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Electric Bicycle

Owner's Manual for MARS

Contents

Attention

- Do not operate this electric bike without fully reading and understanding its operation and limitations.
- Before riding each time ensure that all parts are in good order. If you have any questions or concerns, please contact us via Facebook chat or by email.
- Ensure you observe traffic rules and regulations when using this electric bike.
- Passengers cannot be carried.
- When riding in rain, snow or slippery conditions reduce your speed and increase the distance between yourself and other vehicles.
- We advise against performing maintenance operations that involve removing parts or components. If this is necessary, please contact us for guidance.
- Do not ride through deep puddles. Water could enter the hub motor, causing short circuits and irreparable damage.
- Do not allow individuals who are unfamiliar with the features and functions of this e-bike to operate it without proper instruction.
- Do not modify the e-bike by yourself.

1. Check Before Use

- Is the tire pressure [3.4 - 5.1 bar] correct?
- Are the breaks working correctly?
- Are the batteries sufficiently charged?
- Is the handlebar attachment and saddle post correctly inserted and tightened?
- Are the wheel hub mounting nuts correctly tightened?
- Is the bell working correctly?

2. Product Information

2.1 Product Performance

This e-bike is fitted with a high quality brushless motor, intelligent operating system, high quality lithium battery, freewheel, power display unit and electric cut off when braking.

2.2 Product Specifications

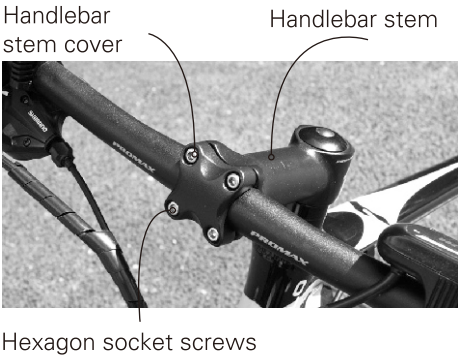
Bike Specifications	Model	MARS M3	Motor Specifications	Type	Brushless
	Frame Size	483*27.5mm		Rated Power	350W
	Wheel Diameter	27.5 inch		Rated RPM	255±10
	Wheelbase	1148 mm		Rated Voltage	36V
	Rated Load	⩽75kg		Rated Output Torque	4.5-18N.M
	Max Load	75kg			
	Max Speed	32km/h		Speed Range	⩽32km/h
	Range Per Charge	Pedelec ⩽55km	Controller	Under Voltage Value	31.5±0.5A
	Weight	19 kg		Over Current Value	15A
Battery Spec	Type	Lithium-ion	Charger	Current	2 A
	Capacity	10.2AH		Output	50/60HZ 90W
	Rated Voltage	36V	Box Size	1480 x 270 x 800 mm	

Note: Maximum travel distance on a fully charged battery is measured at a condition of 20°C, no wind, flat road, total bike weight 75Kg, and 32km/h speed. This will vary according to load, road conditions, wind direction, temperature, braking and restarts, tire pressure and prompt battery charging. To obtain the maximum travel distance, we suggest you check all factors within your control, including overloading, driving style, tire pressure and timely battery charging.

3. Adjustments

3.1 Adjusting the handlebar

- Place the handlebar onto the handlebar stem, place on the cover, and fix with the two screws. The tighten torque should not be less than 18 Nm.



- To align the handlebars, face your bike and hold the front wheel between your legs. Turn the handlebars so that they are perpendicular to the front wheel.

- Tighten the screw that fixes the handlebar attachment to the frame. The tightening torque should be no less than 18 Nm.

3.2 Adjusting The Saddle

- The saddle post must be inserted to at least the circular safety mark engraved on the tube (shown below).
- An ideal saddle height is when the knee is at a soft bend when you are sat on the saddle with your foot on the pedal at it's lowest point. Adjust the saddle to this height.
- The saddle should be parallel to the ground for maximum comfort. The tightening torque for the saddle mounting screw and saddle post mounting screw should not be less than 18 Nm.

3.3 Adjusting The Wheels

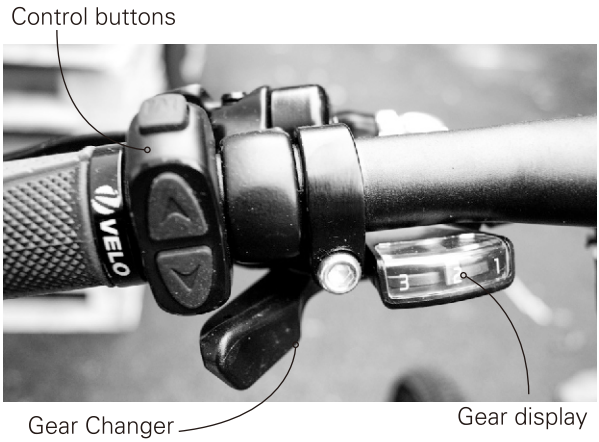
- Tighten the screws to make sure the front and back wheels are fixed to the front fork and frame.
- Recommended tightening torques are as follows:
  Front wheel hub: 18 Nm
  Rear wheel hub: 30 Nm

3.4 Adjusting And Maintaining The Brakes

- Make sure the rotors are true. Spin the wheel and, sighting against the pads, watch for wobbles. If the rotor clears the pads and calliper, the bend probably isn't worth straightening. If you spot a warp, try to straighten it by clamping a clean adjustable wrench along the rotor and bending toward true. Make sure everything that touches the rotor is clean. You don't want any grease there to reduce the grip.
- If your brakes squeal, something is probably loose. Check all bolts holding the rotor on, as well as the calliper bolts and adapter bolts (if your bike is fitted with one).
- If everything's snug, the rotor and pads should be cleaned.
- If one lever pulls back farther than the other, try to equal out the travel by dialing the lever limit screws in or out. If that doesn't work, it's time for a shop to bleed your hydraulic fluid.
- Inspect hydraulic system for leaks. Check the levers, callipers and all along the housing. Take a leaky system to the shop.

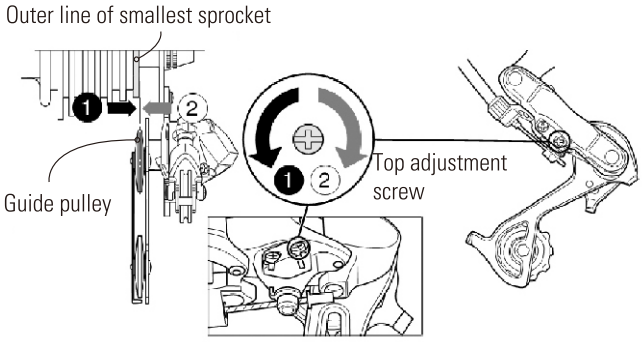
3.5 Adjusting The Gear-Change Rear Derailleur

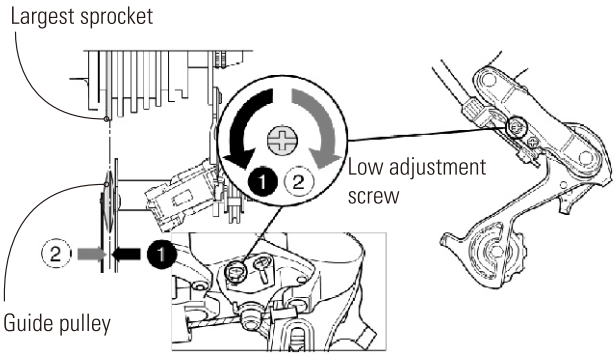
3.5.1 Gear Display



3.5.2 Adjusting The Derailleur

- Adjust the lower bolt to make the guide wheel move to the free-wheel; align the centre of the guide wheel and the outer line of the smallest sprocket.
- Turning the front chain-wheel, operate the gear lever to shift to the lowest gear, then tighten the derailleur cable and fix it by the derailleur cable nut.
- Turn the low adjustment screw so that the guide pulley moves to a position directly below the largest sprocket.
- Tighten the adjust nut when the real gear is lower than the gear shift shows; loosen the adjust nut when the rear gear is upper than the gear shift shows. It is OK when the gear changes correctly and smoothly.





4 How to Use Bike Controls

⚠ Start slowly and speed up slowly.

⚠ The power will automatically cut out if the e-bike overloads and automatically cut back in after a short period if the e-bike is ridden normally.

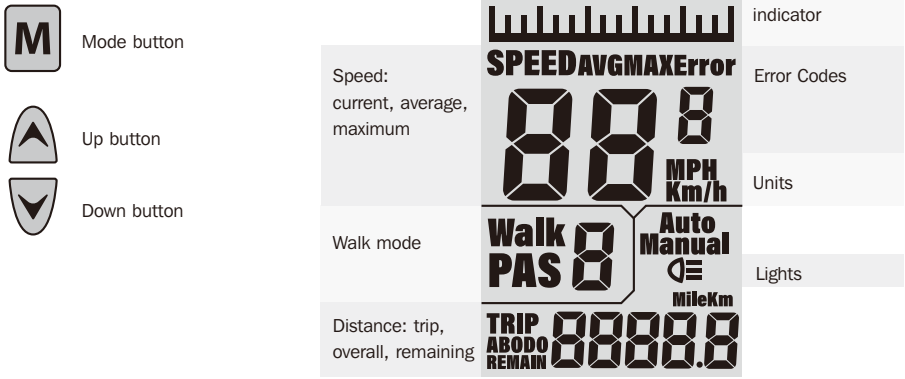
⚠ Try to avoid knocking and bumping the screen and control panel.

⚠ Avoid direct contact with water.

⚠ Do not alter the settings of the control panel, it could affect your riding experience.

⚠ If your control panel does malfunction please let us know straight away.

4.1 Control Panel - At a Glance



4.2 Turning The Bike On/Off

To turn the control panel on or off press and hold the mode button M for several seconds. The bike will automatically turn off if there is no activity for 10 minutes.

Tip: If the control screen does not turn on check that the battery is charged.

Tip: Charge your bike for at least 12 hours before you ride it for the first time and the next two times you charge it.

4.3 Increasing/Decreasing Speed

To increase speed press the up button. To decrease speed press the down button . Always start off slowly and gradually speed up. Make sure your speed is appropriate to riding conditions (weather, road surface, traffic/pedestrians etc).

4.4 Showing The Speed

Press the mode button [M] to view your current speed. Pressing the mode button again will cycle through:

SPEED (current speed)

AVG (average speed)

MAX (maximum speed)

4.5 Walk Mode

Stand at the sidde of the bike with both hands on the handlebars and make sure the way infront of you is clear. Press and hold the down button [▼] for three seconds to enable cruise mode for the ebike. '**Walk 1**' will be indicated on the control screen. This will power the bike at a steady 6 km/h allowing you to walk alongside the bike without needing to push.

⚠ Do not use this function while riding the bike.

4.6 Turning On The Headlight

Press and hold the up button to turn on the headlight. When the headlight is switched on you will see a headlight symbol on the control screen. The rear light is controlled by button on top of the rear light.

4.7 Battery Charge Indicator

The battery charge level is indicted by the bars at the top of the control screen. When all the bars are lit up that means that the battery is fully charged. When only one large bar is indicated on the right of the screen the bike needs prompt charging.

Fully Charged

Charging Needed

4.8 Showing The Milage

Press the mode button [M] to cycle through the mile indicator in the following order:

TRIP A
single trip miles A

TRIP B
Single trip miles B

ODO
Total miles ridden

RMAIN
Remaining miles

4.9 Error Codes

If there is an error in the electrical function of the bike an error message will be displayed on the control screen along with an error code. See the table below for error code definitions:

⚠ The bike will not run if there is an error code. Please contact us immediately

Error Code	Definition
21	Current abnormality
22	Throttle abnormality
23	Missing phase on motor
24	Motor hall signal abnormality
25	Brake power-off sensor abnormality
30	Controller/instrument communication abnormality

4.10 Control Panel Settings

Accessing the settings menu

After power on press the up and down arrows simultaneously for three seconds. From here press the mode button briefly to scroll through the following settings:

St1 – to switch between the imperial (mph) and metric (km/h) system by pressing the up and down buttons. Confirm the choice by pressing the mode button again.

St2 – alter the speed limit by pressing the up and down buttons. Press the mode button to confirm your choice.

⚠ **NOTE:** the speed limit for electric bikes in the UK is 15.5 mph (25 km/h)

St3 – Set the wheel diameter by pressing the up and down arrows. Setting the correct wheel diameter ensures the speedometer and mileage are accurate. Press the mode button to confirm your choice.

Press and hold the mode button for 2 seconds to confirm and save your settings. To exit without saving press and hold the down arrow for two seconds.

5 Battery

5.1 Charging The Battery

- Connect the charger cable to the bike.
- Plug the charger into the wall outlet. The LED on the battery charger will illuminate RED when charging. The LED will change to GREEN when the battery is fully charged.
- When the battery is fully charged, disconnect the charger from the wall outlet before disconnecting the charger from the bike.
- Ensure that the cover over the charging port on the bike is closed and sealed.
- Charge the battery for 12 hours for the first 3 times you use it.
- Be sure to use the charger supplied together with the bike, use of other chargers will invalidate the warranty.

5.2 Battery And Charger Maintenance

- If the bike will not be used for an extended period, it should be kept at around 50% state of charge (or charge the battery for 2-3 hours if totally flat) and should be placed in a dry and ventilated area. The battery should be charged for 2-3 hours every two months.
- The bike and charger should be kept in a clean, dry and ventilated area, avoid contact with corrosive substances and keep away from excessive heat and open flames.
- Storage conditions for the battery: temperature -20~35°C, relative humidity: 5~65%RH
- The charger should be disconnected from the bike when be kept in storage.

5.3 Battery Precautions

- Never short circuit and discharge the battery.
- Keep the bike away from fire and excessive heat. Never put the bike or it's battery into fire.
- To avoid damage to the battery, never subject the bike to intense physical shock, severe vibration or impact.
- Protect the bike from water and moisture. Protect the discharge and charge terminals of the battery from rain or water logging.
- Operating temperature range when charge: 0~45°C
- Operating temperature range when discharged: -20~45°C
- Humidity whilst battery is in a working state: □80% RH
- Keep the battery away from children.
- If you have any questions about the bikes battery or its usage, please contact use through Facebook or email.
- Never disassemble the bike or it's battery.

5.4 Charger Precautions

- Make sure the charger is as least 1M away from computers, TV's, fridge, washing machine and other electric appliances while charging.
- Use only the charger supplied with this e-bike.
- Only use the charger in a clean and dry place, free from smoke, dust and moisture.
- Once charging is complete disconnect the plug from the wall first, and then disconnect the charger from the battery.
- Charge out of the reach of children.
- Never disassemble or refit the charger.
- Never put anything on the charger.
- Do not disconnect the battery output while charging.
- Do not switch on the e-bike while charging.

5.5 Assemble battery (only apply to air transport condition or replace battery)

- Dismount the 4 screws on the head light.
- Put the battery in the frame from the head tube and mount 3 screws on the bottom of the tube.

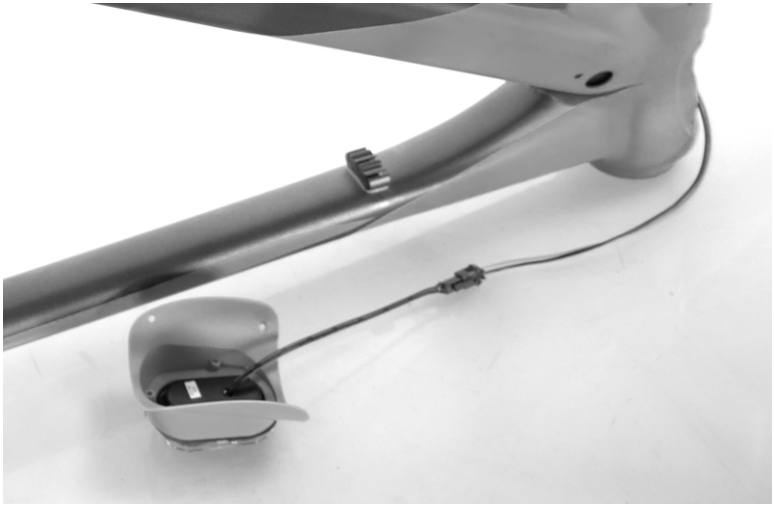


- Connect the motor cable, controller cable.


- Put 3 snap joints into the wiring through on the frame.

- Lock the defense screw.

- Connect head light plug, assemble the head light by mount 4 screws.



6 Bicycle Inspection And Care

6.1 Regular Cleaning

- Wipe any dirty painted or plastic parts with a soft, damp cloth and a neutral cleaning solution. Carefully dry the parts with a soft, dry cloth to finish.
- **DO NOT** use water to clean the e-bike, as the electrical and electronic systems may get wet, resulting in personal injury or malfunction of the bicycle.
- **DO NOT** grease or use a greasy cloth to wipe down the electrical connectors, brake pads, wheels, tyres or plastic parts.
- **DO NOT** use a pressure washer as this can force water into the electrical components.

6.2 Regular Maintenance (Every 1-2 Months)

Always carry out the following checks:

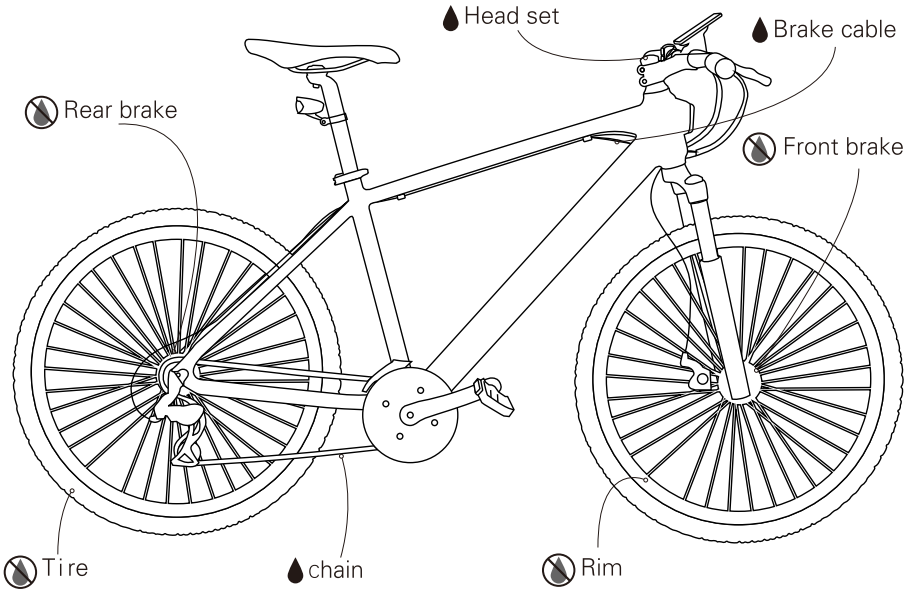
- Check the handlebar attachment and saddle post are correctly inserted and tightened.
- Check the wheel hub mounting nuts are correctly tightened.
- Check the wheel rims are not cracked and that no spokes are loose or broken.
- Check the tires are not worn or cut.
- Check the tires are correctly inflated.
- Check the battery is sufficiently charged.
- Check the front and rear lights are working correctly.
- Check the front and rear brakes brake effectively.
- Check the cables are sufficiently greased, and that the brake pads are in good condition.
- Check frame welds are in good condition and are free from corrosion or oxidation

6.3 Lubricating The E-Bike

To maintain your e-bike in proper working order, be sure to carry out regular lubrication, as indicated in the following illustration:

- Use specific transmission lubricants for the chain, freewheel and gears every 1–2 months, or if the drive line is dry.
- Do not lubricate or grease the speed controller, brake pads or wheel rims

Parts that can be lubricated	Parts that should not be lubricated
Head set	Rear brake
Break cable	Front break
Chain	Rims
	Tires



Electric Bicycle

THIS MANUAL SHOULD BE CONSIDERED A PERMANENT PART OF THE ELECTRIC BICYCLE AND SHOULD REMAIN IF IT IS RESOLD