



# operation manual

## MBIQ-S



Dear Customer,

Please read the instructions carefully before using the device and keep them in a safe place.

If the device is passed on, these instructions must also be handed over. The manufacturer assumes no liability if the information in this manual is not observed. As part of further development, we reserve the right to change the product, packaging or description documents at any time.

## Intended Use

The purchased device is a tuning product that may only be used in private, closed areas. For example, for sports competitions and advertising purposes. E-bike tuning is not permitted in the area of road traffic regulations.

The current speed profile is analyzed, processed and, when tuning is activated, manipulated values are output. If the tuning is active, speeds over 25 km / h are blocked for the motor firmware, which means that the displayed speed always remains  $\leq 25$  km / h!

**All brands mentioned are used solely to identify the models of motors / e-bikes / pedelecs with which our devices are compatible. They are the property of their respective owners and are otherwise in no way related to the product!**

# Technical specifications

<b>Motor / connector system:</b>	<p>Compatible with most common mid-range engines: with an identical connector</p> <ul style="list-style-type: none"><li>• YAMAHA PW- ...</li><li>• AEG ( e.g., Sportsdrive)</li><li>• GIANT</li></ul>
<b>Cable length:</b>	approx. 600 mm
<b>Operating modes:</b>	<ul style="list-style-type: none"><li>• Permanently activated</li><li>• Permanently deactivated</li><li>• Activation according to switch-on condition</li></ul>
<b>Power supply:</b>	No separate supply necessary!

# installation

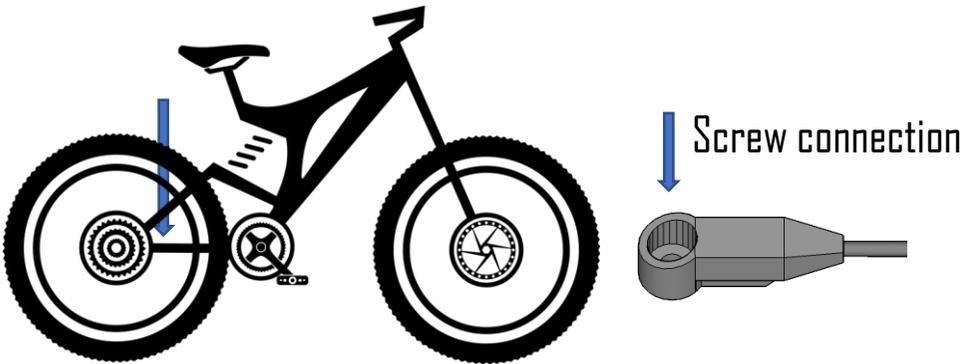
⚠ Please remove the battery from the system before starting work!

For installation, the existing, original speed sensor must be exchanged for the MBIQ-S. You can keep the original sensor for later dismantling.

The sensor is provided with a screw and, if necessary, various washers. You can also use this to mount the MBIQ-S.



*Fig. 1 original sensor*



*Fig. 2 Screw connection of the sensor*

## Access to the engine compartment

The sensor is located on the rear frame and works in conjunction with the magnet attached to the rear wheel. The end of the connector is plugged into the engine compartment, which is why the engine block must be removed to gain access to the sensor. You remove the blue screws and to solve the red easy.

If necessary, there is a cover on the underside that must be loosened, this varies depending on the model.



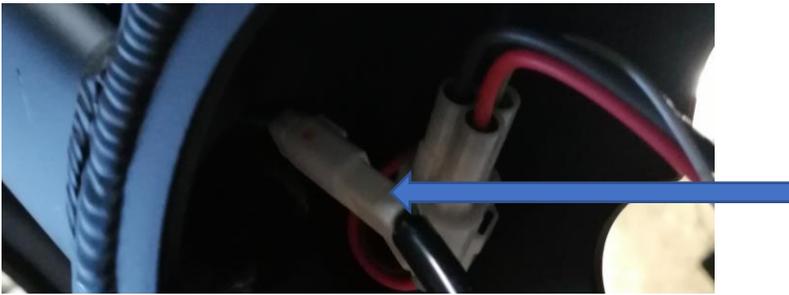
*Fig. 3 Loosening the motor*

The engine block can now be turned to the side, the lines are visible.



*Fig. 4 Loosening the motor*

⚠ If you are unsure about how to proceed, contact the manufacturer directly!



*Fig. 5 Connector of the speed sensor*

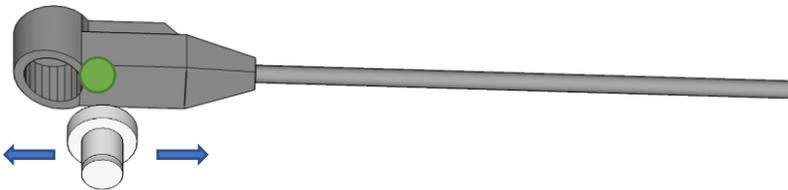
## Installation of the Tuning Sensors

Now replace the original sensor with the MBIQ-S and attach it in the same way.

⚠ The manufacturer's information on the type of installation / fastening instructions must be observed here to ensure proper fastening!

If the tuning is integrated, you can check the correct function, if necessary, before the assembly. Turn on the system and perform a few revolutions of the wheel. If the display shows a speed, the device is in progress.

Should there be no speed display or the display values do not show any meaningful values, it may be necessary to readjust the position of the spoke magnet a little until the impulses can be recognized properly.



*Fig. 6 Position of the spoke magnet*

Analogous to opening the engine compartment, you can now fasten it again according to the manufacturer's specifications.

# Modes of operation

You can choose between three operating modes:

- Tuning permanently activated
- Tuning permanently deactivated
- Tuning according to the switch-on condition

## 1. Permanent tuning activated

In this operating mode, the speed limit is permanently canceled. The speed actually driven no longer corresponds to the displayed speed from around 25 km / h. Manipulated values  $\leq 25$  km / h are generated for the motor firmware.

## 2. Permanent tuning deactivated

No lifting of the speed limit. The actual speed driven corresponds to the displayed speed. Support up to 25 km / h.

## 3. Tuning according to the switch-on condition

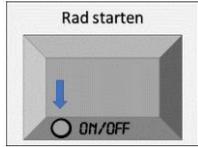
To activate the tuning, the magnet must be in front of the sensor for at least 4 seconds while it is starting up. Otherwise the tuning is deactivated.

(The time is roughly the same as the time it takes for the display to be ready to go.)

# Programming the operating modes

In order to get into the programming mode, you have to carry out the following sequence:

Before starting, turn off the bike and wait a moment ...

<p>Make sure that the spoke magnet is level with the sensor before switching on the system.</p>	
<p>Then turn on the system.</p> <p><b>Important:</b> For the rest of the process, the start of the system counts (e.g. LED goes on), not the complete start of the display!</p>	
<p>Leave the magnet positioned in front of the sensor for approx. 3 seconds.</p>	
<p>Remove the magnet from the sensor for approx. 1 second</p>	

<p>Bring the magnet in front of the sensor again for 3 seconds.</p>	
<p>If the magnet is now removed, the tuning sensor jumps into programming mode.</p>	
<p>If the process has been carried out correctly, the display now shows the set operating mode by outputting different speeds (explanation follows on the next page) on the respective display of your bike.</p> <p>To navigate through the different operating modes, it is sufficient to simply turn the wheel one revolution. Each revolution (moving the magnet past the sensor) jumps one point further.</p> <p><b>Make sure that the magnet is not in front of the sensor after the rotation!</b></p>	

**⚠** *The decisive factor is not the exact value (this varies depending on the wheel circumference), but the order!*

If your system has an immobilizer using a transponder, this must be deactivated for the duration of the programming.

<p style="text-align: center;"><b>Tuning permanently activated</b></p> <p style="text-align: center;">(the speed actually displayed may vary slightly!)</p>	<p style="text-align: center;">Tuning immer an</p> 
<p style="text-align: center;"><b>Tuning permanently deactivated</b></p> <p style="text-align: center;">(the speed actually displayed may vary slightly!)</p>	<p style="text-align: center;">Tuning immer aus</p> 
<p style="text-align: center;"><b>Tuning according to the switch-on condition</b></p> <p style="text-align: center;">(the speed actually displayed may vary slightly!)</p>	<p style="text-align: center;">Tuning schaltbar</p> 

In case you no If you want to save changes, simply switch off your system; the last operating mode selected will then be retained.

Would you like to change an operating mode to save, bring the magnet in front of the sensor for at least 4 seconds.

After saving, the display shows 0 km / h and remains in this state.

Then restart the system!

## Disclaimer of liability

I expressly point out that e-bike tuning products may only be used on pedelecs and S-pedelecs in private, closed areas, such as for sports and advertising purposes.

E bike tuning is not permitted in the area of road traffic regulations. Use at your own risk. No liability is accepted for any current or future damage to objects and / or people as a result of improper installation / attachment and / or use. The guarantee of your e-bike is limited or completely voided by the use or application of the tuning, as the installation or use of the e-bike tuning represents a modification or manipulation of your e-bike (pedelec or SPedelec).

If your e-bike has an operating permit, this will generally also expire. Please always drive carefully, use protective clothing such as helmets or protectors and do not put yourself or others in danger.

Please also note that some manufacturers use analysis software to detect manipulation of sensor data and, if necessary, save this data permanently and evaluate it later.

Since the tuning products offered work on the principle of speed manipulation, such logging cannot be ruled out, even after firmware updates that may have been carried out later. No liability is accepted for any resulting damage. Please only put the product into operation if you are aware of it!

Operation in public road traffic is expressly prohibited by the StVO!

The existing components / materials of the wheel used may not be designed for long-term use with the tuning product.

Before using the system, please inquire about the current legal status and any consequences resulting from the installation.

## Disposal instructions



The device must not be disposed of with household waste. This device is labeled in accordance with the European Directive 2002/96 / EC on waste electrical and electronic equipment. The guideline provides the framework for the return and recycling of old devices, which is valid across the EU. To return your old device, please use the return and collection systems available to you.

You can also return the tuning kit to your specialist dealer after use.

### Manufacturer information:

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