



# M600 E-bike Manual

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## WELCOME

First off, welcome to the Frey NZ/ Wattwheels family! We're so happy to have you on board! You have picked a great model and, in this manual, we're going to break down the basics to make sure that your bike remains in top shape and performs to the highest standard.

You're about to experience the ride of your life. To get you out and having fun as quickly and as safely as possible please read entire the manual carefully, paying close attention to the safety section.

Also, we highly recommend familiarizing yourself with local regulations for e-bikes and the components of the model that you have before your first ride.

Please also ensure that the bike is regularly serviced as per the instructions outlined later in this document. Failure to get the bike serviced can result warranty claims being void if they are required. A bike is a vehicle and like a car needs to be serviced regularly.

Wattwheels assumes that all persons involved in using, repairing, maintaining, cleaning, or disposing of this or any Wattwheels product must have fully read and understood the content and meaning of these operating instructions.

Additionally, Wattwheels claims no responsibility for any injury or damage resulting in improper use of any electric bike.

## USING THIS MANUAL

This manual contains details of the electric bike, its equipment, and information on its operation and maintenance. Read it carefully and familiarize yourself with your bike before using it to ensure safe use and prevent accidents. This manual contains many Warnings and Cautions concerning the safe operation and consequences if safe setup, operation and maintenance are not performed. All information in this manual should be carefully reviewed and if you have any questions you should contact your local retailer immediately.

Because it is impossible to anticipate every situation or condition which can occur while riding, this manual makes no representations about the safe use of bicycles under all conditions. There are risks associated with the use of any bicycle which cannot be predicted or avoided, and which are the sole responsibility of the rider. You should save this manual, along with any other documents that were included with your bicycle, for future reference, however all content in this manual is subject to change or withdrawal without notice. Visit [www.wattwheels.co.nz](http://www.wattwheels.co.nz) to download the latest version. Wattwheels makes every effort to ensure accuracy of its documentation and assumes no responsibility of liability if any errors or inaccuracies appear within.

## INSTALLATION IF REQUIRED:

1. COMPLETELY CHARGE THE BATTERY BEFORE THE FIRST USE

*(Red light is on when battery is charging, green when fully charged. Approx. time is around 4-5 hours)*



**(PLEASE BE CAREFUL NOT TO PRESS THE BRAKES LEVERS WHILE THE FRONT WHEEL IS NOT INSERTED. DOING SO WILL RESULT IN THE BRAKES PADS CLAMPING TOGETHER, AND YOU WILL NOT BE ABLE TO INSERT THE FRONT WHEEL RESETTING THE BRAKE PISTONS IN WHICH YOU WILL NEED A BIKE WORKSHOP TO PERFORM)**

2. ATTACH THE HANDLEBARS

3. ATTACH THE PEDALS

*(Beware: The left-hand pedal has a reverse thread. To tighten, please turn anti-clockwise, right hand pedal is clockwise)*

4. GREASE THE SEAT TUBE AND INSERT THE SEAT POST

5. ATTACH THE FRONT MUDGUARD AND ATTACH FRONT LIGHT (if applicable)

6. INSERT THE FRONT WHEEL WITH THROUGH AXLE

7. CHECK ALL SCREWS AND BOLTS ARE TIGHT, SEAT POST THE CORRECT HEIGHT AND BRAKES WORKING PROPERLY

## SUSPENSION SETUP AND MAINTENANCE

Your bike comes standard with a Rockshox Yari fork and a Rockshox Monarch rear shock it is recommended that you familiarise yourself with the fork's instructions on the [Sram.com/service](https://www.sram.com/service) website. Here you will find information regarding setup and recommended service intervals. We recommend running 25% sag front and rear. Ask your shop to set this up when you purchase the bike.

## BRAKES

The Frey M600 electric bike is equipped Tekro 4 piston hydraulic disk brakes with electric cut off. The cut off will cut the power to the motor when the brakes are applied. This is a added safety feature. Please be aware that the hydraulic disk brakes are very strong, so care is to be taken braking initially, when getting familiar with the bike. The front wheel brake is located on right hand side with the rear wheel brake on the left. For riders which prefer the brakes the other way around please get your nearest bike shop to switch over if required.

## TYRE PRESSURE

To avoid flats, keep tyre pressure at the recommended PSI. On off-road terrain a slightly lower PSI will provide more grip, but flats can occur. We recommend a pressure of between 35-50PSI

## RIDING RANGE

The range of your M600 is the distance the bike will travel on a single full charge of battery pack. The range values in this manual are estimates based on expected usage characteristics. Some of the factors which effect range include changes in elevation, speed, payload, and acceleration, number of starts and stops and ambient air temperatures. Tyre pressure and terrain are also important variables to consider.

We suggest that you ride conservatively when you first get your M600 Bike to get to know your bike and travel routes.

Once you become familiar with the range requirements of your travel routes, and the capabilities of your Frey Bike you can then adjust you riding characteristics if you so desire.

The following table provides general estimates and outlines various factors effecting range and their combined estimated effects on range. This table is meant to help owners understand the factors that can increase or decrease range, but Wattwheels makes no claims to the range that individual users might obtain.

<b>Expected Range</b>	<b>Operating Conditions</b>
40 Km	<ul style="list-style-type: none"><li>o Hilly Terrain</li><li>o Heavy Payload</li><li>o High Throttle use</li><li>o High Speeds</li><li>o High PAS</li></ul>
60 Km	<ul style="list-style-type: none"><li>o Flat Terrain</li><li>o Normal Payload</li><li>o Not Windy</li><li>o Medium Speeds</li><li>o Moderate PAS</li></ul>
90+ Km	<ul style="list-style-type: none"><li>o Flat Terrain</li><li>o Normal Payload</li><li>o Not Windy</li><li>o Low Pedal Assist Level</li><li>o Moderate to Heavy Pedalling</li></ul>

## ADJUSTING THE SEAT HEIGHT

Use the quick release seat post clamp to release the seat post and pull upwards or push downwards to reach desired height. Please feed the dropper post cable through the front of the frame at the same time otherwise the cable may come unhooked from the dropper and stop working. It is recommended to get the shop to set up your seat height for you.



## RIDER COMFORT

To obtain maximum comfort, the rider should not overextend his or her arms reach when riding. In order to obtain the most comfortable riding position and offer the best possible pedalling efficiency, the seat height should be set correctly in relation to the rider's leg length. The correct saddle height should not allow leg strain from over extension, and the hips should not rock from side to side when pedalling. While sitting on the bicycle with one pedal at its lowest point, place the ball of your foot on that pedal. The correct saddle height will allow the knee to be slightly bent in this position.



## BATTERY & CHARGING

The battery can be either charged by leaving the battery in the bike or by removing it. To charge while in the battery open the rubber cap located on the right-hand side of the downtube and plug the charging pin into the slot.



To remove the battery, turn the wheel slightly so you have better access to battery. Turn the key to the unlock position and then turn the lever on the battery case to release the battery

Removing the battery from the bike when storing it for a long period of time is recommended. In this case store it in a cool, dry area away from water. The charge left in the battery should be 50%-75% for long storage times.

Cleaning the battery and battery housing should only be done while disconnected and powered off. Use a dry rag or if needed a lightly damp rag.



**DO NOT** spray with high-pressured water to prevent damage or possible short-circuiting. Only charge the battery with the supplied charger as others may not function properly, and this increases the possibility of fire or explosion.

Do not store the charger or battery in a wet/damp place or in direct sunlight.

Lithium-ion batteries can last longer if you recharge with 10-15% of the charge remaining to prevent damage to the cells. Keep both the battery and charger out of the reach of children and if there appears to be an issue with the charger or battery, stop use immediately and contact either the manufacturer or Wattwheels at [sales@wattwheels.co.nz](mailto:sales@wattwheels.co.nz)

## BEST PRACTISES FOR EXTENDING BATTERY LIFE

- o Avoid sudden starts and stops.
- o Accelerate slowly
- o Keep within the recommended weight limit

## CHARGING

- Firstly, insert plug of the charger into charging socket of the battery box.
- Second, Insert the charger into the socket of the home power supply. It shows the power has already been put through when the indicator lamp of the charger is on.
- It is charging when the indicator light is red. When the light turns from red to green, it indicates that the battery is fully charged.
- After the green light is on, the charger is in little electric current and "fill slowly mode". It will not be harmful to the battery if left to charge for a longer period or overnight. We do recommend not leaving for longer than 48hours if possible



**DO NOT** use the charger of other brands to charge. The electric apparatus contains a high-pressure circuit and is not compatible with some brands

## USEFUL TIPS

- This specified load of this Electric Bicycle is 130kg, please don't overload otherwise it will void the warranty
- While riding if the level of charge shows only one bar flashing is recommended to ride without power in PAS 0 at this time and charge as soon as you can.
- Turn off the display and remove the key, while parking or storing the bike.
- Inspect the bolts on a regular basis, to ensure that they are tight, and all components are secure. Pay close attention to crank bolts, cranks, stems, front and rear through axles.  
This is especially important if you are riding in demanding conditions.
- Regularly check the brake pads. The provided pads should be replaced if they have:
  - Been contaminated
  - Have less than .8mm of material
  - Cracks or deformation
- To replace the brake pads or perform other maintenance take it to a qualified bicycle mechanic at your local bike shop.
- Properly inflate your tyres according to riding conditions. Under-inflated tyres are prone to get flats, especially if riding off-road.
- Please don't dismantle and repair parts by yourself. Please go to your local bike shop. This bike comes with a manufacturer's warranty (document included) so any standard repairs please contact Wattwheels and we will arrange a service agent close to you to look at the bike. We carry spare parts so anything electrical that a standard bike shop doesn't have we will ship to your nearest retailer

## PARKING, STORAGE & TRANSPORT

Please follow these basic parking, storage, and transport tips to ensure your bike is well cared for on and off the road.

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

SAFETY CHECK	BASIC STEPS
1. Brakes	<ul style="list-style-type: none"> <li>o Ensure front and rear brakes work properly.</li> <li>o Ensure brake pads are not over worn and are correctly positioned in relation to the disc.</li> <li>o Ensure brake hoses are correctly bleed and display no obvious wear.</li> </ul>
2. Wheels and Tyres	<ul style="list-style-type: none"> <li>o Ensure tyres are inflated to within the recommended limits displayed on the tyre sidewalls.</li> <li>o Ensure tyres have tread and have no BULGES OR EXCESSIVE WEAR.</li> <li>o Ensure rims run true and have no obvious wobbles or kinks.</li> <li>o Ensure all spokes are tight and not broken.</li> <li>o Check axle nuts and quick releases to ensure they are tight. If your bicycle is outfitted with quick release axles, ensure the locking levers are correctly tensioned and in the closed position.</li> </ul>
3. Steering	<ul style="list-style-type: none"> <li>o Ensure the handlebar and stem are correctly adjusted and tightened and allow proper steering.</li> <li>o Ensure the handlebars are set correctly in relation to the forks and the direction of travel.</li> </ul>
4. Chain	<ul style="list-style-type: none"> <li>o Ensure the chain is lubed, clean and runs smoothly.</li> <li>o Extra care is required in wet or dusty conditions</li> </ul>
5. Bearings	<ul style="list-style-type: none"> <li>o Ensure all bearings are lubricated, run freely and display no excess movement, grinding or rattling.</li> <li>o Check headset, wheel bearings, pedal bearings and bottom bracket bearings.</li> </ul>
6. Cranks and Pedals	<ul style="list-style-type: none"> <li>o Ensure pedals are securely tightened to the cranks.</li> <li>o Ensure the cranks are securely tightened and are not bent.</li> </ul>
7. Derailleurs	<ul style="list-style-type: none"> <li>o Check that the derailleur is adjusted and functioning properly.</li> <li>o Ensure shift and brake levers are attached to the handlebar securely.</li> <li>o Ensure shift cables are properly lubricated.</li> </ul>
8. Frame and Fork	<ul style="list-style-type: none"> <li>o Check that the frame and fork are not bent or broken.</li> <li>o If either are bent or broken, they should be replaced.</li> </ul>
9. Accessories	<ul style="list-style-type: none"> <li>o Ensure all reflectors are properly fitted and not obscured.</li> <li>o Ensure all other fitting on the bike are properly secured and functioning.</li> <li>o Ensure rider is wearing a helmet and any other required riding safety gear.</li> </ul>
10. Motor Drive Assembly and Throttle	<ul style="list-style-type: none"> <li>o Ensure mid-motor is spinning smoothly and the motor bearings are in good working order.</li> </ul>

11. Battery Pack	<ul style="list-style-type: none"> <li>o Ensure battery is charged before use.</li> <li>o Ensure there is no damage to battery pack.</li> <li>o Lock battery to frame and check to see that it is secured.</li> </ul>
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## BASIC TROUBLESHOOTING

Symptoms	Possible Causes	Most Common Solutions
<b>It does not work</b>	<ol style="list-style-type: none"> <li>1. Insufficient battery power</li> <li>2. Faulty Connections</li> <li>3. Battery not fully seated in tray</li> <li>4. Improper turn on sequence</li> <li>5. Brakes are applied</li> </ol>	<ol style="list-style-type: none"> <li>1. Charge the battery pack</li> <li>2. Clean and repair connections</li> <li>3. Install battery correctly</li> <li>4. Turn on bike with proper sequence</li> <li>5. Disengage brakes</li> </ol>
<b>Incorrect distance, speed readings and/or reduced top speed</b>	<ol style="list-style-type: none"> <li>1. Insufficient battery power</li> <li>2. Speed sensor is not centred or missing</li> </ol>	<ol style="list-style-type: none"> <li>1. Charge or replace battery</li> <li>2. Check on the rear wheel that the spoke magnet matches up in the centre of the black sensor.</li> </ol>
<b>When powered on the motor does not respond</b>	<ol style="list-style-type: none"> <li>1. Loose wiring</li> <li>2. Loose or damaged throttle</li> <li>3. Loose or damaged motor plug wire</li> <li>4. Damaged motor</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair and or reconnect</li> <li>2. Tighten or replace</li> <li>3. Secure or replace</li> <li>4. Repair or replace</li> </ol>
<b>Reduced range</b>	<ol style="list-style-type: none"> <li>1. Low tyre pressure</li> <li>2. Low or faulty battery</li> <li>3. Driving with too many hills, headwind, braking and/or excessive load</li> <li>4. Batter discharged for long period of time without regular charges, aged or damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust tyre pressure</li> <li>2. Check connections or charge battery</li> <li>3. Assist more with pedals or adjust route</li> <li>4. Replace the battery</li> </ol>
<b>The battery will not charge</b>	<ol style="list-style-type: none"> <li>1. Charger not connected properly</li> <li>2. Charger damaged</li> <li>3. Battery damaged</li> <li>4. Wiring damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the connections</li> <li>2. Replace</li> <li>3. Replace</li> <li>4. Repair or replace</li> </ol>
<b>Wheel or motor makes strange noises</b>	<ol style="list-style-type: none"> <li>1. Damaged motor bearings</li> <li>2. Damaged wheel spokes or rim</li> <li>3. Damaged motor wiring</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace</li> <li>2. Repair or replace</li> <li>3. Repair or replace motor.</li> </ol>

## SERVICING

To ensure your bike remains in great shape just like a car it requires regular servicing. Failure to do so may void any potential warranty claims. Please retain your receipts for proof of service

### **2-3 MONTHS:**

DATE:

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STORE/MECHANIC:

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SIGNATURE:

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### **12 MONTHS:**

DATE:

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STORE/MECHANIC:

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SIGNATURE:

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### **6 MONTHS:**

DATE:

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STORE/MECHANIC:

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SIGNATURE:

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### **24 MONTHS:**

DATE:

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STORE/MECHANIC:

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SIGNATURE:

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## WARRANTY

**To activate your warranty please go to <https://www.wattwheels.co.nz/warranty>. A link is located at the bottom of our webpage.**

Wattwheels Ltd warrants that all new products are warranted to the Buyer against manufacturing defects in materials and/or workmanship for the following periods:

Motor/Battery	24 months
Frame	60 months (Folding bikes & trikes is 36months)
Additional Components	12 months

For commercial operations where the bikes are being used a hire bike then the following applies:

Motor/Battery	12 months
Frame	24 months (Folding bikes is 18months)
Additional Components	6 months

The warranty period is calculated from the point of delivery. The original receipt of purchase is required to establish proof of purchase and must be provided to Wattwheels for all warranty claims. Wattwheels will require the customer to complete a MANDATORY standard procedure for warranty claims that will involve media such as photos and videos to help Wattwheels after sales staff establish the fault with the product.

Goods we sell are subject to a full comprehensive warranty. The costs/inconvenience caused by the loss of use of the product, is not covered whilst the warranty procedure takes place. The warranty for replacement components will be based on the date of delivery. Under no circumstance will a replacement component have a warranty date different than the original date of delivery. If a replacement is necessary due to a defect in materials and/or workmanship, then upon return to Wattwheels, the component will be replaced during the warranty period.

Wattwheels will have no obligation under this warranty in the event the product is damaged or destroyed as a result of any of the following events: components used on a non Wattwheels product, damage or destruction by abuse; collision; theft; improper maintenance or mishandling of the product; natural forces such as wind, lightning, hail, etc.; any wilful or negligent act; penetration, or opening of the product casings in any manner. Replacement will be honoured only by Wattwheels.

This is Wattwheels exclusive warranty. No party is granted express or implied authority to change or annul this warranty in any manner. Implied warranty including that of merchantability and fitness for a particular purpose are expressly limited in duration to the duration of this warranty. Wattwheels disclaims any liability for special, incidental or consequential damages.

This warranty is not meant to suggest or imply that the products cannot be broken or will last forever. It does mean that the product is covered subject to the terms of the warranty. This warranty applies only to the original Buyer of the product and is not transferable to subsequent owners or any other party. This warranty is void if the product is subjected to abuse, neglect, improper repair, improper maintenance, alteration, modification, an accident or other abnormal, excessive, or improper use, at the sole discretion of Wattwheels.

### **Warranty Exclusions**

This warranty does not cover:

- normal wear and tear
- damage or failure from abuse, neglect, misuse, or accident
- damage from stunt riding, ramp jumping, acrobatics, competitive events, such as bicycle racing, bicycle motocross racing, or similar activities or any activity that is not consistent with the intended use of the product
- damages resulting from improper charging of the battery pack or use of any charger not supplied by Wattwheels
- installation of any parts, accessories, or electrical component(s) not originally intended for or compatible with the product as sold, or any modification of the frame or any component(s) originally supplied; tires, brake pads, chains, lights, motors, battery packs, displays, or vehicle controllers that have been opened for any purpose whatsoever, other than by Wattwheels
- All warranties are void if the product is used for any purpose other than the reasonable intended use of the product. Additionally, this warranty does not cover damage associated with commercial use.
- Aftermarket components or modifications

All implied warranties, including the warranties of merchantability and fitness for a particular purpose, are limited in duration to that of the express warranties stated above.

### **Warranty Procedure**

Proof of purchase must be provided. The original Purchaser must contact a Wattwheels representative to discuss the problem with the product. The original Purchaser is responsible for the return of the product, undamaged in transit, to Wattwheels for warranty work and for the costs associated with shipping the component(s) when returning them. If Wattwheels determines a warranty claim is valid and conforms with this warranty, Wattwheels will replace component(s). For valid warranty claims hereunder, Wattwheels will reimburse the original Purchaser for shipping costs incurred as a result of returning the product to Wattwheels for warranty work at standard ground shipping rates, and Wattwheels will pay for shipping costs to return the product to the original. You must retain and send us the receipts for shipping.

### **Limited Liability**

Unless otherwise provided, the sole remedy under the above warranty, or any implied warranty, is limited to the replacement of defective parts at the sole discretion of Wattwheels. In no event shall Wattwheels be responsible for direct, incidental or consequential damages, including, without limitation,

damages for personal injury, property damage, or economic losses, whether based on contract, warranty, negligence, product liability, or any other theory.

### **Cancellation**

Buyer has a 14-day period to cancel an order for a full refund. After the cancellation period, no refunds will be awarded. The Goods will be delivered with no returns.

### **Returns**

Our extensive quality control means that our products are thoroughly tested and ultra-reliable by industry standards. All products are warranted to work as

described on arrival and for the warranty period. If there is a warranty claim, it will be assessed by Wattwheels and new parts will be delivered upon claim's approval. Wattwheels will accept the return of warranted components. If there is a major fault with the product, contact Wattwheels immediately. Wattwheels will not accept returns for change of mind.

### **Questions**

Please contact us at [sales@Wattwheels.co.nz](mailto:sales@Wattwheels.co.nz)