

**Instructions for the installation and description
of the functions for *Yamaha* Syncdrive-Sport
or Syncdrive-Pro mid-motor design**

from year 2017 to 2019 with Giant-display (RideControl-charge, -evo or -one)



...for further information visit... www.BIKESPEED.DE

Product description

The bikespeed-RS is a simple and compact kit to bypass the speed limit of 25 km/h of Yamaha Syncdrive-Sport mid-design drives of year 2017 with Giant-Display (RideControl Charge or RideControl Evo). The installation is completely invisible.

In contrast to other commercial tuning kits for pedelecs the bikespeed-RS displays the "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 bikespeed-RS Tuning will show an animation of the Trip-time. After 3 seconds the number 1 appears on the display. If the displayed time runs from 00:00 to 11:11 your pedelec will supports motor power even if you exceed 25 km/h. If the displayed time runs from 11:11 to 00:00 the motor 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, up. 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 'Normal' level:

Pushbutton down (new level: 'Eco')

Pushbutton up (neue Stufe: 'Normal')

Pushbutton down (new level: 'Eco')

Pushbutton up (new level: 'Normal')

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 within about 3 seconds. Repeat the procedure if necessary in order to obtain the desired setting.

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.

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 pedelec

If you have in mind to update your pedelec software or you wish to perform the Bosch system with a customer service, please ask our bikespeed customer service for compatibility or 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 within 3 seconds. Begin on the highest level. The correct input will be confirmed by 3x alternate blinking the Trip-Time from 00:00 to 11:11. The software status of the bikespeed-RS is shown during this procedure. Now the tuning is in service mode and maintenance as well as software updating can be executed.

If you have a bikespeed-RSc 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.

Hint: A switched off bikespeed-RS can not be switched on with combination for service-mode!

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.

Cause	Solution
- bicyce doesn't start or deactivates itself immediately	<ul style="list-style-type: none">- Please check whether the battery is properly engaged in the bracket.- Please check the 8-pole connector from the tuning to the motor and to the display.
- no animation visible when starting the bicycle	<ul style="list-style-type: none">- Please check if the service-mode is activated as by entering the combination.- Check the 3-pole connector from the tuning to the motor. You have to use the white connectors on the bike instead the red ones!
<ul style="list-style-type: none">- no support or rather only briefly when starting- no speed-indication (0 km/h)	<ul style="list-style-type: none">- Please check the 3-pole connector from the tuning to the motor and to the speed-sensor- Check the magnet on the sensor and align it new. You have to use the white connectors on the bike instead the red ones!- Test the magnet by holding another magnet in front of the sensor for a second and take it away again several times.

Continue on next page.

- support only until up to 25 km/h are reached - miles are missing	- Check if the tuning is activated and service-mode is off.
- bikespeed-RS (c) can not switched on or off	- Keep in mind you have to switch the stages to enter the combination. Please start in a sufficient high or low stage.
- bike shuts down after a few kilometers	- Please have the latest software installed on your giant-bike
- error code "A4" or battery pack error	- you have used the red 3-pin connector instead of the white one

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!

Example installation on a Giant Dirt-E (2017)

For the installation of the bikespeed-RS two of the three screws holding the motor have to be removed; the motor can easily be folded down and all of the connectors become accessible. Before this, several covers on the motor must be removed in order to reach the screws.

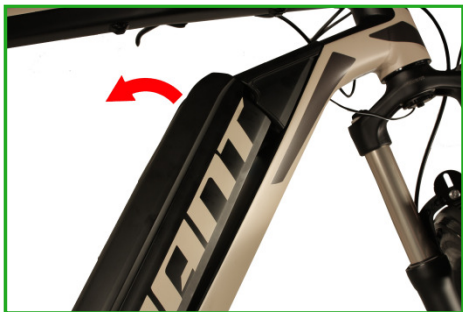
Required tools:

- Allen key set (different sizes)
- Crank puller (e.g. Lifu)

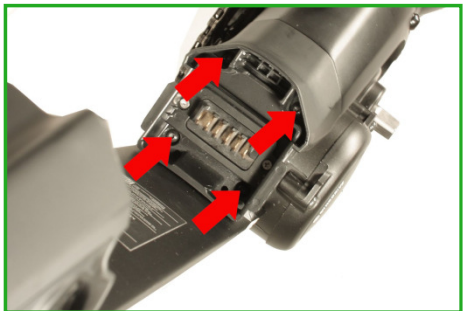
The installation may only be carried out by an expert!
All statements without guarantee!

1. Please remove the battery before working on your bicycle!

Remove the battery by turning the key and pulling out the battery.



2. Loosen the 4 screws of the battery holder with the Allen key.



3. To loosen or remove the side panel parts, you must first lift the battery holder **gently**. The two tabs must be pushed out upward from the side panel parts. Be careful, do not tear off any cables!



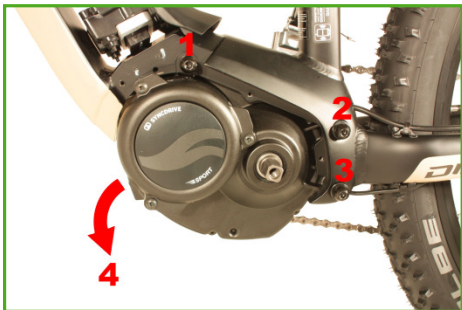
4. Loosen and remove the 3 screws of the right motor cover and the underrun guard with a suitable Allen key.



5. Loosen and remove the 3 screws of the left motor cover with a suitable Allen key. Then remove the cover. The cover can be slipped over the crank handle.



6. Loosen the third screw (3) and use it later as a hinge to fold down the motor.



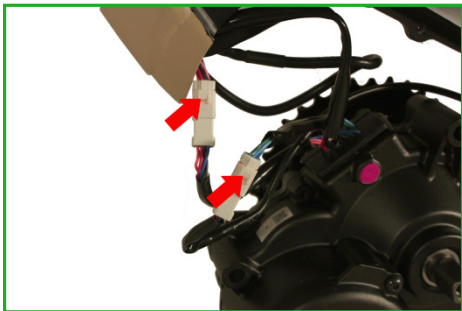
7. Loosen and remove two motor screws (1 + 2) with a suitable Allen key. **Attention:** The screws can be of different lengths! Remember this for assembling!
Keep the motor in position and read next step!



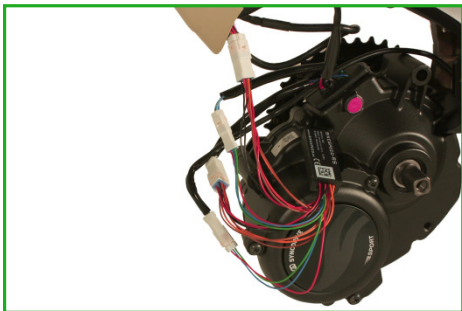
8. Bend the right cover carefully away from the frame. The motor can be fold down then.



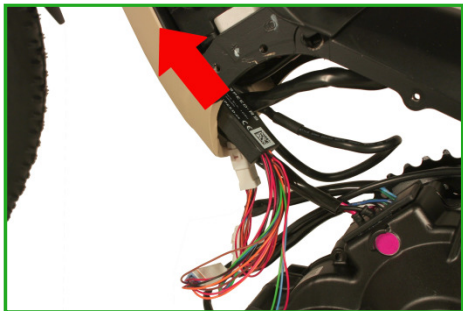
9. Loosen the white 8-pin and **white** 3-pin connector on the motor. If you can not find the connectors directly, please follow the cables in the frame. The connectors are secured with a snap-in lug. Press it gently. (E.g., with a narrow slotted screwdriver)



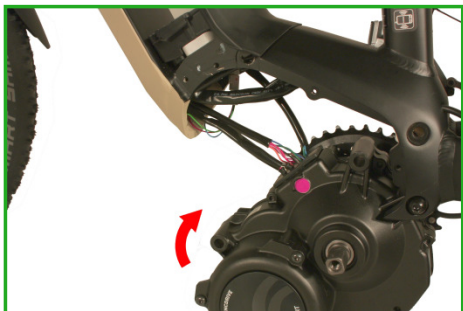
10. Connect the 4 connectors of the bikespeed-RS with the corresponding counterparts of the newly disconnected connections. Please use exclusively **white** connectors! If you can not find the 3-pin white connector, please follow the cable from the speed-sensor at the rear wheel.



- 11.** Stow all in the frame tube, the bikespeed-RS, the connectors and the cables.



- 12.** Fold the motor up again, making sure that no cables were squeezed. Reattach the motor using the previously released screws.



- 13.** Install the motor, the covers, the chainring, the pedal cranks, the battery holder again in reverse order.

Please ensure that the motor screws has to be tighten to the specified torque of the manufacturer (usually 20 Nm; information without guarantee)

Please ensure that the chainring nut has to be tighten to the specified torque of the manufacturer (usually 40 Nm; information without guarantee)

All statements without guarantee!

Hints 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)

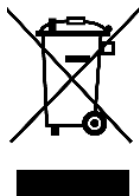
Hints for disposal

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**

EU declaration of conformity

The manufacturer bikespeed GmbH
 Winterhaeuser Str. 109b
 97084 Wuerzburg

hereby declares that the following product:

Name of the product: bikespeed-RS

Year of construction: 2014-2019

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,

04/02/2019 Matthias Braun, manager

Date Signatory



Signature