

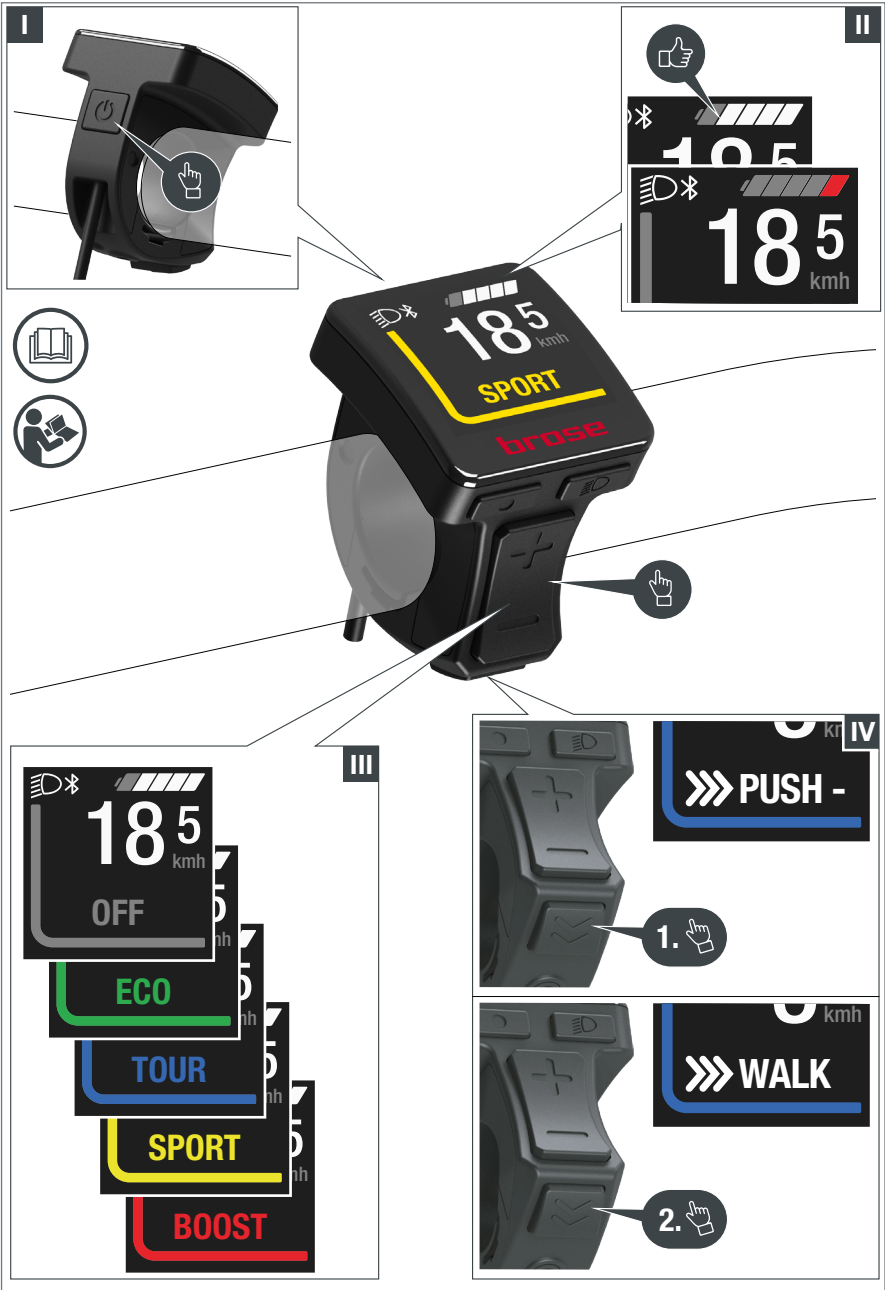


# Brose Display Allround

E41230



ORIGINAL OPERATING INSTRUCTIONS



A. Quick start overview



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## About these original operating instructions

These original operating instructions – referred to as the user manual in the following – is based on the standards and regulations applicable in the European Union and contain important information on the use of Brose components.

### 1 Additionally applicable documents

This user manual is part of the original operating instructions for the Brose Drive System.

The complete original operating instructions consist of all documents relating to the individual components of the Brose Drive System installed in your e-bike.

The component configuration for the Brose Drive System installed in your e-bike can be found in the included data sheet of the e-bike manufacturer.

**You absolutely must read and observe the following:**

- The operating instructions of the e-bike manufacturer,
- The user manuals of supplementary components of the Brose Drive System,
- The user manuals for additional and special equipment.

### 2 Reading and storing the user manual

Read the user manual, especially the safety advice in the following chapters, carefully before using components of the Brose Drive System.

This user manual contains information for the safe and fault-free use of the Brose Display Allround E41230 for the Brose Drive System.

This user manual does not contain any instructions for operating the complete Brose Drive System (information on this topic can be found in the additionally applicable documents).

- Keep the user manual at hand for further use by all users.
- If you hand over your e-bike or individual components of the Brose Drive System to third parties, always include the pertinent operating instructions and all additionally applicable documents.

### 3 Intended use

The Brose Drive System is designed as an e-bike drive system. It consists of several components.

The components of the Brose Drive System installed in your e-bike are especially designed for your e-bike and may only be used in their original configuration as intended.

The **Brose Display Allround E41230** component described in these operating instructions is one of them.

The manufacturer's instructions for the intended use of the e-bike (e.g., use on certain terrain or similar instructions) must also be followed (see the manufacturer's instructions for the e-bike).

The Brose Display Allround E41230 is used for displaying information relevant to cycling and to control the drive unit of the Brose Drive System.

- The Brose Display Allround E41230 is designed and intended only for use with a Brose Drive System.
- The Brose Display Allround E41230 can be mounted on the right or left handlebar of the e-bike.
- Any other use is regarded as improper.

Brose accepts no liability for damage caused by incorrect or improper installation or use other than that intended. Only use the Brose Drive System as described in this manual. Any other use is considered improper and may result in accidents, serious injury and damage to the drive system.

### 4 Foreseeable misuse

Foreseeable misuse, especially tuning, will void the CE marking of your e-bike (EPAC up to 25km/h) – with all legal consequences.

Tuning consists of all non-approved modifications to the Brose Drive System or e-bike that manipulate performance. Accidents that can be traced back to technical manipulation are subject to high personal liability costs and criminal prosecution.

Furthermore, any kind of tampering with the Brose Drive System will void the warranty and guarantee claims on your e-bike.

Refrain from the following misuse of the Brose Display Allround E41230 or the e-bike equipped with it in order to prevent hazards:

- Improperly performed repairs and/or maintenance work;
- Improperly performed cleaning and care;
- Structural modifications to the delivery condition of the Brose Drive System or the e-bike equipped with it, especially tuning, and any other manipulation of the Brose Drive System and its components;
- The opening and modification of all components of the Brose Drive System.

## 5 Residual risks

Certain residual risks unavoidably remain when using the e-bike - despite a well-calculated design by the manufacturer and compliance with the specifications for intended use by the user.

You can reduce these residual risks yourself by observing all safety and warning notices, but you cannot completely exclude them. It is therefore vital that you be aware of the existence of residual risks when using the e-bike.

Unforeseeable residual risks associated with the use of the e-bike described here include:

### **Risk of injury**

- Unforeseeable cycling maneuvers and/or misbehavior of other road users.
- Surprising or sudden changes in the road surface conditions, such as freezing wetness or "black ice".
- Incalculable material defects or signs of wear that may cause components of the e-bike to break or impair their function.

### **Risk of fire**

- Internal, invisible damage can cause the battery to catch fire and ignite objects in the vicinity.

### **Risk of damage**

- When the battery is burning, hydrofluoric acid escapes with the flue gas. Hydrofluoric acid is highly corrosive and permanently damages surfaces.

## 6 Explanation of illustrations

Illustrations in this user manual show functions by way of example and may differ from the actual appearance of your Brose Drive System.







All illustrations are schematic and examples only. Some details may vary for your e-bike depending on the e-bike manufacturer. Detailed information on your entire e-bike is available from your dealer and e-bike manufacturer.

The numbering in the following tables refers to the illustrations at the beginning of this manual.

### Illustration overview

- A.** Quick start overview
- B.** Key assignment overview
- C.** Assembly and adjustment









### Illustrated components

- (1) Button  (On/Off)
  - › Switch system on/off
- (2) Button  (Menu)
  - › Confirm selection
- (3) Button  (Light)
  - › Jump menu back one level
- (4) Button  (Plus)
  - › Increase assistance level /
  - › Page up menu
- (5) Button  (Minus)
  - › Decrease assistance level /
  - › Page down menu
  - › Activate push assist
- (6) Button  (Push Assist)
  - › Release push assist
- (7) Plug
  - › Connection to the motor unit
- (8) Grub screw
  - › Control unit fastening



## 7 Explanation of symbols and signs

The following symbols can be found on the components of the Brose Drive System and in this user manual.

 	<p>Read and observe the user manual to ensure safe use.</p>	 <p>Electrical appliances with this labeling must not be disposed of with household or residual waste. Consumers are required by law to dispose of electrical equipment with this labeling at appropriate collection points for environmentally sound recycling.*</p>
	<p>For your own protection and for the protection of the components, observe all instructions marked with this symbol!</p>	 <p>Dispose of the packaging according to type. Put cardboard in the waste paper container and foils in the recyclables container.*</p>
	<p>Never twist the fixed control unit. Always loosen the grub screw before turning the control unit to adjust it.</p>	<p><b>Bluetooth®</b></p> <p>The Bluetooth® word mark and logos are registered trademarks and the property of Bluetooth SIG, Inc.</p> <p>Any use of these word marks/logos by Brose Antriebstechnik GmbH and Co. is under license.</p>
	<p>Products marked with this symbol comply with all applicable Community regulations of the European Economic Area.</p> <p>Labeling of rechargeable and other batteries that must not be disposed of with household or residual waste. Dispose of the labeled rechargeable and other batteries at suitable collection points.*</p> 	

\*Please also observe the notes on disposal on page 32.

## For your safety

### 8 Information regarding safety and warning notices

This user manual contains instructions and notices for your safety, as well as the safe and proper operation of the Brose Drive System.

For your own safety, please read all safety notices and information in this chapter carefully before using the Brose Drive System or the components.

#### 8.1 Explanation of safety and warning notices

Basic safety notices are summarized in this chapter and include instructions that basically apply to safe use or to maintaining a safe condition.

Action-related warnings warn of residual dangers and precede the respective step.

#### 8.2 Presentation and structure of safety and warning notices

##### **SIGNAL WORD**

##### **Type and source of the danger!**

Explanation of the type and source of the danger.

» Measures for preventing the danger.

#### 8.3 Danger classification of safety and warning notices

The safety and warning notices are classified with regard to their level of danger.

The danger levels with the corresponding signal words and warning symbols are explained below.

##### **DANGER**

Danger that will result in death or serious injury if not prevented.

##### **WARNING**

Danger that can result in death or serious injury if not prevented.

##### **CAUTION**

Danger that can result in moderate or minor injury if not prevented.

##### **NOTE**

Danger that can result in property damage if not prevented.

## 9 Safety notice

### **WARNING**

#### **Dangers for e-bike users!**

Basically, specific dangers arise when using e-bikes. Depending on the e-bike model in which the drive system is installed, there may be additional dangers not mentioned here.

- » Read and follow the manufacturer's instructions for your e-bike.
- » Find out about any applicable national regulations concerning e-bikes and observe them.

### **WARNING**

#### **Risk of accidents and injury!**

If you are distracted by the operation or displays on the control unit while cycling, a risk of accidents and injuries arises.

- » Familiarize yourself with the handling of the control unit and the various indications and views on the display before setting off (away from road traffic).
- » Do not be distracted by controls or displays while cycling.
- » Drive with foresight and do not make any settings on the control unit (e.g. change the assistance level) during delicate cycling maneuvers and in unclear cycling situations.

### **WARNING**

#### **Risk of accidents and injury!**

If the Brose Drive System is activated accidentally, accidents and injuries may result.

- » Always remove the battery from the e-bike:
  - Before transporting the e-bike.
  - Before performing any work on the e-bike.
  - Before storing the e-bike.

### **WARNING**

#### **Risk of accidents and injury!**

There is a risk of injury if the push assist is used improperly.

- » Only use the push assist as an aid when pushing your e-bike:
  - When push assist is activated, the e-bike must be held securely with both hands and the wheels must be in contact with the ground.
  - Do not use the push assist to propel yourself while sitting on the e-bike.

## NOTE

### **Risk of damage!**

Improper handling can damage the Brose Drive System or the individual components.

- » Only have individual components of the Brose Drive System and the e-bike replaced with identical components or other components expressly approved by Brose or the e-bike manufacturer. In this way, you can protect the other components or your e-bike from possible damage.
- » Never open the components of the Brose Drive System. The components may be destroyed by opening, voiding the warranty.
- » Do not place the e-bike upside down on the handlebars and saddle.
- » Do not use the control unit as a handle.
- » Do not lift the e-bike by the control unit.
- » Never twist the fixed control unit. Always loosen the grub screw before turning the control unit to adjust it.

## Assembly and adjustment

### **WARNING**

#### **Risk of accidents and injury!**

Incorrect or improper assembly and maintenance work can damage your e-bike or the components and increase the risk of accidents.

- » Do not overestimate your technical abilities.
- » Have assembly and maintenance work, in particular the replacement of components and spare parts, carried out only by an authorized Brose specialist dealer.
- » Do not under any circumstances carry out any work or make any changes to your e-bike or the components if you do not have the necessary expertise and required tools.
- » Always switch off the Brose Drive System and remove the battery before starting work.
- » Make sure that you can safely operate the controls on the handlebars at all times.

### **NOTE**

#### **Risk of damage!**

Improper handling can cause damage to the control unit.

- » Never twist the fixed control unit. Always loosen the grub screw before turning the control unit to adjust it.

### **INFORMATION**

- The control unit can be mounted on either the left or right side of the handlebar.
- Brose recommends positioning on the left-hand side of the handlebar.

## 10 Mounting and adjusting the control unit

› fig. C, page 3

1. Carefully remove the handle and open the fastening of the brake, gear shift and all other components mounted on the selected side of the handlebar.
  - › Observe the respective manufacturer's instructions for the components and the e-bike.
2. Carefully loosen the grub screw **(8)** with a size 2 mm (3/32 in.) hexagon socket on the control unit.
  - › **NOTE:** The screw cannot be removed from the control unit.
3. Slide the control unit onto the handlebar from the side.
  - › Position the control unit close to the handle so that all keys can be easily operated by your thumb.
  - › Make sure that the connection cable is not crushed or kinked.
4. Slightly tighten the grub screw with a size 2 mm (3/32 in.) hexagon socket.
  - › Do not tighten the screw yet.
5. Check the position of the control unit.
  - › Are all buttons accessible with your thumb?
  - › Is the display clearly visible?
6. Tighten the grub screw with the hexagon socket.
  - › Torque: 0.3 Nm (max. 0.5 Nm).
7. Connect the plug **(7)** of the control unit with the plug of the motor cable.
  - › This connection may vary depending on the equipment of their e-bike.

## 11 Adjusting the control unit

› fig. C, page 3

1. Carefully loosen the grub screw **(8)** with a size 2 mm (3/32 in.) hexagon socket on the control unit.
  - › **NOTE:** The screw cannot be removed from the control unit.
2. Adjust the position of the control unit.
  - › Are all buttons accessible with your thumb?
  - › Is the display clearly visible?
3. Tighten the grub screw with the hexagon socket.
  - › Torque: 0.3 Nm (max. 0.5 Nm).

## Before initial commissioning

### WARNING

#### **Risk of accidents and injury!**

Becoming distracted by the operation or the indications on the display while cycling can result in accidents and serious injuries.

- » Familiarize yourself with the functions and handling of the control unit away from road traffic before using your e-bike for the first time.

### NOTE

#### **Risk of damage!**

Improper handling can cause damage to the control unit.

- » Never twist the fixed control unit. Always loosen the grub screw before turning the control unit to adjust it.

Commissioning the control unit does not require any further steps after assembly.

The control unit is ready for operation as soon as it has been connected correctly and the battery is sufficiently charged.

- You can use the controls (buttons) on the control unit to control the functions of your Brose Drive System.
- The display of the control unit informs you about the selected assistance level, as well as other information on your Brose Drive System.

### INFORMATION

- The control unit does not have its own battery and therefore cannot be used or operated outside the e-bike.
- Provided the e-bike is switched on, the control unit always remains switched on during cycling, even if the motor assistance is deactivated.

### INFORMATION

A complete function is only given if the speed sensor as well as all cables have been connected correctly and the battery is charged (at least one white charging bar visible).

### INFORMATION

- The menu and settings cannot be accessed while cycling.
- All interface representations and interface texts on the following pages correspond to the release status of the software.
- An update may change the display slightly; you can obtain this update from your authorized Brose dealer.

## 12 Basic controls (buttons)

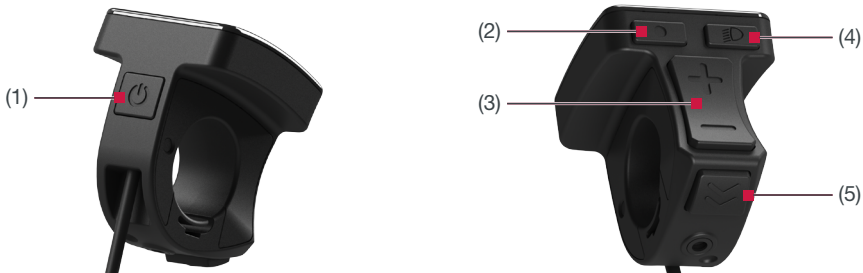









Fig. 1: Controls (buttons) of the control unit


- (1) Button  (On/Off)
- (2) Button  (Menu)
- (3) Buttons  /  (Plus/Minus)

- (4) Button  (Light)
- (5) Button  (Push Assist)



### Button (On/Off)

- › Press the  button to switch the Brose Drive System on or off again.



### Button (Menu)

- › With the  button, you can retrieve various information while cycling.
- › If you are in a menu (e.g. “Settings”), use this button to confirm the settings you have made.


### Buttons / (Plus/Minus)

- › Using the  /  buttons, you can increase or decrease the assistance level.
- › If you are in a menu (e.g. “Settings”), you can use these two keys to scroll up or down in the menu.

### Button (Light)

- › Use the  button to switch the lighting of your e-bike on or off again. This function depends on the model.
- › If you are in a menu (e.g. “Settings”), press the  button to go back one level. Changed settings are saved.

### Button (Push Assist)

- › Press the  button to enable the push assist function.



### 13 Display basics

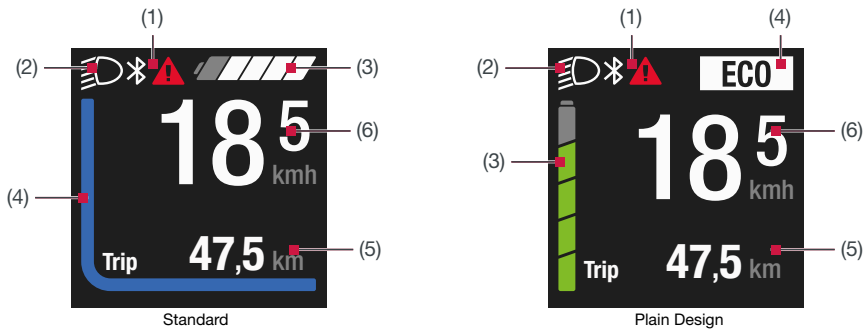



Fig. 2: User interface

- (1) System status information (e.g. errors)
- (2) Lighting display
- (3) Battery charge level display

- (4) Current assistance level
- (5) Trip information (including unit)
- (6) Speed (including unit)

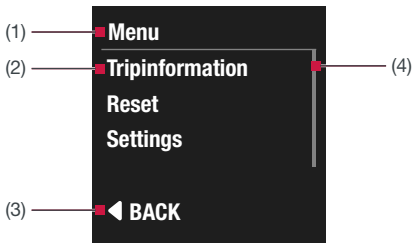
The control unit offers a choice of two different user interfaces.

- Changing the user interface (see chap. 23 on page 25) .

- The upper display area forms the status bar and is permanently displayed while cycling.
- In the center display area, the current speed and the charge level or the assistance level are displayed as a colored line.
- In the lower display area, you can use the  button to call various trip information (trip data).

## 14 Menu structure and navigation





The menu structure of the Brose control unit is as follows:





**Fig. 3:** Menu structure

- (1) Headline (permanently visible)
- (2) Menu sub-item
- (3) Back (last list item)
- (4) Navigation bar

To access the menu, stop or start the e-bike and proceed as follows with the e-bike stationary:

- Press the  button for two seconds.
  - › **Menu** is shown on the display.
- Navigate to the desired list item with the  /  buttons and call it with the  button.

To go back one level:

- Select **Back** and confirm with the  button.
- **Or:** Press the  button.


## Operation and control

### 15 Switching the Brose Drive System on and off

#### INFORMATION

- The Brose Drive System can only be started up with a sufficiently charged battery (at least one white charging bar visible).
- Depending on the battery installed in your e-bike, it may take a few moments for the display of the control unit to turn on.

#### Activation


- With the e-bike battery inserted, press the  button on the control unit once.
  - › The Brose Drive System is now ready for operation.

The drive is activated as soon as you start pedaling. The motor power depends on the assistance level set on the control unit.

As soon as you stop pedaling in normal mode or as soon as you reach a speed of 25 km/h, the assistance function of the e-bike drive is switched off.

The drive is automatically reactivated as soon as you start pedaling and the speed is below 25 km/h.

#### Deactivation

- With the E-Bike battery inserted, press the  button on the control unit for approx. 3 seconds until the Brose start screen appears.
  - › The system takes about 3 seconds to turn off completely. You can turn on the system again only after it has shut down completely.

The control unit, drive unit and battery are switched off completely.

#### Automatic deactivation

If no power is called up from the e-bike drive for approx. 15 minutes (e.g. because the e-bike is stationary) and no button is pressed on the e-bike control unit, the Brose Drive System switches off automatically to save energy.

The time after which the control unit switches off automatically can be adjusted in the settings (*see chap. 24 on page 26*).

The control and display unit is always switched on, even if the motor assistance is deactivated.

Always switch off the Brose Drive System when you park the e-bike.

## 16 Selecting the assistance level

Your Brose Drive System has four assistance levels.

During the ride, the level is displayed to you as a colored band or as text in the status bar, depending on the selected user interface (Fig. 2, page 17).

The characteristics of the respective assistance mode can be found in table «Overview of the assistance levels».

You can set on the control unit how much the e-bike drive assists you when pedaling. The assistance level can be changed at any time, even while cycling.

To increase the assistance level, press the **+** button on the control unit repeatedly until the desired assistance level appears in the display. To decrease, press the **-** button.

For 2 seconds, the selected assistance level is displayed in the trip information area, also as text.

### Overview of the assistance levels

<b>OFF</b>	(grey) No motor assistance. Simultaneously resistance-free cycling.
<b>ECO</b>	(green) Noticeable support from the engine for maximum efficiency and range.
<b>TOUR</b>	(blue) Clearly noticeable assistance from the engine, optimum for long trips.
<b>SPORT</b>	(yellow) Powerful assistance for sporty cycling.
<b>BOOST</b>	(red) Full support for sporty cycling, on hilly routes and in city traffic with normal battery range.

## 17 Using the push assist

### WARNING

#### Risk of accidents and injury!

There is a risk of injury if the push assist is used improperly.

- » Only use the push assist as an aid when pushing your e-bike:
  - When the push assist is activated, the e-bike must be held securely with both hands and the wheels must be in contact with the ground.
  - Do not use the push assist to propel yourself while sitting on the e-bike.

### INFORMATION

Familiarize yourself with the function and acceleration of the push assist away from road traffic.




Only use the push assist as an aid when pushing your e-bike.

The push assist accelerates the e-bike without pedal assistance to a speed specified by the e-bike manufacturer (3 to 6 km/h).




Fig. 4: Push assist (active)

#### Activate push assist


1. Press the  button.
  - › The function is activated.
  - › **PUSH-** appears on the display.
2. Within 5 seconds, press and hold the  button for as long as you need the push assist function.
  - › **WALK** appears on the display.
  - › Release the  button to deactivate the push assist.

#### Deactivating push assist



The push assist is deactivated as soon as one of the following events occurs:

- If you release the  button,
- the speed specified by the e-bike manufacturer is exceeded (3 to 6 km/h).

## 18 Switching the lighting on and off

In the version where the headlight is powered by the Brose Drive System, the  button on the control unit can be used to switch the front and rear lights on and off simultaneously.

When the light is on, a symbol is shown in the status bar in the display.

	No lighting activated
	Lighting activated
	Automatic control system activated

Turning the lighting on and off does not affect the display backlighting.

### INFORMATION

If the battery has been removed from the e-bike or if the battery is completely discharged, the light will not illuminate. If the e-bike does not have a separate lighting system, it no longer complies with the German Road Traffic Licensing Regulations (StVZO) and may therefore not be used on public paths/roads.

## 19 Changing the trip information view

The following information can be displayed:

- Range
- Time
- Distance
- Trip duration
- Average speed
- Maximum speed
- Total distance

To switch between trip information items:

- Press the  button.

### INFORMATION

Individual functions may be disabled depending on the e-bike model. For detailed information, please contact your e-bike manufacturer and your authorized Brose dealer.



Displays

20 System information



Fig. 5: Error message example

The status bar will show you the following:

-  Battery reserve is reached or battery is empty and the system is switched off.
-  An error has occurred (see chap. 26 on page 28).

21 Battery charge level display

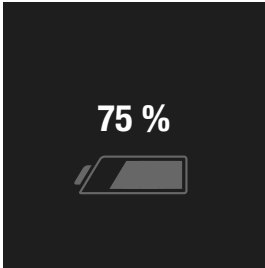


Fig. 6: Charging the battery

The charge level of the battery can be shown in the display of the operating unit with 5 segments and/or in percent (see chap. 24 on page 26). One segment corresponds to approx. 20% of the battery capacity.

Depending on the equipment of your e-bike, the charge level of the battery can also be read on the same.

If the battery charge level is <10%, the charge level indicator starts flashing.

When the charge level is <5%, the last segment of the display turns red. In this state, the motor support is switched off to ensure the use of the lighting for another 2 hours in case of emergency.

If the battery is charged on the wheel, a corresponding message is displayed.

White	Battery capacity >10%
Red	Battery capacity ≤ 10% (Last segment red)

## Menu and settings

### INFORMATION

Please note that not every Brose Drive System has all setting options. Possibly some menu items are not activated or not available.

To access the menu and settings, the following requirements must be met:

- The battery is inserted and sufficiently charged.
- The Brose Drive System is switched on.
- The e-bike is at a standstill.

### INFORMATION

The menu and settings **cannot** be called while cycling.

## 22 Menu

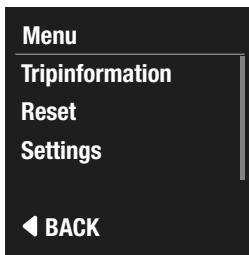



Fig. 7: Settings Menu

### Calling the menu

- Press the  button for two seconds.  
→ **Menu** is shown on the display.

The following settings and information are available for selection in the **menu**:

#### **Tripinformation**

- Overview of all trip information (trip data).

#### **Reset**

- Reset the trip information (all trip data).  
› After reconfirmation, all trip information (trip data) can be deleted.

The total kilometers cannot be deleted.

#### **Settings**

- (see chap. 23 on page 25)



## 23 Settings

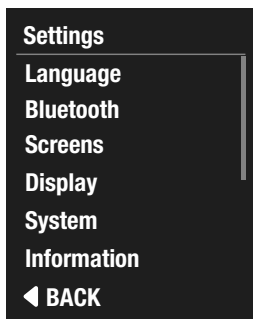






Fig. 8: Menu Settings

### Calling the settings

- Press the  button for two seconds.
  - Using the  /  buttons, select **Settings** and confirm the selection with the  button.
- **Settings** is shown on the display.

The following settings and information are available for selection in the **Settings** menu:

#### Language

Selecting a language causes an immediate change in the language display.

#### Bluetooth

Additional devices can be connected via the Bluetooth interface.

- For more information, contact your e-bike manufacturer or an authorized Brose dealer.

#### Screens

- Personal the trip information (trip data) display. Select which data can be displayed while cycling.

#### Display

- Adjustment of the display.

##### Automatic

- › The display brightness and the day-and-night driving display (white/black) are controlled automatically using the light sensor.

##### Brightness

- › Control of the display brightness: The display brightness can only be changed if automatic control is deactivated.

##### White/Black

- › Switch between white and black backgrounds.

##### Display Off

- › The backlighting of the display is turned off after 5 seconds of inactivity. All e-bike and display functions remain active. Press any key to turn the backlighting back on.

##### Plain Design

- › Change of the user interface  
(Fig. 2, page 17).

#### System

- (see chap. 24 on page 26)

#### Information

- Information from your Brose Drive System (e.g. Product Name and Software Version).

## 24 Settings System

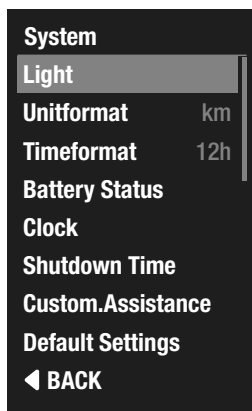


Fig. 9: Settings System

### Call settings System

- Press the button for two seconds.
- Using the / buttons, select **Settings** and confirm the selection with the button.
- Using the / buttons, select **System** and confirm the selection with the button.
  - › **System** is shown on the display.

The following settings and information are available for selection in the **System** menu:

#### Light

- Settings for lighting (only if the lighting is powered by the Brose Drive System).
  - › The lighting is automatically switched on and off.
  - › Switch on the lighting permanently.

#### Unit format

- Unit selection:  
(km/mi) / (km/h/mph).

#### Time format

- Time format selection (12h/24h).

#### Battery Status

- Battery display in percent (%). The display in percent (%) is shown in addition to the segment display.

#### Clock

- Setting the time
  - › Press the button. The hour display flashes.
  - › Set the desired hour using the / buttons.
  - › Confirm your entry with the button. The minute display flashes.
  - › Set the desired minute using the / buttons.
  - › Confirm your entry with the button.

#### Shutdown Time

- Define the automatic switch-off time (1 - 20 minutes) of your Brose Drive System.

#### Custom. Assistance

- Adjust the assistance levels individually to your needs.

#### Default Settings

- After reconfirmation, all settings are reset to the delivery state.

## Error handling

If problems occur when using your Brose Drive System, first check the points listed in *chap. 25 Troubleshooting*. In many cases, you can already remedy the situation yourself.

If an error is shown in the display of the control unit, first check the points listed in *chap. 26 Error indication in the display*.

## 25 Troubleshooting

Problem	Possible cause	Solution approach
The control unit and/or Brose Drive System cannot be activated.	The battery is not correctly engaged in holder.	Remove the battery and reinsert it. Make sure that it fits correctly.
	Battery is not charged.	Fully charge the battery.
	The contacts of the battery and/or the holder are dirty.	Make sure that all contacts are clean. Clean them with a dry, lint-free cloth.
	The control unit is not connected correctly.	Check the plug-in connection of the control unit. Make sure that it fits correctly.
	The contacts of the control unit are dirty.	Make sure that all contacts are clean. Clean them with a dry, lint-free cloth.
The control unit does not provide trip data even though the e-bike is in motion.	The magnet is not mounted correctly (distance to speed sensor).	Check the mounting of the magnet, especially its distance to the speed sensor on the chain stay. This distance must lie between 5 and 17 mm. Correct the distance if necessary.
The lighting cannot be activated.	The lighting cable is incorrectly connected.	Check the wiring and plug-in connections and connect them correctly if necessary.
The control unit displays an error in the multifunction panel.	The system has an active error.	See <i>chap. 26 Error indication in the display</i>

26 Error indication in the display

The control unit displays error messages of the entire Brose Drive System.

Depending on the type of fault, the drive may be switched off automatically. Check the e-bike before further rides. Continuing to drive without assistance from the drive is possible at any time.

The error display can indicate serious faults in your Brose Drive System.

- Stop the ride. Find out the meaning of the error indication and observe the solution approach.
- If the meaning of the notice is unclear, turn off the e-bike. Contact the e-bike manufacturer or an authorized Brose dealer for information on the next steps.

Indication in display	Remedy
Check Speed Sensor	Switch off the Brose Drive System. Check the speed sensor and position of the magnet. Restart the Brose Drive System.
Check Light	Switch off the Brose Drive System. Check all wires and plug-in connections of the front and/or rear lighting system. Restart the Brose Drive System.
Restart System	Restart the Brose Drive System. If the problem persists, please contact an authorized Brose dealer.
Check Brake Light	Switch off the Brose Drive System. Check all lines and plug-in connections of the brake system. Restart the Brose Drive System.

## Transport, maintenance and cleaning

### 27 Transport

#### NOTE

##### **Risk of damage!**

If you transport your e-bike outside your car, e.g., on a luggage rack, moisture can penetrate system components even at low speeds.

- » Remove the battery from the e-bike.
- » Protect all e-bike components such as the display, drive, open plugs, etc. from moisture penetration. You can obtain appropriate protectors from the bike dealer.

#### INFORMATION

Undamaged batteries can be transported on the road by the private user without further requirements.

### 28 Maintenance

- Visually inspect the electrical lines, connections and contacts regularly to ensure that they are undamaged and clean.
- Arrange for your Brose Drive System to be given a technical inspection at least once a year to ensure that all components are present and functional (e.g. mechanics, up-to-date system software).

For service or repairs to the Brose Drive System or in case of a component failure (e.g. battery or charger), contact an authorized Brose dealer.

Information about authorized Brose dealers can be found in the Service area at:

**[www.brose-ebike.com](http://www.brose-ebike.com)**

## 29 Cleaning

### **WARNING**

#### **Risk of electric shock and short circuits!**

Injury due to electric current during cleaning and care work.

- » Switch off the Brose Drive System.
- » Unplug the charger plug from the socket.
- » Cover the power supply contacts.
- » Do not use any water or other cleaning fluids!
- » Do not immerse the control unit in water.
- » Do not use a high-pressure cleaner or steam cleaner for cleaning.

### **CAUTION**

#### **Risk of burns!**

The brakes, motor and battery can heat up considerably during operation.

- » Always let the components cool down first before handling them or working in the vicinity of them.

### **CAUTION**

#### **Risk of injury!**

If the drive system starts up while you are working on it, you may become injured.

- » Switch off the Brose Drive System and remove the battery when cleaning the e-bike or components.

### **NOTE**

#### **Risk of damage!**

Improper cleaning can damage the Brose Drive System or the individual components.

- » Do not use aggressive cleaning and care agents, especially penetrating oils and brake cleaners.
  - » Do not use sharp, angular or metallic cleaning objects.
- Keep all components of your e-bike clean.
  - Avoid soiling the charger connections and the contacts. Wet contacts can lead to corrosion.
  - Clean the components with a dry, lint-free cloth.

## Technical data

### 30 Control unit Brose Display Allround

E 41227	Brose Display Allround	Operating frequency	2.400 - 2.480 MHz
L × W × H	44×37×50 mm	Electrical data	12 V // max. 3 W
Approx. weight	50 g	Operating and storage temperature	-10 °C bis +60 °C
Handlebars	Ø 22.2 mm	FCC ID // IC	O4GAE // 7666A-AE
CAN	CAN interface ISO 11898 high-speed CAN	Display	1.5 inch TFT color display (240 × 240 px)
Protection class & Certificates	IP X7 (HMI) watertight CE // ROHS // Reach // Bluetooth (EU, Switzerland, USA, Canada, Japan)		
Bluetooth®	low energy 5.0 (optional ANT+)		
Frequency	2.400 - 2.480 MHz		
Transmission power	< 10 mW		

### 31 Declaration of Conformity

Brose Antriebstechnik GmbH & Co. KG hereby declares that radio system type Display Allround complies with European Directive 2014/53/EU.

The complete EU declaration of conformity can be found in the service area on:

**[www.brose-ebike.com/service](http://www.brose-ebike.com/service)**

## Disposal

Batteries, chargers, control units, drive units, speed sensors, accessories and packaging must be recycled in an environmentally-friendly manner.

Do not throw e-bikes and their components in the household waste!

By collecting and recycling waste products separately, you are helping to conserve natural resources and are ensuring that the product is disposed of in a way that is safe for health and the environment.

Return e-bikes or components which are no longer serviceable to an authorised Brose dealer.

### ONLY FOR EU COUNTRIES



According to European Directive 2006/66/EC defective or used batteries/rechargeable batteries must be collected separately and recycled in an environmentally sound manner.



The symbol indicates that both non-rechargeable and rechargeable batteries may not be disposed of with household waste.

Non-rechargeable and rechargeable batteries containing mercury (Hg), cadmium (Cd) or lead (Pb) are marked with the respective chemical symbol below the disposal symbol.

Consumers are legally obliged to non-rechargeable and rechargeable batteries to the retailer or a collection point regardless of whether they contain the above-mentioned pollutants so that they can be disposed of in an environmentally friendly manner and valuable raw materials can be recovered in order to avoid negative impacts on the environment and human health.

Batteries may contain substances that have adverse health effects for humans, animals and plants if disposed of incorrectly.

Special risks arise when handling lithium-containing batteries/rechargeable batteries, such as a high risk of fire/explosion due to the effects of heat or a short circuit.



Non-rechargeable and rechargeable batteries that are not permanently installed in the device must be removed and properly disposed of separately before the disposal of the device.



According to the European Directive 2012/19/EU, electrical appliances that are no longer fit for use must be recycled in an environmentally sound manner.

- For lithium-containing batteries and rechargeable batteries, tape off the terminals before disposal to prevent external short-circuiting.
- The disposal of old non-rechargeable and rechargeable batteries is cost-free. Make sure that non-rechargeable and rechargeable batteries are fully discharged when brought to the retailer or collection point.
- Try to avoid waste from old batteries as much as possible, e.g. by using long-life batteries or rechargeable batteries instead of disposable batteries.
- Always ensure proper disposal to counteract littering in public spaces.
- If applicable, use existing options to reuse used batteries instead of disposing of them, e.g. by having the battery serviced.

Old machines, replacement parts and packaging consist of recyclable materials. The owner has the duty to dispose of them properly according to the statutory provisions and in an environmentally-friendly manner.

All injection-moulded parts made of plastics are labelled with a recycling symbol.

- REACH directive no. 1907/2006 (EC)
- RoHS directive (2011/65/EU)

Please return Brose e-bike components that are no longer fit for use to an authorized Brose dealer.

## **SUBJECT TO CHANGES.**

## Service

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### 32 Customer care and service

For all questions regarding the Brose Drive System and its components, please contact an authorized Brose dealer.

The contact details for authorized Brose dealers can be found in the service area at:

**[www.brose-ebike.com](http://www.brose-ebike.com)**

### 33 Copyright

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