

User Manual for SmartBrake HYBRID

Congratulations on your new SmartBrake HYBRID system!

SmartBrake comprises a brake unit connected to a **hydraulic brake lever** and a **wireless controller**.

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

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 controller:
 - Press the "BRAKE" button once to wake it from standby mode.
The safety brake will deactivate, and the bike will roll freely when the button is not pressed.



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.

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.

Using the Controller

- Brake: Press and hold the "BRAKE" button.
- Parking brake: Press the "(P)" button once.
- Release parking brake: Press the "BRAKE" button once.

Note: If the controller is out of range (approximately 30 meters), the safety brake is automatically activated and will deactivate when back within range.



Using the Hydraulic Brake Handle

The brake handle functions like a standard hydraulic brake handle and remains operational even when the SmartBrake unit is deactivated. Using a TORX20 screwdriver, you can adjust the screw beneath the handle to move the brake pads closer to or farther from the rim or brake disc. This adjustment ensures optimal braking performance by keeping the pads close to the rim or disc, even as they wear.



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?"

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.
- **Hand controller:** 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.
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✔ Quick Troubleshooting – SmartBrake (R52)

Hand Controller (HC)

Light / Issue	When	What it means	What to do
●◆ Blinking green light	When holding the "BRAKE" button, and the brake unit is either off or out of range	No connection with the brake unit.	Turn on the brake unit or move the hand controller closer. If that doesn't help, the controller may need to be paired again.
●◆ Blinking red light	When pressing the button while the brake unit is active	Battery is empty. The brake is locked in fail-safe mode.	Replace the battery. Turn off the brake unit to release the brake.
✗ No light signal	When pressing the button while the brake unit is active	No battery installed, or battery is completely drained.	Replace the battery. Turn off the brake unit to release the brake.

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 hand 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 hand controller is active, but not connected	The fail-safe brake is engaged because: 1. Hand controller is out of range (●◆ blinking green) 2. The hand controller battery is empty (no light) 3. The brake unit is set to assistant mode	1. Move the hand controller closer. 2. Replace the battery. If not possible: Press and hold the activation button until the motor stops and the light blinks twice. The brake will release. 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

1. 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.

2. 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.

3. After pairing – when starting the system:

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

*** 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

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