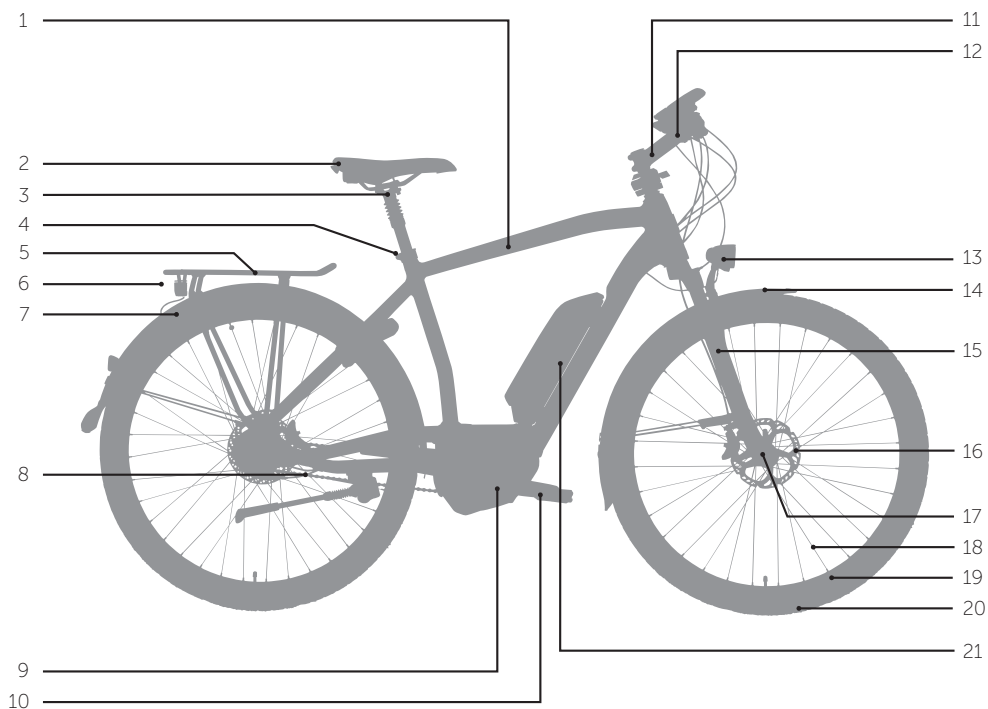


ROSE





1	Frame	11	Stem
2	Saddle	12	Handlebar
3	Seat post	13	Front light
4	Saddle clamp	14	Mudguard
5	Pannier rack	15	Fork
6	Rear light	16	Brake disc
7	Mudguard	17	Hub
8	Chain	18	Spoke
9	Mid-drive motor	19	Rim
10	Pedal	20	Tyre
		21	Battery pack

Congratulations on the purchase of your ROSE dream bike!

We are pleased that you have decided to buy a ROSE bike and are sure that your new bike will put a smile on your face every day.

Your bike is unique – before it has found its way to your home, this bike was individually assembled by hand by a skilled mechanic and carefully inspected by another specialist to ensure it meets our highest quality standards. We thus guarantee that your bike offers reliability and state-of-the-art technology. Easy-to-use gears and brakes, an excellent design and excellent value for money are just some of the reasons why you will love your bike.

Some components were removed or adjusted for shipping. However, they can be easily re-assembled or re-adjusted in just a few simple steps (see "3. Bike assembly" on page 13).

Regular care and maintenance (see "9. Maintenance" on page 35) will prolong the life of your beloved bicycle. This manual includes all information on handling, maintenance and care you need to properly care for your bike. We recommend you to carefully check and service your bike at regular intervals. Your safety and a long life of your bike should be worth the effort.

This manual describes all details important for the safe use of your bike, as well as the most important and general facts about your bike. For more detailed information on the single components of your bike please see the respective owner's manual of the manufacturer. The manuals are either included in your purchase documents or available online.

Please take the time to read this manual carefully. The sections marked with the signal words "DANGER", "WARNING" and "CAUTION" are of particularly high importance. The instructions contained in these warnings must be followed. Moreover, we recommend you to follow the steps described in "7. Before and after your ride" on page 30 and to have your bike serviced regularly (see "9. Maintenance" on page 35) to ensure your safety on every ride.

Have fun with your dream bike!

Your ROSE Bikes team

1. General information	6
1.1 Explanation of symbols used	6
1.2 Target group	7
1.3 Requirements to operate an e-bike	7
1.4 Owner's manuals supplied by component manufacturers	7
1.5 Tools	7
1.6 Installation of add-on parts and accessories	7
1.7 Replacement of parts	7
1.8 Warranty and guarantee	8
1.9 Wearing parts	8
1.10 Weight limit	8
1.11 Exclusion of liability	8
2. Safety	9
2.1 General safety	9
2.2 Safe use of the brakes	10
2.3 Safe use of the battery pack	10
2.4 Safe use of a pannier rack	11
2.5 Safe use of an adjustable stem	11
2.6 The rider's duty of care	11
2.7 Intended use	12
3. Bike assembly	13
3.1 Opening the ROSE bike box and unpacking the contents	13
3.2 Straightening the handlebar and adjusting the steering play	14
3.3 Straightening the handlebar and adjusting the steering play [Speedlifter]	15
3.4 Adjusting the angle of the handlebar	16
3.5 Adjusting the saddle height	17
3.6 Installing the pedals	18
4. Before your first ride	19
4.1 Checking the battery before first use	19
4.2 Getting started for your first ride and getting used to your new bike	19
5. Riding your e-bike	20
5.1 Information on the e-bike system	20
5.2 Riding	22
5.3 Switching bike lights on/off	25
5.4 Interrupting your ride	26
5.5 Switching off the system	27
5.6 Charging the battery	28
6. Cycling with kids	29
6.1 Carrying kids with a bike seat	29
6.2 Carrying kids with a bike trailer	29
7. Before and after your ride	30
7.1 Before your ride	30
7.2 After your ride	32
7.3 After a crash	32

8. Transport, storage and disposal 33

8.1 Transport by car.....33

8.2 Transport on a hitch or roof rack33

8.3 Battery storage.....33

8.4 Bike storage.....33

8.5 Bike shipping.....34

8.6 Battery shipping34

8.7 Disposal.....34

9. Maintenance 35

9.1 Bike servicing.....35

9.2 Replacement of parts36

9.3 Tyre pressure.....37

1. General information






This manual is the most important element to prevent any damages and risks during the assembly, use and servicing of your new bike. It is provided to give you the most important technical information on your bike, to support you during bike assembly and to give you helpful tips over the entire life of your bicycle. If in doubt about maintenance works, please consult a qualified bicycle mechanic.

Please read this manual carefully before taking the first ride on your bike and make sure you understand everything. Ensure that third-party users are also informed about the contents of this manual and that they understand and follow all instructions.

Keep this manual for future reference. If you sell or give away your bike, please also include the owner's manual.

This manual is additionally available as a pdf file on rosebikes.com/manuals

1.1 Explanation of symbols used

	DANGER ... indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.
	WARNING ... indicates a hazard with a medium level of risk which, if not avoided, may result in minor or moderate injury.
	CAUTION ... indicates a hazard with a low level of risk which, if not avoided, may result in minor or moderate injury.
	NOTE ... indicates a potentially hazardous situation that may result in damage to property.
	...Indicates additional information.

1.2 Target group

This manual is intended for you, the owner of the ROSE bike.

Assembly and maintenance works require basic knowledge in bicycle technology. If in doubt consult a qualified bicycle mechanic. Improper assembly or maintenance of your bike may result in serious injury or death!

1.3 Requirements to operate an e-bike

The rider should be able to ride a bike, this means that he/she must have basic cycling skills and sufficient balance to safely ride and steer a pedelec. The use on public roads requires a high level of cognitive ability. The rider must be mentally and physically able to safely operate the bicycle over a longer period of time and longer distances.

For newcomers and those who have not used an e-bike for a longer period special cycling skills courses for pedelecs are recommended.

1.4 Owner's manuals supplied by component manufacturers

This manual contains all information you need for a safe use of your bike. However, apart from this manual, the documents supplied with your bike also include some product information or manuals of different component manufacturers. If need be, you can use those documents for further information on the respective product, its assembly and setup. The owner's manuals of some manufacturer's might only be available online.

1.5 Tools

All works on your bicycle require appropriate tools. All nuts and bolts must be tightened using an appropriate torque wrench. Proper use prevents overtightening and breaking of the bolts.

A proper installation and removal of components can only be guaranteed when using perfectly functioning and undamaged tools.

1.6 Installation of add-on parts and accessories

Bicycle trailers must only be fixed to the rear axle of the bike using special devices.

Only use child seats and trailers for clamp mounting on the seat tube of the bicycle frame on men's and unisex models.

Do not mount any child seats and trailers with clamp mount on the seat tube of bicycles with a low entry.

It is not allowed to mount trailers or child seats on the seat post. Racks must only be attached to special fittings designed for this purpose.

Please read the manufacturers' manuals before the installation of add-on parts and accessories.

Make sure you don't exceed the maximum system weight (see "1.10 Weight limit" on page 8) even with all add-on parts and accessories fitted!

1.7 Replacement of parts

As e-bike components are subjected to heavy loads, you cannot simply replace them. In most cases, you must obtain approval from ROSE Bikes or the component manufacturer before replacing a component (also see "9.2 Replacement of parts" on page 36). Please contact ROSE Bikes in case of any questions.

1.8 Warranty and guarantee

For all information on warranty and guarantee see rosebikes.com/content/help/terms-and-conditions.
Tuning the e-bike will invalidate the warranty.

1.9 Wearing parts

As a technical product, a bicycle consists of many components which are all subject to wear given the nature of their function. Therefore, the components listed below should be checked regularly and replaced, if necessary:

- Battery pack and drive unit
- Tyres and tubes
- Rims
- Brake pads
- Bearings (headset, bottom bracket bearings, rear triangle bearings, hub bearings)
- Chain, cassette and sprockets
- Handlebar and stem
- Grips
- Saddle and seat post
- Grease, lubricant, hydraulic oil and brake fluid
- Inner and outer brake and gear cables
- Suspension fork and rear shock
- Stickers and paintwork

1.10 Weight limit

Electric ROSE bikes are designed for a maximum weight of 140 kg. The maximum weight is derived from the weight of rider, bicycle, gear (helmet, backpack, shoes, clothes) and luggage.

1.11 Exclusion of liability

The tasks described in this manual require special knowledge and should only be carried out by people with sufficient expertise.

The user is liable for damages resulting from:

- Misuse or any other cause beyond the range of the intended use (see "2.7 Intended use" on page 12)
- Non-compliance with safety regulations
- Improper assembly, repair and maintenance
- Use of unapproved replacement parts and accessories
- Change of construction
- Tuning

If in doubt consult a qualified bicycle mechanic or the ROSE service.

2. Safety

2.1 General safety



DANGER

Always wear a helmet!

Adapt your style of riding to your skills. Respect your limits and only ride cautiously in new situations.



DANGER

Risk of accident due to using on-board computer while riding!

Reading from the computer display or changing settings while riding may distract from the traffic situation. This may result in accidents caused by delayed or hindered rider responses!

- For all settings other than those concerning the level of assistance, you should stop off the road to enter the respective data.



DANGER

Risk of accident due to misjudgement through other road users!

Other road users mostly misjudge the speed of e-bike riders.

- Always ride carefully and never rely on other road users to react properly.



DANGER

Risk of accident due to improperly installed components!

Improperly installed components may loosen during the ride!

- Always follow the installation instructions included in this manual.
- If in doubt consult the ROSE service or a qualified bicycle mechanic.



DANGER

Risk of injury due to accidental activation of the e-bike drive system!

- Always remove the battery pack from the e-bike before working on the electric bicycle (e.g. servicing, repair, assembly, maintenance works), as well as before transport (e.g. by car or plane) and storage.



DANGER

Risk of accident due to sudden total failure of pre-damaged or worn components!

Bicycles are subject to high stress and wear. A fall or unforeseeable manoeuvres cause unpredictable peak loads. These loads can pre-damage components of your bike unnoticed.

- You should have your bike regularly checked for wear and damages by a qualified bicycle mechanic. Also see "9. Maintenance" on page 35. Worn or damaged components must be replaced.

2.2 Safe use of the brakes



DANGER

Risk of accident due to reduced braking performance caused by brake pads that are not broken in!

Disc brakes can only achieve full braking power when the brake pads are broken in. Choose a place off public roads to break in the pads.

- Brake 20 to 30 times with the front or rear brake from a speed of 30 km/h down to 5 km/h and repeat the process for the second brake. You should brake as hard as possible without locking one of the wheels.
- Please also note the instructions of the brake manufacturer (see enclosed manual). In case of any deviations, the component manufacturer's instructions apply.



DANGER

Risk of accident due to high braking power of the disc brakes!

Modern disc brakes have a very high braking power. Sudden braking can make you lose control of your bicycle.

- Become familiar with the power and operation of your disc brakes off public roads.

2.3 Safe use of the battery pack

In addition to the safety instructions below, please also follow the instructions described in "8. Transport, storage and disposal" on page 33.



DANGER

Risk of accident due to incorrect handling of the battery or its use in a way that is not intended!

- Only use the battery in combination with the appropriate e-bike drive system.
- Only use approved models when replacing the battery pack.



DANGER

Risk of injury due to short circuit, explosion and electrical fire!

- Batteries must not be subjected to mechanical impacts.
- Do not open the battery pack. Otherwise, there is the risk of a short circuit.
- Keep the battery away from heat (and out of permanent sunlight) and fire and never drop it into water.
- Do not store or operate the battery near hot or inflammable objects.
- Keep battery away from paper clips, coins, keys, nails, screws or other metal items when not in use to prevent shorting exposed battery contacts.



DANGER

Risk of injury due to improper charging of the battery!

Improper charging may cause the battery or other inflammable materials nearby to catch fire.

- Only use the original charger.
- Do not locate the charger or battery near inflammable materials while charging.
- Only charge the battery when dry.
- Do not leave the battery unattended while charging it.



DANGER

Risk of injury due to escaping liquid or vapour!

- Damages or improper use may cause liquid to escape from the battery. This may cause skin irritation, eye irritation or burns!
 - Avoid contact with skin and eyes.
 - In case of contact with skin, wash off with water.
 - In case of contact with the eyes, seek medical assistance.
- Damages or improper use may cause vapours to escape from the battery. These may be irritant to the respiratory system!
 - Seek fresh air and medical attention, if need be.

2.4 Safe use of a pannier rack



WARNING

Risk of accident due to improper handling of a pannier rack!

Improper handling of a pannier rack or the luggage attached to it may lead to serious crashes.

- Never exceed the rack's maximum load limit. Check the pannier rack or the manufacturer's manual for the maximum load limit (also see "1.4 Owner's manuals supplied by component manufacturers" on page 7).
- Do not exceed the load limit of the bicycle even when the rack is loaded (see "1.10 Weight limit" on page 8).
- A loaded rack may change the steering and braking characteristics of your bike.
- Always attach additional accessories for the rack (e.g. panniers) according to the manufacturer's instructions.
- Ensure lights or reflectors are not obstructed when the pannier is attached.
- Distribute weight evenly on both sides of the rack.
- Secure luggage against sliding or falling down. Make sure there are no loose parts hanging down.
- Secure and regularly check the rack's mounting brackets.
- Racks must not be modified.
- Do not attach trailers to the rack.

2.5 Safe use of an adjustable stem



WARNING

Risk of accident due to improper use of a stem with adjustable height and angle!

An improperly adjusted or tightened stem can cause you to lose control and fall.

- Do not adjust the height of your stem while riding.
- Make sure the stem is positioned and tightened properly before riding the bicycle.



WARNING

Risk of accident due to the use of a conventional stem on a steerer that is designed for Speedlifter stems!

The installation of a Speedlifter system requires a modification of the steerer tube. A Speedlifter stem cannot be replaced with a conventional stem.

- The replacement of a Speedlifter system with a conventional stem requires a special adapter and must be carried out by a qualified bicycle mechanic.

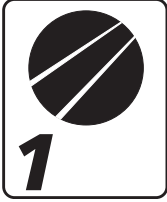
2.6 The rider's duty of care

Following the instructions specified in this manual does not absolve the rider from their duty of care to ensure that their bike is always in good condition. If there are any questions consult a qualified bicycle mechanic or the ROSE service.

2.7 Intended use

The intended use of ROSE bikes is divided into five different categories – ranging from the use on paved roads through to downhill or freeride use. The bikes must only be used in accordance with their intended purpose/use. Otherwise, the user takes responsibility.

A sticker on the frame of your bike will show you the intended use.



Category 1: For use on paved roads only

Category 1 includes all bikes and components that should only be used on paved roads.

The wheels will always stay in contact with the ground.



Category 2: For use on and off the road and for drops of up to 15 cm

Category 2 includes all bikes and components that can be used in conditions described under category 1, as well as on gravel roads and moderate trails. The wheels may also loose contact with the ground. Drops should not be higher than 15 cm.



Category 3: For use in rough terrain and for jumps of up to 61 cm

Category 3 includes all bikes and components that can be used in conditions described under category 1 and 2, as well as on rough trails and rough and unpaved roads that require good cycling skills. Jumps and drops should not be higher than 61 cm.



Category 4: For use in rough terrain and for jumps of up to 122 cm

Category 4 includes all bikes and components that can be used in conditions described under category 1, 2 and 3, as well as for higher speeds on rough and steep trails. Jumps should not be higher than 122 cm.



Category 5: Extreme biking (Downhill, Freeride, Dirt)

Category 5 includes all bikes and components that can be used in conditions described under category 1, 2, 3 and 4, as well as for extreme jumps and high speeds on rough trails and in bike parks.

Dirt and slopestyle bikes are not designed for use on downhill tracks.

3. Bike assembly

This chapter aims at helping you remove your bike from the ROSE bike box and re-assemble it.

Depending on the bike model, different components may have been removed or repositioned for shipping. In addition, you need to fit the pedals and check if your bike is in a roadworthy condition.



DANGER

Risk of accident due to improperly installed components!

Improperly installed components may loosen during the ride!

- Always follow the installation instructions included in this manual.
- If in doubt consult the ROSE service or a qualified bicycle mechanic.



In addition to this manual, you will find some videos on how to assemble your bike at [rosebikes.com](https://www.rosebikes.com).

Required tools

Depending on bike model and equipment, you will need the following tools for assembly:

- 4 mm, 5 mm, 6 mm, 8 mm hex keys
- Torque wrench with a 4 mm, 5 mm, 6 mm und 8 mm hex drive
- 15 mm open-ended spanner

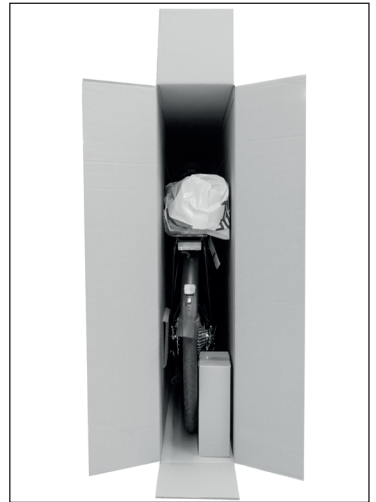
3.1 Opening the ROSE bike box and unpacking the contents

Before opening, check the ROSE bike box for any damages. After that, check the contents for completeness! Please notify all possible defects immediately!

The bike box of ROSE e-bikes is designed to allow you to wheel the bike out of the box. For this, please open the box on the small side.

1. Carefully open the ROSE bike box on one of the small sides. Make sure not to damage any parts especially when using a knife.
2. Wheel the bike out of the bike box and unpack all other contents.
3. Remove – if present – any transport locking devices from the frame.

Keep hold of the ROSE bike box! You might need it to return the bike for servicing or repair.



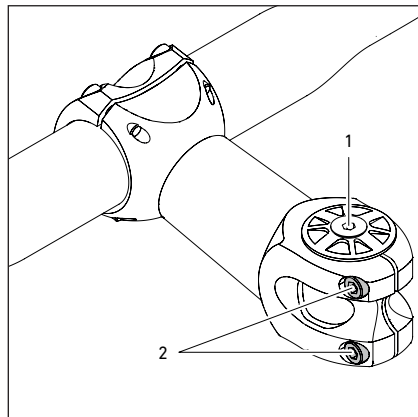
3.2 Straightening the handlebar and adjusting the steering play



CAUTION

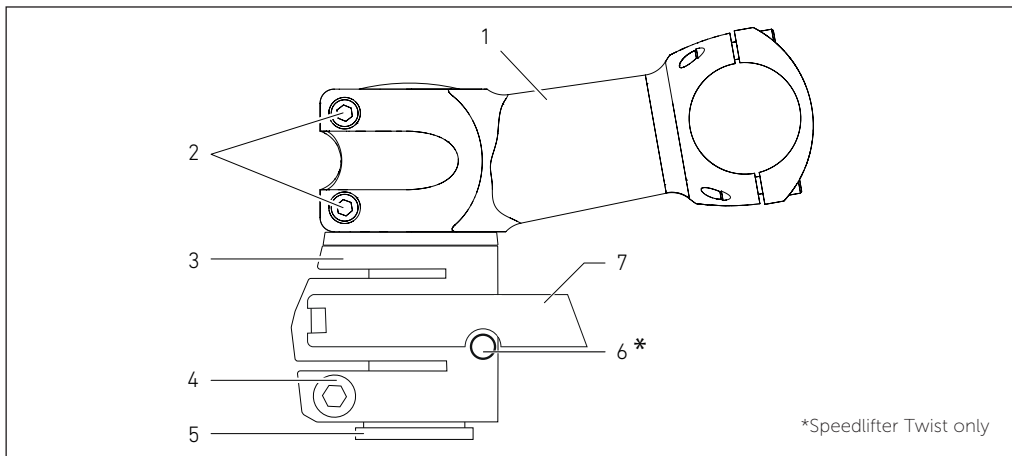
The adjusting bolt for the steering play (1) does not serve to tighten the stem, but only to adjust the play in the steering bearing!

1. Loosen the stem clamp bolt(s) (2) with a hex wrench. Do not loosen the adjusting bolt for the steering play (1).
2. Turn the handlebar through 90 degrees and align it with the front wheel.



3. Check the steering bearing for play by pulling the front brake and trying to push the bike gently backwards and forwards.
→ You should not notice any play.
4. If you feel any movement inside the headset, tighten the adjusting screw for the steering play (1) a quarter turn.
5. Check the headset once again for play and repeat the previous steps, if need be, until there is no more play inside the bearing. If in doubt seek professional advice from a qualified bicycle mechanic.
6. Tighten the stem clamp bolt(s) (2) alternately to a torque of 8 Nm.

3.3 Straightening the handlebar and adjusting the steering play [Speedlifter]



Speedlifter

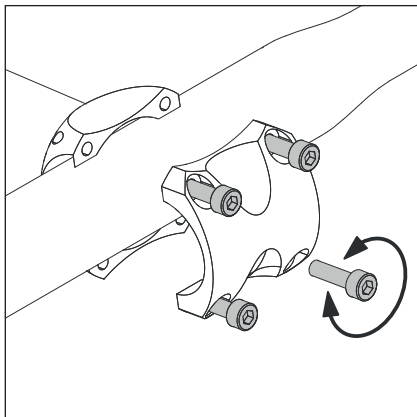
1. Loosen the stem clamp bolt(s) (2) with a hex wrench.
2. Turn the handlebar through 90 degrees and align it with the front wheel.
3. Tighten the stem clamp bolt(s) (2) alternately to a torque of 8 Nm.
4. Check the steering bearing for play by pulling the front brake and trying to push the bike gently backwards and forwards.
→ You should not notice any play.
5. If you feel any movement inside the headset:
 - 5.1 Turn the clamp bolt (4) on the Speedlifter (3) anti-clockwise for one to two turns.
 - 5.2 Use a 36 mm open-jaw wrench to turn the adjustment ring (5) clockwise in small increments until you do no longer notice any play.
→ After the steering head bearings have been adjusted, no more than three of the adjustment ring's (5) thread turns should be visible. If you see more than three thread turns, ask a qualified bicycle mechanic to adjust the headset play.
 - 5.3 Tighten the clamp bolt (4) to a torque of 6 to 8 Nm.
6. Check the headset once again for play and repeat the previous steps, if need be, until there is no more play inside the bearing. If in doubt seek professional advice from a qualified bicycle mechanic.

Speedlifter Twist

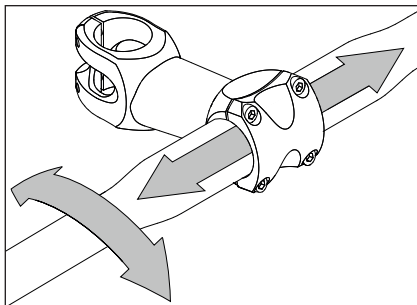
1. Open the quick-release lever (7).
2. Press the safety lever (6) to the top and hold it in position.
3. Turn the handlebar in the direction of travel.
4. Let the safety lever (6) go and close the quick-release lever (7).

3.4 Adjusting the angle of the handlebar

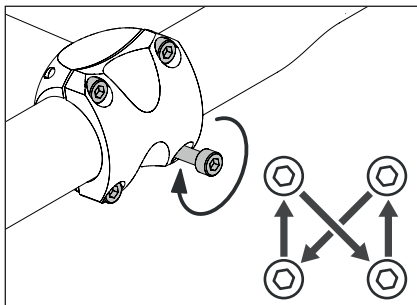
1. Loosen the handlebar clamp bolts by turning them anti-clockwise until the angle of your handlebar can be adjusted.
2. Check whether there is a protective film between handlebar and stem.
If there is a protective film:
 - 2.1 Completely loosen the handlebar clamp bolts and remove the handlebar clamp(s).
 - 2.2 Remove the handlebar and take off the protective film.
 - 2.3 Re-install the handlebar and handlebar clamp(s).
 - 2.4 Turn the clamp bolts clockwise and tighten them just enough so that the handlebar can still be moved.



3. Centrally align the handlebar and adjust the angle.



4. Tighten the bolts of the handlebar clamp alternately in small increments until you have reached the tightening torque of 4 Nm.



3.5 Adjusting the saddle height



DANGER

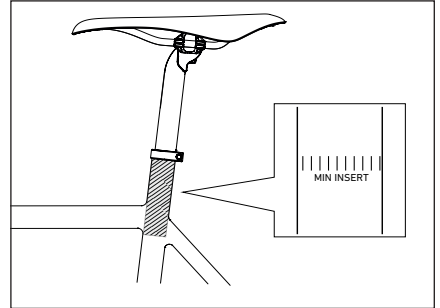
Risk of accident and damage due to the extension of the seat post beyond the minimum insertion mark!

If the seat post is not inserted to the minimum insertion mark, it may break or damage the frame while riding.

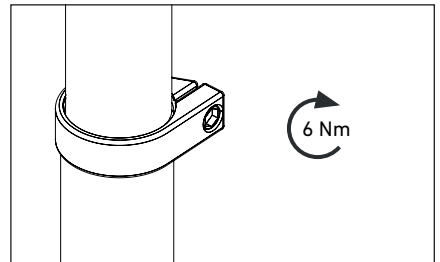
- The seat post must not be extended further than the limit mark.

1. Open the seat post clamp bolt.
2. Change the height of the saddle by raising or lowering the seat post and make sure your saddle is straight.

The minimum insertion depth is marked by a limit mark and the seat post must not be lifted any higher!



3. Tighten the seat post clamp bolt to a torque of 6 Nm.



4. Get on your bike and check whether the saddle height is right.
 - You should easily get on and off the bike.
 - Your toes should touch the ground when standing.

3.6 Installing the pedals

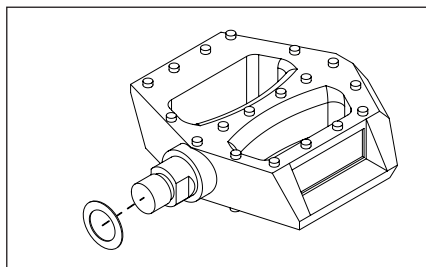


One of the pedals has a right- and the other a left-hand thread.

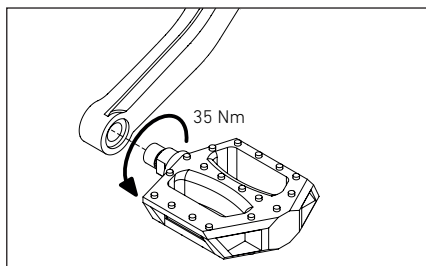
Most pedals have the letter "L" and "R" stamped on the end of the thread. Some pedals come with a groove in the flange of the left pedal.

For more information see the manufacturer's manual.

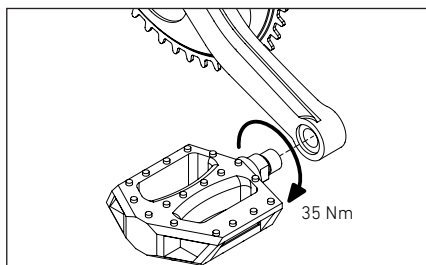
1. Check if your bike was supplied with washers and slide both washers onto the pedal axles – if present.



2. Turn the left pedal counter-clockwise to screw it into the thread of the left crank arm and tighten the pedal to a torque of 35 Nm.



3. Turn the right pedal clockwise to screw it into the thread of the right crank arm and tighten the pedal to a torque of 35 Nm.




Your bike is now fully assembled. However, before you take the first ride you should follow the instructions in the chapters "4. Before your first ride" on page 19 and "7.1 Before your ride" on page 30.

4. Before your first ride


4.1 Checking the battery before first use

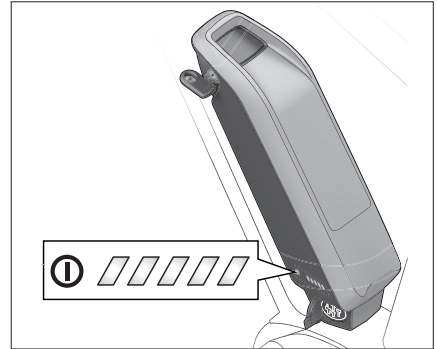
Check the battery pack before charging or using your e-bike for the first time.

Press the on/off switch ❶ to switch on the battery.

→ If no charge indicator LED lights up , the battery pack might be faulty.

Do not charge or use a defective battery. Get in contact with a qualified bicycle mechanic or the ROSE service.

→ If at least one charge level indicator LED lights up, yet not all , fully charge the battery before your first ride (see "5.6 Charging the battery" on page 28).



4.2 Getting started for your first ride and getting used to your new bike

Make yourself familiar with the handling, brakes, shifting system and – if available – with the suspension elements of your bike away from public roads. Do not forget to wear a helmet! Only slowly increase the difficulty of the terrain or manoeuvres.

Requirements:

- The bike is assembled in accordance with chapter "3. Bike assembly" on page 13.
- The saddle height is properly adjusted to guarantee a comfortable ride and to ensure you will get on and off the bike easily.
- All tasks from the chart "Before your ride" (see "7.1 Before your ride" on page 30) have been carried out.

1. Break in the brake pads.

Choose a road away from public roads and brake 20 to 30 times with the front or rear brake from a speed of 30 km/h down to 5 km/h. You should brake as hard as possible without locking one of the wheels. Repeat the process for the other brake. Only then the brake can show its full braking power.

Please also note the instructions of the brake manufacturer (see enclosed manual).

2. Check the functioning of the brakes while riding.

i Normally, the rear brake is located on the right-hand side of the handlebar, and the front brake is on the left-hand side. However, if required, the brake levers can also be mounted the other way around.

If the positioning of the brake levers on your bike is new and unfamiliar, you will have to be careful on your first rides. Make yourself familiar with the functioning and power of the brakes while riding at reduced speed.

Many brakes offer the possibility to adjust bite point and lever reach. For this, please note the brake manufacturer's instructions (see enclosed manual).

Shifting system:

3. Shift through all gears while riding at reduced speed and choose the right gear.

5. Riding your e-bike

5.1 Information on the e-bike system

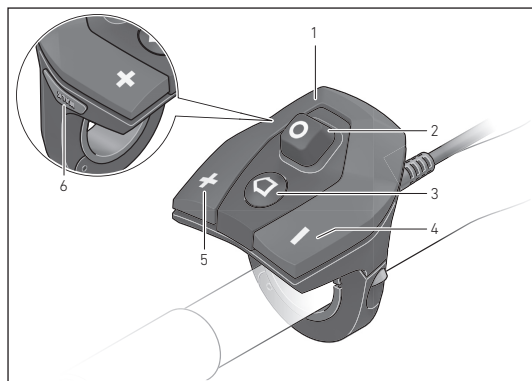
5.1.1 On-board computer



Control elements

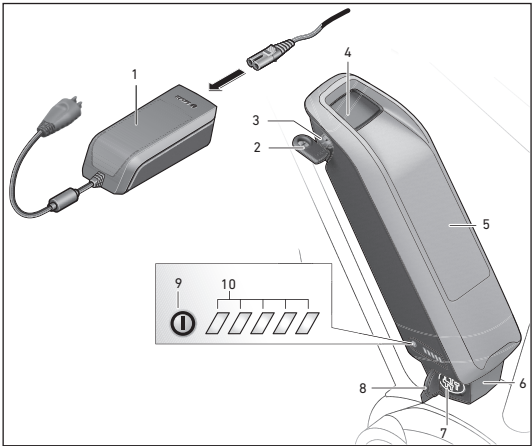
- 1 Joystick
- 2 "Home" Button
- 3 On-board computer
- 4 Holder for on-board computer
- 5 On/off switch for on-board computer
- 6 Bike lights button
- 7 Brightness sensor
- 8 USB port
- 9 Protective cap of USB port

5.1.2 Control unit



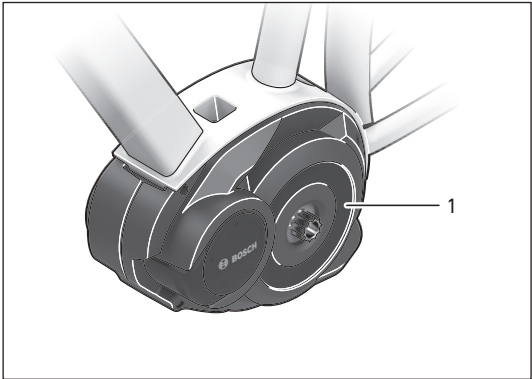
- 1 Control unit
- 2 Joystick
- 3 "Home" Button
- 4 Button to reduce assistance level "-"
- 5 Button to increase assistance level "+"
- 6 WALK assistance button

5.1.3 Battery pack

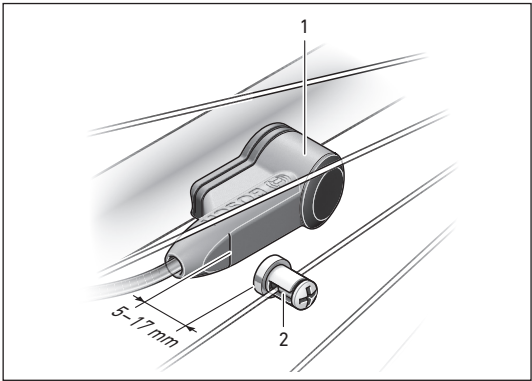


- 1 Charger
- 2 Key of battery lock
- 3 Battery lock
- 4 Upper holder
- 5 Battery pack
- 6 Lower holder
- 7 Charging socket
- 8 Cover of charging socket
- 9 On/off switch
- 10 Operating status and battery charge indicator

5.1.4 Drive unit




- 1 Drive unit

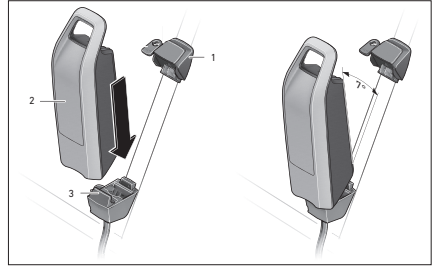


- 1 Speed sensor
- 2 Spoke magnet

5.2 Riding

5.2.1 Inserting the battery pack

1. Switch off the battery pack and the e-bike system by pressing the  button on the on-board computer.
2. Make sure the contacts on the lower holder (3) are free from dirt.
3. Place the battery pack (2) with the contacts on the lower holder (3) on the e-bike.
4. Tilt the battery into the upper holder (1) until it engages.
→ The battery pack engages with a clicking sound.
5. Check if the battery pack is tightly seated.



5.2.2 Inserting the on-board computer

1. Insert the on-board computer into the handlebar mount from the front.


The on-board computer is supplied with power from the e-bike battery. When removing the computer from the electric bike, a built-in battery will be responsible for power supply.

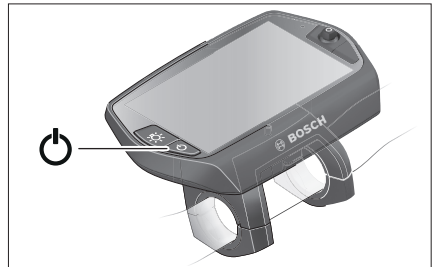
If need be, the built-in battery can be charged via a USB socket on the on-board computer. See the manufacturer's manual for more information.





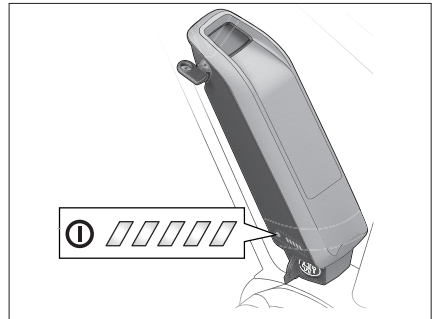
5.2.3 Switching on the system

There are several possibilities to switch on the e-bike system:

- If the on-board computer is already switched on when inserting it into the mount, the e-bike system will switch on automatically.
- Briefly press the on/off switch  on the computer, when on-board computer and battery pack are already fitted.



- Press the on/off switch  on the battery when the on-board computer is fitted.
→ The indicator LEDs light up  and show you the battery charge level.
Note: If the remaining capacity of the battery pack is below 5 %, no LED will light up on the battery. You can only see on the on-board computer that the e-bike system is switched on.





The drive will be activated as soon as you start to pedal (except when using the walk assistance function or the assistance level OFF). The power of the motor depends on the assistance level selected on the on-board computer. Once the system is activated, you will see "Active Line/Performance Line" on the display.

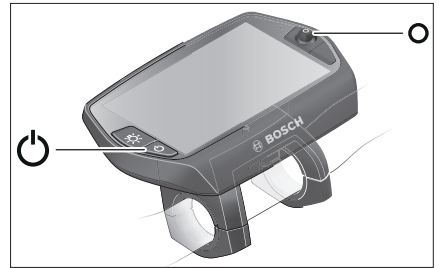
5.2.4 First use of the Nyon system

Nyon is supplied with a partially charged battery. Before the first use, you should fully charge the Nyon battery via the USB port (see "5.1.1 On-board computer" on page 20) or the e-bike system.

You have to register online in order to use all features of the operating system.

Activate the on-board computer:

1. Switch on the on-board computer by pressing the  button.
2. Choose your language:
 - 2.1 Choose your preferred language by moving the joystick  up and down.
 - 2.2 Confirm your selection by clicking the joystick.
 - 2.3 Follow the instructions on the display.



You can choose between the following options to activate your Nyon:

TEST RIDE

You can do a test ride without having to register or enter any data in advance. When switching off the device, all data will be deleted.

SET UP > OFFLINE

This is a very short registration process restricted to Nyon.

In this case, offline means that your trip and user data are only saved locally on the on-board computer.

Follow the instructions and choose one of the suggested answers. The data will be stored when the Nyon is switched off, but they will not be synchronised with the online portal or the smartphone application.

SET UP > ONLINE > PHONE


This is a complete registration process. Put the Nyon on the handlebar mount, download the application "Bosch E-Bike Connect" on your smartphone and use it for registration. After registration, your performance data is stored and synced with the smartphone app and the online portal.

REGISTER > ONLINE > Wi-Fi

This is a complete registration process. Make sure you are within the range of your Wi-Fi network. Put your Nyon on the handlebar mount. After having selected a Wi-Fi network and entered your ID and password, Nyon connects to the network of your choice and directs you to the online portal "www.eBike-Connect.com", where you can register. After registration, your performance data is stored and synced with the online portal. You can then connect your Nyon to your smartphone (Settings > Connections > Connect smartphone).

For more information see the supplied manual of your Bosch e-bike system or visit www.bosch-ebike.com/en


5.2.5 Mode settings

**DANGER**

Risk of accident due to using on-board computer while riding!

Reading from the computer display or changing settings while riding may distract from the traffic situation. This may result in accidents caused by delayed or hindered rider responses!

- For all settings other than those concerning the level of assistance, you should stop off the road to enter the respective data.








All interface displays and interface texts shown in the following correspond to the release status of the software. Since the Nyon software is updated regularly, the interface displays and/or interface texts may slightly change.

You can change the operating mode while riding by using the joystick on the control unit. Thus, you can keep both hands on the handlebar.

If the on-board computer is mounted on the e-bike, the Ride mode is displayed after switching on the device. If the on-board computer is not mounted on the e-bike, the Dashboard mode is displayed.


You can choose between the following operating modes:

	Dashboard	Displays various statistical data, as well as the connection status and synchronisation status.
	Ride	Provides current trip data.
	Map & Navigation	Use this mode for navigation or to download maps. Displays maps.
	Fitness	Displays various fitness-related information.
	Settings	Use this mode to change the basic settings of your on-board computer.

Move the joystick to the left to get back to the main menu from any mode. In the main menu, you can press the joystick to select one of the operating modes "Dashboard", "Ride", "Map & Navigation", "Fitness" or "Settings".

Pushing the joystick to the right allows you to see all possible setting options. Use the joystick to navigate to the desired option and select the option by pressing the joystick.

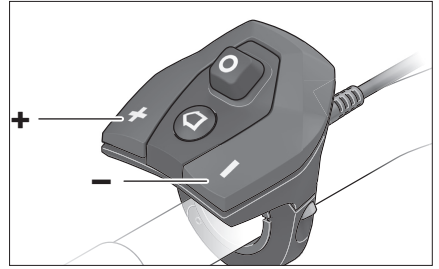
Tip: If you are in an active operating mode, you can push the joystick up and down to change to the next mode.



This manual only describes the "Ride" mode.
For more information on the features of the other modes, see the manual of your Bosch Nyon system.

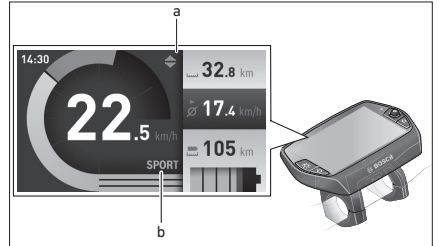
5.2.6 Setting the assistance level

You can set the level of assistance by using the buttons **+** or **-** on the control unit. The assistance level may be changed anytime, even while riding.



You can choose between the following assistance levels:

- **OFF**: The motor assistance is switched off, the e-bike can be pedalled as a regular bicycle. In this assistance level, you cannot switch on the walk assistance.
- **ECO**: Effective assistance at maximum efficiency for maximum range.
- **TOUR**: Constant assistance, for long tours.
- **SPORT**: Powerful assistance for sporty off-road riding, as well as for urban traffic.
- **TURBO**: Maximum assistance for high cadence, for sporty riding.



To increase the assistance level, press the **+** button on the control unit until the desired assistance level (b) is shown on the display. To reduce the assistance level, press the **-** button. When the on-board computer is removed from the holder, the last indicated assistance level is stored, the display of the motor output remains blank.

5.2.7 Interaction of the e-bike system with bicycle gears

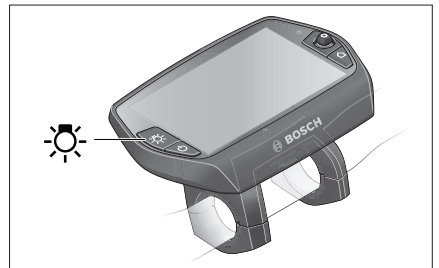
Even with an e-bike drive system, the bicycle gears should be used as with a regular bicycle.

Independent of the type of gearing, it is recommended to briefly interrupt pedalling while changing gears. This makes shifting easier and reduces drivetrain wear.

By selecting the right gear, you can increase speed and range with the same pedalling effort. For this reason, follow the shift recommendations **▲▼** (a). If indication **▲** is displayed, you should shift to a higher gear with lower cadence. If indication **▼** is displayed, you should select a lower gear with higher cadence.

5.3 Switching bike lights on/off

You can use the **☀** button on the on-board computer to simultaneously switch both front and rear light on and off. When the lights are switched on, the symbol **☀** is displayed. Switching the bike lights on and off has no effect on the backlight of the display.



5.3.1 Switching the walk assist function on/off

The walk assistance may help you push your e-bike. The assistance provided depends on the selected gear and may reach up to 6 km/h. The lower the selected gear, the lower the speed in the push assistance mode (at full power). Only use the walk assist function when pushing the e-bike. There is a risk of injury, if the wheels of the e-bike are not in contact with the ground when using the walk assistance.

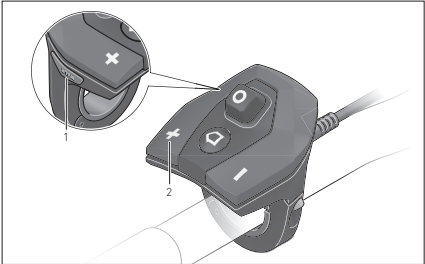
Briefly push the **WALK** button (1) on the control unit to activate the walk assistance. Push the **+** button (2) within 3 secs after activation and hold it down.

→ The e-bike drive is activated.

Note: You cannot activate the walk assist function in the assistance level OFF.

The walk assistance will switch off, if:

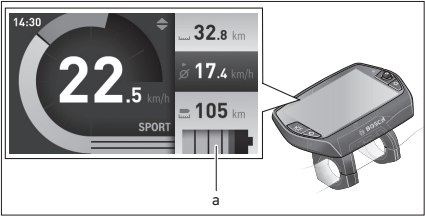
- you release the **+** button (2),
- the wheels of the e-bike are locked (e.g. through braking or knocking against an obstacle),
- the speed exceeds 6 km/h.



5.3.2 Checking the battery charge

The battery charge (a) is displayed on the on-board computer. In addition, you can read the battery charge from the indicator LEDs on the battery pack itself (see "Battery charge indicator" on page 28).

Each bar in the battery symbol on the on-board computer is equivalent to a capacity of approximately 20 %:



	The e-bike battery pack is fully charged.
	The e-bike battery pack should be recharged.
	The battery capacity for the support of the drive system is exhausted and the assistance is switched off gently.
	The remaining capacity is used for the bike lights and the on-board computer. The battery capacity is sufficient to feed the lights for around 2 more hours. Other loads (e.g. automatic gears, charging external devices via the USB port) are not taken into account.



5.4 Interrupting your ride

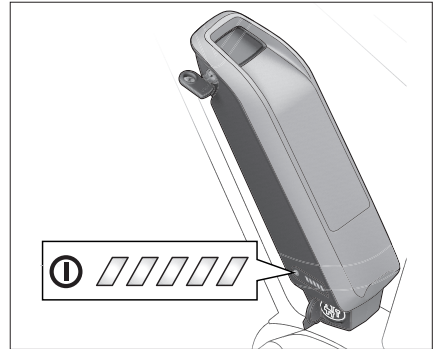
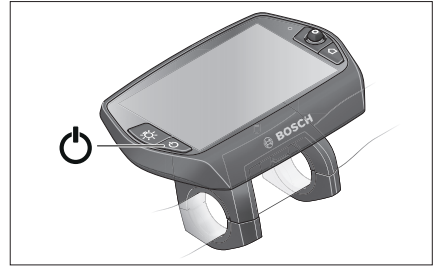
If no power output from the e-bike drive unit is requested (e. g. because the e-bike is parked) and no button on the on-board computer or control unit is pressed for approx. 10 minutes, the e-bike system and battery pack will automatically switch off to save energy.

Please remove the on-board computer when parking your e-bike.

5.5 Switching off the system

There are several possibilities to switch off the e-bike system:

- Press the on/off switch  of the on-board computer.
- Switch off the battery pack by pressing its on/off switch .
- Remove the on-board computer from the mount.



If no power output from the e-bike drive unit is requested (e. g. because the e-bike is parked) and no button on the on-board computer or control unit is pressed for approx. 10 minutes, the e-bike system and battery pack will automatically switch off to save energy.

Please remove the on-board computer when parking your e-bike.

5.6 Charging the battery




DANGER

Risk of injury due to improper charging of the battery!


Improper charging may cause the battery or other inflammable materials nearby to catch fire.


- Only use the original charger.
- Do not locate the charger or battery near inflammable materials while charging.
- Only charge the battery when dry.
- Do not leave the battery unattended while charging it.

The battery pack can be charged at any time when removed or installed without shortening its service life. Interrupting the charging process does not damage the battery pack.

The battery pack comes with a temperature control that only allows you to charge the battery within a temperature range of 0 °C to 40 °C. If the battery pack is outside the charging temperature range, three LEDs of the battery charge indicator  (7) will start to flash. Disconnect the battery from the charger until the temperature has adjusted. Only connect the battery pack to the charger when the permissible charging temperature has been reached.



Battery charge indicator

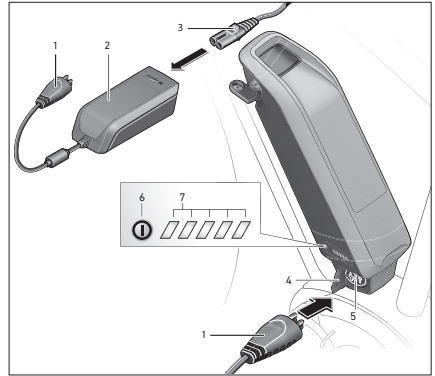
When the battery pack is switched on, the five green LEDs of the battery charge indicator  (7) show the charge level of the battery. Each indicator LED is equivalent to a capacity of approx. 20 %. When the battery pack is completely charged, all five LEDs light up.

Besides, the charge level of the switched on battery pack is indicated with the  symbol on the display of the on-board computer.

When the remaining capacity of the battery pack is below 5 %, all charge indicator LEDs (7) of the battery turn off, however, the on-board computer still indicates the capacity.

Charging the battery

1. Press the on/off switch  (6) to switch off the battery pack.
2. Clean the cover of the charging socket (4) and the area around the charging socket.
 - Make sure the charging socket doesn't get dirty when plugging in the charging cable.
3. Remove the cover of the charging socket (4).
4. Plug the charging cable (1) into the socket (5) of the battery.
5. Plug the mains cable (3) into the socket on the charger (2).
6. Connect the mains cable to a 230 V mains socket.
 - Once the mains cable is connected, the battery is charged automatically.
 - During the charging process, the charge indicator LEDs on the battery  (7) light up. Each permanently lit LED is equivalent to approximately 20 % capacity. A flashing LED indicates the charging of the next 20 %.
 - Once the e-bike battery is fully charged, the LEDs turn off immediately and the on-board computer is switched off. Charging is completed.
7. Disconnect the charging cable (1) from the battery pack, if need be, and unplug the mains cable (3) from the socket.



6. Cycling with kids

6.1 Carrying kids with a bike seat

There are some basic things you should pay attention to when carrying a child with a bike seat:

- Children over seven years of age are not permitted to sit in a child seat.
- The child (from approx. 9 months) must be able to sit upright when carried in a bike seat.
- If you want to carry a child with a bike seat, you must be at least 16 years old.
- Please follow the bike seat manufacturer's instructions.
- Do not exceed the weight limit of the bicycle (see "1.10 Weight limit" on page 8).
- If the bike seat is installed on a rear rack, the rack should be approved to carry a child bike seat and the resulting additional weight.
- Follow the manufacturer's instructions!
- The bike seat must be approved for the weight and size of the child.
- The installation of a bike seat may affect the handling of your bike (balance, steering and braking). Please adapt your riding style accordingly.
- Ride carefully: Sudden movements of your child may affect the riding safety.
- Check all bike parts for proper functioning with the bike seat attached.
- Never attach luggage to the bike seat. Check – even when riding alone – whether the bike seat is securely attached and make sure that no parts can get caught in moving bicycle parts.
- Always fasten the child restraint.
- Never let the child out of your sight when parking the bike.
- Additionally protect the child with a bike helmet.
- Make sure neither the child nor clothes can get caught in moving bike parts. Always use the foot straps. Stow away loose straps, garments etc.
- When using a saddle with coil springs, the child might pinch its fingers and get seriously injured. Use an appropriate cover for the coil springs of your saddle to effectively prevent the risk of pinching the fingers.
- Remove the key of your frame lock, if it is removable.

6.2 Carrying kids with a bike trailer

There are some basic things you should pay attention to when carrying a child with a bike trailer:

- Children over seven years of age are not permitted to sit in a bike trailer.
- No more than 2 kids of up to seven years may be carried in a bike trailer.
- Only drive on cycle paths with a maximum speed of 30 km/h.
- The minimum age of the child is half a year. In addition, a baby protection shell or infant sling is required.
- If you want to carry a child with a bike trailer, you must be at least 16 years old.
- Children should also wear a helmet when carried in a bike trailer.
- Fasten the child restraint before every ride and for short distances.
- Follow the manufacturer's instructions!
- The bike trailer must be approved for the weight and size of the child.
- Bicycle trailers must only be attached to the rear axle of your bike with special hitches. Do not fix it on the seatpost!
- The installation of a bike trailer may affect the handling of your bike (balance, steering and braking). Please adapt your riding style accordingly.
- Check all bike parts for proper functioning with the bike trailer attached.

7. Before and after your ride

7.1 Before your ride

To make sure your bike is safe to ride, you should carry out certain tasks before your ride. This is for your own safety in particular, yet also for your riding pleasure. Nothing is more annoying than having a defect on a bike tour.

If there are any defects or flaws, your bike must be inspected by a qualified bicycle mechanic and repaired. Never ride with a defective bicycle!

	Task/Check	Before your first ride	Before every ride
Wheels	Check that the wheels are straight. Lift the wheels one after the other and spin them. → The wheels must spin smoothly. → The wheels must run true, without moving up and down or from side to side. → The tyres must not rub against the frame.	X	X
	Check the wheels for play in the hubs. Lift the wheels one after the other and move the wheels to the side. → There must be no play.	X	X
	Check the freehub mechanism of the rear hub to ensure proper engagement. Get on your bike, pull the front brake and put some power onto the pedals while standing. → The power must be transferred to the rear wheel. → The freehub must not slip.	X	X
	Check the tyre pressure: The best way to check the pressure of the tyres is to use a floor pump with a pressure gauge. → The tyre pressure must not fall below or exceed the minimum or maximum value (see "9.3 Tyre pressure" on page 37).	X	X
	Check the tyres for damages and wear. → The tyres must not be damaged. → The tyres must not be worn so that the puncture protection belt or the carcass threads can be seen through the tread.	X	X
	Check whether the quick-releases and thru axles are properly attached.	X	X
Brakes	Check the bite point of the brakes: Pull one brake lever after the other while standing. → The bite point must be felt around half way down the brake lever travel.	X	X
	Check the braking performance: Pull one brake lever after the other while standing and push the bike backwards and forwards. → Front and rear wheel must lock when the brake lever is pulled.	X	X
	Check the brake pads for wear. → Disc brake: The thickness of each brake pad must be 0,5 mm or more. → Rim brake: You should see all grooves in the brake pad. When one or more grooves disappear, it is time to replace the brake pads.		X
	Check the brake discs for wear. → Minimum thickness of brake rotors: Avid: 1,55 mm, Magura: 1,8 mm, Shimano: 1,5 mm		X
	Check whether the brake cables and connections are losing brake fluid and check them for defects. → Brake fluid must not escape at the connections.	X	X

Parts	<p>Verify the tight fit of the stem: Stand in front of the bike with the front wheel between your knees. Try to turn handlebar left and right.</p> <p>→ It should not be possible to turn the handlebar with normal force.</p>	X	X
	<p>Check the headset for play: Stand next to your bike with both hands on the handlebar. Pull the front brake and try to push the bike gently backwards and forwards.</p> <p>→ You should not notice any play.</p>	X	X
	<p>Verify the tight fit of the seat post: Stand behind your bike, hold the saddle with one hand and try to turn it left and right.</p> <p>→ It should not be possible to turn the saddle or seat post.</p>	X	X
	<p>Make sure that all parts are tight.</p> <p>→ Loose parts must be tightened to the proper torque</p>	X	X
Frame	<p>Check the frame for damages and deformation.</p> <p>→ There must be no damages.</p>	X	X
	<p>Check whether all cables and hoses are in the cable clips and verify the tight fit of the clips.</p> <p>→ All cables must fit firmly in the cable clips.</p>	X	X
Suspension elements	<p>Check the suspension elements (if present) for damages.</p> <p>→ There must be no damages.</p>	X	X

7.2 After your ride



DANGER

Brake failure or reduced braking power due to dirty brake pads or rim flanges!

Brake pads and rim flanges must be free from lubricating substances such as grease, oil (also skin oil), wax, silicon etc.!

Brake pads or rim flanges contaminated in this way must not be used!

7.2.1 Cleaning your bike

After your ride you should clean your bike thoroughly using a soft cloth and clear water. Never use a pressure washer! Stubborn dirt can be removed with a gentle cleaning agent. In this case, it is best to use washing up liquids for domestic needs. Pay attention to the notes and recommendations for use printed on the respective cleaner.

In addition, you will find numerous cleaning and care products for your bike on www.rosebikes.com.

After having cleaned your bike, you must lubricate the chain (see "7.2.2 Chain maintenance" on page 32).

If your bike comes with suspension elements, make sure all moving parts in this area are free from dirt. Dirt in this area may cause premature wear and thus a loss of performance of your suspension elements.

7.2.2 Chain maintenance

The bicycle chain is the most important part of the transmission. An oily chain attracts dirt and thus accelerates wear.

Please regularly follow the steps below to ensure a long and reliable service life of your chain:

1. Clean the chain with an oil-soaked cloth.
2. Lubricate the chain using chain oil.
3. Wipe away excess oil with a dry, lint-free cloth.

7.2.3 Parking your bike

Bicycles should always be protected against falling. Especially for lightweight bikes, it is often enough to fall down from a standing position to damage the frame or components. Please also see "8. Transport, storage and disposal" on page 33.

7.3 After a crash



DANGER

Risk of accident due to damaged or broken components!

Crashes or exceptional stresses may cause unnoticed and invisible damages.

- Riding with damaged, bent or even torn parts is extremely dangerous.
- After a crash, the bike and its components must be checked by the ROSE service or by a qualified bicycle mechanic.
- Never fix bent parts yourself, but replace them for your own safety.

Especially for lightweight bikes, it is often enough to fall down from a standing position to damage the frame or components. When suspecting a damage, you should always consult the ROSE Bike Service or a qualified bicycle mechanic.

Damages on aluminium parts are indicated by dents, cracks, deformations or discolorations. If you notice any sign of damage, the component or bike must no longer be used. When suspecting a damage, you should always consult the ROSE Bike Service or a qualified bicycle mechanic.

8. Transport, storage and disposal

8.1 Transport by car

The best and safest way to transport your bike is by car. Here, your bike is perfectly protected from the elements and from theft. Yet there are some things you should bear in mind:

- Do not expose the battery pack to direct sunlight. Cover the battery for protection. It's best to use a battery cover that protects the battery pack from heat and impacts.
- Keep the battery securely inside the car during transportation and make sure it won't move around.
- Fit a transport lock between the dropouts of frame or fork when removing the wheels.

8.2 Transport on a hitch or roof rack

Before transporting your e-bike on a car bike rack you should remove the battery. Cover the contacts on battery pack and bicycle. Keep the battery securely inside the car during transportation and make sure it won't move around. It's best to use a battery cover that protects the battery pack from heat and impacts.

Rims must be padded before fitting lashing straps or ratchet systems.

When transporting several bikes on one hitch or roof rack, please make sure there is sufficient distance or padding between the bikes.

Child seats must be removed for transport.

Please also note the instructions of the hitch or roof rack manufacturer.

8.3 Battery storage

We recommend you to remove the battery pack from the bike before storage.

Store the battery in a dry, well ventilated place. Protect the battery pack from moisture and water. In unfavourable weather conditions, it is recommended to remove the battery pack from the bike and to store it in an enclosed area until it is used again.

The battery pack can be stored at temperatures between -10 °C and +60 °C. For a long battery life, however, it's advantageous to store it at approx. 20 °C. Don't exceed the maximum storage temperature. Don't leave the battery pack in the car during summer and do not expose it to direct sunlight.

Recharging the battery before and during storage

When not using the battery for a longer period, charge it to approximately 60 % (until 3 to 4 LEDs light up on the battery charge indicator). Check the charge level again after 6 months. When only one LED on the battery charge indicator lights up, charge the battery to around 60 % again.

Note: Storing an empty battery pack for a longer period may damage the battery despite its low self-discharge and reduce the battery capacity. It is not recommended to have the battery pack permanently connected to the charger.

8.4 Bike storage

You should park your bike using an appropriate cycle stand which ideally only holds the rear wheel. Make sure to check the tyre pressure regularly when parking the bike for a longer time. You should not park your bike for longer with no air in the tyres.

8.5 Bike shipping

The e-bike can be pushed into the bike box for shipping.

1. Turn the handlebar down.
2. Turn the handlebar through 90 degrees.
3. Secure or cover all loose or moving parts properly. Sharp or pointed components must be wrapped additionally to make sure they won't damage other parts of your bike and won't tear through the outer packaging.
4. Position the cardboard at the rear on the drive side.
5. Protect the top tube from damages through the handlebar by using appropriate material (e.g. foam tubing).

8.6 Battery shipping

When shipped by commercial users or transported by third parties (e.g. air transport or forwarding company) however, the battery must meet special packing and labelling instructions (e.g. as laid out in the transport regulations of the ADR):

- Only ship the battery pack when the housing is undamaged.
- Mask off all battery contacts and carefully wrap the battery pack so it won't move inside the packaging.
- Make the parcel service aware of the fact that the package contains dangerous goods.
- Additionally observe any supplementary national regulations.

If you have any questions regarding the transport of your battery pack, please contact a qualified bicycle mechanic or the ROSE service.

8.7 Disposal

Information in accordance with the German Batteries Act (BattG)

In connection with the distribution of batteries and battery packs, we as a distributor are obliged according to the German Batteries Act to inform you as our customer about the following: You are legally obliged to return batteries. You can return them after use in one of our stores, at a local collection point or in a local store. Batteries containing harmful substances are labelled with the symbol of a crossed out, wheeled bin as well as with the chemical symbol (Cd, Hg or Pb) that represents the decisive factor for the classification as a heavy metal containing hazardous substances. Used batteries can be handed over to:

ROSE Bikes GmbH
- Logistics centre -
Isselburger Str. 17
46395 Bocholt
Germany

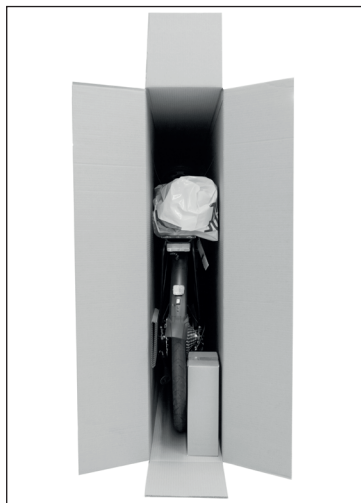
The possibility to return batteries is limited to those types of batteries we have or have had in our range as well as to the quantity end consumers usually dispose.

Information in accordance with the German Electrical and Electronic Equipment Act (ElektroG)

In connection with the distribution of electrical appliances, we as a distributor are obliged according to the German Electrical and Electronic Equipment Act to inform you as our customer about the following: You are legally obliged to return waste electrical and electronic equipment. You can return it after use in one of our stores, at a local collection point or in a local store. Waste electrical and electronic equipment can be handed over to:

ROSE Bikes GmbH
- Logistics centre -
Isselburger Str. 17
46395 Bocholt
Germany

The possibility to return waste electric and electronic equipment is limited to those types of equipment we have or have had in our range as well as to the quantity end consumers usually dispose.



9. Maintenance

Regular care and maintenance will prolong the life of your new bicycle. You should carry out easy cleaning, servicing and repair tasks yourself (see “7. Before and after your ride” on page 30). The required services must be performed by a qualified bicycle mechanic.

9.1 Bike servicing



DANGER

Risk of accident due to overdue maintenance and service!

When neglecting maintenance and servicing, worn components may cause accidents.

- The service works and intervals mentioned in this manual must be observed.
- Service and maintenance works must be carried out by the ROSE service or a qualified bicycle mechanic.

The service includes a complete check of all components. Servicing is required after a specific period of time or after a certain amount of kilometres ridden, whichever comes first.

Service intervals and tasks:

- 1. servicing after 500 to 1000 km, six months after purchase date at the latest
- 2. servicing after 3000 to 4000 km or two years after purchase date
- 3. servicing after 5000 to 7000 km or three years after purchase date

Task	1. Servicing	2. Servicing	3. Servicing
Visual inspection of all components	X	X	X
Check of all bearings and screw connections	X	X	X
Check of spoke tension	X	X	X
Wheel truing	X	X	X
Adjustment of gears	X	X	X
Adjustment of brakes	X	X	X
Check of rim flanges (in case of rim brakes) or brake rotors for wear	X	X	X
Check of chain, brake pads and tyres for wear and replacement, if necessary		X	X
Check of software status and update, if need be	X	X	X

9.2 Replacement of parts

Not all components of your e-bike might be changed or replaced without approval. The two German associations "Zweirad Industrie Verband" (ZIV) and "Verbund Service und Fahrrad" (VSF) have agreed on a uniform guideline. This guideline defines the conditions under which e-bike components can be replaced. The document divides the e-bike components in four categories:

Category 1: Components which can only be replaced after approval by the electronic drive system provider or ROSE Bikes

- Motor
- Sensors
- Electronic control unit
- Electronic cables
- Control unit on handlebar/display
- Battery pack/charger

Category 2: Components which can only be replaced after approval by ROSE Bikes

- Frame
- Rear shock
- Rigid or suspension fork
- Brake system
- Pannier rack (racks directly affect the load distribution on a bicycle. Both negative and positive changes result in a different road behaviour than the one originally intended by the manufacturer.)

Category 3: Components which can only be replaced after approval by ROSE Bikes or the component manufacturer

- Crank (provided that the distance between crank – centre of the frame (Q factor) is observed)
- Wheel (provided that the ETRTO is observed)
- Chain/belt (provided that the original width is observed)
- Rim tape (rim tape and rim must be compatible with each other. Modified combinations may result in rim tape shifting and thus in defective inner tubes.)
- Tyres (stronger acceleration, additional weight and more dynamic cornering require the use of tyres approved for e-bike use. It is important to observe the ETRTO.)
- Brake cables/brake hoses
- Brake pads
- Handlebar and stem (provided that there is no need to change the length of cables and/or hoses.)
- Saddle and seat post (provided that the offset to the rear does not exceed 20 mm compared to the original saddle/ seat post combination. A modified load distribution beyond the intended adjustment range may possibly lead to critical steering properties. The length of the saddle rails and the shape of the saddle are also important.)
- Headlight (headlights are designed for a specific voltage which must be compatible with the battery pack of the respective e-bike. In addition, the electromagnetic compatibility (EMC) must be guaranteed, whereas the headlight may be responsible for a part of the potential disturbance.)

Category 4: Components which can be replaced without approval

- Headset
- Bottom bracket
- Pedals (provided that the pedals are not wider than the series/original pedals)
- Front and rear derailleur (all shifting components must be suitable with the number of gears and compatible with each other)
- Shifter/twist shifter
- Shift cables and housings
- Chainrings/cassette (provided that number of teeth and diameter are identical to the original)
- Spokes
- Inner tube (with identical design and identical valve)
- Rear light, reflector, spoke reflectors
- Kickstand
- Grips with screw clamp
- Bell

9.3 Tyre pressure

The maximum tyre pressure depends on the tyre width and the inner rim width. The following table might be of help when adjusting the tyre pressure. Do not exceed the maximum tyre pressure!

On bicycles with originally fitted tyres, the maximum tyre pressure can be determined from the tyre width. You can find the tyre width on the sidewall of the tyre.

On many bikes, it makes sense to choose a tyre pressure that is lower than the maximum pressure for higher riding comfort. The minimum tyre pressure is also marked on the tyre sidewall and you should not fall below this value either.

Inner rim width										Tyre width		Maximum tyre pressure	
										[mm]	[inches]	[bars]	[psi]
15 mm	17 mm	19 mm	21 mm	23 mm	25 mm	27 mm	29 - 40 mm	40 - 50 mm	50 - 80 mm	20	0,8	9,5	138
										23	0,9	9	131
										25	1	8,5	123
										28	1,1	7,8	113
										30	1,2	7,2	104
17 mm	19 mm	21 mm	23 mm	25 mm	27 mm	29 - 40 mm	40 - 50 mm	50 - 80 mm	32	1,25	6,8	99	
									35	1,35	6	87	
									37	1,4	5,7	83	
									40	1,5	5,5	80	
									42	1,6	5,2	75	
19 mm	21 mm	23 mm	25 mm	27 mm	29 - 40 mm	40 - 50 mm	50 - 80 mm	44	1,7	5,0	73		
								47	1,8	4,7	68		
								50	1,9	4,4	64		
								52	2	4,1	59		
								54	2,1	3,8	55		
21 mm	23 mm	25 mm	27 mm	29 - 40 mm	40 - 50 mm	50 - 80 mm	57	2,2	3,5	51			
							60	2,3	3,2	46			
							62	2,5	2,9	42			
							66	2,6	2,7	39			
							69	2,7	2,5	36			
23 mm	25 mm	27 mm	29 - 40 mm	40 - 50 mm	50 - 80 mm	71	2,8	2,3	33				
						74	2,9	2,1	30				
						76	3	2,0	29				
						81	3,2						
						89	3,5						
102	4												
25 mm	27 mm	29 - 40 mm	40 - 50 mm	50 - 80 mm	107	4,2							
					114	4,5							
					122	4,8							
					127	5							



ROSE Bikes GmbH
Schersweide 4
46395 Bocholt
Germany