SmartBrake

Technical handbook

Installation, bleeding, lever replacement and firmware updates

Compiled and edited from four existing SmartGroup guides. Technical values, indicator lights, steps and qualifications are retained. Always use the guidance that applies to your equipment.

1. Information for installers
2. Bleeding SmartBrake
3. Replacing Brake Lever Slim and Thumb Brake
4. Update the brake unit
5. Update the hand controller

SmartGroup AS | post@smartgroup.no | smartgroup.no/support/

Editorial version 11 November 2026. Firmware instructions are based on the source dated 27 January 2026 (2026 v2). This is not a new firmware version.

1. Information for installers

Find the right guidance

This chapter helps you find the right information when installing, testing and handing over SmartBrake.

If you are unsure about anything during the process, consult the guides on our website. The guide for technicians is a useful starting point.

smartgroup.no/kom-i-gang-med-smartbrake-for-teknikere/

Before handover

Install SmartBrake in accordance with the agreed solution, quotation and the cyclist's needs.

Before handing over the bicycle, assess the installation as a whole. The solution must suit the bicycle and the person riding it.

If SmartBrake is intended for both the cyclist and a companion, both should be able to brake the bicycle in a way consistent with the agreed use. In most cases, the cyclist should still be able to operate a brake independently, unless a different arrangement has been specifically agreed and assessed as appropriate for that person.

Functional test

Test SmartBrake after installation and before handing the bicycle over to the customer.

Check that the brake activates as expected, the controllers work, and the braking response is clear. Test first while stationary, then at low speed in a safe area.

Also check that hoses, cables, the unit and controllers are securely mounted and cannot interfere with wheels, steering, pedals, the chain or other moving parts.

Support and guides

Our website provides guides covering indicator lights, troubleshooting, battery replacement, charging, using SmartBrake and frequently asked questions.

smartgroup.no/support/

If anything is unclear, or the installation does not match the agreed solution, contact us before handing over the bicycle.

2. Bleeding SmartBrake

Installer's guide

This chapter covers preparation, bleeding and inspection of the SmartBrake braking system. It supplements the information for installers in the previous chapter and the brake caliper manufacturer's bleeding instructions.

1. Before you start

Always use mineral oil approved for the fitted caliper. Do not mix different types of mineral oil or use DOT brake fluid.

• Protect the brake disc, rim, tyre and brake pads from oil.

• Remove the brake pads and use a suitable bleed block if required by the caliper.

• Check that syringes, hoses and tools are clean.

• The SmartBrake bleed port uses a SRAM/Avid connection.

• Use a Torx T10 to open the bleed screw.

2. Deactivate SmartBrake

SmartBrake must be deactivated before bleeding starts.

Hold the activation button for approximately three seconds. The unit flashes red twice and the motor retracts fully.

This places the piston in the correct position so that the system can be filled with enough oil.

For SmartBrake Hybrid, turn the adjustment screw underneath the Hybrid lever fully back before bleeding.

3. Open the SmartBrake unit

The bleed port is underneath the top cover.

1. Remove all nine screws for plastic from the underside of the brake unit. Use a Torx T10.

2. Carefully lift off the top cover.

3. Make sure the internal cables and connectors are not pulled loose or damaged.

4. Bleed the system

Position SmartBrake so its bleed port is the highest point in the system. The caliper should be lower, with no high points or loops in the hose where air can collect.

1. Connect a syringe containing the correct mineral oil to the caliper bleed port.

2. Connect a second syringe to the SmartBrake bleed port.

3. Keep the syringes as upright as possible, with any air bubbles at the top.

4. Slowly push oil from the caliper upwards towards SmartBrake.

5. Draw and push the oil back and forth between the syringes several times in a controlled manner.

6. Gently tap the caliper, connections, brake hose and SmartBrake unit to release air bubbles.

7. Gently move and tilt the hose so trapped air can travel towards the upper syringe.

8. On SmartBrake Hybrid, gently operate the Hybrid lever a few times to release air in this part of the system.

Continue until no new air bubbles enter the syringes.

Do not let the syringes empty enough to push air into the system.

5. Finish bleeding

Keep the SmartBrake bleed port at the highest point throughout this procedure.

1. Check that no more air bubbles enter the syringes.

2. Close the clamp or valve on the hose to the SmartBrake syringe. Do not force in extra oil.

3. Disconnect the syringe at the caliper and fit the caliper bleed screw according to the caliper manufacturer's instructions.

4. Reopen the hose to the SmartBrake syringe.

5. Check that no further bubbles rise. Gently tap the hose and unit if necessary.

6. Check that oil reaches right up to the bleed port opening.

7. Close the hose, disconnect the syringe and fit the SmartBrake bleed screw.

Tighten the SmartBrake bleed screw only gently until it seats. Do not tighten it firmly.

Excessive tightening can compress the seal incorrectly. This can allow air to move into and out of the system even if the bleed port appears sealed.

Wipe away any oil and carefully inspect the bleed ports and connections.

6. Refit the top cover

Before refitting the top cover, check that all cables are correctly positioned and cannot be trapped between the upper and lower covers.

1. Carefully put the top cover in place.

2. Check that it is correctly seated all the way around the unit.

3. Fit the nine screws for plastic.

If using a drill/driver, use low speed and torque setting 1. Tighten the screws only gently.

Check that the upper and lower covers meet fully. If there is still a gap, carefully tighten by hand with a screwdriver.

7. Check after bleeding

Before handing over or using the bicycle:

• Activate SmartBrake and check that the brake responds quickly and smoothly.

• Check that the brake releases fully when deactivated.

• Check that the brake does not feel spongy.

• Check the function of the levers and controllers.

• Test the brake while stationary first.

• Then test at low speed in a safe area.

• Check all bleed ports, hoses, splitters and connection points for leaks.

• Check that hoses, cables, covers and the brake unit are securely and professionally installed.

Apply the parking brake and leave it on for at least 30 minutes.

Then inspect again for leaks, especially around the SmartBrake bleed port, the caliper bleed port, hose connections, splitters and connection points in the Hybrid system.

Do not hand over or use the brake if the response is slow, the pressure changes, the brake feels spongy or there are signs of leakage.

3. Replacing Brake Lever Slim and Thumb Brake

Tools

- Torx T20 for the handlebar bracket.
- Phillips screwdriver for the battery cover and inner cover.
- Torx T6 for the circuit board screws.





1. Remove the controller from the handlebar bracket

There is no need to remove the bracket from the bicycle.

1. Press the small latch on the side of the bracket.

2. Slide the controller sideways to release it from the bracket.



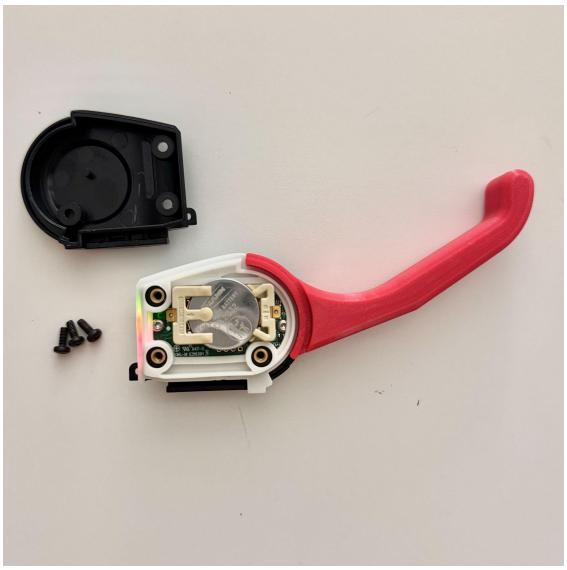


2. Open the top cover

1. Remove the three Phillips screws from the top.

2. Lift off the top cover.



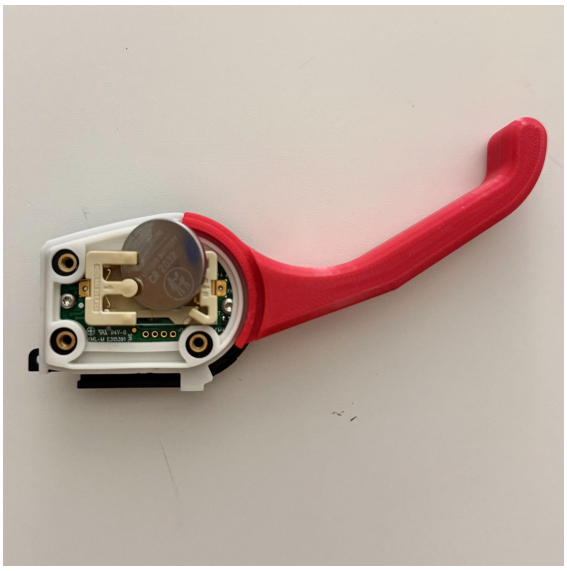


3. Remove the battery if needed

1. Press the latch in the middle of the battery holder.

2. The battery pops up and can be removed.

The small holders on the opposite side of the battery may break. The source guide states that this does not affect function. Once the top cover is refitted, the battery is held securely in place.

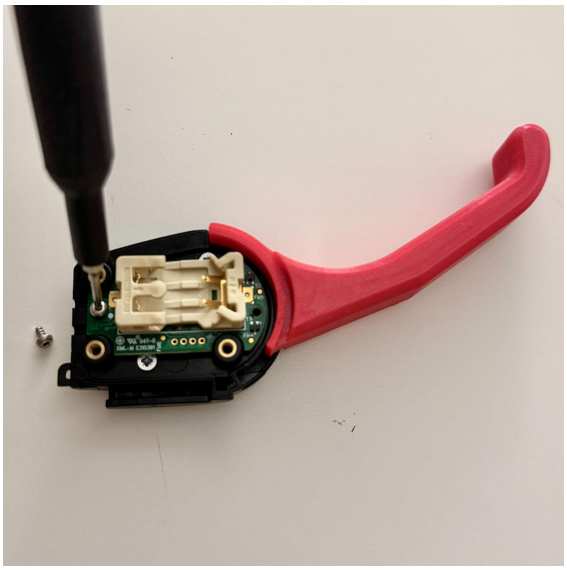


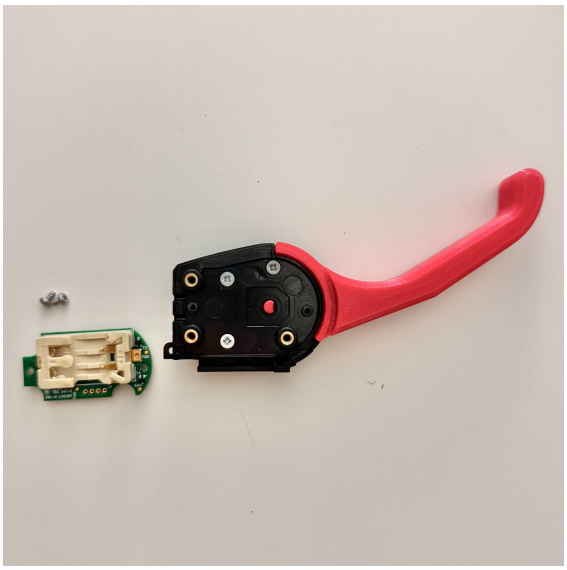


4. Remove the circuit board

Remove the two circuit board screws using a Torx T6.

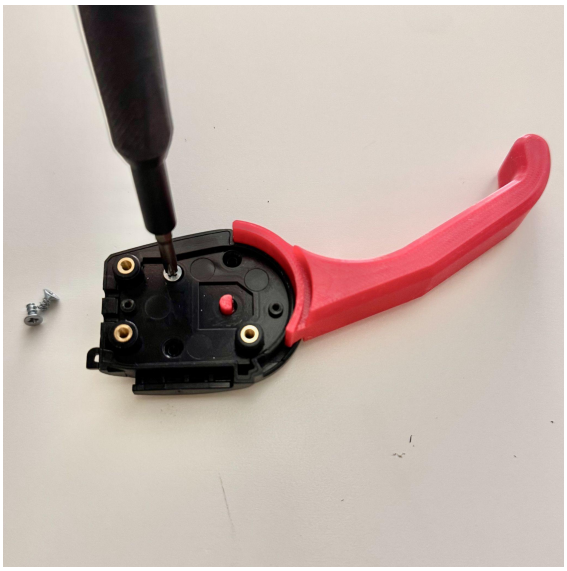
Some controllers may have other screw types. Use the correct tool for the screws fitted.

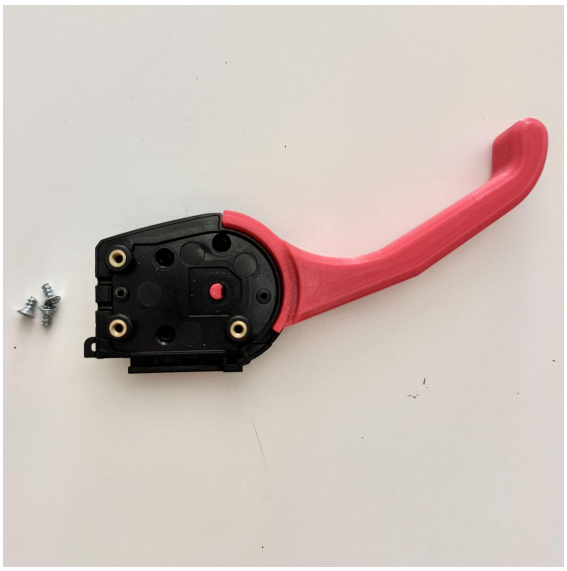




5. Access the lever mechanism

1. Remove the three inner Phillips screws to access the lever.
2. Turn the controller over.
3. Remove the inner locking plate.
4. Pull the lever out of the housing.









6. Reassemble

1. Insert the spring into the lever.
2. Position the spring arm so that it presses against the inner wall and provides the required return force.
3. Reassemble all parts in the reverse order of disassembly.
4. Slide the controller onto the handlebar bracket until it clicks into place.





4. Update the brake unit

Why update?

SmartBrake does not update automatically. An update may be needed to obtain the latest improvements, such as bug fixes, better braking performance and improved battery life.

An update may also resolve connection problems, for example when two hand controllers will not connect, disconnect frequently or cannot reconnect.

If you change between disc and rim brakes, you must install the correct firmware for the brake type.

Supported phones are iPhone and Android with Bluetooth enabled. If any of these situations applies, a firmware update is likely needed. Follow the steps below. If problems remain after updating, contact post@smartgroup.no.

1. Install the DFU app

Download the nRF Device Firmware Update (DFU) app for iOS or Android. The app transfers the firmware file from your phone to SmartBrake.



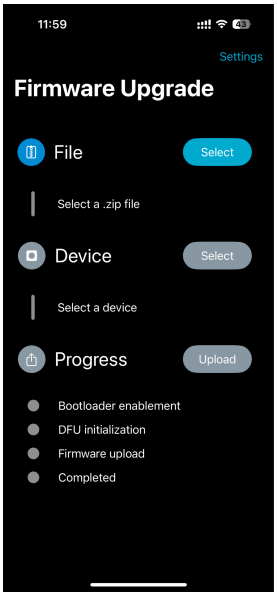
2. Obtain the correct firmware file

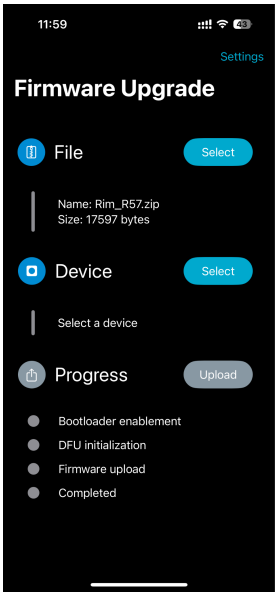
Request the correct firmware from SmartGroup at post@smartgroup.no. The source guide states that a download link is planned.

Preferably download the file directly to your phone. If it arrives by email, download it on your phone rather than via a PC so the DFU app can access it. Do not unzip the ZIP files.

3. Select the firmware file

Open the DFU app. Under File, tap Select and choose the firmware file on your phone. The filename should then appear under File.





4. Put the brake unit into DFU mode

The brake unit must be in DFU mode for the phone to connect.

1. Connect the brake unit to its charger.

2. Hold the button for 7 seconds until a red light appears.

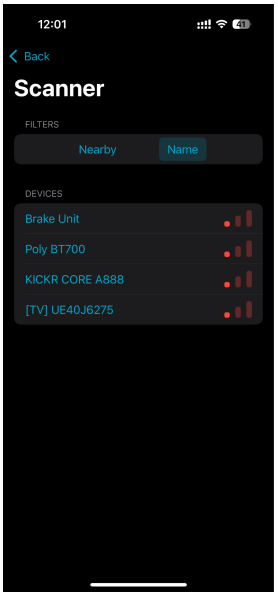
3. Release the button when the red light is steady.

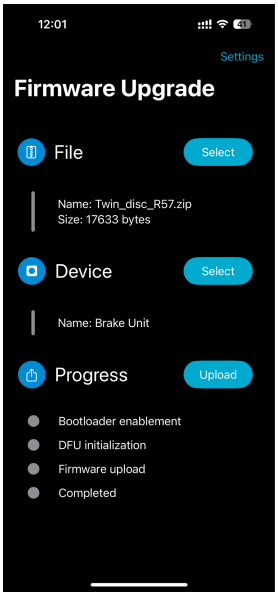




5. Connect in the DFU app

In the DFU app, go to Device and tap Select. Choose SmartBrake / Brake Unit from the list of devices found by the phone.

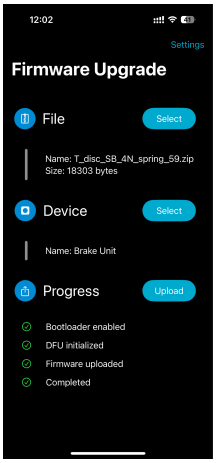




6. Upload the firmware

Tap Upload and wait until the process finishes. When complete, four green ticks should appear in the checklist. The red light on the brake unit should also go out.

Do not close the app, switch off Bluetooth or disconnect SmartBrake during the upload.



Troubleshooting

If SmartBrake is not listed, check that DFU mode is active, Bluetooth is on, and SmartBrake is in connection mode with the red light on and the charger connected. Keep the phone nearby, turn Bluetooth off and on, and try again.

If the upload fails, try once more. If it fails again, contact support.

5. Update the hand controller

Why update?

SmartBrake does not update automatically. An update may be needed to obtain the latest improvements, such as bug fixes, better braking performance and improved battery life.

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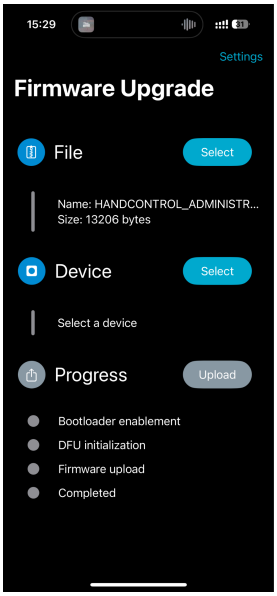
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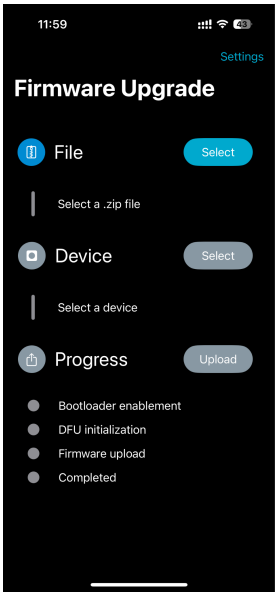
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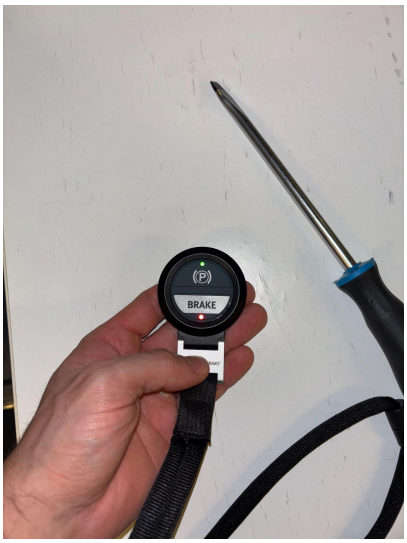
4. Put the hand controller into DFU mode

The hand controller must be in DFU mode for the phone to connect.

1. Disconnect the battery and press the buttons several times.

2. Reconnect the battery without pressing any buttons.

3. Press both buttons, “Brake” and “(P)”, together until a green and a red light come on at the same time.

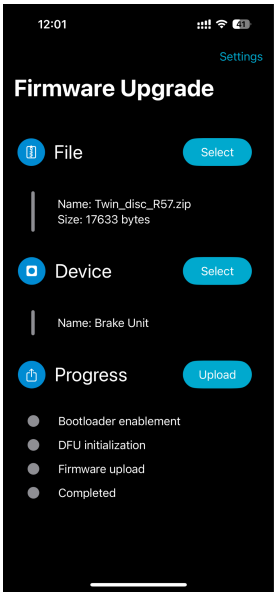


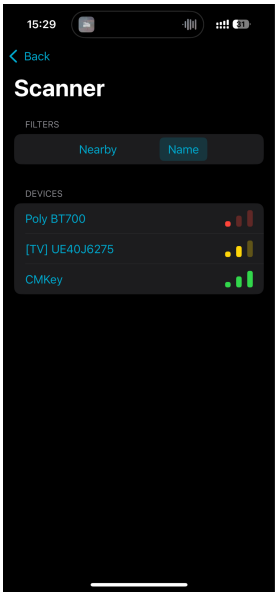




5. Connect in the DFU app

In the DFU app, go to Device and tap Select. Choose Hand Controller from the list of devices found by the phone.

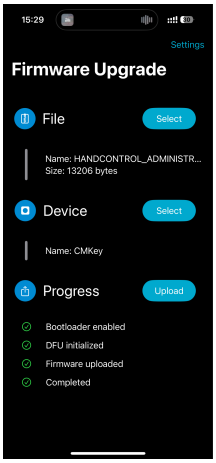




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Troubleshooting

If the hand controller is not listed, check that DFU mode is active, Bluetooth is on, and the controller is in connection mode with both red and green lights on. Keep the phone nearby, turn Bluetooth off and on, and try again.

You can also repeat step 4. Make sure you do not press any buttons while reconnecting the battery.

If the upload fails, try once more. If it fails again, contact support.

Sources and document scope

Information for installers, 1 page.

Informasjon-til-montor-–-SmartBrake-1.pdf

Bleeding SmartBrake, 3 pages.

Veiledning-for-lufting-til-montor-SmartBrake-1.pdf

Brake Lever Slim / Thumb Brake, 5 pages.

Lever-Replacement-Guide-–-SmartBrake-Brake-Lever-Slim-Thumb-Brake.pdf

Firmware update, 7 pages, dated 27 January 2026.

Slik-oppdaterer-du-SmartBrake-programvaren-pa-SmartBrake-Bremseenhet-og-handkontroller_2026_v2.pdf

Original photographs and app screenshots are retained. English app field names are kept in the text so they can be recognised on screen. This compilation does not replace the product manual for your system variant or the caliper manufacturer’s instructions.

Scope and limitations

This guide describes operation of the specified SmartBrake variant. Use the system only in a combination of vehicle, brakes and controllers documented for your configuration. References to bicycles, wheelchairs or roller skis do not confirm that every variant fits every such vehicle. Confirm the configuration with SmartGroup or the supplier before use.

Automatic brake activation is not a guarantee against accidents or injury. This functional description does not establish that the system detects or handles every fault or hazardous situation. Follow the requirement for two independent braking systems and a functional test before each ride.