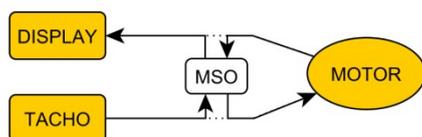


## PearTune MSO „Max Speed Off“

### Functional description

**PearTune MSO 3.0 and 4.0 SMART for BAFANG M500** is an e-bike „chiptuning“ set (followed „MSO“) used for removing the speed limiter of electric assisted bicycles with centerdrives BAFANG M500. The MSO is not stand alone functional. Installation should be carried out by a qualified personell. The MSO does not need to be configured manually. The entire configuration and adaptation to the particular e-bike is done automatically. The MSO is connected in between the magnetic speed sensor and the motor unit, and in between the display and the motor unit. MSO is powered from the display connector. All readings are correctly displayed. The MSO can be activated or deactivated anytime during the ride by pressing + and - buttons or by TWO long presses of LIGHT button. The device state is indicated by number „9.9“ (PearTune MSO is activated) and „2.5“ or „4.0“ (PearTune MSO is deactivated) for few seconds on the display, so the rider easy recognise whether the device is active or not.



### Installation procedure

**MSO-BF-M500:** ① Unscrew the screws and **remove the plastic cover**, or plastic „cap“ from the engine, on the other side than the sprocket is located. All needed cables and connectors are placed under this cover in the space between the motor and bike frame.

② **Disconnect the 8-position connector** in between the display and motor unit **and the 8-position connector** in between the tachometer (speed) sensor and the motor unit.

③ Connect both appropriate connectors from the MSO instead of the original display and speed sensor connectors into the motor unit = **!!!IMPORTANT!!! = these connectors from MSO are RED marked and has to be connected to the motor instead of the original ones!!!**

**And then the original display connector and original speed sensor connector, previously disconnected from the engine, connect into the MSO = to NOT marked connectors!!!**

All the connectors have a keying which prevents wrong connection, there is only one way all of them can be connected.

④ Place the MSO in a proper position (**we recommend into the e-bike frame, if possible**) and optionally, fasten the wiring using the electrical ties. Re-attach the plastic cover, fasten the previously removed screws and the bike is ready to go again.

### Usage

**MSO-BF-M500:** the PearTune MSO can be activated/deactivated anytime during the ride by **two LONG presses of LIGHT button** or with short-pressing of the + button and then immediately - button. Original function of these buttons remains unchanged. PearTune

MSO activity is indicated by value of 9.9 km/h or 6.2 mph (PearTune is activated) and 2.5 km/h or 1.6 mph (PearTune is deactivated) for few seconds on the display after activation/deactivation the PearTune. **In the case that you have „Still ON“ version of PearTune**, you don't need to do anything for activation = the chip is activated/deactivated automatically when the bike is switched ON/OFF. **In the case that you have 4.0 SMART version of PearTune**, you can change the activation buttons in the **SERVICE MENU OF THE CHIP** as you wish.

**If you are planning to install PearTune MSO on new e-bike, make sure that you ride it for at least 1km before the PearTune MSO is installed.**

It is possible that, during a long ride at the speeds of over 25km/h with motor assist, some readings on the display may not immediately respond to their true values. After a certain amount of time without motor assist or at speeds below the 25km/h, these values should always get corrected. After a long trip at higher speeds, we recommend not to turn off the e-bike immediately. The easiest way is to let the e-bike switch off itself automatically or to leave the bike ON after finishing your ride until a value of 0.0 km/h or 0.0 mph is displayed.

**Don't upgrade the software after installing PearTune MSO, the manufacturer is not responsible if the chip does not work properly after the software upgrade.**

The installation manuals and videos for all PearTune products are available also on our websites: [www.pear-control.com](http://www.pear-control.com) or on our YouTube: <https://www.youtube.com/channel/UCBxhV2pBQ-IV-o9vZhxqVlw>

### Manufacturer

PearControl s.r.o.  
Příkopy 1889  
393 01 Pelhřimov  
CZECH REPUBLIC  
[info@pear-control.com](mailto:info@pear-control.com)

### Technical parameters

**Dimension without wiring:** 18 mm x 12 mm x 3 mm

**Supply voltage range:** 5 - 15 V

**Maximum current consumption:** 100 mA

**Maximum power usage:** 1.5W

**Mass:** cca. 10-20 g

### Legislation

The manufacturer reserves the right to make changes. This manual is an integral part of the equipment sold. By using the equipment PearTune MSO its user agrees that he will use the modified e bike in accordance with the applicable legislation of the target country and so does even off-road; therefore, he is free to use it only on his own land or on land designated for that purpose. The user also acknowledges that the operation of bicycles outside their own land or land designated for this purpose with deactivated, but installed equipment PearTune MSO may not be in compliance with legislation. The manufacturer does not warrant non-infringement of bicycle warranties or impossibility of damage or blockage of the e-bike system. The manufacturer disclaims liability for any damages, whether in health or property associated with installing or using this product.

The manufacturer holds the certificate of electromagnetic compatibility testing - Compliance with EU regulations (CE marking) as well as the certificate of restriction of the use of Hazardous Substances (RoHS label).



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