



**mjm**  
ebikes

# TRF21

User Manual





# TRF21

User Manual

## Thanks for choosing MJM

We are excited that you have chosen to join the copper movement. MJM was founded on the goal of delivering an uncompromised product that also doesn't cost a fortune. We love to help our customers find that inner child joy of riding a bike without the effort and strain of having to pedal yourself up hills and through wind.

Read through this manual carefully before operating your bike for the first time.

We highly recommend having a bicycle mechanic assemble your bike if you are not comfortable doing it yourself.

If you have any questions about your product, please reach out and ask.

You can contact us at:

**[calgarysales@mjmwheels.com](mailto:calgarysales@mjmwheels.com)**

403 475 6488

Again, thank you for choosing MJM. Ride On!

## Safety Check

It is important to check over the bike before use to ensure a safe ride.

Check all quick releases to ensure they are tight. This includes the front wheel and seat post. Ensure wheel bolts, brake caliper bolts, handle bar bolts, and pedals are all tight. Inflate tires to within the recommended psi range. For the TRF21 we recommend 18-20 psi. Test brakes and shifter to make sure they are operating normally.



## Maintaining your ebike

Our ebikes just like all bikes require regular maintenance for optimal performance. Regularly cleaning the bike will reduce any potential wear over the years.

Lubricating the chain, derailleur, and sprocket will keep your bike running smooth, reduce wear, and minimize risk of greater problems over time. We recommend using a chain lube made specifically for bikes. Apply every 100km to keep your bike running smoothly.

Inspect the spokes to ensure they are tight. With the extra stress the motor puts on the rear wheel it is important to regularly check for any loose spokes. If some seem more loose than others use a spoke wrench to tighten them to be the same tension as the others.

Inspect your bike on a regular basis for wear or any potential issues that can arise.

If you are not comfortable working on your bike we recommend bringing your bike to an MJM location or to a trained bicycle mechanic to work on your bike.



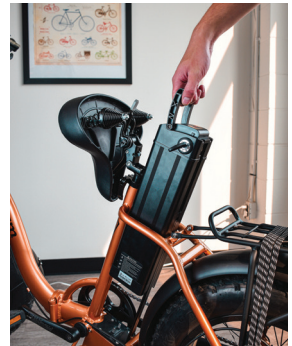
# Battery

The battery is a 48V 17.4 AH lithium ion battery. The battery comes with LEDs and a button on the top of the battery for checking battery level, a handle for easy carrying, a key for locking the battery on one side, and the charging port on the other side.

## Installation and Removal

To install the battery on your bike, first fold the seat up using the lever under the seat. Then fit the rail on the bike to the slot on the back of the battery. Allow the battery to slide down onto the bike. Finally twist the key clockwise until you hear two clicks.

To remove the battery twist the key counter clockwise for two clicks, then using the handle pull upwards until the battery is off the bike.



## There are 3 different locking positions on the battery:

1. **Unlocked:** Key is twisted fully counter-clockwise. You can remove the battery from the bike. The bike will not turn on.
2. **Parked:** Key is twisted clockwise for one click. Battery is locked to the bike. You can remove the key. The bike will not turn on.
3. **On:** Key twisted from position one, two clicks clockwise. Battery is locked to the bike. You cannot remove the key. The bike will turn on.

See video for demonstration:

<https://www.youtube.com/watch?v=wCu2NPljrKo>





# Battery

## Charging

For charging, plug the battery into the charger. You will see a red light on the charger indicating that it is charging. Once the light turns green the battery is at 100% and the charger will automatically stop charging.

Although the charger does automatically shut off, it is not recommended you leave the battery on the charger for long periods of time. In the rare event that this function fails it can cause serious damage to the battery.

Charging should take 4 - 6 hours. If your battery is still not fully charged after 12 hours on the charger, contact MJM as there is likely something wrong with the battery or charger.

- avoid blocking the fan on the charger to prevent overheating
- avoid charging in extreme temperatures. Charging between 10 - 25 degrees Celsius is ideal
- do not charge in strong sunlight
- only use the charger that has been supplied to you. If you require a new charger contact MJM and we will be happy to assist

## Battery Storage

- avoid storing in extreme temperatures. Storing at 10 - 25 degrees Celsius is ideal
- store in a dry location. High humidity can damage the battery
- if storing for months at a time, store battery between 70% and 20%. Avoid storing fully charged or fully depleted
- check the battery each month and top up the charge if necessary



# Display and Controller

## Turning the bike on and off

Press and hold the power button. You will see the display flash on and show all your information. To turn off, press and hold the power button until the screen turns off. It should only take a few seconds.



**Note:** First ensure the battery is charged and installed on the bike correctly.



**Note:** The bike will automatically turn off after 5 minutes if the bike is stationary.



# Display and Controller

## Pedal Assist (PAS) Levels

This is the level of assistance the motor will deliver once activated. Your bike has 5 PAS levels numbered from 1 - 5 with 1 being the lowest level of assistance to 5 being the highest. Use the “+” and “-” buttons to adjust the PAS level.

If you want to ride with no assistance press the “-” button until a 0 is shown in the assist section.

## Lights - Turning on and off

Our bikes are fitted with automatic lights and will turn off and on depending on the environment you are in.

To manually turn the lights on and off, when the bike is turned on press and hold the “+” button. After a couple seconds you will see the headlight icon pop on your display, both the front and rear lights will turn on. Once you see this, release the “+” button and the lights will remain on until turned off or the bike turns off.

To turn off, repeat this process until you see the lights turn off.

## Walk Function

The walk function activates the motor at a slow speed to assist you in walking the bike.

Press and hold the “-” button. After a couple seconds the motor will activate and you will feel the bike move forward. Hold the “-” button while using the walk function. Once you release the “-” button the walk function will turn off.

- the walk function will not work if you are holding the brakes



# Settings

## Modes

Your bike can track and display a variety of information from the main screen that can be changed using the “i” button.



**TRIP:** By default when you turn the bike on it will display your trip in the bottom left. This will track the distance you have travelled in kilometers and can be reset whenever you desire. See settings mode for these instructions.



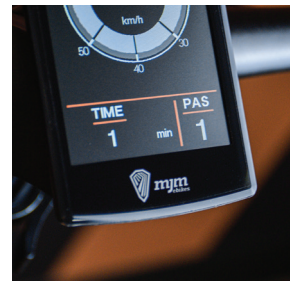
**ODO:** Odometer will display the total kilometers the bike has travelled. This cannot be reset.



**MAX:** Will show your current max speed.



**AVG:** Average speed.



**TIME:** Tracks your total ride time.





# Settings

## Settings

To enter the settings menu press and hold the “+” and “-” buttons together for a couple seconds. The display will change and you will see multiple icons. Use the “+” and “-” buttons to toggle through the settings, use the “i” button to select.

### Wheel

Setting the wheel diameter. Use the “+” and “-” buttons to adjust the wheel diameter then press “i” to confirm. The setting for the TRF21 must be set to 26.

### Speed Limit

All our bikes are set to 32km/hr.

### Brightness

Adjust display brightness.

### Voltage

Sets the voltage output of the bike at each power assist level. The default is 48V. It is not recommended you change these settings.

### Advanced

See advanced settings section.

### Dormancy

Sets how long the bike will stay on before shutting off when there is no input. The default is 5 minutes.

### Unit

Can toggle between metric and imperial measurements.

### Password

If you would like to set a password to lock the display whenever the bike turns off, you can set that here. The default is no password.

### Factory

This will reset everything back to its original factory settings.

### Display

To reset the trip select “**Trip Reset**” with the “i” button so the “**NO**” turns yellow. Once “**NO**” is highlighted yellow press the “-” button and it should change to “**YES!**” Press “i” one more time and “**YES!**” should change to “**Reset Clear**”. The trip is now reset.

### AL Sensitivity

“**Automatic Light Sensitivity**” Adjusts the sensitivity of when the automatic lights will turn off and on. The default value is 3.

### Exit

Return to the main display screen.



# Settings

## Advanced Settings

1. Speed Sensor
2. Assistant Num
3. Power Set
4. Current Limit
5. Sensitivity
6. Slow Start
7. SOC V

MJM does not recommend changing any of the advanced settings.

## Error Code

- 21** - Current Abnormality
- 22** - Throttle Abnormality
- 23** - Motor Abnormality
- 24** - Motor Hall Signal Abnormality
- 25** - Brake Abnormality
- 30** - Communication Abnormality

In the event your ebike flashes an error code contact MJM and we will be happy to assist you.

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[calgarysales@mjmwheels.com](mailto:calgarysales@mjmwheels.com)



# Care Tips

## MJM Care Tips

We want your ebike to work well for years to come, so here are some things you can do to make your bike last as long as possible:

### **Keep it clean**

A dirty bike can lead to rusting, unnecessary wear, and unwanted sounds. As there are electronics involved, use water sparingly to avoid damaging the bike. We recommend buying a bike specific wash for cleaning your bike. Household cleaners like dish soap or detergent may contaminate and damage some components. For cleaning your brake rotors, use a clean microfibre or paper towel and isopropyl alcohol.

### **Get it checked over**

We recommend you have your ebike professionally inspected once a year. This is a service just about any bike shop offers and is something we offer in our shops for \$50. This inspection will ensure your bike is working well and will enable you to stay on top of the wear your bike will inevitably endure. As you ride, parts like your brakes, tires, chain, and gears all slowly wear out. Tracking this wear and replacing these parts as needed will make sure you have the best experience with your bike.

### **Unsure? Just ask**

If there is anything you are unsure of, whether it's how to maintain or clean your bike, or something that seems not quite right, reach out and ask us! We are always happy to help answer questions.



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# Warranty



## **Motor / Battery**

Diminishing one year warranty on the battery, motor and other electrical components, subject to no apparent abuse. The warranty replacement diminishes by  $\frac{1}{12}$  for every month of the year.

## **Frame**

3 year warranty on the frame for cracks, again subject to no apparent abuse.

Warranty does not cover wear parts like tires, brakes, and chain.





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# Contact



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