

# Vermont 48V

## User Manual



**DAYMAK**

# ***About Daymak***

Daymak is one of Canada's largest Alternative Vehicle providers. We design, engineer, manufacture, import and repair everything from recreational dirt bikes, go-karts and electric golf cars to alternative transportation solutions such as e-bikes and gas scooters.

Our electric bicycles represent an energy-efficient and eco-friendly alternative for people who need to get around the city. They greatly increase the practicality of bicycle transportation in urban centres. Costing only a few cents to charge, an e-bike can make city life more convenient and much less expensive.

While there are many new Green technologies that are still in their infancy, electric bicycles have been developing over the last 40 years or more. E-bike technology has been dramatically refined since the introduction of the first custom-conversion bicycles. Today, electric bicycles are a supremely reliable and affordable means of transportation.

Daymak is constantly developing new eco-friendly alternative transportation strategies, led by its own Research and Development department in Toronto, Canada. We are always improving our products. Our innovative in-house engineering and quality testing provide customers with many new kinds of reliable, eco-friendly vehicles, designed to help change the lives of our customers and the world.

Daymak warranties, services, and stocks parts for everything it sells. We support our products.

Please feel free to visit our website. You'll find the latest in cool transportation solutions, support for the products you've purchased and contact information.



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# Introduction

By making the decision to use an electric bike you are helping to safeguard our environment by saving our planets precious and not adding to carbon pollution.

Thank for choosing this electric bicycle.

Our bikes are manufactured under rigorous control to the most stringent European and UAS safety standards and are constantly spot checked both here and in the factory. For many years we have been engaged in the research and development of electric bicycles and cars and this electric bicycle is the culmination of those efforts.

Before you use it, it is important that you read this manual carefully. If there is anything you do not understand completely please do not hesitate to.

Please observe traffic regulations, and don't lend your bicycle to anyone who is unfamiliar with it. The bicycle can only legally be used on the queen's highway by a person aged 14 years or older.

We strongly advise you to always wear a cycle helmet when using your bicycle and to attend a Cycle proficiency course prior to using on the open road. It is not a toy and should be considered as a serious mode of transport.

## 1. Before you set off

Check handlebars are properly tightened.

Check brake isolator is functioning properly.

Check tire pressures are correct.

Make sure battery is fully charged.

Load battery into bicycle and turn on with power key.

Please read this manual carefully. Only on full understanding of all the functions of this electric bicycle should you use the product.

For your safety, please turn off the power key when stopped or walking the bike.

## 2. Battery care

2.1 Before setting off on any journey it is always better to have a fully charged battery.

2.2 Always remember that you use up to three times more power when setting off under the twist throttle or riding up steep hills.



To preserve the life of each charge always set off and climb hills using 1:1 pedal assist rather than the twist throttle.

- 2.3 Do not expose the bicycle or battery package to fire, extreme heat sources or alkaline substances.
- 2.4 When leaving your bicycle during hot weather always try to leave in a shaded well ventilated area.
- 2.5 For best results always recharge the battery at room temperature.
- 2.6 To maximize the life of the battery always leave it fully charged when not in use and if possible recharge once every 4 weeks.
- 2.7 Before unloading the battery, first raise the saddle and unload the battery using its handle.

### ***Important notice***

Worn out batteries should be disposed of properly or returned to us for a credit against the cost of a replacement.

### **3. Recharging your battery**

- 3.1 First connect the output connector plug with the battery, and then connect to the mains. A red lamp on the charger indicates the battery is charging, when this turns green the battery fully charged. Please disconnect from the mains after charging. Always disconnect the charger from the mains before disconnecting from the battery. It is possible that the battery will take up to 6 hours to charge on the first three charges.
- 3.2 When charging the battery always do so in a ventilated area.
- 3.3 Do not leave the charger connected to the mains when not in use.

### **4. Water and your electric bicycle**

- 4.1 Your electric bicycle is rain and splash proof and can be used in all weathers.
- 4.2 The electrical components of the vehicle, such as motor, battery, and controller, must not be submerged in water.



## 5. Maintenance and adjustments

5.1 Do not attempt to open the casing of the battery, motor, or regulator or all warranties will become void. If you experience a problem contact our service department.

5.2 Wheel spokes should be adjusted after 6 months. Handlebar and saddle tubes should never be on the nuts positioning the handlebar, handlebar vertical tube, bicycle saddle, saddle tube and front wheels is 18NM. The minimum torque on the nuts on the pedal bearing axle and rear wheel is 30NM.

5.3 If the chain becomes loose or frequently comes off the front cog, you can easily adjust the chain tension by loosening the rear axle nuts slightly, and adjusting the tension bolts. Make sure that the chain runs freely and re tighten the axle nuts.

5.4 The brake leavers should lock the wheels when compressed half way between their open position and touching the handlebars. When the need adjusting use the following methods:

Front brake: Loosen the nuts the cable clamp, then tension or release the steel cable, until the gap between the wheel and brake rubber is 1.5 to 2.0 mm.

Rear brake: Loosen the nuts on the cable clamp, then tension or release the steel cable until you can feel the brake lever's motion is fluid and does not lock the back wheel until it is the correct position.

**Warning: Braking distances increase on wet or icy roads.**

5.5 Regularly lubricate the gears and chain with light oil and the brake bushes (not the rubber brake shoes) with a little grease.





1. Handlebar
2. Display
3. Seat
4. Battery
5. Ignition/Battery Lock
6. Motor
7. Rear Tire
8. Pedal
9. Front Tire
10. Headlight
11. Brakes
12. Front Fender
13. Chain
14. Kickstand
15. Rear Fender

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## 7. Technical specifications & performance

### General specifications

Type	Electric bicycle
Max speed	32km/h
Net weight	15kgs
Max range	30-40km
Carrying load	120kgs
Wheel size	26"

### Battery specifications

Cell type	Lithium ion
Capacity	12Ah
Rate voltage	48V

### Main Controller specifications

Energy consumption per 100km <1.2kw/h

Problem	Reasons for problem	Trouble shooting
Top speed too slow	<ol style="list-style-type: none"> <li>1. low battery voltage</li> <li>2. handlebar control problem</li> <li>3. damage to motor driveline</li> </ol>	<ol style="list-style-type: none"> <li>1. recharge battery fully</li> <li>2. call service</li> <li>3. call service</li> </ol>
Power on but motor not working	<ol style="list-style-type: none"> <li>1. battery not connected position</li> <li>2. fused</li> <li>3. motor connection damaged</li> <li>4. handlebar control problem</li> </ol>	<ol style="list-style-type: none"> <li>1. reinstall battery</li> <li>2. replace fuse</li> <li>3. call service</li> <li>4. call service</li> </ol>
Driving shorter distance per charge	<ol style="list-style-type: none"> <li>1. type pressure too low</li> <li>2. undercharge or charger fault</li> <li>3. battery capacity loss or damage</li> <li>4. hill climbing, frequent stop and start riding against strong wind or weight overload</li> </ol>	<ol style="list-style-type: none"> <li>1. check pressures, pump tyres</li> <li>2. recharge complete or have charger inspected</li> <li>3. replace battery</li> <li>4. use 1:1 power assist</li> </ol>
Charger not working	<ol style="list-style-type: none"> <li>1. charger fuse blown</li> <li>2. charger damage</li> </ol>	<ol style="list-style-type: none"> <li>1. replace fuse</li> <li>2. call service</li> </ol>





## 8. Operating the Vermont

### 8.1 Shifters

The Vermont 48V has quick shift, Shimano shifters. These will increase or decrease the manual difficulty of the bike. By pressing in the plus (+) button, you will move the chain to a harder gear making it more difficult to pedal however increasing the speed and decreasing the amount of revolutions required to travel. Higher gears are recommended when going down hills or straight flats.

By pushing the Minus ( - ) lever away from you, you will decrease the gear that you are on making it easier for you to pedal but decreasing maximum speed and increasing how many cycles you need to pedal to travel. Lower gears are recommended when going up steep hills.



## 8.2 Display

On the left you have 4 buttons:

**Plus button:** Increase the level of pedal assist. Maximum of 6. The higher level of pedal assist the less amount of manual energy is required to get to pedal the bike.

**Power button:** Turns on and off the bike when held for 2 seconds. This only works provided that the battery is in place and the ignition is set to on. If pressed without being held will turn on and off the back lit display.

**Set Button:** Used for diagnostic purposes only

**Minus button:** Decrease the level of pedal assist. Minimum of 0. If set to 0 the motor will not engage while pedalling only when using the throttle.

On the display you have the following from top to bottom:

Your current speed

The current level of pedal assist

The battery level

The amount of kilometers you have travelled on the last trip

The total amount of kilometers travelled.





### 8.3 Battery

The battery can be charged both in the Vermont 48V as well as outside of it. The charging port cover needs to be pushed to the side to expose the port (Circle with 3 Prongs). When putting keys into the key hole, you must push in and turn clockwise to engage the battery lock, then once more to turn on the ignition. Once the ignition is turned on, you may use the power button on top of the battery to quickly check the battery life.

To remove the battery from the unit simply turn counterclockwise once, push in and turn counterclockwise a second time and then pull up from the handle (You may need to remove the seat first to do this )

### 8.4 Throttle

On the right handlebar you will find a throttle. By twisting this throttle towards you, you can have the motor engage without pedaling. The more you twist it the more power will be given to the motor.

### 8.5 Kill Switch

The red button on the throttle is the kill switch. When this is pressed in, the motor and throttle will provide a boost provided everything is turned on. When it is out the motor will not give any power.



## 9. Repair or replacement of components

Only use this product in accordance with this user manual.

We offer a limited warranty on the following items.

- 9.1 Welds on the main frame, front forks, splashboard, or wheel rims.
- 9.2 Gears, bearings, motor shell, hub motor.
- 9.3 Handlebar controls, brakes (excluding rubber brake shoes), controller, charger, or battery capacity.
- 9.4 Paintwork (excluding deliberate damage or scratching)
- 9.5 Front and rear axle, flywheel, chain wheel, or driveline
- 9.6 Battery casing, battery leak, battery capacity step-down more than 40%.

### Additional Limited Warrantees

- 1. If the product has any quality fault within 15 days of sale you may choose to have the bike repaired or replaced.
- 2. The period of assurance shall commence from the day the sale was made.
- 3. Beyond the period of assurance, we offer lifelong repair, but the cost of labor, parts and delivery will be charged.

### Exception to Limited Warrantees

- 1. Damage resulting from misuse, not maintaining the vehicle or not following the guidelines within this user guide.
- 2. Accidental or deliberate damage.
- 3. Damage due to private repair by user or unauthorized service center.
- 4. Failure to produce invoice or proof of purchase.
- 5. Spare parts and components worn in normal use.

