Instructions for the installation and description of the functions for **Bosch** mid-motor design

(Classic, Active-, Active-Plus, Performance- or CX-line) from year 2011 up to 2020 with HMI-, Intuvia-, Nyon- Purion- or Kiox-Display

...for further information visit...
Product description

The bikespeed-RS is a simple and compact kit to bypass the speed limit of 25 km/h of Bosch pedelec drives. The installation is completely invisible.

In contrast to other commercial tuning kits for pedelecs the bikespeed-RS displays „real“ speed on the tachometer instead of the half value. The data of the cycled distance, average/maximum speed, calculated range, ... are usable without any limitations. The levels of support as well as any special profile will be certainly maintained. Light activation is also unnecessary and you can use the tuning if you have an additional lighting system powered by the battery.

The tuning makes the final speed void, that means the terminal velocity is only limited by the power of the drive and the muscular strength invested.

We designed the installation as simple as we could. All the necessary connections are pluggable and consequently they can be removed without any traces.

Deactivation of the speed limit at 25 km/h is possible with the help of a key sequence on the actuator (see page 3, paragraph ‘description of the functions‘).

The tuning will adapt to your pedelec when it is activated. During this process the drive, the display and the size of the tires will be recognized automatically. The tuning is thus universally applicable and you don’t have to adjust anything.
Description of functions

After activating your pedelec the display will show an animation of the battery’s capacity. If the capacity runs from empty to full your pedelec will support you with motor power even if you exceed 25 km/h. If the capacity runs from full to empty the support will end at 25 km/h.

In order to switch on or off the support above 25 km/h please change the level of support down, up, down and up again. If the procedure was successful you will see the animation of the battery’s capacity once more just like when you activate your pedelec and this way you are informed about the current setting.

Here is an example beginning on the ‘Turbo’ level:

Pushbutton down (new level: ‘Sport’)
Pushbutton up (new level: ‘Turbo’)
Pushbutton down (new level: ‘Sport’)
Pushbutton up (new level: ‘Turbo’)

If you have a bikespeed-RSc you use the combination you chose beforehand. (see page 4, paragraph ‘Hint for the custom-variant’)

Please enter the combination quickly without a pause of 3 seconds between two keys. Repeat the procedure if necessary in order to obtain the desired setting.

**Hint:** A switched off bikespeed-RS can **not** be switched on with the combination for service-mode (see on page 6)!
Hint for the HMI-display

With the HMI-display you can enter the combination just about on the big arrow keys on top of the display.

Hint for the Nyon-Display

At the Nyon display a small warning triangle could be popped up during the animation. This has technical reasons, because during the animation, even a low battery level is displayed. The warning triangle can therefore be ignored during the animation.

Hint for the Purion-Display

With the Purion display it is possible that the animation, which informs about the state of the bikespeed-RS, is displayed too fast and is therefore not clearly visible. In this case, the animation of the battery indicator can be slowed down.

Please enter the following combination: down, down, down, down, up, up, up, up. Start at the highest level. (Example: Turbo, Sport, Tour, Eco, Off, Eco, Tour, Sport, Turbo)

The speed of the animation can be reset by entering the combination again.
**Hint for the Nuvinci/Enviolo H-Sync variant**

On bikes with Nuvinci H-Sync a warning is displayed after you start your bike or start cycling. The bike and the tuning is still working perfectly. This message can easily confirmed.

**Hints for the removal of battery or display**

Please always deactivate your bicycle before removing the battery or display. If battery or display are removed in operating state there could be interferences with your bikespeed-RS and the mileage is no longer correct.

**Hint for the odometer**

Please note that after the deinstallation of the bikespeed-RS your odometer may show a lower value under certain circumstances like you’re actually traveled with your bike. This behavior is caused by the design and not a fault.

Please note this primarily when selling your bike.
Important hint when visiting the repair-shop or software-updates on your Bosch-system

If you have in mind to update your pedelec software or you wish to perform the Bosch system with a customer service, please have a look on bikespeed and check on our website www.bikespeed.de, whether the tuning continues to work with a later software or not.

For a software-update to your Bosch-system you have to uninstall the bikespeed-RS. Alternatively there is the service mode on the bikespeed-RS that needs to be activated at your retailer.

Therefore change the level of support 3x down and then 3x up. Please enter the combination continous without a pause of 3 seconds beetwen two keys. Begin on the highest level. In case of success the entire battery index will blink 3x and meanwhile the software state of the bikespeed-RS will be shown on the speed indicator. Now the tuning is in service mode and maintenance as well as software updating can be executed.

If you have a bikespeed-RS you use the combination you chose beforehand. (see page 4, paragraph ‘Hint for the custom-variant’)

This state is maintained even after deactivating the system. That is why there will not be an animation of the battery’s capacity informing about the state of the tuning.

For the deactivation of the service-mode please use the same key-combination as for the activation or the combination you chose for activating and deactivating the tuning. Please keep in mind that in service-mode the support of the drive ends at 25 km/h.
**Hint:** If you are not sure, whether the service-mode is activated, please uninstall the bikespeed-RS before you update!

After activating the service mode, we recommend to switch off the bike without moving it again. If a speed is displayed it could change the trip, avg- or max-speed.
Description of the *custom*-variant (bikespeed-RSc)

After many requests of our customers we offer a new feature of the bikespeed-RS additionally. The individual customer configuration gives you the opportunity with you selectable personal setting to protect your tuning for discovering.

With your individual key combination you can decide if the tuning should be displayed its status with an animation above the battery indicator or not. The tuning can be switched on/off at anytime and you can control the behavior (tuning on/off) after on switching your bike.

The configuration options can be found in the shop on our website. There all possibilities are described with many tips and videos.

If you are interested to upgrade your standard bikespeed RS on a custom version, you can feel free to contact us.
Product liability / exclusion of liability

We were not able to figure out whether running a pedelec with an installed but deactivated bikespeed-RS is permitted on public roads. That is why we expressly point out that the mere existence of the tuning on your pedelec may be an offence against Road Traffic Regulations or it violates §6 of the obligatory insurance law, driving without insurance.

Modified bicycles may only be used on private property. Running a modified pedelec on public roads is expressly prohibited by Road Traffic Regulations!
Installing and running a bikespeed-tuning is done in personal responsibility; liabilities for damages or subsequent damages as well as legal consequences for bikespeed are excluded in every case.

Please inquire about legal consequences that may result for you from installing and using the tuning before you use it.

We expressly point out that using the bikespeed-RS leads to a loss of warranty by the manufacturer. Furthermore there are no claims to product liability for your pedelec/e-bike viable for the manufacturer and bikespeed.

bikespeed especially cannot guarantee that brakes, frames, running gears, tires etc. are designed for the use of the tuning-component.
Help in case of problems

If your bikespeed-RS doesn’t work correctly at any given time please check the following steps in order to help yourself.

Should you still have problems please write an email before sending back the bikespeed-RS.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Solution</th>
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| - bicycle doesn’t start or deactivates itself immediately           | - Please check whether the display and battery are properly engaged in the bracket.<br> - Please check the 4-pole connector from the tuning to the motor and to the display.  
  **Intuvia, Nyon or Purion:** Please try switching on the bicycle with the battery; the display’s battery may be empty. |
| - no animation visible when starting the bicycle                     | **HMI, Intuvia or Purion:** <br>- Please check if the service-mode is activated as by entering the combination.<br> - Check the 2-pole connector from the tuning to the motor.  
  **Nyon:** caused by the Nyon’s principle because the display needs very long to get started. |
<p>| - no support or rather only briefly when starting&lt;br&gt;- no speed-indication (0 km/h) | - Please check the 2-pole connector from the tuning to the motor and to the speed-sensor&lt;br&gt;- Check the magnet on the sensor and align it anew&lt;br&gt;- Test the magnet by holding another magnet in front of the sensor for a second and take it away again several times. |</p>
<table>
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<tr>
<th>- support only until up to 25 km/h are reached - miles are missing</th>
<th>- Check if the tuning is activated and service-mode is off.</th>
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<tbody>
<tr>
<td>- bikespeed-RS (c) cannot switched on or off</td>
<td>- Keep in mind you have to switch the stages to enter the combination. Please start in a sufficient high or low stage.</td>
</tr>
<tr>
<td>- bike can only be switched on at the battery, not at the display</td>
<td>- remove battery and press on/off button on battery at least 10 seconds</td>
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In our experience, the cause for problems most often are connectors which are not correctly plugged in. Therefore please always check if they are set correctly and plugged in the correct socket. Please insert the connectors as far as you cannot see the seals any more. If that is not possible please apply some Vaseline onto the seals for greasing. The plugs are coded and only fit in one direction. Please do not use force!
Help in case of problems (continue)

The cause of error occurring most often is connectors which are not correctly plugged in. Therefore please always check if they are set correctly. Please insert the connectors as far as is shown on the following picture. If that is not possible please apply some Vaseline onto the seals for greasing. The plugs are coded and only fit in one direction. Please do not use force!
**Example installation on a Stevens Pordoi with Bosch Active-, Active Plus-, Performance- or CX-Line drive from year 2014**

**Hints:** For installation on a CX Motor from year 2016 please read the additional hints from page 19

For installation on a Classic Motor built before 2013, or the 2014 Classic+, please read from page 20.

In order to get to the necessary connectors for the connection of the bikespeed-RS the gravel deflector of your motor has to be removed. To do this you have to dismount the treadle on the opposite side of the chain guide. Please follow our pictured instruction manual for this procedure.

**Required tools:**
- Allen key (size 8)
- Crank puller (e.g. Lifu)
- Torx (T20)

The installation may only be carried out by an expert!

All statements without guarantee!
1. Please remove the battery before working on your bicycle!

Remove the attachment screw of the treadle on the opposite side of the chain guide. (Left) For most bicycles with a Bosch-motor you will need an Allen key size 8 to do this.

2. Dismount the treadle with a suitable crank puller. Screw the crank puller into the thread of the attachment screw and dismount the treadle with a suitable Allen key. Please remove all washers before screwing in the puller and read the manual of the manufacturer.
3. The access to the gravel deflector is free. Remove the three screws of the gravel deflector (tool: torx T20) and remove the gravel deflector.

4. Disconnect the two connectors marked with an arrow. The connectors are secured with a small nose.

**Hint:** Please also have a look on the picture on next page!
Please use only the two red marked sockets. If another connector plug in the motor, this must remain unchanged.

At the active-line or active-line plus motor from 2018 please use the following sockets:
5. Plug in the two connectors of the bikespeed-RS in the new freed ports of step 4.

The plugs are coded and only fit in one direction. Please do not use force!

6. Plug in the two unplugged connectors of step 4 to the sockets on the bikespeed-RS. The connectors are coded and only fit in one direction. Please do not use force!

Keep to the colors of the wires in order to find the correct direction. The colors have to be the same on both sides. Please insert the connectors as far as is shown on the following picture. If that is not possible please apply some Vaseline onto the seals for greasing.

Then stow the tuning in a suitable place in a frame tube or under the gravel-deflector.
7. Assemble the gravel-deflector and the treadle in reverse order. (Keep to the tightening torques of the manufacturer!

Re-insert the battery.
Hints and tips for installation on a Bosch CX-drive (from year 2016):

For the CX motors built since 2016, there are different covers, depending on the manufacturer and frames. Unfortunately, it is not possible to provide all variants of installation instructions. Therefore, please look at your bike prior to installation in more detail.

Please keep yourself close to the instructions during the installation for the Active- or Performance-Line motor. All steps and connections are identical, except for the removal of the cover.

**Tip:** In some models, the cover can be removed without the need to remove the crank.

The cover is fixed not on all models with torx screws. There are also variants with Allen or Phillips screws.

The space under your coverage may be limited. But with the new, smaller housing of bikespeed RS nevertheless you will find a fitting location easily. If you have any problems please feel free to contact us.

**Tip:** In some models, the installation inside the tube of the seatpost is possible.
Example installation on a Stevens E-Caprile with Bosch Classic-drive (up to year 2013, or year 2014 Classic+ motor)

**Hint:** For installation on a Active-, Active Plus, Performance or CX-Line motor from model year 2014, please read from page 13.

In order to get to the necessary connectors for the connection of the bikespeed-RS the gravel deflector of your motor has to be removed. For that you need to dismount the treadle as well as the chain ring on the side of the chain guide. Please keep to our pictured instruction manual for this procedure.

**Tools required:**
- Allen key (size 8)
- Crank puller (e.g. Lifu)
- Torx (T20)
- Tool for removing the chain ring screw nut (Spider-Tool)

**The installation may only be carried out by an expert!**

**All statements without guarantee!**
1. Please remove the battery before working on your bicycle!

Remove the attachment screw of the treadle on the side of the chain guide. For most bicycles with a Bosch-motor you will need an Allen Key size 8 to do this.

2. Dismount the treadle with a suitable crank puller. Screw the crank puller into the thread of the attachment screw and dismount the treadle with a suitable Allen key. Please remove all washers before screwing in the puller and read the manual of the manufacturer.
3. Remove the nut of the chainring (Spider) with a suitable tool.

When the nut is unscrewed, unplug the chainring. It is plugged onto the axle.

4. The access to the gravel deflector is free. Remove the three screws of the gravel deflector (tool: Torx T20) and remove the gravel deflector.
5. Disconnect the two connectors marked with an arrow. The connectors are secured with a small nose.

If another connector plug in the motor, this must remain unchanged.

6. First, degrease the bonding surface at the location shown on the bikespeed-RS of the motor. Remove the lamination sheet of the two-sided adhesive tape on the back in order to attach the bikespeed-RS. Attach the bikespeed-RS at the position indicated.
7. Plug in the two connectors of the bikespeed-RS in the new freed ports of step 5.

The plugs are coded and only fit in one direction. Please do not use force!

8. Connect the two disconnected connectors (of step 5) to the sockets on the bikespeed-RS. The plugs are coded and only fit in one direction. Please do not use force!

Keep to the colors of the wires in order to find the correct direction. The colors have to be the same on both sides. Please insert the connectors as far as is shown on the following picture. If that is not possible please apply some Vaseline onto the seals for greasing.
Photo to Step 8:

9. Assemble the gravel-deflector and the treadle in reverse order. (Keep to the tightening torques of the manufacturer!)

Re-insert the battery.
**Hint for water protection**

The opening in the housing is by design, so that any water can quickly drain and dry. Of course the electronic is protected with a splash proof sealing.

For the succes of drying the opening should be placed downwards. If this is not possible, we recommend additional water protection. (e.g. finger of a one-way-glove)
Hint for disposal

Electric and electronic devices that have become waste are called old devices. Owners of such old devices have to bring these to recycling facilities, where these are handled and recorded separately from urban solid waste. Old devices must not end up in the household refuse. In fact they have to be collected in special collecting and recycling systems.

Owners of old devices from private households can dispose these at the public waste disposal authorities or bring them to producer or seller related disposal locations. You can find these disposal locations online:

https://www.ear-system.de/ear-verzeichnis/sammel-und-ruecknahmestellen.jsf

The labelled symbol showing the „crossed out waste container“ on electric and electronic equipment indicates that the concerning equipment has to be disposed separately from urban solid waste.

As a producer in terms of the German ElektroG we are registered with the German registration authority Stiftung Elektro-Altgeräte-Register (Benno-Strauß-Str. 1, 90763 Fürth), having been granted the following WEEE registration number: **DE 87104747**

As well at the Elektro Recycling Austria (ERA) GmbH with contract number: **40624**
EU declaration of conformity

The manufacturer bikespeed GmbH
Huberstr. 17
97084 Wuerzburg

hereby declares that the following product:

Name of the product: bikespeed-RS
Year of construction: 2014-2020

is in accordance with all appropriate regulations of the EMV-guideline (EMC) 2004/108/EU, the disposal-guideline 2012/19/EU as well as the RoHS-guideline 2011/65/EU.

Name of the documentation plenipotentiary: Matthias Braun
Address of the documentation plenipotentiary: see address of the manufacturer

Wuerzburg,

11/12/2019 Matthias Braun, manager

Date Signatory Signature