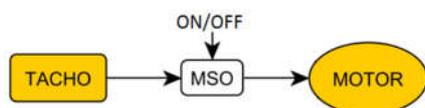


PearTune MSO

„Max Speed Off“

Functional description

PearTune MSO-SH1 is an e-bike „chiptuning“ set (followed „MSO“) for shift the speed limit of electric asisted bicycles with centerdrives Shimano from 25km/h to 50km/h. The MSO is not standalone functional. Intallation should be carried out by a qualified personell. The MSO does not need to be configured manually. The entire configuration and adaptation to the paticular e-bike is done automatically. The PearTune MSO is connected between the magnetic speed sensor and the motor unit. PearTune MSO is powered from the lights connector. This MSO version can be activated or deactivated by selecting lights control function in bicycle control menu. When the chip is active a displayed speed value is divided by two. ODO value is being added with half value, too, etc. In Bosch, Yamaha, Giant and Brose variant, the right values are displayed and the speed limiter is disabled completely.



Variants according to the e-bike system

- **"PearTune MSO-SH1"** for Shimano Steps E8000
- **"PearTune MSO-B2"** for Bosch Active, Performance, CX Line
- **"PearTune MSO-Y2"** for Yamaha Syncdrive, PW-X, GIANT
- **"PearTune MSO-BR2"** for Brose

Installation procedure

MSO-SH1: ① Unscrew three screws marked by red ring and **remove the plastic cover** of the centerdrive. All necessary cables and connectors are placed under this cover. Covers are provided in various shapes and colours and the cover may differ from the picture.



② Disconnect the connector between the motor unit and tachometer sensor (marked by green arrow in the picture). Release the screw of positive (+) light clamp (marked by red arrow in the picture).



③ Connect the speed sensor to the MSO unit and the MSO unit to the motor unit using corresponding connectors. Connect red power cable to positive light clamp. Tighten the screw of the clamp.



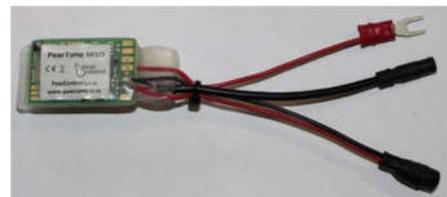
④ Place the MSO in a proper position and optionally, fasten the wiring using the electrical ties. Re-attach the plastic cover and the bike is ready to go.

Usage

The MSO can be activated or deactivated anytime by light control function of the bike menu. Refer to the bike manual.

Manufacturer

PearControl s.r.o.
Svatovítské náměstí 159
393 01 Pelhřimov
CZECH REPUBLIC
hruskova@pearcontrol.cz



Technical parameters

Dimension without wiring: 21 x 40 x 12mm
Supply voltage range: 5 - 15 V
Maximum current consumption: 100 mA
Maximum power usage: 1.5W
Mass: cca. 30g

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).

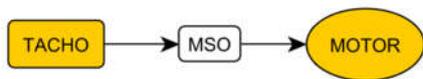


PearTune MSO

„Max Speed Off“

Functional description

PearTune MSO-SH1 is an e-bike „chiptuning“ set (followed „MSO“) for shift the speed limit of electric asisted bicycles with centerdrives Shimano from 25km/h to 50km/h. The MSO is not standalone functional. Intallation should be carried out by a qualified personell. The MSO does not need to be configured manually. The entire configuration and adaptation to the paticular e-bike is done automatically. The MSO is connected between the magnetic speed sensor and the motor unit and MSO is powered from the motor unit. This PearTune MSO version is intended for bikes that are note equipped by light control function as well as for bikes that have it. The MSO is active permanently. A displayed speed value is divided by two. ODO value is being added with half value, too, etc. In Bosch, Yamaha, Giant and Brose variant, the right values are displayed and the speed limiter is disabled completely.



Variants according to the e-bike system

- "PearTune MSO-SH1" for Shimano Steps E8000
- "PearTune MSO-B2" for Bosch Active, Performance, CX Line
- "PearTune MSO-Y2" for Yamaha Syncdrive, PW-X, GIANT
- "PearTune MSO-BR2" for Brose

Installation procedure

MSO-SH1: ① Unscrew three screws marked by red ring and **remove the plastic cover** of the centerdrive. All necessary cables and connectors are placed under this cover. Covers are provided in various shapes and colours and the cover may differ from the picture.



② Disconnect the connector between the motor unit and tacho sensor (marked by green arrow in the picture). Remove the blinding plug (marked by yellow arrow in the picture)



③ Take care about wiring in this step. A mistake can cause serious damage to the MSO or to the bike. Connect **red marked** MSO cable instead of the blinding plug. Connect other two MSO cables between the speed sensor to and the motor unit using corresponding connectors.



④ Place the MSO in a proper position and optionally, fasten the wiring using the electrical ties. Re-attach the plastic cover and the bike is ready to go.

Usage

This MSO version is still active. While the bike is switched on, the MSO is switched on, too. Note that light control function can be enabled through the use of diagnostic device. Service workshops usually own this device and the enable of the light control function can be done there. If the light control function is enabled, a different MSO version can be used; that MSO can be switched on/off via light control function in bike menu anytime during a ride.

Manufacturer

PearControl s.r.o.
Svatovítské náměstí 159
393 01 Pelhřimov
CZECH REPUBLIC
hruskova@pearcontrol.cz



Technical parameters

Dimension without wiring: 21 x 40 x 12mm
Supply voltage range: 5 - 15 V
Maximum current consumption: 100 mA
Maximum power usage: 1.5W
Mass: cca. 30g

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) aswell as the certificate of restriction of the use of Hazardous Substances (RoHS label).