

# User Manual for SmartBrake SWITCH

## Congratulations on your new SmartBrake SWITCH system!

When using two brake units, each must be turned on, off, and charged separately. The units operate together during use.

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### How to Turn On SmartBrake

1. Activate the brake unit:
  - Press the activation button once →  
Once calibration is complete, the safety brake is activated.
2. Activate the brake lever:
  - Press the brake lever once to wake it from sleep mode. The safety brake will disengage, and the bike will roll freely when the lever is not held down.



**SmartBrake must be activated before use:** If the brake unit is not turned on before you start cycling, the brakes may be locked or non-functional. This can pose a serious risk to you and others. Always make sure to turn on the system before use and test that all brake controllers are working properly.

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### How to Turn Off SmartBrake

- Hold the activation button until it blinks red twice, then release. You will hear the brake disengage.
- If the brake controller is not activated within 30 minutes, the brake unit enters power-saving mode. The parking brake will engage, and the unit will shut down..

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### How to use the thumb brake Switch or Brake Lever Slim

- **1. Brake adjustment:** The brake lever can be adjusted to 5 different positions. Full braking is achieved when the lever is free.
- **2. Activate parking brake:** The brake will stay in parking when the lever is free.
- **3-4. Light signals:** The indicator lights are visible from the back of the controller.
- **5.** The thumb brake is often used in combination with the secondary brake for one-handed control of the bike's dual braking system.

Note: If the brake lever loses signal, the safety brake will activate automatically. Once the signal is restored, the safety brake will disengage on its own.



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### Why does the system brake on its own? (*Fail-safe*)

SmartBrake includes a built-in *fail-safe* function that automatically activates the brakes if something goes wrong. This is done to protect the user and prevent the vehicle from moving uncontrollably.

The brake may activate automatically in the following situations:

- **Critically low battery**  
The system enters safe mode when the controller or brake unit is nearly out of power. The brakes activate automatically.
- **Signal loss (*main controller only – not assistant*)**  
If the main controller loses contact with the brake unit, the system switches to fail-safe and activates the brakes.
- **Technical error or power interruption**  
The system automatically enters a safe state to prevent dangerous situations.

You'll know the system is in fail-safe mode when the brake activates by itself. You can identify the cause by checking the indicator light near the charging port on the brake unit or controller — the light will blink in a specific pattern to indicate the problem.

See the troubleshooting chart at the end of this manual:

**“Light / Problem – When – What does it mean? – What to do?”**

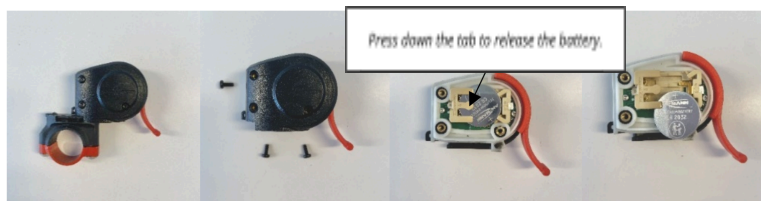
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### Charging and Battery Life

- **Brake Unit:** Use the included charger. While charging, a red indicator light appears next to the charging port. When the battery is fully charged (after approx. 3 hours), the light turns green. The brake unit can remain active for 20–25 hours before it needs recharging.  
A good habit is to charge SmartBrake at the same time as your e-bike, if your bike has an electric motor.
- **Brake remotes:** Uses one CR2032 battery. The lever can be held continuously for up to 20 hours before the battery needs to be replaced.
- **Long-Term Storage:** Charge the brake unit at least every four months to prevent battery damage during storage.







## Maintenance and Cleaning

- Maintenance charging: Ensure regular charging during long-term storage.
- Cleaning: Use a damp cloth to keep the system clean.

## ✓ Quick Troubleshooting – SmartBrake SWITCH (R54)

### Thumb Brake and Brake Lever slim (TB/BLS)

| Light / Issue           | When   | What it means   | What to do  |
|-------------------------|--|---|---|
| ● Solid green light     | When pressing the lever, and the brake unit is <b>activated</b>                  | The brake is engaged. Everything is functioning normally. | No action needed.   |
| ●◆ Blinking green light | When pressing the lever, and the brake unit is <b>off</b> or <b>out of range</b> | No connection to the brake unit.                          | Turn on the brake unit or move the controller closer. If this doesn't help, the controller may need to be paired. |
| ● Solid red light       | When pressing the lever, and the brake unit is <b>activated</b>                  | Battery level is low (approx. 25% remaining).             | Replace the battery as soon as possible.  |
| ●◆ Blinking red light   | When pressing the lever, and the brake unit is <b>activated</b>                  | Battery is empty. The brake is locked in fail-safe mode.  | Replace the battery. Turn off the brake unit to release the brake.  |



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## Brake Unit (BU)

| Light / Issue                                   | When   | What it means   | What to do  |
|---|--|---|---|
| ●◆ Blinking red brake light (every 5 seconds)   | While the brake unit is active                         | Battery is low (approx. 25% remaining).   | Charge the brake unit as soon as possible.  |
| ●◆ Blinking red USB light + wheels are locked   | When the brake unit is out of power                    | The fail-safe brake is engaged. The brake controller shows ● solid green light when pressed.  | Press and hold the activation button until the motor releases and the light blinks twice. Then fully charge the brake unit.   |
| ●◆ Blinking green USB light + wheels are locked | When the brake controller is active, but not connected | The fail-safe brake is engaged because:<br>1. Brake controller is out of range (●◆ blinking green)<br>2. Brake controller battery is empty (no light)<br>3. The brake unit is set to assistant mode | 1. Move the brake controller closer.<br>2. Replace the battery.<br>If not possible: Press and hold the activation button until the motor stops and the light blinks twice. The brake will release.<br>3. Reset the brake unit to administrator mode by holding the activation button for about 25 seconds. Release the button when the brake light turns on. If the problem persists after the reset, try reconnecting the controller.* |

## Pairing a Brake Controller with a Brake Unit

- Set the brake unit in pairing mode:**
  - Start with the unit powered off.  
Press and hold the activation button until the brake light turns on (about 8 seconds), then release the button.
  - The brake light will stay on – the unit is now ready for pairing.
- Connect the controller:**
  - Press the BRAKE button on the controller.  
When the brake light turns off, the pairing is complete.
  - In some cases, you may need to hold the controller closer to the brake unit and press the button or pull the lever multiple times before pairing succeeds.
- After pairing – when starting the system:**

You need to activate the controller once (press BRAKE) to wake the system from sleep mode.



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**\* Note**

The controller is pre-paired when you receive SmartBrake.  
It will not lose connection even if the battery runs out.

You only need to re-pair the controller if:

- The brake unit has been reset, or
- You are using a new controller that was not included with the original system.

**If the problem persists**

If the issue continues, please contact our customer service for support. Remember to include the serial number, which is located inside the USB cover. This helps us identify your brake system and provide faster assistance.





# SMART BRAKE Disclaimer

## Important Safety Information

Using SMART BRAKE products involves risks, including injury, paralysis, or death. Always learn proper usage and follow all safety instructions. SMART BRAKE is designed for bicycles, wheelchairs, and rollerskis and must not be used for other purposes. Misuse increases risks significantly.

## Safety Precautions:

1. Always use and test two independent brake systems before each use. Never rely solely on a single brake system for safety.
2. Wear a properly fitted helmet and necessary protective gear.
3. Pay attention to all system signals and warnings. Respond promptly to unsafe conditions as described in the user documentation.
4. Ensure the product is fully charged, installed correctly, and functioning properly before use.
5. Start in a safe area at low speeds to familiarize yourself with the system.

## Prohibited Actions:

- Do not use SMART BRAKE products without all components installed, charged, and updated.
- Do not modify the product without written approval, as this may cause malfunction, injury, or void the warranty.

For instructions, videos, and support, visit [www.smartgroup.no](http://www.smartgroup.no)

## Contact Information:

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