

# EBMX CONTROLLER & MOTOR CARE & WARRANTY



The controller and motor are two of the most important parts of an electric bike. The following information will inform you how to care for, handle and safely manage your motor and controller.

Incorrect use of the motor and controller may result in an excessive rise in temperature, fire and/or explosion.

## **Precautions for Use:**

Install the motor and controller properly before first use. Many EBMX products will include a QR code with installation instructions. Please contact your EBMX dealer if you cannot locate the proper installation video or PDF. If you do not follow the EBMX install instructions provided with the QR code your warranty will be voided.

If you are not comfortable installing the motor or controller, please have a professional install them for you.

USING A CIRCUIT BREAKER AND FUSE IS ESSENTIAL FOR THE SAFE AND RELIABLE OPERATION OF YOUR ELECTRIC MOTORCYCLE.

Circuit breakers and fuses are critical components that protect your bike's electrical system from overloads and short circuits. Every controller must be paired with an appropriate circuit breaker or fuse to ensure safe and proper functioning. Removing or bypassing the circuit breaker or fuse can lead to serious damage, to your bike, property, or both and will void the warranty on all products.

If you are using an aftermarket battery, you must install an appropriately rated circuit breaker or fuse to protect the system against overcurrent events. Failure to do so may result in electrical failure, fire hazards, or permanent damage to your components, and will void the warranty on all products. As each setup varies, we strongly recommend consulting a qualified professional to determine the correct circuit breaker or fuse rating for your specific battery.

Only operate the motor and controller between 23 °F (-5 °C) and 122 °F (50 °C) outside temperature.

If your bike does not have a breaker, disconnect the battery from the bike when not in use. A small amount of power continues to be used while the battery is attached to the bike. This may cause the controller capacitors to stay charged at all times, voiding your warranty.

Always store the bike in a cool dry place.

If your bike does not have a breaker, make sure the battery is unplugged prior to being charged.

Failure to unplug the battery could damage the controller and void your warranty.

If at any time you have concerns about your motor or controller, do not use it and seek expert assistance.

## **Motor Care:**

Always remove the battery from the bike before inspecting the motor.

Frequently check the bolts that hold the motor in place are tight.

Frequently check that the motor case and encoder cover bolts are tight.

Frequently check to make sure the nut that holds the pulley or sprocket on the motor shaft is tight.

Ensure the belt or chain is properly adjusted.

If you are using a belt, please see the OEM owners manual for directions on how to adjust the belt tension.

If you are using a chain, you will require a small amount of slack at the tightest spot in the chain. Failure to tension the belt or chain properly can cause premature wear on the motor bearings or damage the motor case.

Use the proper gearing for your type of riding. Higher KV motors require larger rear sprockets.

Do not attempt to reconstruct, disassemble, deform, or short-circuit the motor.

Do not touch the motor phase wire lugs with conductive objects such as jewelry, keys, coins, hairpins, etc.

Do not power wash the motor.

Do not immerse the motor in water when it is hot.

Always use a high performance battery with EBMX motors.

Do not drop or submit the motor to strong shocks or impacts.

Please keep the motor operating temperature 10% below 320 °F (160°C).

## **Controller Care:**

Remove the battery from the bike before inspecting the controller.

Use the correct settings for your motor and battery. Failure to do so can damage the controller. Use of the incorrect settings for your bike, controller, motor or battery will void your warranty,

Do not change any password protected settings without the help of EBMX staff or an Authorised EBMX Dealer. Using the advanced settings password where you have not been given written approval by an EBMX staff member will void your warranty.

When plugging in the connectors, take your time making sure the arrows and pins align. Do not force them.

Frequently check to make sure the bolts that secure the controller to the bike are tight.

Ensure the bolts that hold the phase and + / - wires to the controller each use (1) flat washer and (1) spring washer.

Frequently check to make sure the bolts that hold the phase and + / - wires to the controller are tight and that the wires cannot move side to side. If the wires can move side to side, your lug could be thinner than most. In this case, add an additional flat washer and re-check side to side movement.

# EBMX CONTROLLER & MOTOR CARE & WARRANTY



Frequently turn your handlebars side to side and ensure the 2 to 1 cable that connects to the display and thumb throttle has plenty of slack and cannot be pinched.

Do not leave or store your bike with the controller turned on.

If changing out the heatsink, inspect the o-ring and thermal pad for damage. Replace if damaged.

Do not touch the controller + / - or phase wire bolts with conductive objects such as jewelry, keys, coins, hairpins, etc.

Do not drop or submit the controller to strong shocks or impacts.

Do not attempt to reconstruct, disassemble, deform, or short-circuit the controller.

Please keep the controller operating temperature 10% below 176 °F (80 °C).

Do not power wash the controller.

Do not immerse the controller in water when it is hot.

Use dielectric grease on the connectors. This helps prevent water and other contaminants from entering the connectors and protects the controller. Dielectric grease must only be applied to the rubber seals, do not apply it to the electrical contacts.

## How fast will my bike go and how much range will it have with a EBMX controller?

The top speed and range of an electric bike varies greatly and depends on several factors. It depends on the cells and BMS used in your battery, the weight of the rider, the weight of the bike, the motor used, gearing, tire size, etc. . External factors such as environment, temperature and wind conditions also influence the top speed and range. A flat even surface will always provide increased range over a hilly uneven surface when riding. Colder environments can decrease range by up to 40%.

## What is the life expectancy of my controller and motor?

EBMX motors and controllers are very reliable when used correctly. However, poor maintenance, handling and incorrect settings will greatly impact the life of your product.

If you wish to extend the life of the motor and controller, avoid overheating them and follow the care outlined in this document. This will greatly increase life expectancy.

## How to maximise the Range

Use a battery that has a lot of watt-hours. Higher voltage batteries can be more efficient. Watt-hours = Nominal voltage x AH. A 72v 50AH battery would be 3600wh.

Your battery should be fully charged before departure.

You can increase your range by inflating the tires to the proper psi, as the bike will have less rolling resistance.

Use the correct motor, gearing, controller settings, and tire size for the application.

## Warranty

### Warranty Terms and Conditions Summary

Subject to the limitations, terms and conditions herein EBMX GLOBAL warrants to the original retail purchaser of the EBMX GLOBAL Controller and Motor will be free from defects and flaws in manufacturing workmanship under "normal intended use" and service for the following periods;

- Motor used with 3rd party controller - 6 months (only where it is clear the motor is faulty)
- EBMX Motor and controller combination - 2 years
- Controller stand alone – 2 years
- Cables and connectors - 6 months
- Motor hall sensor / encoder – 2 years

Warranty only valid for the original purchaser and an original invoice or proof of purchase must be produced.

Examples of items that will void the warranty or are not covered by the warranty:

- All Warranties will be voided if any modifications are made to our products, including but not limited to changing the settings outside the recommended limits, installation of third party software
- Cosmetic issues, including but not limited to minor scratches, marks or imperfections that do not affect performance.
- Damage due to external causes, e.g. environmental factors, damage by negligent use, incorrect use, incorrect installation and tampering with the product, damage by traffic accidents and damage during any transportation, e.g. by couriers
- Damage due to normal use or expected wear and tear.
- Poor maintenance including failures resulting from inadequate maintenance or failing to follow the manufacturers install and care instructions.
- Damage caused by any modifications to the controller or motor
- Casing has been opened
- If your controller or motor is stolen or misplaced

## Warranty Terms and Conditions

For the avoidance of doubt: We make no representations or warranty in relation to the existence, non-existence, validity, availability, terms or conditions of any other warranties or product support that may or may not be offered or provided by the manufacturer of the Product; The warranties and product support that we offer and provide pursuant to our Terms and Conditions are in addition to the consumer warranties and guarantees under your country's Consumer Law.

# EBMX CONTROLLER & MOTOR CARE & WARRANTY



Subject to the terms and conditions set out below, EBMX GLOBAL agrees to repair or replace the product which it supplied to you at its own cost, in circumstances where the Product does not perform in accordance with EBMX GLOBAL specifications during the Warranty period for manufacturer faults.

The Standard warranty period commences on the date of delivery or collection of the Product. Where there is no proof of delivery, the date of delivery of the product will be assumed to be 3 business days from the date of dispatch of the Product.

The benefits provided to you by this contractual product warranty are in addition to other rights and remedies available to you under the law.

Proof of purchase (invoice or paid order confirmation) must be provided when requesting service under the Warranty and all reasonable attempts must be made by the customer to supply the details as requested by EBMX GLOBAL to determine the fault.

Any repair service under warranty must be approved by EBMX GLOBAL. If a customer decides to perform repairs on a product without the approval of EBMX GLOBAL, warranty will be void.

Where Products are already faulty or damaged upon delivery, photographic evidence of the damage must be submitted to the dealer from which the product was purchased, who will in turn determine if the product is to be repaired or replaced in accordance with their shipping terms.

The Customer is responsible to inspect all goods received from EBMX GLOBAL or authorised dealers, upon arrival. In instances where goods have been damaged in transit, the Customer must report this to the dealer within 7 days of receipt of the product. Failure to report physical damage on arrival within 7 days of receipt may result in denial of warranty for physical damage.

EBMX GLOBAL reserves the right to replace the controller or motor with the same controller or motor, rather than repair it. Where a replacement is provided, EBMX GLOBAL will determine, in its discretion, the closest controller or motor within the then current range of Products offered by EBMX GLOBAL with which to replace the faulty or damaged Product. The replacement controller or motor may differ with the replaced controller or motor specifications, at the reasonable election of EBMX GLOBAL, as controller and motor specifications can alter from time to time. Replacement of the controller or motor does not extend or restart the Warranty period.

If EBMX GLOBAL is unable to repair or replace the motor or controller, the customer will be provided with credit or may be refunded the price of the Product (at EBMX GLOBAL's election). This credit or refund will be for the purchase price of the Product excluding the associated Delivery Cost.

EBMX GLOBAL reserves reasonable discretion to determine whether any motor or controller is or is not performing in accordance with the EBMX GLOBAL specifications and general industry expectations, subject to applicable law.

The Warranty is not transferable to a new owner of a Product originally purchased from EBMX GLOBAL or their associated dealers.

To the full extent permitted by law, the Warranty will not apply in respect of a motor or controller:

If the Product has not been installed, operated, maintained or used in accordance with the manufacturer's instructions or specifications provided with the Product;

If the factory-applied serial number has been altered or removed from the Product;

Which has suffered damage, malfunction or failure resulting from alterations, any alterations (hardware or software), accident, misuse, abuse, fire, liquid spillage, mis-adjustment of customer controls, use on an incorrect voltage, power surges and dips, thunderstorm activity, force majeure, voltage supply problems, tampering or unauthorised repairs by any persons, use of defective or incompatible accessories, exposure to high pressure washing, exposure to chemicals, exposure to excessive sunlight, exposure to abnormally corrosive conditions or entry by any insect, vermin or foreign object in the Product;

To damage arising during transportation, installation or while moving the Product, or to any transportation costs of the Product or any parts thereof to and from the Customer, unless otherwise specified in these Warranty Terms and Conditions;

To any third-party software or hardware not contained in the Product as originally configured by the manufacturer;

To any incidence of defective pixels (i.e. dead or stuck pixels) that arise for Digital Products;

To any failure, to the extent that the failure is not a failure of the Product to perform in accordance with its specifications;

To service and support of any software operating system or application installed on any Product, except to assist in restoring the Product to its factory default settings.

To the full extent permitted by law: EBMX GLOBAL will not be liable for any loss, damage or alterations to third party hardware, software, programs, data and/or information stored on any media or any part of the Product, no matter how occurring; or for any loss or damage arising from loss of use, loss of profits or revenue, or for any resulting indirect or consequential loss or damage.

EBMX GLOBAL's aggregate liability in respect of all claims under the Warranty shall not exceed the original purchase price of the Product or, at EBMX GLOBAL's option, replacement of the Product with a like or similar Product.

# EBMX CONTROLLER & MOTOR CARE & WARRANTY



EBMX GLOBAL excludes all other warranties, conditions, terms, representations, and undertakings whether express or implied.

Insofar as they apply to warranties relating to EBMX GLOBAL Products supplied by EBMX GLOBAL or its authorised dealers, these Warranty Terms and Conditions are governed by and must be construed according to the law of Hong Kong.

All warranties are voided if any of our products sold through EBMX GLOBAL or its authorised dealers are modified or rebuilt or opened.

This warranty does not cover the cost of any repairs, damages, or losses suffered to your bike, persons or other property resulting from product failure or use.

## **Warranty Registration and Claims**

Your product must be registered for warranty at [www.ebmx.com](http://www.ebmx.com) via the form on the technical support page or via the dealer you originally purchased from.

All claims for warranty must be submitted via the original dealer you purchased your product from, who will in turn submit a claim to EBMX GLOBAL.

## **Tech Support**

<https://www.ebmx.com/customer-troubleshooting-ticket>

## **Warranty Questions**

[support@ebmx.com](mailto:support@ebmx.com)