

# e-motion your bike with add-<mark>e</mark>



# add-e NEXT User Manual

ΕN

Vers. 3.6

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# **F**OREWORD & IMPORTANT INFORMATION

Thank you for purchasing your add-e NEXT retrofit kit. This manual contains installation information.

Before you start, it is important that you familiarise yourself with the various installation variants.

This manual should be kept in a safe place by the customer and given to the new owner if the conversion kit is eventually passed on.

Our add-e NEXT auxiliary drive unit is designed to be easily retrofitted to almost any bike. You do not need any particular prior knowledge for this. Nevertheless, we do recommend that you only carry out the initial installation yourself if you have already had some experience doing manual work on a bike. If you encounter difficulties or deviations from this user manual, our partners are at your disposal to help you. Use the store locator on our website at www.add-e.at/haendlersuche. You can also find more information, pictures and videos through our homepage at www.add-e.at.

All directions given in this manual refer to the normal direction of travel. The chain ring is on the right-hand side in the direction of travel and the saddle is located above the bottom bracket.

The add-e NEXT retrofit kit can be used on a wide range of bike types (MTB, racing bike, trekking bike, city bike, etc.). However, we cannot rule out the possibility that highly different frame shapes and/or additional equipment may make it impossible to install the add-e NEXT retrofit kit. In particular, pressed-in bottom brackets (Pressfit) and full-suspension bikes (Fullys) may make it impossible to use the installation kit. Further information on this subject can be found on our website at *www.add-e.at/faq*.

In some cases, you may need special tools to work to a professional standard. These make the work a lot easier, do not cost much and can be ordered from our online shop at www.add-e.at/shop.

Although the graphics and text in this user manual have been produced with the greatest care, we cannot accept liability for any errors, inconsistencies and the consequences thereof.

We update this manual continuously. You can download the latest version from our website at *www.add-e.at/montage*.

# LEGAL INFORMATION

According to pedelec standard EN 15194/2017, the max. assistance speed is 25 km/h with a nominal continuous power of 250W. The add-e NEXT Sport is equipped with mapping 2. This means that it has a max. assistance speed of 25 km/h and a max. power of 600W. This corresponds to the above standard, because the 600W indicates the peak power.

The add-e NEXT Sport Edition allows travel at an average higher speed (max. up to 45 km/h). In order to use the add-e NEXT Sport in the European Union in compliance with the law, it is factory delivered with mapping 2 (25 km/h, 600W peak power). These parameters can only be modified if a dongle is fitted to the drive unit. If you disconnect this dongle after modification, no risk of tampering exists, even if there is an accident, and the set maximum speed (25 km/h) also applies to add-e NEXT Sport as the maximum design speed in accordance with the registration-free pedelec standard EN 15194/2017.

The parameters can be changed by the user at own request with the dongle, both for the motor power and for the maximum speed, but this no longer complies with the EN 15194/2017 standard.

If the configuration chosen does not comply with the applicable legal regulations in the country of use, the add-e NEXT is only allowed to be used with a special license and/or for racing purposes and/or on private property.

Different countries have different regulations for the use of e-drive units on bikes. Generally, the overall bike is used for assessment. Whether other regulations also apply when an e-motor is retrofitted, e.g. for lighting, depends on the country in question and compliance is the responsibility of the user.

The user is responsible to inform himself about the legal regulations that apply in each case and for complying with them accordingly. Off-road restrictions regarding electrical power, maximum speed and pedal assistance also need to be complied with.

# **SAFETY INSTRUCTIONS**

Before putting the unit into operation, the user should read through the complete manual, since it provides important information about correct operation and minimises the risks. If damage does occur due to failure to observe these instructions, the manufacturer accepts no liability, and the guarantee/warranty is void.

Proper functioning of the bike and the add-e NEXT retrofit kit is essential and reduces the risk of injury or accidents with potentially fatal consequences for the cyclist and others.

For your own safety, please ensure that you wear the proper protective clothing and a helmet. First, practice with care on a suitable track to get used to the new handling behaviour with the add-e.

Depending on the frequency of use, you should inspect and may need to clean the add-e NEXT retrofit kit and its parts on a regular basis.

Before each journey, check the bike for the correct motor setting, tyre pressure/ condition and the secure fit of the add-e, and adjust if necessary!

Ensure that no moving parts, e.g. cables of the drive unit or other objects, can get caught between the drive unit and the tyre, otherwise unexpected problems may ensue, including the rear wheel jamming.

The motor swing arm must always remain mobile, do not let objects get wedged in it. Otherwise, this may result in the motor no longer disengaging from the rear wheel and/or unwanted damage.

The motor of the drive unit can get very hot while travelling. Avoid touching it directly after use, as this could lead to burns and injuries.

# WARRANTY/DISCLAIMER

In the area covered by EU law, the vendor is liable for material defects for at least the first two years after the date of purchase. For battery cells, this is limited to 6 months from the date of purchase.

This covers defects that already existed at the time of delivery. In the first six months, it is assumed that the defect already existed at the time of purchase. A requirement for the purchaser to make a claim is that all specified conditions were complied with during installation, use and maintenance.

These regulations only apply to states that are subject to EU law. In Switzerland and other non-EU countries, liability is limited to one year after the date of purchase.

Wearing parts, such as the battery casing (scratches, falls, impact, etc.), friction roller, scratches and damage attributable to the user's personal negligence are excluded from the warranty.

Any form of manipulation or modification not expressly permitted in the installation or operating manual, assembly video or by written permission from GP Motion GmbH invalidates the warranty.

Damage to the add-e NEXT battery caused by a complete discharge (e.g. due to prolonged lack of use) or by using a different charger is excluded from the warranty. If the add-e NEXT battery is not used for a longer period of time, it should be removed from the battery holder.

In the case of a warranty claim, please contact the respective retailer. The manufacturer or specialist retailer will repair or replace the defective parts. For the purpose of processing the warranty claim, the customer is required to send in the defective parts or the add-e NEXT kit.

The "**Repair Order**" form is available online at www.add-e.at/montage or from support@add-e.at. This form needs to be filled in carefully and enclosed with the delivery. Warranty claims without a correctly completed form may result in higher costs and a delay in the repair. The customer is responsible for ensuring that the parts sent in are suitably wrapped to avoid damage in transit. The manufacturer ist not liable for damage that occurs during transport.

Removing the serial number from the add-e NEXT battery or the add-e NEXT drive unit voids the warranty.

Spare parts are available from the retailer.

Failure to observe the information provided in this manual, improper use or use for purposes other than those the product is intended will result in GP Motion GmbH rejecting the claim for damage to and caused by the product. Liability for consequential damage to elements of any kind or persons is excluded.

The manufacturer accepts no responsibility for and will not refund any costs incurred as a result of improper use.

## **E**XPLANATION OF SYMBOLS



#### PLEASE NOTE!

This symbol stands for special instructions which need to be followed during use or installation.



**TIP!** This symbol stands for special tips that make use or installation easier.



#### **ATTENTION!**

This symbol stands for IMPORTANT information and instructions for assembly or use. It is imperative that you observe these in order to avoid hazards.



#### CLEANLINESS!

Sections marked with this symbol indicate that special attention needs to be paid to cleanliness here.



This marking means that the parts are not allowed to be disposed of in household waste

# SCOPE OF DELIVERY





add-e NEXT drive unit add-e NEXT charger





Battery holder

 $\mathsf{add}\text{-}\mathsf{e}\:\mathsf{NE}^{\mathsf{X}\mathsf{T}}\:\mathsf{battery}$ 



Stand plate



Damper plate



Assembly arms long

Assembly arms short



Setting gauge



add-e NEXT Sensors

Spacer



Docking station



2x M5 Allen screws



6x M4 Torx screws 3x M4 Torx screws long

1x 8mm Wash

1x 8mm Washer 1x M8 Nut 1x M8 Screw

size 3 Allen key size 4 Allen key size 6 Torx key size 20 Torx key





# e-motion your bike with add-<mark>e</mark>



# add-e NEXT Instalation Manual



ΕN

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# INTRODUCTION

This part of the manual deals mainly with fitting the add-e NEXT retrofit kit to your bike. A detailed description of the each of the parts, as well as their operation, technical data and functions can be found in the second part, the Operating Manual.

Installing your new add-e NEXT retrofit kit may involve the use of special tools which are not included in the set. These tools can be purchased from our online shop at www.add-e.at/shop or from a specialist bike retailer.

Read the operating and installation manuals carefully before assembling the drive. The steps need to be followed in their exact order. Only original parts from the manufacturer or accessories recommended by the manufacturer should be used.

# SECTION 1: IDENTIFICATION OF INSTALLATION VARIANT

## Preparation

The following factors need to be considered to get the most out of your new add-e NEXT retrofit drive:

- The rear tire should not have a rough/knobble profile. It is important that it has a continuous centre rib, like the Continental Travel Contact, Schwalbe Hurricane or Schwalbe Land Cruiser.
- At the position on your bike where you intend to fit the battery, adequate space should be available so it can be inserted and removed from the holder easily.
- Standard installation is not possible with a Pressfit bottom bracket (i.e. a pressed-in bottom bracket, not a screwed-in bottom bracket). In this case, please contact our support team at *info@add-e.at* or an add-e partner.
- On a full-suspension MTB (Fully) the drive can only be installed if the rear wheel suspension can be locked completely or the drive can be fitted directly to the rear wheel struts. In this case, please contact our support team at *info@add-e.at* or an add-e partner.

Due to different bike tipes available, fitting the drive unit with the damper plate may vary from bike to bike. This also depends on factors such as the cable pull, available space, bottom bracket models, etc.

Prior to the installation of the drive you should check which variant is suitable for your bike.

## Variant1 1: Installation at the side stand

If your bike has a side stand mounting, it can be used to install the drive. Make sure that the side-stand mounting is sufficiently far away from the rear wheel and at a suitable angle to the rear wheel hub. You can check this as follows:



The setting gauge is touching the rear wheel

- 1. Place the damper plate in the stand plate and attach the setting gauge.
- 2. The damper plate can be moved along the stand plate so that the distance between the setting gauge and the rear wheel can be adjusted. Slide the damper plate towards the rear wheel until the setting gauge rests against the tyre.
- 3. Ideally, it should be possible to tighten three, but at least two M4 Torx screws on each side in order to continue installing the drive unit with the sidestand mounting plate. - *See p. 14*.

If this is not possible, another installation variant will have to be used.



#### PLEASE NOTE!

The shape of the frame may prevent the setting gauge from coming into contact with the rear wheel. If this is the case, rotate the stand plate for 180°.



#### ATTENTION!

If the angle is not correct, you can adjust it by using an underlay for the stand plate. You can use aluminium or plastic plates or similar for this purpose. See p. 15.

## Variant 2: Installation at the bottom bracket

The installation at the bottom bracket should be choosen if the bike does not have a side-stand mounting plate or if cable pulls or limited space conditions do not allow any other installation variant.



Bottom bracket assembly with short assembly arms

When fitting the drive unit to the bottom bracket, the short assembly arms should preferably be used. If the distance to the tyre is too great, the included long assembly arms may be used.

This installation variant is not suitable for bikes with pressfit bottom brackets.

With screwed-in bottom brackets, you can continue the bottom bracket installation variant. *See p. 16.* 



#### PLEASE NOTE!

In some cases the left bearing shell has no flange or is made of plastic. In the case of plastic bottom bracket shells, the distance between the motor and the rear wheel can change/increase over time. For a safe and durable installation, metal bearing shells with a flange on both sides should be used. A suitable selection can be found in our online shop at www.add-e.at/shop.

## Variant 3: Installation with the Hebie counterplate



The drive unit is fitted by using the Hebie counterplate if neither Variant 1 nor Variant 2 can be used. Particular attention needs be paid to ensuring that there is sufficient space. For a detailed description *see p. 20*.

The Hebie counterplate is not included in the installation kit, but can be bought in our online shop at www.add-e.at/shop or from your local specialist retailer.

# SECTION 2: ASSEMBLING THE KIT

After checking which installation variant is suitable, you can start assembling the installation kit.

## Step 1: Attaching the damper plate

The following describes all three installation variants for attaching the damper plate. Depending on your bike type one of the three variants can be used.

## 1.1. Variant 1: Installation at the side stand mount



Parts needed:

- Damper plate
- Stand plate
- 6x M4 Torx screws, short
- 1x M8 Allen Screw
- M8 nut
- Washer



#### PLEASE NOTE!

If your bike has a side stand, remove it and switch to a rear stand if needed. A rear stand can be purchased in our online shop at www.add-e.at/shop or from a specialist bike retailer.



#### **CLEANLINESS!**

Before attaching the stand plate, the side stand mount needs to be thoroughly cleaned!



- 1. Attach the stand plate below the side stand mount. Insert the M8 Allen screw from below and fasten it from above with the washer and the M8 nut.
- 2. Slide the damper plate onto the stand plate with the wedge facing the chain ring and attach the setting gauge with the curve facing the rear wheel.

Page 14



3. Slide the damper plate back and forth along the stand plate until the setting gauge rests against the rear wheel.

If there is not enough space due to the shape of the bike, the stand plate can be rotated fo 180° to gain more space.



## PLEASE NOTE!

In order to be able to adjust the drive unit optimally aferwards, the angle from the stand plate to the rear wheel hub may need to be adjusted.



The angle needs to be adjusted so that the extended line of the stand plate extends to at least the centre or slightly above the rear wheel hub.





If you cannot set the right angle, you can adjust it by underlaying the stand plate.

For example, aluminium or plastic plates can be used as an underlay.

4. If the damper plate setting is appropriate, attach it to the stand plate using six M4 Torx screws (ideally three, but at least two screws on each side).

## 1.2. Variant 2: Bottom bracket installation with assembly arms



Parts needed:

- 1x Damper plate
- 2x Assembly arms, short
- 2x assembly arms, long (optional)
- 6x M4 Torx screw, short



## PLEASE NOTE!

To fit the drive unit to the bottom bracket special bike tools are needed. These can be ordered in our online shop at www.add-e.at/shop. The following steps should only be done by experienced installers.

## **1.2.1.** Dismantling the cranks and removing the bottom bracket

Depending on the model and manufacturer, your bike may be equipped with different bottom brackets and cranksets.

The following describes the installation using a Shimano Hollowtech II bottom bracket as an example. This procedure may vary considerably depending on bike type.





1. Loosen the two screws on the clamp of the left pedal crank.

Remove the locking screw on the pedal crank and then pull the crank off the shaft.

2. Pull the right-hand pedal crank out of the bottom bracket.

It may be need to loosen the shaft by gently tapping on it.

3. Remove the bike chain from the chainring.





Disassembly of the right bottom bracket shell

4. Unscrew and remove the left bottom bracket shell.

5. Unscrew and remove the right bottom bracket shell.

The chain ring side thread for the bottom bracket is a left-hand thread.



#### **PLEASE NOTE!**

Some Italian and French frame manufacturers are an exception, and have both right-hand threads. If you cannot loosen a bottom bracket, heating the frame with a hot air gun in this area helps.



#### ATTENTION!

In some cases the left bearing shell has no flange or is made of plastic. In the case of plastic bottom bracket shells, the distance between the motor and the rear wheel can change/increase over time. For a safe and durable installation, metal bearing shells with a flange on both sides should be used. A suitable selection can be found in our online shop at www.add-e.at/shop

## 1.2.2. Assembling the damper plate

When fitting the drive unit to the bottom bracket, preferably the short assembly arms should be used. Check whether the bike's frame allows this as follows:





Short assembly arms - right lenght

1. Attach the short assembly arms to each side of the stand plate using the six M4 Torx screws supplied.

2. Place the setting gauge on the assembled damper plate and **point the wedge on the damper plate towards the chain ring**.

Loosely attach the assembly arms to the bottom bracket using the bottom bracket shells.

The setting gauge should rest against the rear wheel. If this is not the case, use the long assembly arms.



#### **ATTENTION!**

If the distance between the setting gauge and the rear wheel is too large, use the long assembly arms! However, if these are too long, the stand plate angle for fitting the drive unit will be too acute. Right fitting later on is not possible.





Long assembly arms too long

## 1.2.3. Attaching the damper plate to the bottom bracket



#### **CLEANLINESS!**

Before attaching the damper plate, thoroughly clean the area around the bottom bracket. There should be no dirt or grease between the assembly arms and the frame.



Thin layer of assembly paste on the frame



Tightening the bottom bracket shells

1. To improve the grip of the assembly arms, some assembly paste can be applied to the contact surfaces on the bottom bracket.

For this purpouse, apply a thin layer of paste to the frame, making sure that it does not enter inside the frame.

2. Pre-fix the damper plate to the frame with the appropriate assembly arms and the two bottom bracket shells.

Press the setting gauge against the tyre. Before alternately tightening the bottom bracket shells, make sure that the extended line of the damper plate extends to at least the centre of the rear wheel hub or slightly above it. *See p. 15.* 



#### **ATTENTION!**

When tightening the bottom bracket, make sure that the setting gauge does not slip out of place and remains in contact with the tyre! Tighten the bottom bracket shells alternately.



3. Replace the pedal cranks in reverse order. *See p. 16.* 

Make sure that everything is tightened securely.

## 1.3. Variant 3: Installation with the Hebie counterplate

Fitting the drive unit with Hebie counterplate is done when weather the side stand nor bottom bracket variants are suitable. Particular attention needs to be paid that there is sufficient space.



Parts needed for Hebie counterplate installation

Parts needed:

- Hebie counterplate (not included in standard delivery)
- Damper plate
- Stand plate
- 6x M4 Torx screws
- 1x M8 Allen screw
- M8 cap nut

With installation variant 3, the stand plate is attached to the frame with the Hebie counterplate.

For a detailed description of how to attach the stand plate, refer to the instructions for fitting the drive unit to the side-stand mounting. *See p. 14.* 





Attaching the Hebie counterplate

- 1. Insert the stand plate between the rear wheel struts with the M8 bolt inserted.
- 2. Attach the Hebie counterplate from above and tighten it with the M8 cap nut.
- 3. Slide the damper plate with the setting gauge attached along the stand plate towards the rear wheel until it rests against the tyre.
- 4. Tighten the damper plate with at least 2 screws on each side, making sure the wedge is pointing towards the chainring, and the setting gauge is resting against the tyre.

## Step 2: Attaching the battery holder

For attaching the battery holder to the frame 3 options are available; standard attachment to the factory attachment points on the frame, attachment with steel straps (optional) or a combination of both.



Parts needed:

- Battery holder
- 2x M5 Allen screws
- 2x steel straps
- 4x M6 grub screws

## 2.1. Variant 1: Standard attachment of the battery holder

Standard attachment of the battery holder is used when pre-drilled attachment holes for attaching a bottle holder are already provided.



Battery holder at lower tube

1. Use the pre-drilled holes on the frame for attachment.

The battery holder has total of 4 screw holes.

Depending on the battery size, the holder can slide up and down the frame to adjust the space for inserting and removing the battery.



#### ATTENTION!

If there are no pre-drilled holes provided do not drill into the bike frame by yourself. This can reduce the stability of the frame and pose a danger to all road users!



Attach the battery holder to the frame

2. The battery holder should only be secured in the desired position on the bike frame using the M5 Allen screws included in delivery.

To prevent scratches or damage to the battery the screws should be screwed in completely.

## 2.2. Variant 2: Attaching the battery holder with steel straps

Use steel straps to mount the battery holder if the frame has no pre-drilled holes for a bottle holder.

# $\bigcirc$

#### **TIP!** As a

As assitance for attaching the battery holder with steel straps, see the add-e NEXT installation video at www.add-e.at/montage.





Pull the steel straps taut



- 1. Bend up the pre-bent flaps on the steel straps by 90 degrees.
- 2. Guide the straight end of the steel straps through the battery holder from the front and insert the bent up flaps in the second slot.
- 3. Press the steel straps flat against the battery holder and pull the long end of the steel straps taut.
- 4. Wrap the long ends of the steel straps around the bike frame and pass them through the slot from behind.

Make sure that e.g. brake cables etc. do not get trapped.

- 5. Pull the steel straps taut in the direction of the arrow and secure them temporarily with your thumb.
- 6. Secure the steel straps with an M6 grub screw and a 3 mm Allen key each until the steel strap is slightly deformed.
- 7. Lay the steel straps against the edge and trim them leaving a **5 mm excess** (*see illustration*).

Use a quality pair of plate shears or wire cutters to trim the steel straps.



#### PLEASE NOTE!

To minimise the risk of injury, do not trim the steel straps too long and do not leave any sharp cutting edges. The steel straps can only be used once.





8. Bend the trimmed ends of the steel straps by 90 degrees and insert them into the slots.

Press the steel straps flat against the battery holder with your thumb and secure them with the second grub screw.

If the trimmed ends are too short, the grub screws will not engage, and the steel strap cannot be pulled taut.

9. Tighten the grub screws alternately until the steel straps fit tight around the frame.

It is important not to overtighten the steel straps, as this may cause damage or even tear them.

## 2.3. Variant 3: Attaching the battery holder with screw & steel strap

Attaching the battery holder with a screw and a steel strap comes into operation when the available space allows to use only one of the pre-drilled holes on the frame.



Attach ing battery holder with screw & steel strap

- 1. Attach the battery holder to one of the available holes with an M5 Allen screw.
- 2. Use at least one steel strap as a second attachment method to the frame.

See page 22 "Attaching the battery holder with steel straps".

## Step 3: Attaching the add-e NEXT sensors

The add-e NEXT sensors are used to record pedalling cadence as well as the speed and are attached to the pedal crank and the rear wheel hub. The sensors included in the set are already paired with the drive unit.



Parts needed:

- PAS Sensor (P)
- Speed Sensor (S)
- O-rings (various sizes)
- Rubber mounts (various lengths)



Attach the PAS sensor (P) to the inside of the left-hand pedal crank with a suitable rubber mount, so that your foot cannot damage the rubber.

The crank should rotate freely at all times, unhindered by the sensor.

PAS sensor, inside of pedal crank



#### PLEASE NOTE!

The PAS sensor (P) can be additionally secured with adhesive tape or moved further towards the bottom bracket if space allows.



Attach the speed sensor (S) to the rear wheel hub using a suitable O-ring.

The O-ring may be too short for large gear hubs, such as Rohloff, Alfine etc. Joining 2 O-rings together can solve that problem.

Speed sensor on rear wheel hub

# SECTION 3: DRIVE UNIT & MECHANICAL SETTING

The heart of the system is the add-e NEXT drive unit.

The mechanical setting involves adapting the drive unit to the bike, and the ideal adjustment of the drive unit is important for the optimum function of the drive itself.



**ATTENTION!** The sequence of the individual steps described below must be exactly observed!

Optimal mechanical setting of the drive unit is performed using the setting screws. These are used to adjust the upper and lower stops as well as the freewheel setting and contact pressure. The clamping screw is used to fasten the drive unit to the damper plate.



- 1 Setting screw for upper stop
- 2 Setting screw for contact pressure
- 3 Setting screw for freewheel
- 4 Setting screw for lower stop
- 5 Clamping screw

## ATTENTION!

For accurate settings the bike must be placed on a plane surface!

## **Preparation**

The following illustrations demonstrate the adjustment settings on the side stand mounting position. The mechanical setting is carried out in the same way for installation variants 2 and 3.



1. Check the tyre pressure and correct this if necessary.

The tyre pressure may vary depending on the manufacturer's specifications. It is usually impressed on the tyre.

2. Place the setting gauge on the damper plate and make sure it is in contact with the tyre.



## **ATTENTION!**

For the optimal function of the drive unit, it is important to check the correct setting and the tyre pressure regularly!



Unscrew the screw by approx. 2-3 mm



3. Remove the setting gauge and unscrew the setting screw for contact pressure (2) on the wedge of the damper plate by 2-3 mm.

4. Screw the setting screw for the lower stop (4) completely back into the housing of the drive unit to ensure the maximum deflection of the swing arm.

## Setting 1: Upper stop

The upper stop setting regulates how far the motor rises the tyre, to ensure optimum engagement and disengagement while the bike is in driving mode.



Fix the drive unit





- 1. Place the drive unit on the damper plate and push it all the way towards the rear wheel.
- 2. Fix the drive unit with the clamping screw (5).

3. Push the motor to the upper stop in the highest position.

When released, the motor should not swing down and remain in this position.

However, the motor should swing down again at the slightest movement of the rear wheel.

The optimal setting for the motor is regulated using the setting screw for the upper stop (1).

The setting screw for the upper stop (1) should be further unscrewed if the motor does not swing down with the slightest movement of the rear wheel. Otherwise, the motor will not disengage when in off-mode.

The setting screw for the upper stop (1) needs to be screwed in further, if the motor does not stay engaged to the tyre independently. Otherwise, the motor will disengage unintentionally while riding.

## Setting 2: Contact pressure

Contact pressure is crucial to ensure consistent power transmission even in adverse weather conditions. It needs to be adjusted, especially if the tyre pressure changes, in order to prevent increased wear. The contact pressure is regulated using the setting screw (2).



Rear wheel tyre MUST NOT slip through



- 1. Push the motor in the highest position up to the upper stop and hold the friction roller.
- 2. At the same time, rotate the rear wheel backwards. The tyre **MUST NOT** slip through!

If the tyre slips, correct the position of the drive by screwing the contact pressure setting screw (2) on the wedge on the damper plate.

Screwing in the setting screw (2) moves the motor closer to the tyre and increases contact pressure.

Unscrewing the contact pressure setting screw (2), increases the distance from the motor to the tyre and reduces contact pressure.



#### TIP!

A sure instinct is required here. The contact pressure should be as strong as necessary and as light as possible. The damper plate also compensates a few millimetres of a radial runout. The contact pressure should be set at the "furthest" point from the tyre.



#### **ATTENTION!**

Check the contact pressure at regular intervals to prevent the rear wheel slipping and consequently excessive tyre wear out.

## **Setting 3: Freewheel**

The freewheel setting screw (3) regulates the distance between the motor and the tyre in the Off position. There is no friction between rear tyre and the motor and therefore clean engagement and disengagement of the motor is ensured.



- 1. To adjust the freewheel setting, park the bike on a flat surface; never upside down.
- 2. The distance between the motor and the tyre should be 2-5 mm when disengaged.



## PLEASE NOTE!

The freewheel setting screw is located on the chainring side of the drive unit. If the setting screw is covered by the chainring, the drive unit needs to be removed.



Loosen the freewheel setting screw, the motor "falls" down



3. If the distance is less than 2-5 mm, loosen the freewheel setting screw(3) by one turn. You do not need to unscrew it completely.

The motor "falls" down. If it does not, slightly tap on the setting screw.

 Push the motor up to the highest position and hand-tighten the setting screw (3) in this position.

When released, the motor swings into its final position. The distance between the motor and the tyre should be 2-5 mm.

If the distance is too small, repeat the procedure, but this time do not push the swing arm all the way up to the highest position.

## Setting 4: Lower stop

The setting screw for the lower stop (4) prevents the motor from swinging back and forth unintentionally when riding over bumps.



Unscrew the setting screw for the lower stop (4) as far as possible without the screw touching the swing arm in a disengaged state.

Screw does not touch the swing arm



#### ATTENTION!

The setting screw for the lower stop should NOT be used to adjust the freewheel between the motor and the rear wheel!



## PLEASE NOTE!

Further information and useful tips & videos for support and assistance are available at www.add-e.at/montage.

## **Final steps**



Connect the battery cable to the drive unit

- 1. Connect the battery cable to the drive unit. Make sure that the plug with the sealing lip is completely plugged in as far as it will go!
- 2. Fix the battery cable to the bike frame with cable ties and trim off the protruding ends of the cable ties.
- 3. Insert the battery into the holder.

# **C**ONGRATULATIONS! YOU HAVE SUCCESSFULLY FITTED YOUR ADD-E NEXT

# SECTION 4: SPECIAL NOTES TO THE INSTALLATION PROCESS

Depending on the different thike type, some peculiarities may become apparent when installing your add-e NEXT.

#### Moving the wedge if it is too close to the chain 4.1.

Sometimes in the lowest gear the drive unit may be too close to the bike chain, causing the chain to rub against the housing of the electronic block. Moving the wedge on the damper plate increases the distance between the drive unit and the chainring by 4 mm.



1. Unscrew the screw that secures the wedge to the damper plate and separate the wedge from the damper plate.

Unscrew the wedge from the damper plate



#### PLEASE NOTE!

The screw is secured with a high-strength threadlocker. To remove the wedge, it has to be heated to over 60°C, e.g. with a hot air gun.





2. Rotate the wedge for 180° and move it into the second groove.

Fix the wedge loosely from below with the screw.

- 3. Align the wedge so that it sits firmly in the groove.
- 4. Screw the wedge tight.

Make sure that the wedge does not twist in the groove while screwing it tight.

## 4.2. Installation with a bottom bracket width of 73 mm

If your bike has a 73 mm wide bottom bracket instead of the standard 68 mm, use the 5 mm spacer to widen the damper plate to the required 73 mm when assembling the damper plate.



Parts needed:

- Damper plate
- Assembly arms
- 5 mm spacer
- 3x M4 Torx screws, long
- 3x M4 Torx screws, short



2. Fixate the spacer between the assembly arm and the damper plate with the three long M4 Torx screws.

The tip of the wedge on the damper plate serves as orientation when fixing the spacer.

## 4.3. Bottom bracket installation with Italian bottom bracket

Some bikes have Italian bottom brackets. Instead of 35.8 mm, these may have a 0.8 mm larger thread diameter and require adapted assembly arms.



Fixate the spacer with three long M4 Torx screws

If you need assembly arms with a larger inner diameter, please contact our support at *info@add-e.at*.



# e-motion your bike with add-<mark>e</mark>



# add-e NEXT Operating Manual



ΕN

Vers. 3.6

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# INTRODUCTION

The operating manual deals primarily with the operation, technical data and functions of the individual parts of the add-e NEXT retrofit system. Information on installing the drive unit and correctly setting can be found in the installation manual.

The following are explained:

- 1. add-e NE<mark>X</mark>T Drive unit
- 2. add-e NEXT Battery
- 3. add-e NEXT Charging technology
- 4. add-e NEXT Sensors

- 5. add-e NEXT Remote control
- 6. add-e NEXT Sport Mapping
- 7. add-e NEXT App
- 8. add-e NEXT Software update

# 1. ADD-E NEXT DRIVE UNIT

The heart of the system is the add-e NEXT drive unit. The add-e NEXT drive unit consists of the following parts:



The drive unit contains all the electronics. When switched off/standby (battery position "Off"), the drive unit is disengaged and therefore no power is transferred to the rear wheel. This means that when switched off or when no battery is inserted, the bike can be used without any drag from the drive unit. If you switch the drive on by selecting one of the 5 power levels available, the drive unit automatically moves onto the tyre while you pedal and delivers the selected power. If you stop pedalling, the motor automatically disengages from the tyre again.
# 1.1 Technical data

The add-e NEXT drive unit is compact, lightweight and powerful with a brushless external rotor motor. The power is transmitted super silent directly to the tyre without any gears. State-of-the-art electronics provide unprecedented performance. Minimal dimensions and low weight make this drive unique worldwide.

add-e NEXT drive unit is available in two models: the Lite and the Sport Edition. Both are manufactured according to the European pedelec standard (EN 15194) and can be used legally in road traffic. The Lite Edition is permanently limited to 25 km/h. The Sport Edition, however, allows the 25 km/h speed limit (set as standard on delivery) to be adjusted freely (Mapping *see p. 62*) and can also be completely suspended for use on private terrain.

	add-e NE <mark>X</mark> T Lite	add-e NE <mark>X</mark> T Sport	
Dimensions L/W/H	90/75,	/50 mm	
Weight	71	.0 g	
Bluetooth ® 4.0	Yes		
Peak power	250 W	600 W	
Top speed	25 km/h 45 km/h		
According to German Raoad Traffic Act (StVO)	always	Mapping 1 & 2	
Mapping	No Yes		
Start sequenz	Blue LED (3)	Red LED (4)	

# 1.2 Description of the drive unit LEDs

The function of the individual parts can be verified using the respective LEDs. The LEDs are located under the tinted front cover.

Following an overview of all the LEDs and their positions:



- 1. Status LED (red)
- 2. Bluetooth LED (blue)
- 3. add-e Lite indicator LED (blue)
- 4. add-e Sport indicator LED (red)
- 5. PAS Sensor LED (orange)
- 6. Speed Sensor LED (green)
- 7. Power setting LED (white) only classic battery



Red Status LED



## LED (1) - Status LED

This lights up as long as the battery is connected to the drive unit, also in the off/standby position, as long as the battery has power.

After 15 minutes of inactivity, the battery goes into sleep mode and the red LED (1) extinguishes.

## LED (2) - Bluetooth LED

This LED lights up when the drive is connected to a smartphone over the add-e app.



## LED (3) – add-e NEXT Lite indicator

This LED indicates that the drive is the Lite version. When the battery is inserted, the blue LED (3) lights up for 5 sec.



### LED (4) - add-e NEXT Sport indicator

This LED indicates that the drive is the add-e Sport version. When the battery is inserted, the red LED (4) flashes according to the mapping set.

e.g. Mapping 6 - six times, mapping 5 five times, mapping 4 - four times, etc.



Orange LED PAS





White LED for power setting



## LED (5) - PAS Sensor

This LED is used to check the function of the PAS sensor. To check this, set the power setting for the add-e battery to Off, because only then the orange LED (5) lights up. If the crank is moved, the orange LED flashes up to a speed of 10 km/h and then extinguishes. It lights up continuously when at a standstill.

## LED (6) - Speed Sensor

This LED is used to check the function of the speed sensor. To check this, set the power setting for the add-e battery to Off, because only then does the green LED (6) light up. If the rear wheel is moved, the green LED flashes up to a speed of 10 km/h and then extinguishes. It lights up continuously when at a standstill.

## LED (7) - Power setting

This LED lights up only in combination with the Classic battery and is used to check the functioning of the power setting. When changing the power level on the battery or using the remote control, the white LED (7) flashes corresponding to the assistance level set, e.g. level Off/ Standby-one flash, level 1-two flashes, level 2-three flashes, etc.

### Pairing mode:

If you want to pair a sensor or a remote control and you are in the Pairing mode (see 4.3. Pairing Sensors), the red LED (4) and the blue LED (3) flash alternately.

# 1.3 Temperature control

The add-e NEXT drive unit has intelligent temperature control. This automatically prevents the electronics from overheat and damages, even when travelling slowly at low speeds and high power levels. The temperature control takes appropriate action automatically and the power is successively reduced.

To prevent a reduction in power, we advise anticipatory driving, especially on uphill climbs. For longer and steeper climbs, it is recommended to climb the entire uphill slope with a lower assistance and consistant level of power.

# 1.4 Anti-slip control

The add-e NEXT drive unit features an intelligent speed monitoring. Slippage is detected early by constantly comparing the wheel speed with the motor speed. As the friction roller spinning causes excessive wear on the tyre, the "ASC" is permanently activated, and the drive is switched off selectively.

A continuous warning tone signalize that the "ASC" is active. The drive can only be released again by interrupting the pedal movement. If the "ASC" has been activated, the contact pressure and tyre pressure have to be checked and readjusted correctly if necesarry.

# 1.5 Friction roller coating

The friction roller coating is a wear part. How quickly it wears out depends on various factors – rear wheel setting, temperature, rubber compound and tyre tread, surface, frequency of use etc. As a rule, the coating is worn out after about 10,000 km. It is standard for the red colour under the black coating to appear after a short period of use. This does not indicate that the coating is worn.

Replacement of the friction roller coating is usually free of charge. To replace the friction roller coating, please contact your retailer or GP Motion GmbH direct at *support@add-e.at*.

# 1.6 Care & winter storage

The drive unit can and should **be cleaned at regular intervals**. Especially after use on for example muddy paths, clayey ground or similar. This prevents dirt from accumulating on the drive unit and possibly affecting its function.

If the friction roller coating becomes clogged with dirt, e.g. clayey soil, the coating can be cleaned with water and a soft brush (not a wire brush). Do not use solvents, alcohol (methylated spirits) or aggressive cleaning solvents for cleaning. Failing to clean the friction roller may result in tyre slippage and subsequent malfunctioning.

If the system is also used during the winter months, the drive unit should be cleaned more often to prevent possible damage.

# 2. ADD-E NEXT BATTERY

The add-e NEXT battery is exclusively equiped with high-quality brand-name cells. Special attention is paid to reliability and safety. A robust housing in combination with selected materials ensure durability and allows a compact design with the highest energy density.



# 2.1 Tecnical data

The add-e NEXT battery is available in three different sizes:

S-Battery (150 Wh), M-Battery (300 Wh) and L-Battery (450 Wh). The most important technical data is shown clearly in the table below.

	S-Battery	M-Battery	L-Battery
Dimensions Ø/H	80/116 mm	80/183 mm	80/250 mm
Weight	0,9 kg	1,6 kg	2,3 kg
Capacity	6,8 Ah	13,6 Ah	20,4 Ah
Power	150 Wh	300 Wh	450 Wh
Nominal Voltage	21,6 V	21,6 V	21,6 V
Max. Voltage	25,2 V	25,2 V	25,2 V
Max. Output	250 W	600 W	600 W
Max. Charging Current	3 A	6 A	9 A
Charging Time*	3 h	6 h	9 h
USB-C Charging Port	$\checkmark$	$\checkmark$	$\checkmark$
Suitable for air travel	$\checkmark$	-	-

\*For exact charging times see p. 51, section 3.2 Charging times

## 2.2 Inserting the add-e NEXT battery





Push add-e NEXT battery into position



Fix the add-e NEXT battery



The "LOCK" arrow is located at the bottom of the battery below the add-e logo.

An open and a closed lock are engraved on the front of the battery holder.

The special design of the bayonet lock means that the battery cannot be inserted incorrectly.

- 1. Position the battery the way that the arrow is above the open lock.
- 2. Push the battery downwards so that the arrow is pointing directly at the open lock.

The battery needs to be placed on completely flat the holder.

3. To fix the battery into place, rotate it clockwise until it engages and the arrow points in the direction of the closed lock.

Once the battery is properly inserted and fixed into place, it establishes communication with the drive unit and the LEDs pulsate in blue.

Once communication has been successfully established, the start melody sounds, and the LEDs light up in the colour of the charging status.

If the battery continues to pulsate in blue, communication with the drive unit has not been established (a software update may be needed, *see Section 8*).

If the LEDs do not pulsate at all, the battery may be in deep sleep (see Section 2.10).

## 2.3 Power levels



add-e NEXT battery power setting



add-e NEXT battery power levels

add-e NE <mark>X</mark> T				
	Sport			
Off	Standby	Standby		
1	50 W	50 W		
2	100 W	150 W		
3	150 W	250 W		
4	200 W	400 W		
5	250 W	600 W		

The power level on the add-e NEXT battery can be chosen by rotating the power setting knob on the battery.

The power levels are set by rotating the power setting knob to adjust the level of power.

Clockwise increases the power level, counter-clockwise decreases it.

The lighted up white LED indicates the chosen power level.

If you set the first power level, the white LED lights up above the 1, for level 2 above the 2, for level 3 above the 3 and so on. The remaining LEDs light up, for example in green, and indicate the charging level (*see p. 44*).

A total of 5 assistance levels are offered. Depending on the drive model selected, you can choose from 50W up to a maximum of 250W (Lite Edition) or 50W up to a maximum of 600W (Sport Edition).

For different Mappings for add-e NEXT Sport Edition *see p. 63*.



### PLEASE NOTE!

The S-Battery can also be used with the add-e NEXT Sport Edition. In this case, due to the design the power output is limited to 250W, as with the Lite Edition.



## PLEASE NOTE!

Although the power setting knob does not have an end stop, the power level can be rotated clockwise to the fifth assistance level as maximum and counterclockwise to the OFF position as maximum.

# 2.4 Charging the add-e NEXT battery

The fully integrated battery management system (BMS) ensures a perfectly "balanced" battery, monitors the charging and dischargeing of the battery, individual cell voltages, temperatures and much more. This makes the add-e NEXT batteries among the most modern and best on the market.



## PLEASE NOTE!

For charging the respective battery, it should be placed on the docking station. See page 52. The battery should be charged only by using the docking station and the compatible original charger!

The add-e NEXT battery detects the docking station when placed on it and indicates that it is ready for charging by activating the LEDs on the battery. The charging process only begins when the battery is fully engaged in the docking station and the LED on the charger turns red.





The charging process is indicated directly on the battery by the integrated LEDs. The current charging status is indicated by the LED colours according to the adjacent graphic.

The charging status colours also apply to the battery status while the bike is in motion. The current percentage charging status can be found on the add-e NEXT smartphone app.

The clockwise rotation of the LEDs shows the charging speed and charging current. Towards the end of the charging process, the charging current and speed of rotation slow down until the charging process is finally completed and (if necessary) cell maintenance is initiated.



### **ATTENTION!**

For safety reasons, charging should only take place under supervision and in a dry environment. Before connecting the charger to the mains, check that the socket, connection cable and the charger itself are undamaged.

# 2.5 Charging Times

The add-e NEXT batteries are equipped with high-quality energy cells. A low charging current reduces charging losses and conserves the battery, but also extends the charging time. The built-in electronics prevent excessive charging currents from damaging the battery.

The table below shows the respective charging times from zero to a charge of 90%. The overall charging process can take considerably longer until 100% is reached, because the last few percent are used to equalise the individual cell voltages optimally.

S-Bttery (150 Wh)		M-Battery (300 Wh)	L-Battery (450 Wh)	
Travel Charger	3 hrs	6 hrs	9 hrs	
Car Charger	2 hrs	4 hrs	6 hrs	
Rapid Charger	-	2 hrs	3 hrs	



#### PLEASE NOTE!

The design of the smallest battery model (size S) prevents it from being charged with the rapid charger!

# 2.6 Information about range

The actual range depends on a number of different factors, especially the rider's own performance. It also depends on their riding style, the topography and the power level selected. On average, a distance of 50 km can be covered on one battery charge. Using a high assistance level in combination with steep terrain, the range is reduced considerably.

Since the add-e does not generate any friction when disengaged, also full-day tours can be ridden with just one battery charge. In this case, the add-e is only used for a short while, for example to tackle a strenuous uphill climb.

This allows the rider to compensate for certain shortcomings when riding in a group with a low level of assistance (50 W = first level) or to effortlessly tackle uphill climbs, for instance, using level 4 (400 watts - add-e NEXT Sport).

Level	S-Battery	M-Battery	L-Battery	
1 (50 W)	3 hrs	6 hrs	9 hrs	
2 (150 W)	1 hr	2 hrs	3 hrs	
3 (250 W)	0,6 hr	1,2 hrs	1,8 hrs	
4 (400 W)	-	0,8 hr	1,1 hrs	
5 (600 W)	-	0,5 hr	0,8 hr	

# 2.7 add-e NEXT battery as a power bank

In addition to its purpose as a source of energy for electric propulsion, the add-e NEXT battery can also be used as a power bank. The USB-C charging port provided for this purpose is located on the front top section of the battery.



Various devices can be charged with up to 1.5 amps with a matching USB-C connection cable. Among others, the following connection interfaces can be used:

- USB-C to Mycro-USB
- USB-C to Lightning (Apple devices)
- USB-C to USB-C

The add-e NEXT battery **CANNOT** be charged using an external charger connected to the USB-C socket.

# Activating the USB-C port

The USB-C charging port can be used to charge an external device, such as a smartphone, bike lamp or any other device equipped with a USB socket.



- 1. Rotate the power setting knob by at least 2 levels to "wake-up" the battery. The power setting knob lights up in the colour of the actual charging status.
- 2. Connect charging cable to the battery.
- 3. Rotate the power setting knob counterclockwise for at least **3 full turns (360°)** until the LEDs start flashing. The USB-C charging port now is activated, and the connected device is being charged.



## PLEASE NOTE!

The add-e NEXT battery needs to be charged up to at least 20% to enable use as a power bank.

External devices with a very low charging rate may not be detected properly or may not be fully charged.

# 2.8 Charge indicator



The charge status on the add-e NEXT battery is indicated by 6 LEDs located below the power setting knob.

The LEDs indicate the charge status by changing the respective LED colours from red to green.

If the battery is empty, the LEDs are red. The colour changes via orange to yellow to green the more the battery charges.

# 2.9 add-e NEXT battery Ghost Mode

The battery charge indicator lights permanently as long as the bike is in motion and the battery is inserted. In order to ride incognito without the illuminated LEDs, the add-e NEXT battery can be set to what is known as "Ghost Mode".

Ghost Mode can be activated in two ways: by using the power setting knob on the battery or by using the remote control.

## 2.9.1 Activating Ghost Mode with the power setting knob



- 1. Insert the battery and wait for the start melody.
- 2. Turn the power setting knob from the "Off" position counter-clockwise through for 3 full turns (360°).
- 3. After 1 sec. the LEDs on the battery extinguish Ghost Mode is now activated.

# 2.9.2 Activating Ghost Mode with remote control 1. Insert the batt start melody. 2. Turn the powe 3. Press the arrow the remote co until the LED I 4. The LEDs on the

Ghost Mode with the remote control

- 1. Insert the battery and wait for the start melody.
- 2. Turn the power knob to "Off" position.
- 3. Press the arrow down button ▼ on the remote control for approx. 5 sec. until the LED lights up in green.
- 4. The LEDs on the battery extinguish, Ghost Mode is now activated.



PLEASE NOTE!

If the power level is changed by turning the battery power knob or pressing the remote conrol, the LEDs light up with the level set for 1 second and then extinguish.



ATTENTION!

The Ghost Mode has to be reactivated every time the battery is inserted into the holder.

## 2.9.3 Deactivating the Ghost Mode

To deactivate the Ghost Mode on the battery, turn the power setting knob to the highest power level (5) and then continue rotating it clockwise for three full turns.

To deactivate the Ghost Mode with the remote control, press the arrow up  $\blacktriangle$  button to level 5. Then press the same button again for at least 5 seconds (the LED on the remote control will change to green) until the LEDs light up.

# 2.10 Standby, sleep mode and deep sleep

If the battery is in the battery holder and the bike is parked for a longer period of time, e.g. in the garage or while shopping, after 1 minute the battery goes into the **Standby Mode** and the LEDs extinguish.

The red status LED (1) on the drive unit remains lit. As soon as the bike is set in motion again, the system "wakes up" and the LEDs on the battery light up. The system remembers the last settings, e.g. the last set power level.

When the bike is not moved for 15 minutes or longer, the system enters the **Sleep Mode**. The system switches off completely and the red status LED (1) on the drive unit extinguishes. The system can be reactivated by rotating the power setting knob on the battery. The blue LEDs on the battery pulsate and as soon as the battery has established communication with the drive unit, they change to the charging status colour, e.g. green, and the start melody sounds. The system is now activated again.

If the battery is not used for a longer period of time, e.g. for 3 weeks or longer (winter break), the battery automatically goes into the **deep sleep**. In this status, no LEDs are displayed when the power setting knob is activated. To reactivate the battery, it needs to be connected to the charger and then the battery can be used the usual way again.



PLEASE NOTE!

If the battery is, for example, removed from the holder or from the docking station after charging, the LEDs light up for one minute and then extinguish again.

# 2.11 Care & storage

The battery is a wear part. With increasing age and use, it loses capacity and therefore the range will reduce. This makes the correct storage and maintenance of the battery more important when it is not in use.

If the battery is not going to be used for a longer period of time, e.g. when taking a holiday or during the winter months, it is important to make sure that the battery is not left in the battery holder and that it is stored correctly.

Ideally, the battery should be stored with a charge voltage of 20-23V or at a 50-75% charging level (see *Sec. 2.4 Charging the add-e NEXT battery*) at approx. 7° C. The voltage can be checked over the app or by using a voltmeter. When left unused for a longer period of time, check the voltage at regular intervals and recharge the battery if necessary.

If the battery is completely run down while in use, it needs to be charged to the recommended charging voltage before storage. The add-e NEXT battery should be stored in a dry, frost-free environment and under no circumstances should be exposed to excessive heat.

# 2.12 Disposal

In general, no force should be exerted on the battery, as there is a risk of explosion. If the battery is damaged, contact your nearest specialist retailer.



### ATTENTION!

The add-e battery housing should not be opened under any circumstances. The battery contains Li-ion battery cells and electronic parts for charging and discharging control (BMS). Damage caused by opening the battery housing may result in short circuits, general damage or even ignition of the battery cells.

Damaged or used batteries are not allowed to be disposed as household waste. In accordance with European Directive 2006/66/EC, defective or used batteries must be collected separately and recycled in an environmental-friendly manner.

If the battery needs to be disposed after the warranty has expired, it can be returned free of charge to an add-e partner, an authorised disposal company or the manufacturer. They will take care and arrange its proper disposal.



# 3. ADD-E NEXT CHARGERS & DOCKING STATION

To recharge the batteries to full capacity three different types of charger are available:

- The travel charger (included in the set)
- The rapid charger (optional)
- The car charger (optional)



The travel charger is the smallest, but also the lightest of our charger models. Here, great value has been placed on achieving compact dimensions and a lightweight design.

In contrast, our larger rapid charger can also be used during shorter breaks and impresses with three times the charging performance.

The car charger makes it possible to charge the batteries while driving your car, without having to rely on a domestic mains socket.

All chargers are equipped with state-of-the-art electronics and allow efficient charging without any annoying noises. The chargers are precisely matched to the requirements of the add-e NEXT batteries and should only be used in conjunction with them. The built-in status LED provides information about the ongoing charging process.



#### **ATTENTION!**

To avoid damage to the charger, always connect the charger to the power socet first before placing the battery on the docking station.

## 3.1 Tecnical data

	Travel charger	Rapid charger	Car charger
Dimensions L/W/H	114/50/32 mm	170/70/42 mm	100/66/37 mm
Weight	190 g	470 g	340 g
Input 100-240 V A0 50-60 Hz		100-240 V AC 50-60 Hz	12 V DC
Output	25,2 V DC 2 A/50 W	25,2 V DC 6 A/150 W	25,2 V DC 4 A/75 W

# 3.2 Charging time

The add-e NEXT batteries are equipped with high-quality branded cells. Low charging current reduces charging losses and conserves the battery, but also lengthens the charging time. The built-in BMS prevents excessive charging currents from damaging the battery.

The table below provides information about the respective charging time from zero to a charge of 90%. The overall charging process until 100% can take considerably longer. Last few percent are used to equalise the individual cell voltages optimally. This "cell maintenance" ensures the longest possible battery life and should be carried out regularly.

	Travel charger	Rapid charger	Car charger
S-Battery (150 Wh)	3 hrs	-	2 hrs
M-Battery (300 Wh)	6 hrs	2 hrs	4 hrs
L-Battery (450 Wh)	9 hrs	3 hrs	6 hrs



## PLEASE NOTE!

The design of the smallest battery model (size S) prevents it from being charged with the rapid charger!

# 3.3 Description of the status LED on the charger

The built-in status LED on the respective charger indicates the status of the charging process by showing red or green.



LED lights up green – the charger is connected to the power socket but it is not charging. This is the case when the battery is already fully charged, or a battery is not connected to the charger.

LED lights up red – battery is charging.

LED flashes red – there is an fault.

# 3.4 Docking station



Connect the charger to the docking station





For charging rotate to Lock



The docking station can be connected to our travel, as well as the rapid and car charger.

The docking station serves as the interface between the respective charger and the battery. The DC connector on the charger is plugged into the horizontally aligned socket on the docking station.

The battery is placed on the docking station from above and fixed into place. When attaching the battery, make sure that the arrow with "LOCK" is above the open lock on the docking station.

The special design of the bayonet lock means that the battery cannot be attached incorrectly.

The battery is fixed into place with a clockwise rotating movement. The "LOCK" arrow should be above the closed lock in the "lock position".

The battery remains in the "lock position" while charging.

You can interrupt the charging process at any time and remove the battery from the docking station by rotating it in a counter-clockwise direction.

To ensure a secure hold and to provide a firmly charging point, the docking station can also be screwed down. For this purpose use only the three holes on the bottom of the docking station. The screw depth should not exceed 6 mm!

# 4. ADD-E NEXT SENSORS

The add-e NEXT retrofit system is equipped with specially designed sensors. The advantage of the wireless sensors is not just that they are much easier to install, but also that the measured values are transmitted continuously and independently of the rotation speed. Therefore the add-e NEXT sensors provide optimum motor control at any speed.

The add-e NEXT retrofit system features a PAS sensor (P) and a speed sensor (S), which are pre-programmed with the corresponding drive unit on delivery and are detected automatically. The battery is already inserted when the sensors are delivered.

Dimensions (H/W/D)	11/36/33 mm	
Weight (both sensors)	20 g (incl. battery)	
Battery	CR 2032 3 V	
Sytem Compatibility	Bluetooth ® 4.0	
LED Display	YES orange/green inside	
Range	3 m	
Standby	YES	
Battery Life	up to 2 years	

## 4.1 Technical data

# 4.2 How the add-e NEXT sensors work

The sensors of the add-e NEXT retrofit system react to motion. If the bike is not moved, the sensors automatically go into standby after approx. 1 min. This means that there is no wireless communication between the drive unit and the sensors. If the bike is moved, the sensors automatically "wake up" and send their data to the drive unit, even if the drive unit is not being actively used.

The PAS sensor (P) attached to the crank detects the cadence and the speed sensor (S) attached to the rear wheel hub detects the speed. The data collected during the ride is transmitted to the drive unit in real time over the integrated Bluetooth interface and facilitates precise motor control.



### PLEASE NOTE!

As soon as the sensors are active, the amount of power required increases. This is also the case when the bike is transported, e.g. in a car, train, caravan, etc.

## 4.2.1 Checking whether the sensor is detected

For the retrofit system to function correctly, the drive unit always has to detect both sensors. If one or even both sensors are not detected, no motor assistance is provided. You can check whether a sensor is recognised or not as described below.



#### **ATTENTION!**

The power setting needs to be set to assistance level 0, otherwise the LEDs on the drive unit will not be indicated!



#### **PLEASE NOTE!**

If the bike is on a bicycle stand, a speed of 10 km/h should NOT be exceeded, e.g. by turning the pedals. Otherwise the LEDs will extinguish. The voltage of the button cell must be between 2.7V and 3.3V.



- 1. Rotate the battery power setting knob to level 0. Only then the sensors will be indicated.
- PAS sensor is detected orange LED (5) lights up.
- 3. Speed sensor is detected green LED (6) lights up.

If the bike is set in motion, the two LEDs flash when a speed of approx. 10 km/h is reached and then extinguish.

If the bike is not set in motion, the green and orange LEDs light up continuously and go into sleep mode after approx. 1 min.

## 4.2.2 Inserting & changing the battery

Depending on the frequency of use and sensor activation, the battery will have an average life of 1 year. If the sensor battery is flat, it can easily be replaced. After replacing the battery, you do not need to pair the sensor with the drive unit. It is automatically detected by the corresponding drive unit.

The battery (CR 2032 3 V) can be replaced as described below:



Insert the battery with + pointing upwards

- 1. Unscrew and remove the 4 screws on the rear cover of the sensor using the 6 torx screwdriver supplied in delivery.
- 2. Remove the circuit board from the housing.
- 3. Remove the battery and replace it with a new button cell battery with the correct polarity.



## TIP!

The cover on the sensors has a seal, so it may stick slightly when you open it. You can also use the size 6 torx screwdriver to pry open the cover. To do so, insert the screwdriver into one of the holes and carefully prise the cover open.



#### PLEASE NOTE!

When inserting the battery, make sure that the battery is inserted with the plus sign (+) facing upwards as shown in the illustration!



Corresponding LED flashes on the curicut board

When inserting the battery in the PAS sensor, the orange LED on the circuit board flashes every 3 seconds.

When inserting the battery in the speed sensor, the green LED on the circuit board flashes every 3 seconds.

- 4. Reinsert the circuit board correctly with the battery facing upwards.
- 5. Place the cover and screw tight.

After replacing the battery, you do not have to pair the sensor with the drive unit.

Insert circuit board with battery facing upwards

# 4.3 Pairing the sensors

Pairing is the process of teaching the add-e NEXT sensors on the drive unit. This may be necessary if a sensor gets lost or after it has been replaced.



## PLEASE NOTE!

For **completing** the pairing process approx. 1 minute is available. If nothing happens during this time or if one of the sensors is not detected properly, a sequence of error tones is emitted, and the pairing has to be restarted.

You can **initiate** Pairing Mode only within 30 seconds of the start-up sequence.





1. Insert the battery and wait for the start-up sequence.

If the battery has been inserted for a long time, it will need to be removed from the holder and reinserted.

2. Rotate the power setting knob on the battery to level 5 and back to level 0/Off.

**Repeat this a total of 3 times** until you hear a long beep.

3. The blue and red LEDs on the drive unit **flash alternately** and a short sequence of tones indicate the unit has entered the Pairing Mode.



### PLEASE NOTE!

After the drive unit has entered the Pairing Mode, you have a maximum of 30 seconds to pair both sensors. What is more, no other active sensor should be moved in the vicinity, otherwise the wrong sensor may be paired.



4. Now move the cranks forward for at least five seconds so that the rear wheel also turns.

IMPORTANT! Rotate the pedals forwards at a min. of 30 rpm (revolutions per minute)!

If the sensors are detected, the orange and green LEDs light up and the start sequence is heard immediately afterwards.

The drive unit restarts.



## ATTENTION!

If only 1 sensor needs to be paired, e.g. because a sensor has been lost, both sensors always have to be paired again!



#### PLEASE NOTE!

To ensure a good riding season, it is recommended to replace the battery cells at the start of the season.

# 5. ADD-E NEXT REMOTE CONTROL



The remote control provides an alternative to using the power setting knob on the battery to operate the add-e NEXT. This allows the battery to be installed in hard-to-reach places.

The remote control is designed purely as a transmitter. This means that it can send "data" but cannot receive any.



#### **PLEASE NOTE!**

Before using for the first time, the battery supplied in delivery needs to be inserted and the remote control needs to be paired once. Once this has been done, the drive unit can be operated using the remote control!

## 5.1 Tecnical data

Dimensions (H/W/D)	48/38/21 mm
Weight	15 g (incl. battery)
Battery	CR 2032 3 V
System Compatibility	Bluetooth ® 4.0
LED Display	green/red
Range	3 m
Automatic Sleep-Mode	Yes
Battery Life	~ 2 Years

## 5.2 Inserting & changing the battery



- 1. Unscrew the cover on the bottom side of the remote control in counter-clockwise direction with a coin.
- 2. Insert the battery with the correct polarity (with the + facing upwards).
- 3. Replace the cover and screw tight in a clockwise direction.

After replacing the battery, you do not have to pair the remote control again.

# **5.3 Remote control functions**

The remote control changes into Standby Mode when not used. If one of the 3 buttons is pressed, the remote control activates automatically.



The remote control has three buttons. A red LED (short press) and a green LED (long press) are fitted to indicate when a button is pressed. The associated assistance level CANNOT be displayed.

Plus button ▲/+

- Short press = increases power by one level If the drive is in Off Mode, it is switched to power level 1
- Long press = changes to level 5, the highest power level

## On/Off button●/ 也

- Short press = switches the drive on or off If the drive is in off mode, it is switched to the last power level selected
- Long press = cruise control function, see p. 60.

## Minus button▼/-

- Short press = reduces power by one level
- Long press = changes to level 1, the lowest power level

# 5.4 Cruise control feature

The cruise control function allows you to cruise at a constant speed, regardless of the previously selected power level.

When cruise control is switched on, as much power is supplied as it is needed to reach and maintain the final pre-set speed. When the cruise control function is switched on, the assistance level LED changes from white to blue and the signal tone changes.



- 1. To activate, press and hold down the On/Off button for at least two seconds. The LED changes to green and the current speed is saved.
- 2. The plus button ▲/+ increases the speed.
- 3. Die minus button ▼/- reduces the-speed.
- 4. To deactivate, press the button On/ Off **O** once briefly.



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## PLEASE NOTE!

The motor assistance is also coupled with the pedalling motion in Cruise Control Mode. If there is no pedalling motion, the motor assistance stops.

With renewed pedalling motion, the motor switches on again at the previously saved speed.

# 5.5 Attaching to the handlebar



Preferably attach the remote control on the left

The remote control should preferably be attached on the left. In some cases, however, it may be helpful to attach it on the right (gear selector, bell, etc.).

Either attach the remote control to the handlebar grip directly using the rubber ring supplied in delivery (see illustration) or attach it directly to the handlebar tube using the 22 mm adapter.

## 5.6 Pairing the remote control



Rotate the power setting knob to level 5



Red and blue LEDs flash alternately

1. Insert the battery and wait for the start-up sequence (approx. 5 sec.).

You can only initiate Pairing Mode within 30 seconds of the start-up sequence. If the battery has been inserted for a long time, it will need to be removed and reinserted.

2. Rotate the power setting knob on the battery to level 5 and wait for the beep and back to level 0/Off and wait for the beep again.

# Repeat this a total of 3 times until you hear a long beep.

3. The blue and red LEDs on the drive unit **flash alternately** and a short sequence of tones signal the drive unit has entered Pairing Mode.



### PLEASE NOTE!

In Pairing mode, you have a maximum of 30 sec. to pair the remote control. The bike should not be set in motion during this time since the sensors will otherwise try to pair themselves again.



- 4. Push the on/off button 😃 on the remote control until the LED on the remote control changes to green and the drive unit beeps to confirm that the connection has been established
- 5. The white LED on the drive unit lights up briefly and the drive unit restarts.

# 6. ADD-E NEXT SPORT MAPPING

Mapping refers to the pre-programmed setting of the assistance levels in relation to the final speed and power. It is used to change the maximum speed and power of the drive unit. 6 mappings are already pre-programmed on the drive unit. *See p. 63 in relation.* 

# 6.1 Changing the mapping

The add-e NEXT Sport Edition is delivered with Mapping 2 as standard. This means that the top speed is limited to 25 km/h. The mapping can be changed as described below.





- 1. Remove the add-e NEXT battery from the holder.
- 2. Place the dongle next to the battery connector (*see image*). This is held in place magnetically.
- 3. Reinsert the add-e NEXT battery and wait for the start sequence. If the dongle is detected, the white LED (7) lights up constantly.
- 4. Choose the desired mapping by turning the power setting knob on the add-e NEXT battery (*see 6.2. Overview of the mapping levels*). The desired mapping is indicated by the number of flashes of the red LED (4) and a beep:

Mapping 6: 6x red flashes + 6x beeps Mapping 5: 5x red flashes + 5x beeps etc.

- 5. Once the desired mapping has been set, the dongle can be removed.
- 6. This is then followed by the start sequence and the mapping is saved.



## PLEASE NOTE!

If the dongle is not removed, the mapping set flashes periodically. During this time you cannot ride your bike.

# 6.2 Overview of the mapping levels

The following mapping levels are already pre-programmed:

Off 1 2 3 4 5	Mapping 1 1x flash + 1x beep Standby 25 km/hr 50 W 25 km/hr 100 W 25 km/hr 150 W 25 km/hr 200 W 25 km/hr 250 W	Off 1 2 3 4 5	Mapping 2         2x flashes + 2x beeps         Standby         25 km/hr       50 W         25 km/hr       150 W         25 km/hr       250 W         25 km/hr       400 W         25 km/hr       600 W	Off 1 2 3 4 5	Mapping 3           3x flashes + 3x beeps           Standby           25 km/hr         50 W           25 km/hr         150 W           25 km/hr         250 W           30 km/hr         400 W           - km/hr         600 W
	<b>Mapping 4</b> 4x flashes + 4x beeps		Mapping 5 5x flashes + 5x beeps		Mapping 6 6x flashes + 6x beeps
Off 1 2 3 4 5	Standby         30 km/hr       50 W         30 km/hr       150 W         35 km/hr       250 W         35 km/hr       400 W         -       km/hr       600 W	Off 1 2 3 4	Standby           30 km/hr         50 W           35 km/hr         150 W           35 km/hr         250 W           40 km/hr         400 W           -         km/hr         600 W	Off 1 2 3 4 5	Standby - km/hr 50 W - km/hr 150 W - km/hr 250 W - km/hr 400 W - km/hr 600 W

W = Watt

km/hr = kilometres per hour

Standby = drive unit is switched off, red status LED lights up

- is without speed limit (up to 45 km/hr)



### PLEASE NOTE!

The S-battery can also be used with the add-e NEXT Sport Edition. In this case, the power output is limited to 250W due to the design, as with the Lite Edition.

# 7. ADD-E NEXT SMPARTPHONE APP

First and foremost, the add-e NEXT smartphone app is used for a clear overview of all ride-relevant information. This makes it easy to clearly monitor the current charging voltage, speed, kilometres ridden daily with motor assistance or total kilometres, assistance level set, engine temperature, software version and much more.

The add-e NEXT smartphone app is divided into three sections – Dashboard, Information & Settings – where various information can be viewed.

Furthermore, the add-e NEXT smartphone app can also be used to update the software. *See page 67 onwards*.

## 7.1. add-e NEXT smartphone app-Dashboard



Dashboard Info 1



 When the drive unit is successfully connected to the add-e NEXT smartphone app, the drive's individual serial number (in this case N 2182) is displayed in the top left-hand corner (next to the logo).

The "Dashboard" tab opens automatically when the app is started.

The following information can be viewed on the Dashboard launch page:

*Round display*: Riding speed, battery level in %, power level selected and temperature.

Temp: Drive electronics temperature

*RPM PAS sensor*: Number of crank revolutions per minute. At least 30 rpm/min are required.

Battery: Percentage battery charge.

*Power*: Power level set in Watts, e.g. Level 1 – 50W etc.

On the Dashboard tab, you can swipe to the left in the Temp, RPM PAS Sensor, Battery and Power section to read more information.

If you swipe to the left, the following information can be read:

*km Total*: Total kilometres driven with the drive unit and battery installed.

*km Day*: Driven distance since last reset.

*km Electric Total*: Total driven distance with electric assistance.

*km Electric Day Total*: Driven distance with electric assistance since the last reset.



 Image: state stat

The next information section displays the following:

*Time Day*: Time spent driving with the drive unit and inserted battery.

*Wh Day*: How many Wh were consumed during this time.

*km/h Day*: Average speed during this period of time.

Ah Day: The Ah consumed during this period of time.

Swiping to the left again, you can view the following information:

*Time Total*: Total time driving with the drive unit and battery inserted.

Wh Total: Total Wh consumption.

*km/h Total*: Average speed since using the drive unit.

Ah Total: Total Ah consumption since using the drive unit.

# 7.2. add-e NEXT smartphone app-Information



Additional information can be viewed by clicking on the "Information" tab.

The following information can be viewed here:

Battery Voltage: Battery voltage in Volts

*Rotary meassurement*: Analogue value for the power setting (only with Classic battery).

*Circumference rear wheel*: Rear wheel Circumference. This is measured automatically while riding.

App tab "Information"

Speed Limit: Maximum speed.



SN Drive: Serial number of the drive unit.

*Firmware Version*: Displays the current software version of the drive unit.

Hardware Version: Device version.

*Sport/Lite Version*: Here you can view whether the drive unit is the Lite or Sport Edition.

Mapping: The current mapping set (only with the Sport Edition). With the Lite Edition Mapping 1 is displayed and cannot be changed.

*Starting Kind*: Designation for the motor rotation and start-up speed.



# 7.3. add-e NEXT smartphone app-Settings

The software update, for example, can be launched under "Settings".

*Update Firmware*: Clicking on this area initiates the software update. This can e.g. be necessary for a battery update. For a more detailed description of the software update, see *Section 8: "add-e NEXT Software Update"*.

*Reset Km*: This feature can be used, for example, to reset the trip kilometres on the "Dashboard" tab. All day-dependent data such as total daily kilometres, daily kilometres electric etc. can be reset to 0 here. Information marked Total, CANNOT be reset.

*Reset Sensors*: Erases the paired sensors and remote control from the drive unit. After that, they have to be paired again.

*Factory Reset*: This feature resets everything to the factory settings (mapping, sensors, trip kilometres etc.). After that, the settings can be made **AGAIN**.

App tab "Settings"



# 8. ADD-E NEXT SOFTWARE UPDATE

A software update should be carried out at regular intervals to keep the drive unit and battery up to date. This is necessary, for example, to be able to use new features, improved compatibility with devices and optimal system use as a result.

Requirements for an add-e NEXT Software Update:

- 1. add-e NEXT drive unit
- 2. add-e NEXT smartphone app
- 3. Smartphone with Bluetooth
- 4. Wifi or wireles internet connection

# 8.1 How to perform a software update

The software for the update is located on the add-e server. The drive unit is designed to access the add-e server wirelessly over the Internet and install the software on the add-e NEXT drive unit and the add-e NEXT battery.

To connect the drive unit to the add-e server, you need a smartphone with installed add-e NEXT app and a good Internet connection.

The smartphone sends a command via Bluetooth to the drive unit to connect to a Wi-Fi network for the software update. The access data for the WiFi network needs to be entered in the smartphone app. Then the drive unit connects to the add-e server over the Internet and downloads the latest software onto the drive unit. Once all the data has been downloaded, the drive unit restarts automatically.

The following coloured LEDs on the drive unit and the battery indicate the progress the software update is making.



- red LED (1) The drive unit is being supplied with power.
- blue LED (2) The drive unit is connected to the smartphone via Bluetooth.
- red LED (4) The drive unit has received the software update command.
- orange LED (5) The drive unit is connected to a Wi-Fi network.
- green LED (6) The drive unit has access to the server over the Internet.

# 8.2 Installing the add-e NEXT app

To perform a software update, the add-e NEXT app needs to be installed on your smartphone.

When installing apps, different procedures can apply depending on the operating system on your device. We recommend familiarising yourself with how to install the app on your own device before downloading it.

Here as an example the software update on a smartphone with Android operating system is described. This may vary depending on the smartphone and its operating system.



1. Open Google Play Store (App Store with iPhone).

Open the Play Store



### PLEASE NOTE!

Although you may have to enter your bank details when registering in Google Play Store, the add-e NEXT app itself is still free of charge for download.



- 2. Search for the add-e NEXT app in the search box.
- 3. Confirm your search.

(In this example by clicking on the magnifying glass).

Search the app in Play Store



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- 5. If you are asked to share the location of your device while installing the app, it is important to **allow the app to access your location.**

If not, the drive will not be able to connect to the app later and a software update will not be possible.



6. Once you have downloaded the app, you can open the add-e NEXT app directly in Play Store.

You can also find the app icon on the home screen.

4. Clicking "Install, to download the app.

# 8.3 Performing a software update

Two options are available to you for performing the software update. The first is a software update over a WiFi network, the second over a mobile hotspot.

## 8.3.1 Software update with WiFi network

When updating the software over a WiFi network, you should make sure that the router is in the near vicinity during the entire update process and ensure a good Internet connection.



1. Before starting the software update, make sure that both "Bluetooth" and "Location" are activated.



### **ATTENTION!**

In addition allowing general access to your location, it is also important to allow access to your location for the add-e NEXT app, otherwise you will not be able to establish a connection to the drive unit.



- 2. Insert the battery and wait for the start melody.
- 3. Open the add-e NEXT smartphone app.

The app starts with the "Home"menu open.

The drive with its serial number is displayed in the app.

Connect the smartphone to the drive by clicking on "CONNECT" next to the serial number for the drive.



Drive unit connected via Bluetooth



Once your smartphone is connected to the drive unit via Bluetooth, the blue Bluetooth LED (2) lights up on the drive unit along with the red status LED (1).

4. As soon as the drive unit is connected to the smartphone, the app switches to the "*Dashboard*".

Go to "*Information*" to view the software version programmed on the drive.

To do so, select "*Information*" in the centre at the bottom of the screen.



5. Here you can check whether the drive is already updated with the latest version of the software.

The latest software version can be found on the website.

No software update is required if the latest software version is already installed.

6. If the software needs updating, click on "Settings" on the right at the bottom of the screen.



7. Under the "Settings" select "Update Firmware".

This option contains the connection data for the wireless data transfer.

8. Enter the name of the WiFi (SSID) connection and the password for the network you want to connect to.

Important is that the connection to the network is sufficiently strong and the Internet connection is good.

9. Confirm your entries by tapping "CONNECT".



Connect drive unit to WiFi



### ATTENTION!

When entering the WiFi (SSID) name, make sure that it is written CORRECTLY (upper and lower case, special characters, etc.). Otherwise, the drive cannot establish a connection to the Internet and a software update will not be possible.



## PLEASE NOTE!

If you update the software via a hotspot, enter the name of the hotspot under the WiFi (SSID) name and the password for the hotspot under Password.


10. The "Updating in progress" window opens. Tap on "OK" to continue.



### PLEASE NOTE!

The software update continues even if you tap on "OK" here. From this point onwards, you can put your phone aside. The software update ends automatically.





Successful update - start-up melody sounds

The following LEDs should be constantly lit on the drive while the update is being performed:

- red LED (1)
- blue LED (2)
- LED (4) red
- orange LED (5)
- green LED (6)

Flashing of one or more LEDs indicates an error. For more detailed information see p. 77.

The successful update is indicated by restarting the system and the start-up melody.

The software update takes up to a minute and ends automatically.

The red LED (1) and the blue LED (2) on the drive unit light up again.

# 8.3.2 Software update with mobile hotspot

Performing the software update with the mobile hotspot on your smartphone represents a fast and easy alternative. This may be necessary, for example, if the WiFi connection is poor (bike cellar) or no connection to the WiFi network is possible in general. A software update via a hotspot is also recommended if the WiFi (SSID) name or password contain too many special characters.

The software update via a hotspot differs compared to those via a WiFi network in that you set-up the hotspot to use it as a WiFi interface before the software update is launched on your smartphone.

i

**PLEASE NOTE!** 

Switching on and configuring the hotspot can vary from device to device. Before starting the software update, familiarise yourself with the set-up and configuration of the mobile hotspot on your device. Make sure that Mobile Data is switched on.

As an example the configuration of a hotspot for a device running Android is described here.



1. First, the hotspot needs to be set up on your smartphone.

To do so, open the "Settings" on your smartphone.



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2. As next select "Network & Internet".

This is usually where the hotspot can be found.



3. Afterwords select "Hotspot and Tethering".

4. Select "WiFi Hotspot".

Under this menu item, you can set-up the hotspot and share it with other devices.



### ATTENTION!

Keep the hotspot name and password as simple as possible. We do not recommend using special characters, a mixture of numbers, letters, upper- and lower-case letters or spaces.

You only use the hotspot temporarily, so even simple passwords do not pose a risk.



5. You can edit the hotspot name and password here.

Tap on "*Hotspot Name*" to open a window where you can change the name. Keep the name simple.

6. Tap on "*Hotspot Password*" to open a window where you can change the password. We recommend keep the password simple here as well. At least 8 characters are required!



7. Switch on the hotspot.

If the hotspot is active, the hotspot icon is often displayed at the top of the bar. (Here the third icon from the left).

Once the hotspot has been set up, the software update takes place using the same steps for standard WiFi access. *See p.* 70-73 in reference.



In contrast to a software update over a WiFi network, enter the hotspot name and password under "*Update Firmware*" this time. Confirm your entry by tapping on "CONNECT".

All the remaining steps are the same.

# 8.4 Tips & Tricks for problems with a software update

If a software update is failing this may have various reasons. Following the most common causes and solutions are listed.

### 8.4.1 Drive unit not shown in the add-e NEXT app

If the serial number is not displayed when connecting to the add-e NEXT app, this can have two reasons. First, the red status LED (1) fails to light up and second, the blue Bluetooth LED (2) fails to light up.

### 8.4.1.1 Red status LED (1) fails to light up



If the red status LED (1) on the drive unit fails to light up, check the following:

- 1. Is the battery charged? -The battery may need charging.
- 2. Is the battery inserted correctly and is the connection cable connected to the drive unit? – The connection cable needs to be plugged in as far as it will go.

### 8.4.1.2 Blue Bluetooth LED (2) fails to light up



If the blue Bluetooth LED (2) fails to light up, this indicates that the drive is not connected with the add-e NEXT app. This may have the following reasons:

- 1. No Bluetooth connection activate Bluetooth on your smartphone.
- 2. Location sharing is deactivated activate location sharing on your smartphone.



### PLEASE NOTE!

If the serial number is not shown in the app even though the battery is correctly inserted and completely charged, and the Bluetooth connection and location are activated, contact an add-e partner.

# 8.4.2 Orange LED (5) flashes



If the orange LED (5) flashes during the software update, it means the system cannot connect with the WiFi.

This can have the following reasons:

- Weak WiFi connection signal strength.
- Too far away from the WiFi router. The distance to the router should not be more than 5 m.
- The WiFi (SSID) name or password has been entered incorrectly. Entries are case-sensitive.
- The WiFi name contains special characters or spaces.

In above cases, we recommend updating the software over a mobile hotspot. *See pp.* 74-76.



### PLEASE NOTE!

After one minute, the LEDs stop flashing and the system restarts. The start-up melody plays.

## 8.4.3 All software update LEDs flashing



Software update LEDs flashing

If the red, orange, green and white LEDs flash during the software update, it means a connection to the Internet and consequently the add-e server cannot be established.

The causes can be:

- Great distnace to WiFi router.
- Too low Internet bandwidth.

In both cases we recommend performing the software update over a mobile hot-spot. *See pp.* 74-76.

Before restarting the software update, remove the battery from the holder and reinsert it.

# 9. TIPPS & TRICKS FOR TROUBLESHOOTING

Various factors can lead to your add-e NEXT retrofit system not working as expected. This section lists several descriptions of possible errors. Troubleshooting the problem can sometimes be easier than expected.

This section lists the most frequently asked questions and problems with the appropriate solutions. If the problem cannot be resolved as described, please contact your add-e partner/specialist retailer or add-e Support first.

# 9.1 Is my bike suitable for use with the retrofit kit?



Left: Continental Travel Contact Right: Schwalbe Hurricane

In principle, almost any bike can be upgraded with the add-e NEXT retrofit kit.

The factors to be considered can be found on *p*. 11 in Section 1: Determining which installation variant is right for you.

For the best possible power transmission, it is important to use a tyre with a continuous centre rib. Here are two examples.

# 9.2 The drive no longer starts after a longer period of disuse



After a longer break, e.g. after the winter, holidays, etc., the drive fails to start. The following points should be checked:

• Is the battery in deep sleep?

To awake the battery from deep sleep, it needs to be awoken once with the charger. *See p.* 48.

- Is the battery charged enough? Check the battery charge level by rotating the power setting knob by 1-2 levels (see p. 44) and charging the battery if needed.
- Does the battery manage to connect to the drive unit?

See p. 42.



• Are the sensors detected?

If the battery connects to the drive unit and the starting melody plays, you should check whether the sensors are detected. *See p. 54.* 

**Important!** The sensors are only displayed at level 0/Off.

If the sensors have been accidentally reset in the add-e NEXT app, they need to be paired again. *See p. 56*.

# 9.3 The drive unit cuts out while riding



Push the motor up to the highest position

If the drive unit cuts out with a beep while riding, the ASC (anti-slip control), the tyre pressure and, if necessary, the drive setting need to be adjusted. This mainly occurs when riding uphill with a high level of assistance.

If the distance between the drive unit and the rear wheel has changed, it needs to be adjusted and the system setting also needs to be checked.

It is important that this is done systematically and in the correct order. See pp. 25-30 Section 3: Drive & mechanical setting.

# 9.4 The drive "paws"



What is termed "pawing" or also "knocking" of the drive unit is caused by to high contact pressure. This is especially the case at low power levels when the drive tries to engage with the tyre.

Pawing can also be associated with the upper stop setting.

Reducing the contact pressure and adjusting the upper stop can solve this problem.

# 9.5 Tyre wear is excessive



With correct adjustment, regular maintainance and controll of the setting, as well as if the tyres fit properly, tyre wear only increases minimally. If, contrary to expectations, it is higher, it is a sign that the tyre is slipping.

Here, you should check the tyre pressure and setting and adjust them if necessary, *see pp. 25-30*.

If the tyre wear only increases at one spot on the tyre, this indicates radial run-out. In this case, replace the tyre and check the rim for radial run-out.

## 9.6 Friction roller coating wears out very quickly



The friction roller coating on the drive unit is a wearing part. When delivered, it is coloured in black. After a short time, a red colour shines through, which does not yet represent wear.

However, if you can see the fabric or even the metal in a very short time, it indicates that the drive is not adjusted correctly. Rough/knobble profile can also lead to increased tyre and friction roller wear. In this case, check the setting and change the tyre.



# 9.7 HMSoft appears in the add-e NEXT smartphone app

It can happen that the serial number does not appear in the add-e NEXT smartphone app. Instead, only HMSoft is displayed.

The drive unit provides assistance, but cannot read off any values or perform a software update.

This error code indicates that problems exist with the Bluetooth module. In this case, contact your specialist retailer or support@add-e.at.

# 9.8 After inserting the add-e NEXT battery, the LEDs pulsate in blue – communication between battery & drive unit is not established



After the battery is locked in the holder, the LEDs on the battery indicator pulsate in blue. When the communication between the add-e NEXT battery and the drive unit has been established, the start melody sounds, and the LEDs change to the colour of batteries charging status.

If the add-e NEXT battery does not change colour after being inserted, it means that there is no communication between the battery and the drive unit.

This may be the case after an add-e NEXT battery upgrade since the latest version of the software is required to establish communication between the battery and the drive unit. The latest software can be found on the website under Installation or Downloads. For information on how to perform a software update, see p. 67 onwards – add-e NEXT software update.

If the LEDs on the add-e NEXT battery continue to pulsate in blue despite having installed the latest software and no communication can be established with the drive unit, contact your specialist retailer or add-e Support.

## 9.9 Repair & warranty

Repair form	

If you are unable to solve the problems using the help in Section 9. *Tips* & *tricks for troubleshooting*, please contact your nearest specialist retailer/partner.

All our specialist retailers/partners and their contact details can be found on our website at www.add-e.at/haendlersuche.

If parts need to be sent in after consulting the specialist retailer/partner or add-e Support, **carefully complete the repair form** and enclose it with the package. Available online at www.add-e.at/montage, or download at www.add-e.at/downloads.

#### Manufacturer:

GP Motion GmbH Tiroler Str. 80 9500 Villach Austria Vers. 3.6 / 2023

### Description and identification of the machine:

Function: Pedal-assisting electric bike drive (up to 25 km/h) Typ/model: add-e Series: NEXT

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