain warranty exclusions may occur, but please discuss with the manufacturer.

WARRANTIES ARE NON TRANSFERABLE. WARRANTY COULD BE VOID IF GUIDELINES ARE NOT FOLLOWED.

10 - Documents and References

Display Manual: For detailed information about the display unit, please refer to the official Display Manual provided by the manufacturer. You can access the manual online at - <https://bit.ly/M9Screen> this manual contains comprehensive instructions, setup guides, and detailed explanations of the display's features and functionalities.



Motor Manual: To obtain comprehensive instructions and specifications related to the motor, we recommend consulting the official Motor Manual provided by the manufacturer. You can find the manual online at <https://bit.ly/M9Motor> this manual includes in-depth details about the motor's installation, operation, maintenance, and troubleshooting procedures.



It is essential to refer to the original manuals for the display and motor to ensure accurate and up-to-date information. These manuals provide valuable guidance for optimizing the performance and longevity of your e-bike's components. Please keep these references readily available for easy access whenever you require specific details about the display or motor of your e-bike.

Note: The links provided above are subject to change. If the links are no longer accessible, please visit the manufacturer's website or contact their customer support to obtain the most recent versions of the display and motor manuals.

Remember, always ride responsibly, obey traffic laws, and wear appropriate safety gear to ensure a safe and enjoyable e-biking experience.