watchgas detection

User Manual

WatchGas SST Application

SST-APPLICATION-MAN-ENG-v1.0
21.03.2025

Contents

1. Introduction

1.1 WatchGas SST Application Description

This intuitive app allows you to download gas events, configure devices and gives you the ability to tap in and out devices for full fleet traceability.

Using NFC (Near Field Communication), the WatchGas Application is fully compatible with the SST-Range™. The free app is simple and easy to use, ensuring you get the most from your gas detection fleet.

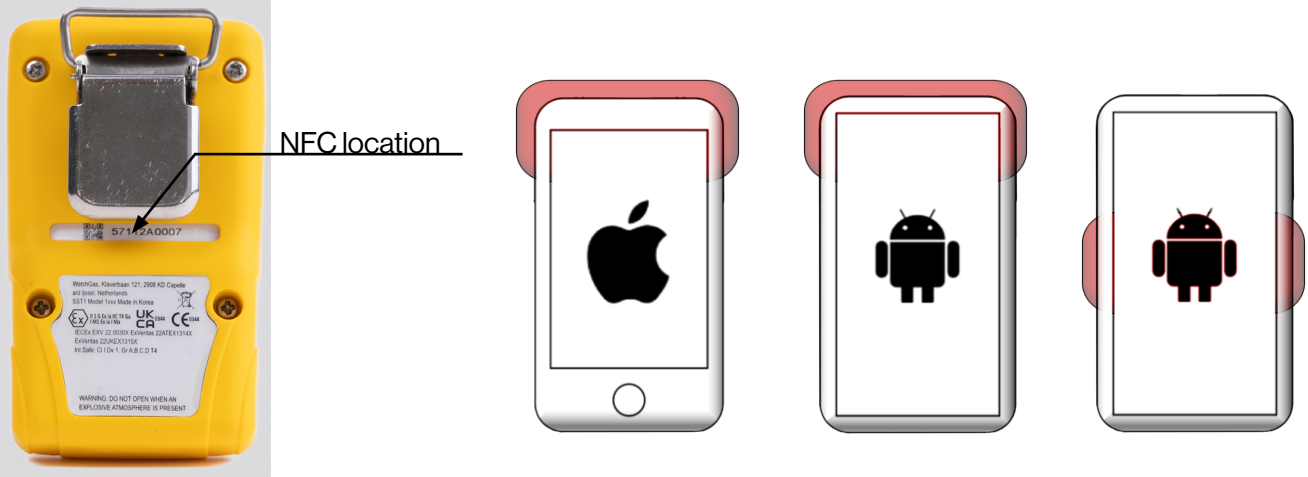
The app can be downloaded from Google Play and the App Store, or by scanning the appropriate QR code below.

2. Getting Started

2.1 How to Tap a Unit

Ensure that your phone has NFC capability.

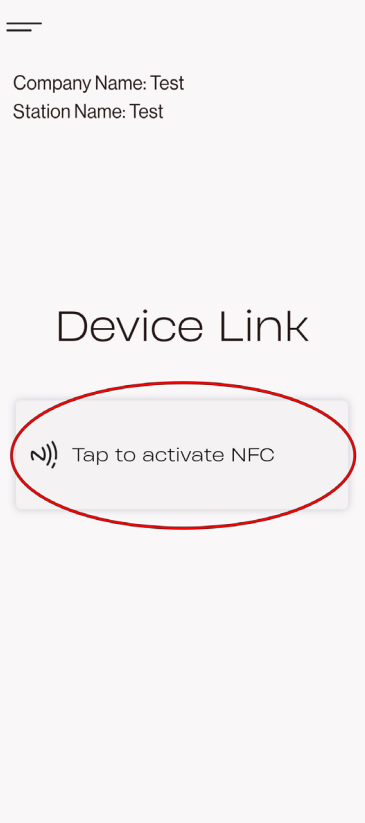
The NFC is located on the back of the detector - just below the alligator clip.



Locate the NFC on the phone (normal locations shown above).

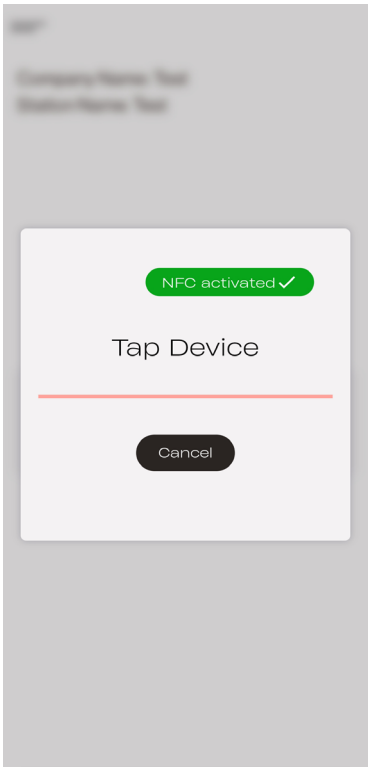
Press and hold the pushbutton on the gas detector for 1.5 seconds until there is a single beep and the NFC icon appears in the upper right corner of the detector's display.

NOTE: The NFC on the detector will automatically deactivate after a period of 300 seconds.



With the NFC turned on in the detector, open the SST Device Link Application on the phone and press the **Tap to activate NFC** button.

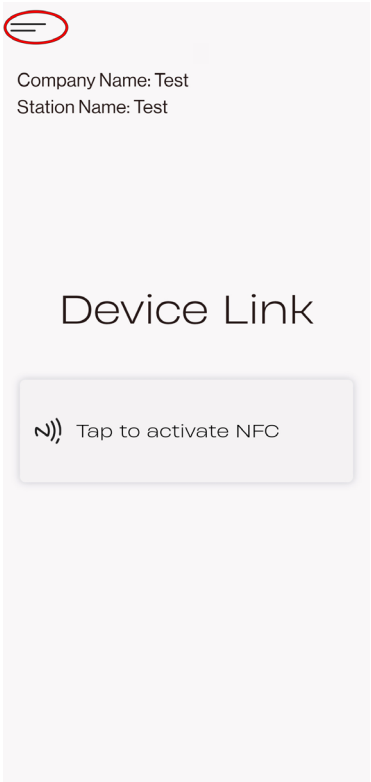
Hold the NFC location on the detector and press it against the phone's NFC reader.



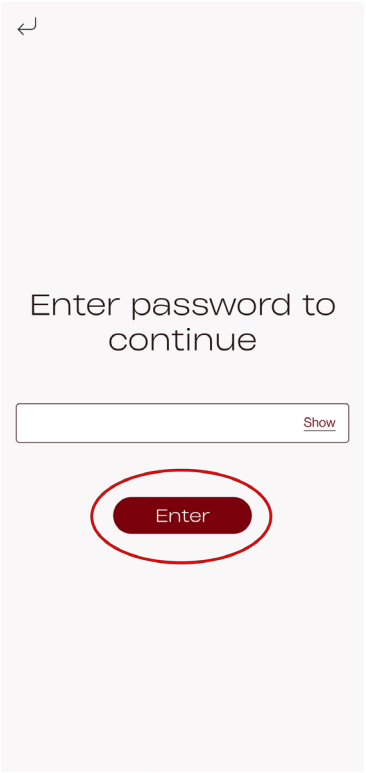
The phone gives a clear visual indication when the NFC connects.

NOTE: as soon as the NFC connection has been established, users don't need to keep holding the detector to the phone.

2.2 WatchGas SST Application Menu



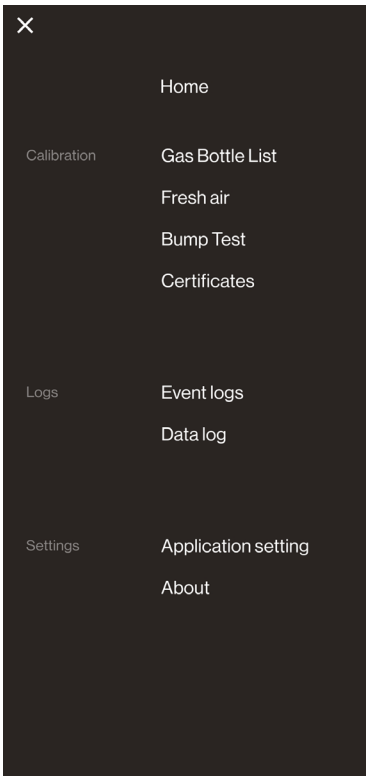
Open the WatchGas SST App and press the icon of the two lines in the upper left corner of the screen.



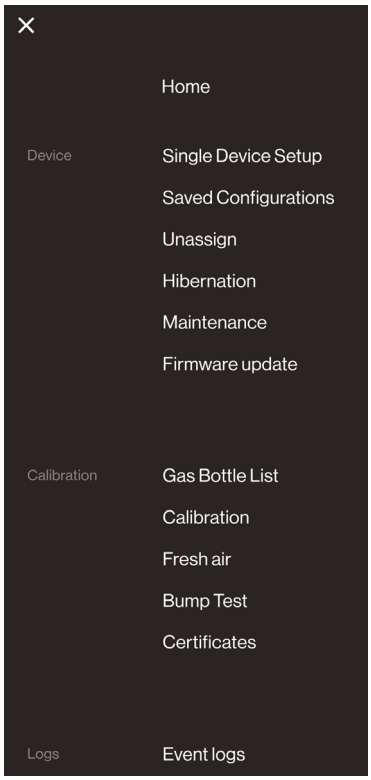
This will open up the password screen. Input **user**, or **service** and press the **Enter** button.

NOTE: both of these passwords can be changed.

Depending on the password used, this will open up one of two different Menu screens:



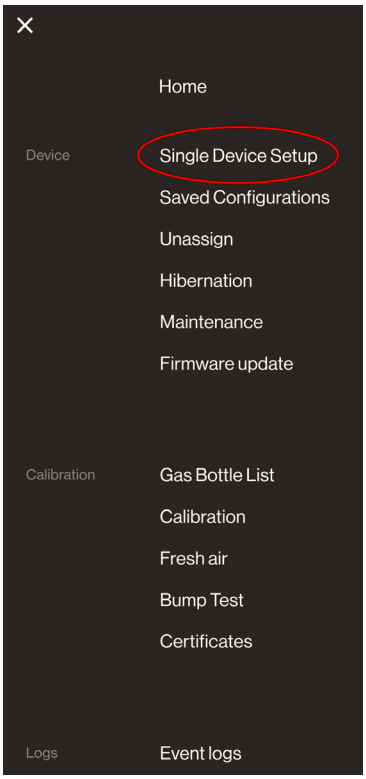
The User Menu



The Service Menu

3. Device Settings

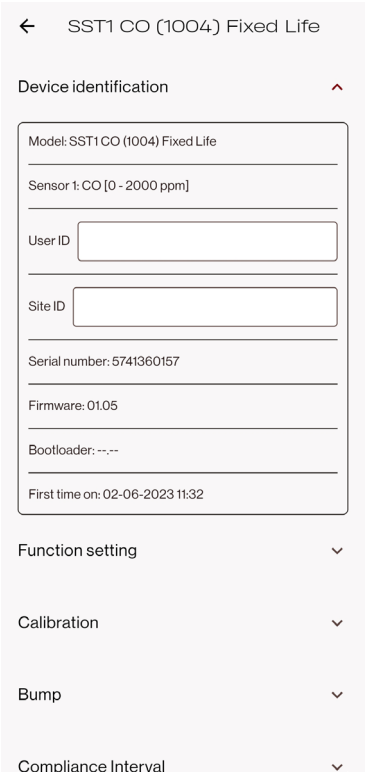
3.1 Single Device Setup



Press the **Single Device Setup** option, and then **tap the device**.

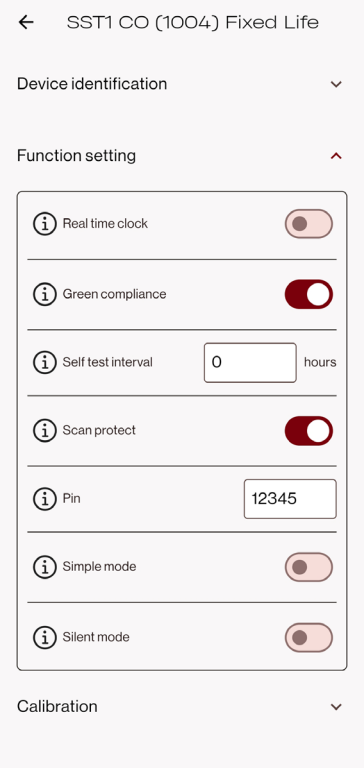
Refer to How to Tap a Unit section on how to tap an SST Gas Detector.

3.11 Device Identification



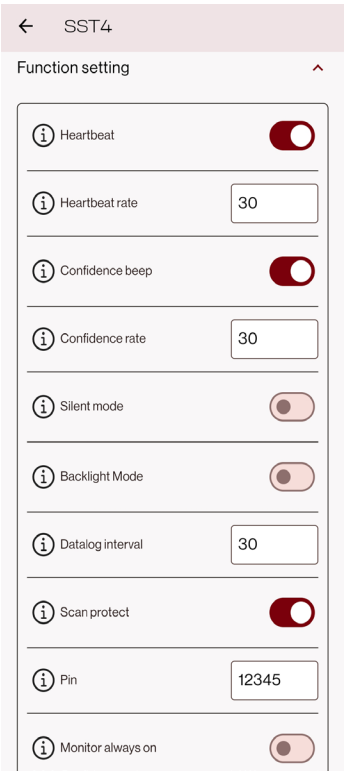
- **Model:** SST Model type.
- **Sensor:** SST Sensor type.
- **User ID:** User ID assigned to the detector.
- **Site ID:** Site assigned to the detector.
- **Serial number:** Detector serial number (non-changeable).
- **Firmware:** Detector firmware version.
- **First time on:** Time the detector has been switched on.

3.12 Function Setting SST1

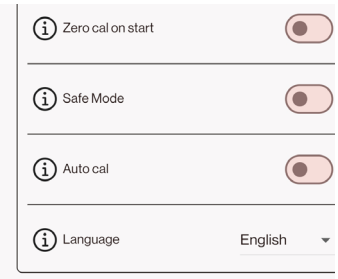


- **Real Time Clock:** Switch on/off displaying the real-time clock on the detector.
- **Green Compliance:** If turned on, a compliant detector will flash a green LED every 5 minutes.
- **Self-test interval:** Interval after which the user is prompted to perform a manual self-test.
- **Scan protect:** Enable an NFC pin to protect the detector against connecting with an unauthorized Device Link.
- **Simple Mode:** When enabled, this option hides the peak indicator and smiley icons from the screen display.
- **Silent Mode:** This function mutes sounds and turns off LED, and only uses the vibrator to indicate alarms.

3.13 Function Setting SST4

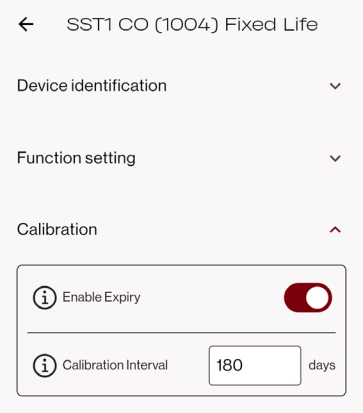


- **Heartbeat:** When enabled, the Heartbeat indicates the device status with a green, blue or red LED as per EN'60079-29. The Hearbeat Interval can be set.
- **Confidence Bleep:** When enabled, the Confidence Bleep indicates that the device is compliant. The tone's sound is 4300Hz and 150ms in length. The Confidence Rate can be set
- **Silent Mode:** This function mutes sounds and turns off LED, and only uses the vibrator to indicate alarms.
- **Backlight Mode:** The backlight automatically activates: during startup, when the pushbutton is pressed, when an alarm occurs, and when there is an alarm condition. If backlight always on is seleted in the WatchGas Device Link Application, then the backlight is always on. **NOTE:** this will result in a shorter run time of the device.
- **Datalog Interval:** Enter a value (1-180 seconds). The default datalog interval is one reading every 30 seconds.
- **Scan protect:** Enable an NFC pin to protect the detector against connecting with an unauthorized Device Link.
- **Monitor Always On:** This function disables the power down function and will display LOCKED on the detector if power down is attempted.



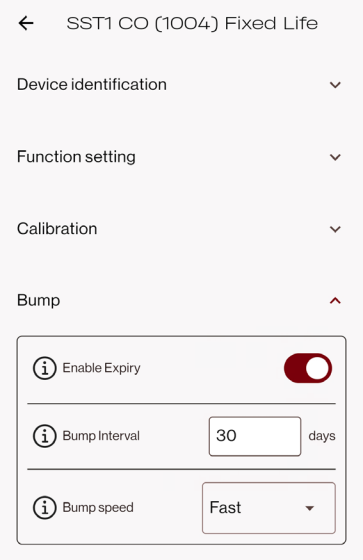
- **Zero cal on start:** When enabled, the sensors automatically zero during the startup self-tests. The Zero cal on start option is applied to all sensors.
- **Safe Mode:** When enabled, SAFE displays continuously on the SST4 LCD screen unless an alarm condition occurs. The Safe Mode provides visual confirmation that no (monitored) hazardous gas is present.
- **Auto cal:** When enabled, it allows calibration without using the app.
- **Language:** Opens up a list of supported languages to switch the detector to. By default, detectors are set to English.

3.14 Calibration



- **Enable Expiry:** Enable/disable calibration interval.
- **Bump interval:** Calibration interval in days.

3.15 Bump

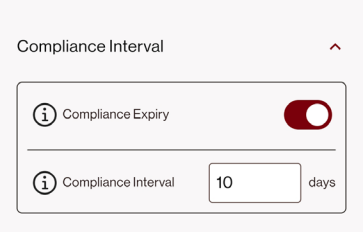


- **Enable Expiry:** Enable/disable bump interval.
- **Bump interval:** Bump interval in days.
- **Bump speed:** Set % of gas applied required to pass bump test.

- Fast: 50%
- Medium: 70%
- Slow: 90%

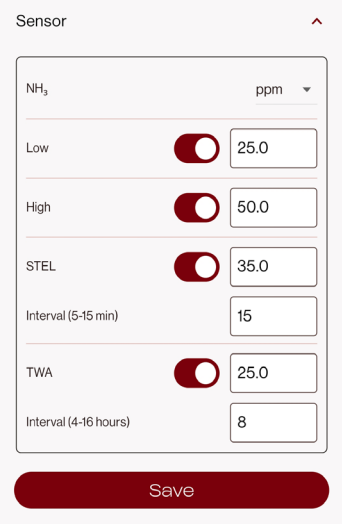
NOTE: the Bump speed setting does not change the allowed time for a bump test.

3.16 Compliance Interval

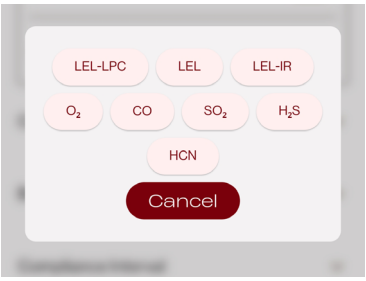


- **Compliance Expiry:** Enable/disable compliance interval.
- **Calibration interval:** Compliance interval in days.

3.17 Sensor Settings

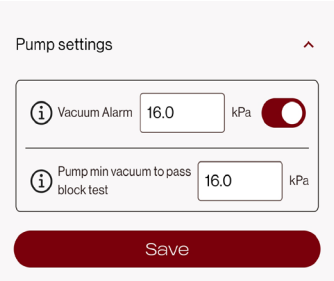


In the Sensor setting tab, users can see the list of sensors on the detector, change the measurements from ppm to mg/m³ (for O2 devices, this is locked to vol%), manually set the alarm Low and alarm High thresholds, and, if applicable, the STEL threshold and Interval, as well as the TWA threshold and interval.



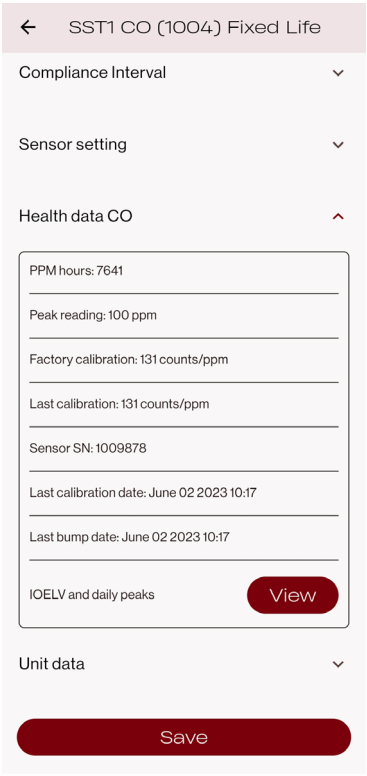
For SST4 detectors, there is an option to add a sensor: LEL-LPC, LEL, LEL-IR, O_2, CO, SO_2, H_2S, or HCN.

3.18 Pump Settings



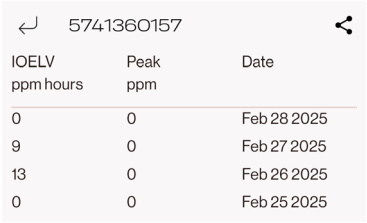
- **Vacuum Alarm:** Sets the vacuum alarm.
- **Pump min vacuum to pass block test:** Minimum vacuum needed to pass the block test.

3.19 Health Data



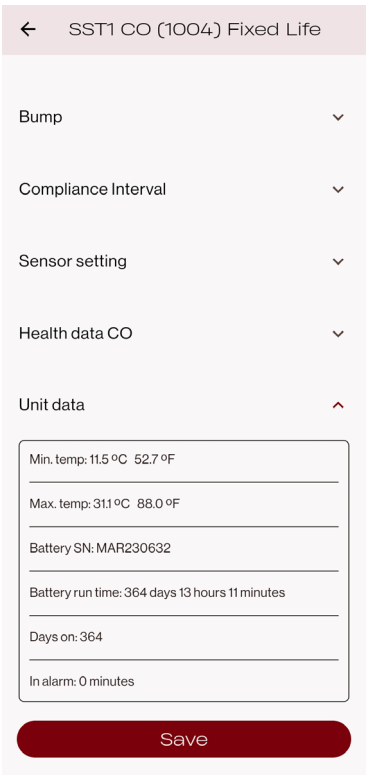
In the Single Device Setup, various parameters indicating detector health can be viewed:

- **Ppm*hours:** accumulated gas exposure, indicating sensor health.
- **Peak reading:** All-time peak reading registered.
- **Factory calibration:** sensor output during factory calibration.
- **Last calibration:** sensor output during last field calibration.
- **Sensor SN:** Gas sensor serial number.
- **Last calibration date:** Date on which the last successful calibration was performed.
- **Last bump date:** Date on which the last successful bump test was performed.



- **IOELV and Daily Peaks:** Press “View” to show the Indicative occupational exposure limit values (IOELV) and daily peaks of the device. To share the IOELV and Daily Peak, press the Share icon in the upper right corner.

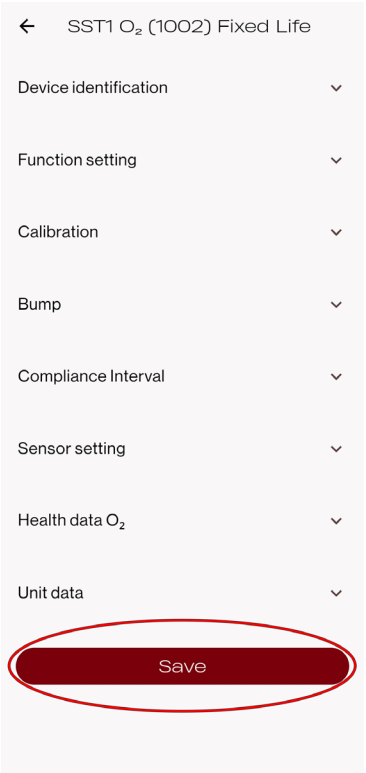
3.20 Unit Data



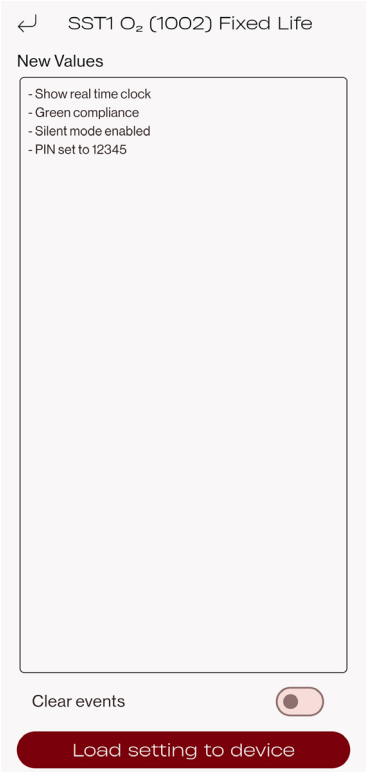
In Single Device Setup various parameters related to the detector can be viewed:

- **Min temp:** all-time minimum temperature in Celsius and Farenheit.
- **Max temp:** all-time maximum temperature in Celsius and Farenheit.
- **Battery SN:** Battery serial number.
- **Battery run time:** total battery runtime.
- **Days on:** How many days the detector has been turned on.
- **In alarm:** Total minutes the detector has been in alarm.

3.21 Save Changes

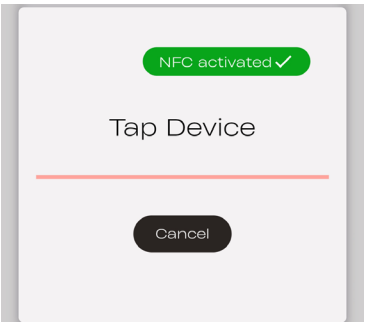


To save changes made, press the Save icon at the bottom of the screen.



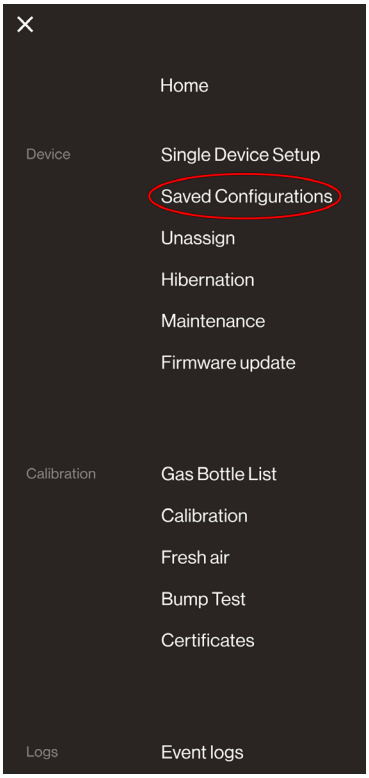
This will open up a new screen with all of the new values listed.

Press the Load setting to device icon to load all the new setting to the detector.



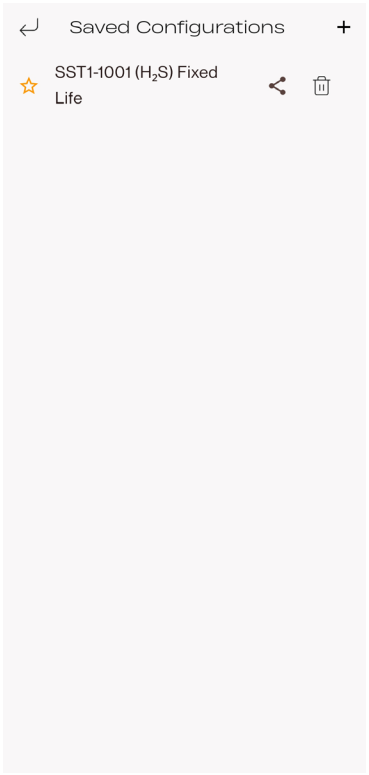
Tap the device to load in the new settings to the device.

3.2 Saved Configurations



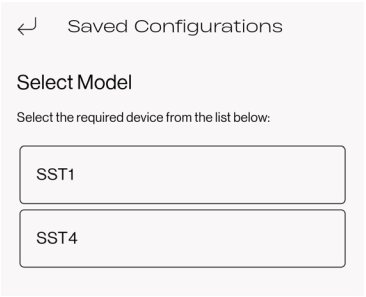
Saved Configurations in the WatchGas Device Link Application can be used to create saved configuration files which can be used to quickly and easily configure multiple detectors.

To create or load a saved configuration, navigate to **Saved Configurations**.



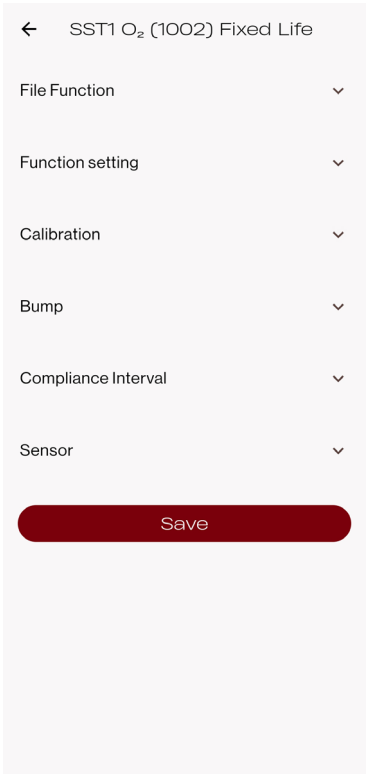
To load an existing Saved Configuration file, select one from the list. To share a Saved Configuation, press the share icon, and to delete a Saved Configuration, press the bin icon.

To create a new Saved Configuration, press the plus icon in the upper right corner.

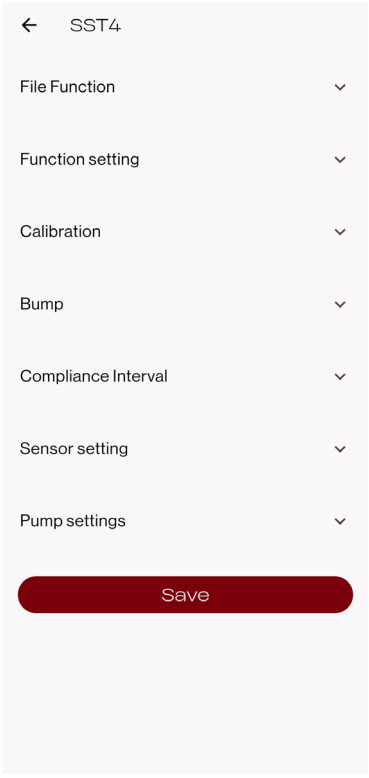


Next, select the SST model.

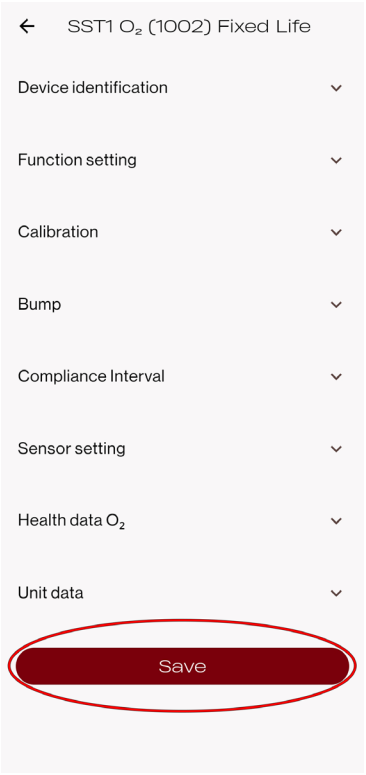
SST1 Model List



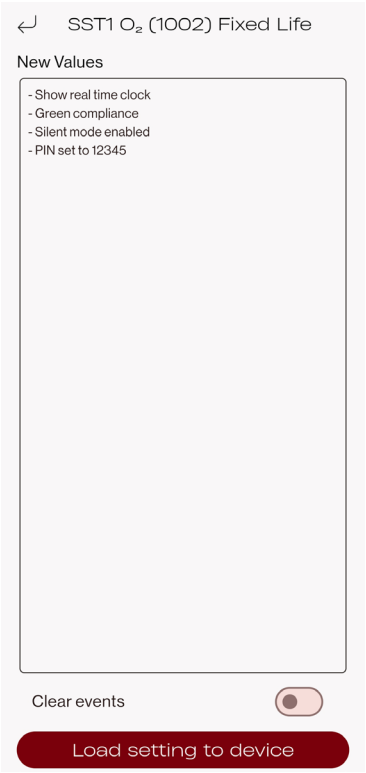
SST1 model example



SST4

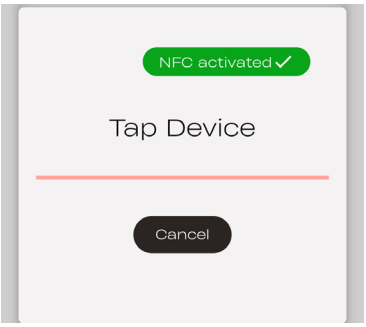


To save all the changes made, press the Save icon at the bottom of the screen



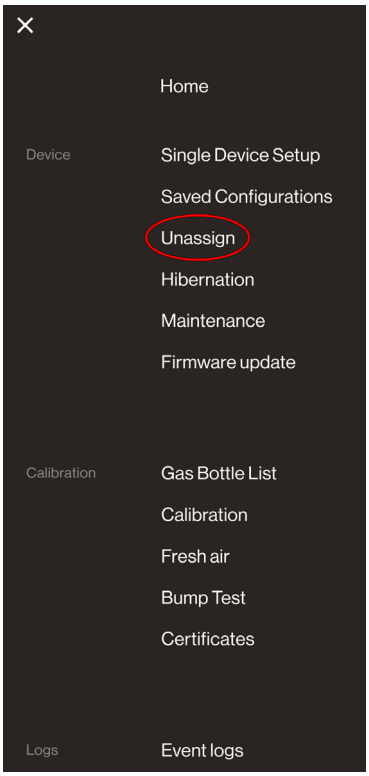
This will open up a new screen with all of the new settings listed out.

Press the Load setting to device icon to load all the new setting to the detector.

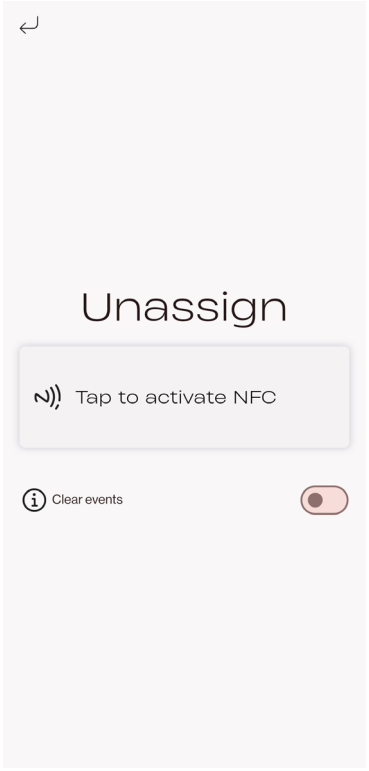


Finally, tap the device to load in the new settings to the device.

3.3 Unassign

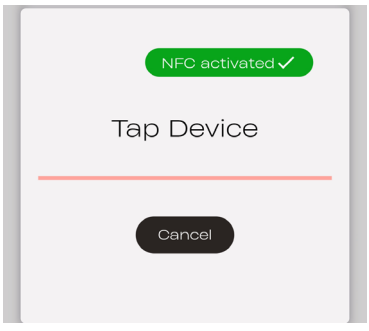


To unsassign an SST1 device, navigate to the **Unassign** option.



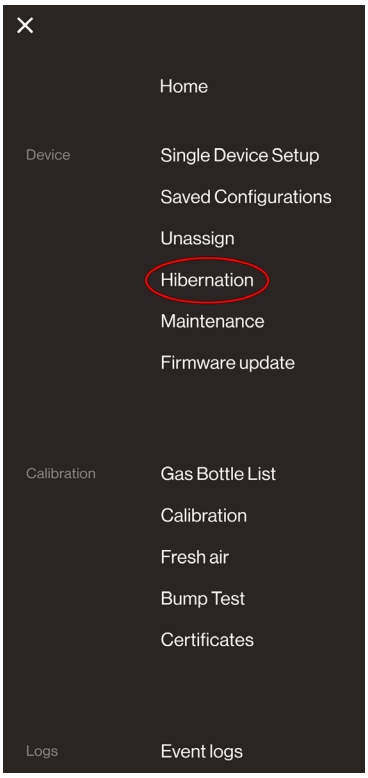
Press the Tap to activate NFC option and turn on NFC on the detector.

OPTIONAL: to clear events and datalogs from the detector, enable the Clear events option.

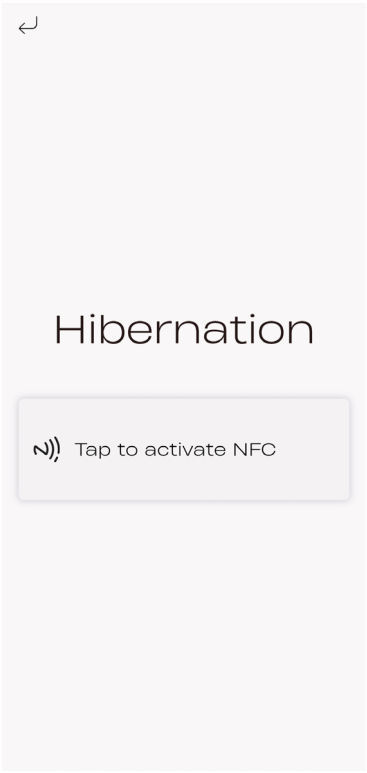


Tap the device to complete unassigning the device.

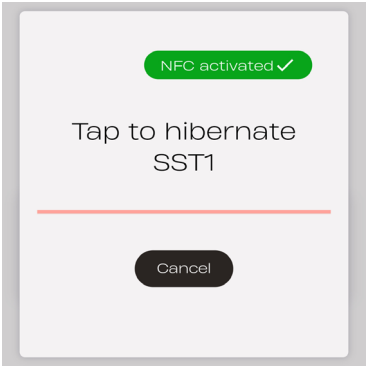
3.4 Hibernation



To hibernate (temporarily turn off) an SST1 device, navigate to the **Hibernation** option.

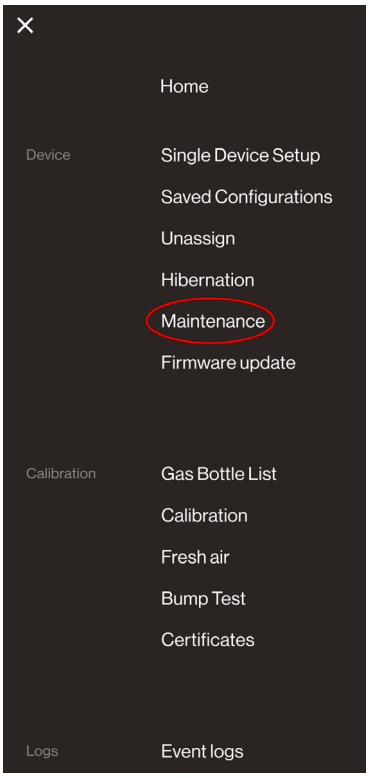


Press the Tap to activate NFC option and turn on NFC on the detector.

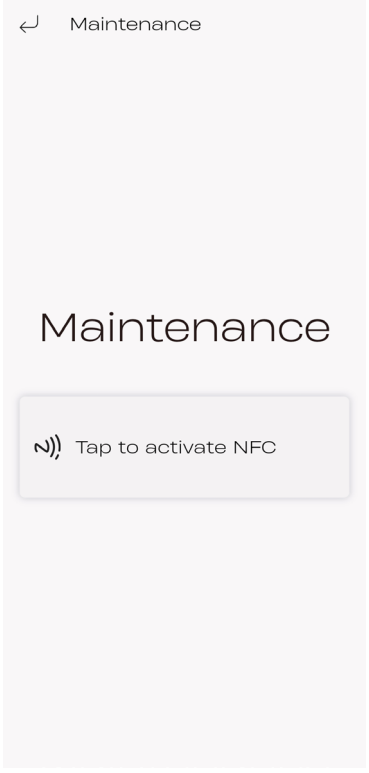


Tap the device to complete hibernating the device.

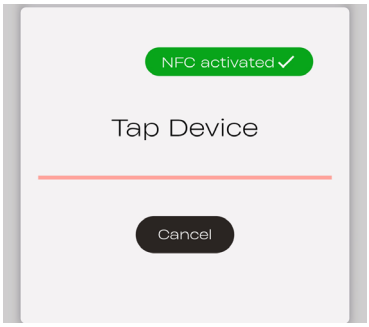
3.5 Maintenance



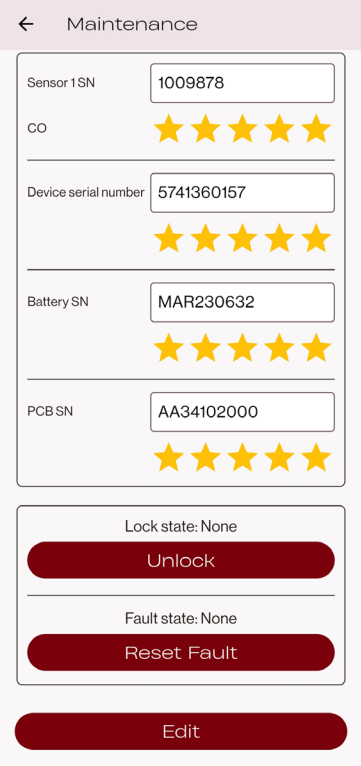
To enter the SST device into Maintenance mode, navigate to the **Maintenance** option.



Press the Tap to activate NFC option and turn on NFC on the detector.



Tap the device.



Below each of the serial numbers, a star rating is displayed, indicating component health:

- **5 stars** mean that the sensor performance is healthy.
- **4.5 stars** mean that the sensor performance is ok.
- **3.5 stars** mean that the sensor performance is poor.
- **2 stars or fewer** mean that the sensor performance is weak.

NOTE: Once a sensor's performance falls to **3.5 stars**, it needs to be replaced.

The **Device serial number** and **PCB SN** cannot be changed.

The **Sensor SN** and **Battery SN** can be changed using the **Edit** button.

Changing the Battery SN will reset the following health parameters of the device:

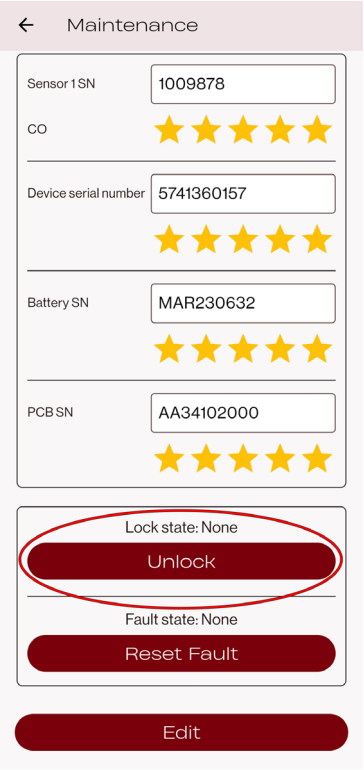
- **Switched on for**
- **Battery run time**
- **In alarm**

Changing the Sensor SN will reset below health parameters of the device:

- **Ppm*hours**
- **Peak**
- **Factory calibration**
- **Last calibration**

NOTE: When changing components, component serial numbers must be changed using the **Device Link Maintenance**.

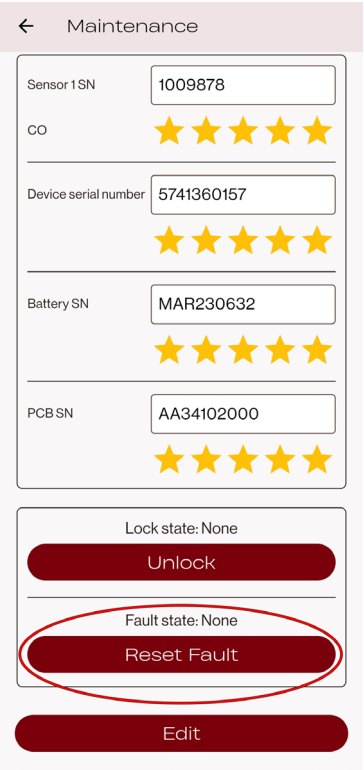
WARNING: Only substitute with original WatchGas parts. Substitution of parts always requires a full calibration prior to use.



An SST1 detector that has been locked because its activation time has expired can be unlocked by pressing the **Unlock** button.

Service personnel must assess the battery condition by star rating and total minutes in alarm. If the battery's lifespan cannot be guaranteed for the additional detector lifetime, the battery must be replaced.

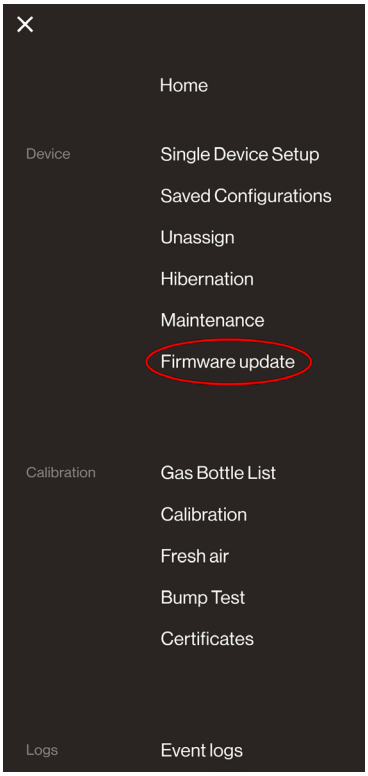
NOTE: The permitted extra lifetime is 12 months.



After performing the necessary maintenance, a failed SST1 unit can be unlocked by pressing the **Reset Fault** button.

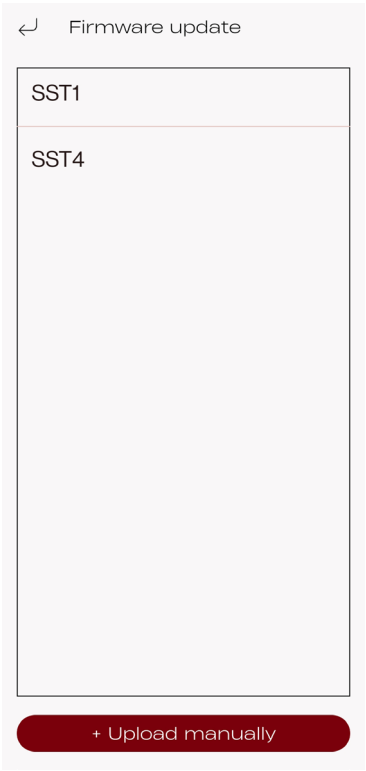
NOTE: Unlocking an SST1 unit without proper maintenance may void its safety function and/or intrinsic safety.

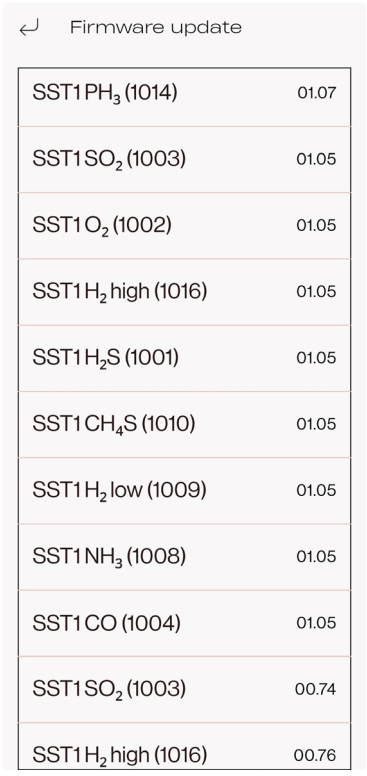
3.6 Firmware Update

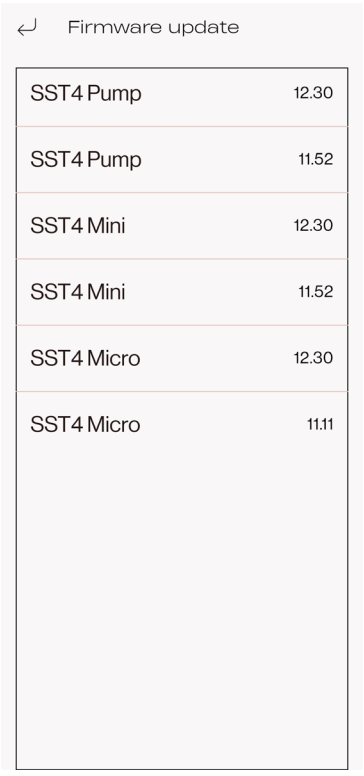


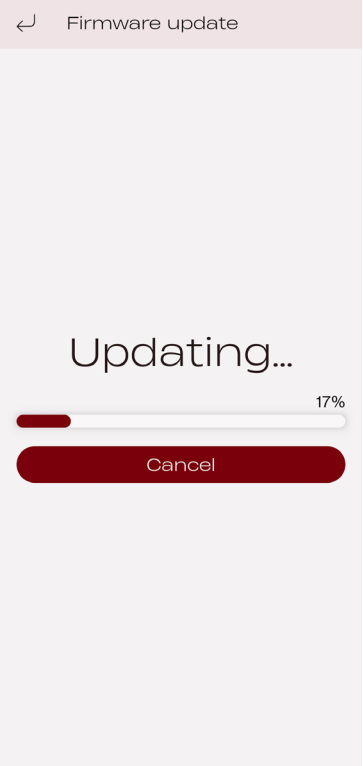
To update the device's firmware, navigate to the **Firmware update** option.

Next, select the correct model and firmware version.









Activate NFC on the detector.

Connect the detector to the Device Link, ensuring that the connection is not lost.

Wait for the NFC file transfer to finalize. This may take several minutes. The detector will then reboot upon receiving the firmware file.

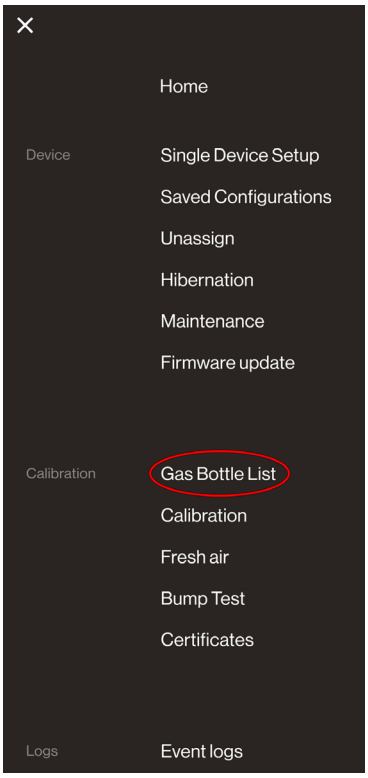
Verify the detector settings in **Single Device Setup**.

NOTE: After conducting a firmware upgrade, it is essential to always perform a configuration check and full calibration of the detector to ensure the system is functioning properly.

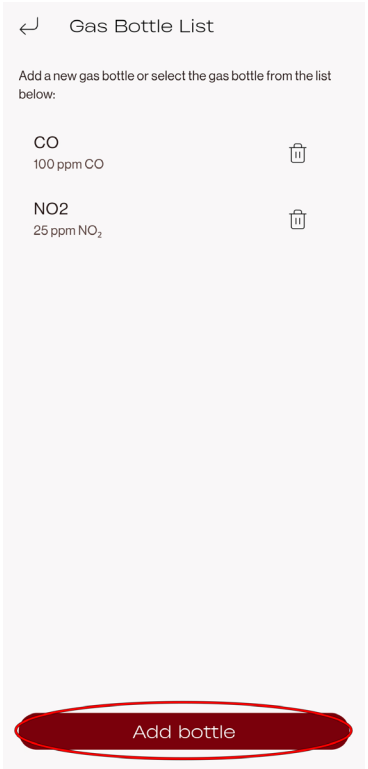
NOTE: Always download your data logs prior to updating the firmware.

4. Calibration

4.1 Gas Bottle List

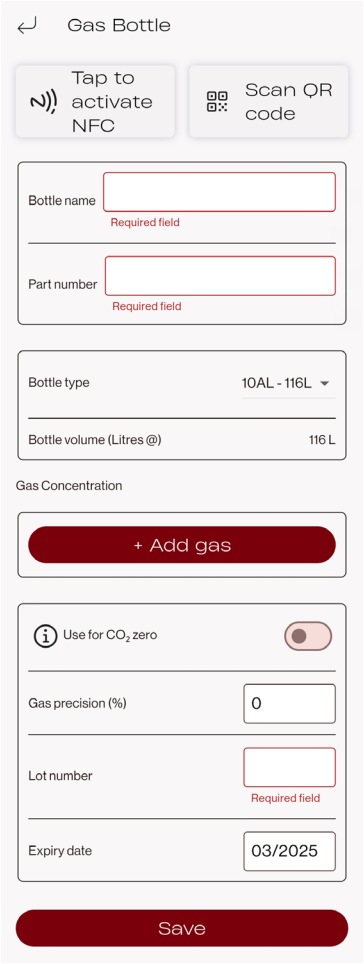


Navigate to the **Gas Bottle List**.



Select a bottle from the list below.

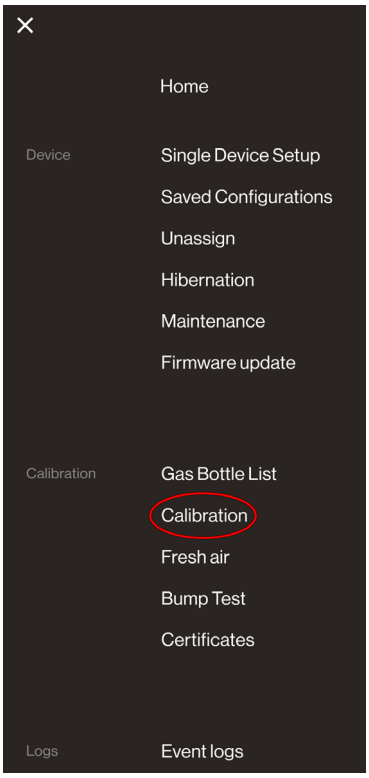
Or press the **Add bottle** button to add a new bottle.



Fill out all the required information and press the **Save** button.

Alternatively, users can scan the QR code on the gas bottle, which will automatically fill out all the relevant data.

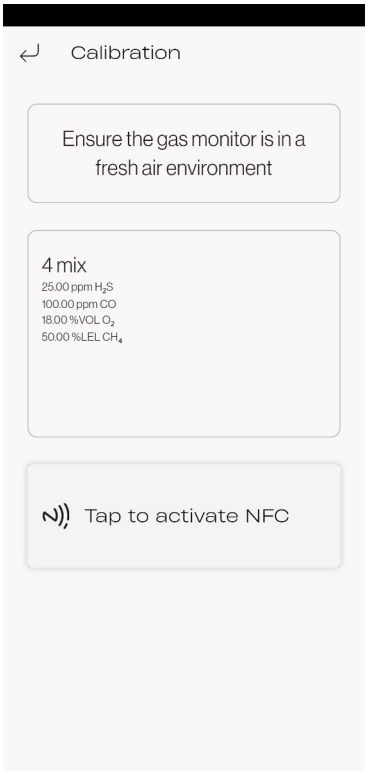
4.2 Calibration



To perform a Calibration, navigate to **Calibration**.

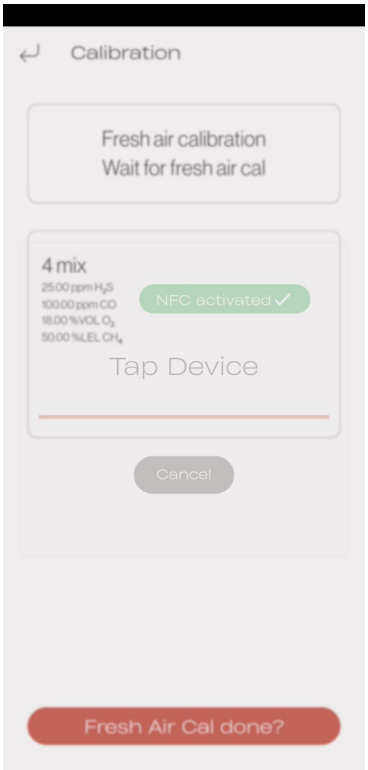
Select a bottle from the list below. Users can add bottles ahead of time using the Gas Bottle List function.

Or press the **Add bottle** button to add a new bottle.



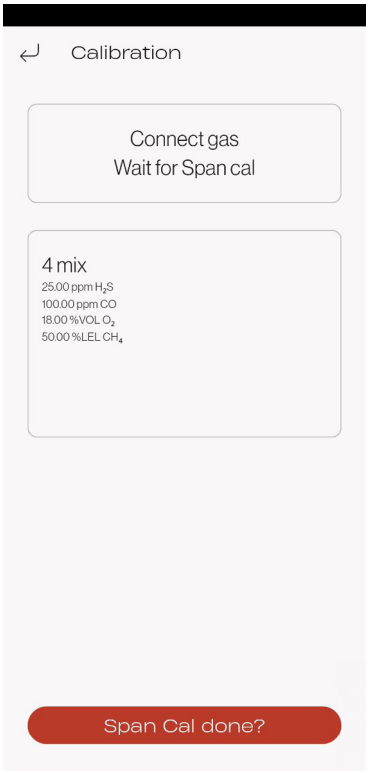
Transition to a standard ambient atmosphere with 20.9% oxygen concentration, free of any hazardous gases.

Activate NFC on the detector and tap to activate NFC on the Device Link App.



The **Fresh Air Calibration** will start and a countdown time will be displayed.

Wait for the Fresh Air Calibration to finish.



Connect the gas to the detector using the original calibration cap.

Start the flow of gas and wait for the span calibration to finish.

Do an inspection check, confirming the visual, audio, and vibrational alarms.

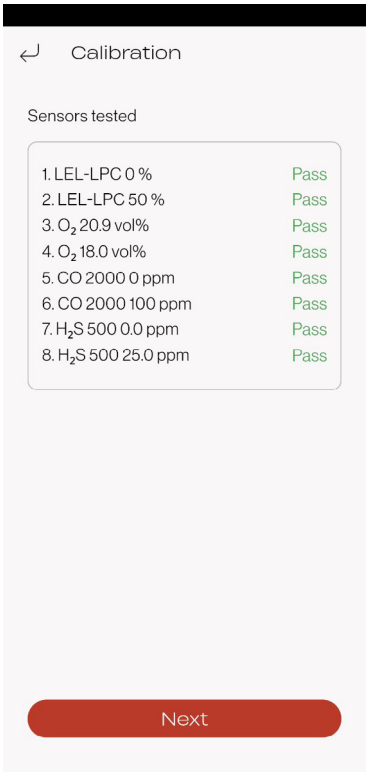
The Calibration result is displayed.

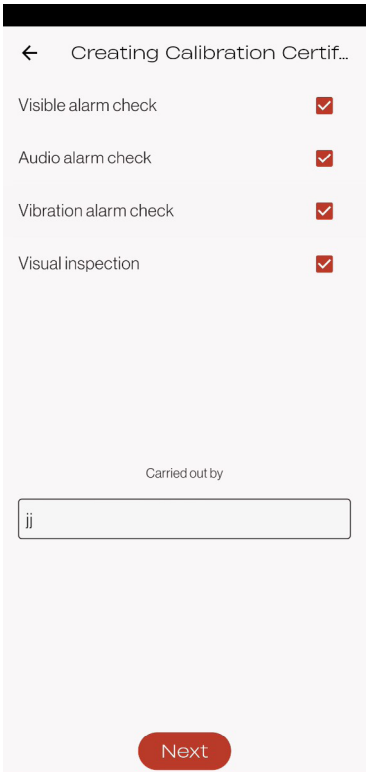
A successful Calibration will generate a **Calibration Certificate**.

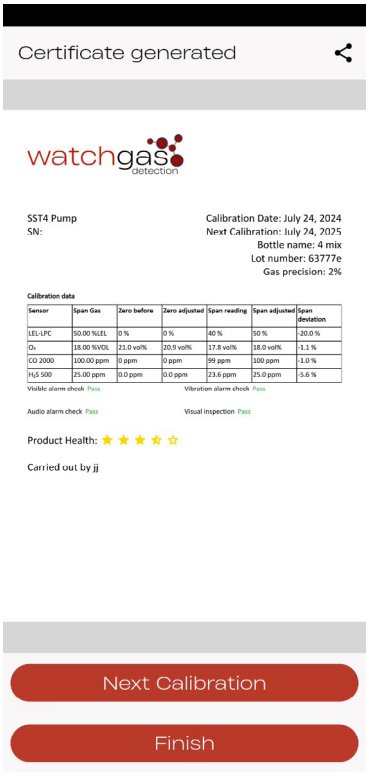
Sign the Calibration Certificate, and press the **Next** button.

This Calibration Certificate can now be shared by pressing the share icon in the upper right corner.

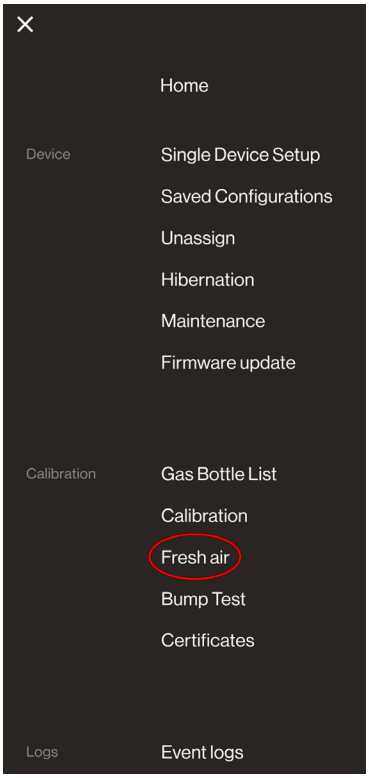
Press the **Finish** button to complete the Calibration.







4.3 Fresh Air



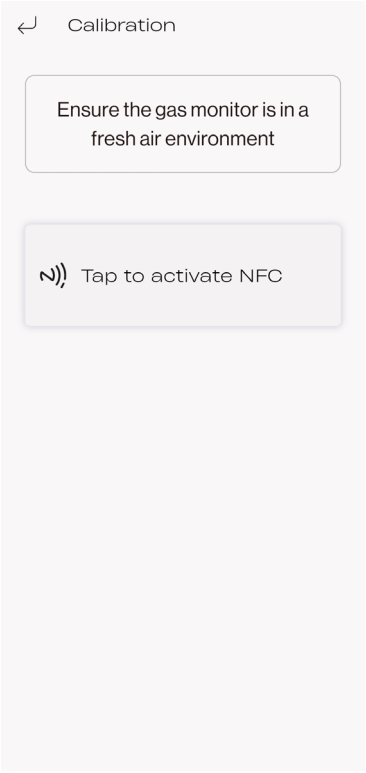
To conduct a Fresh Air test, navigate to **Fresh Air**.

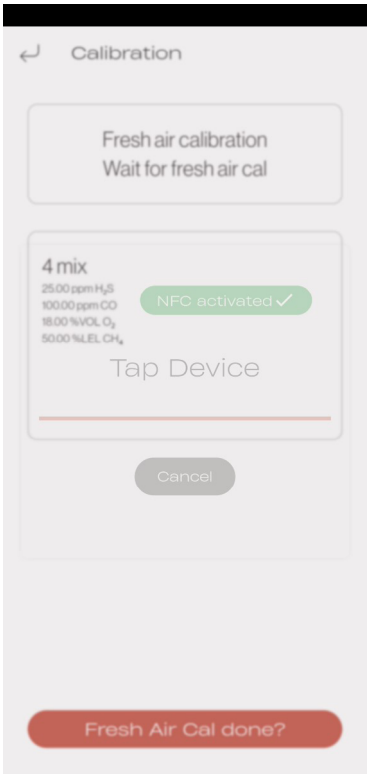
Transition to a standard ambient atmosphere with 20.9% oxygen concentration, free of any hazardous gases.

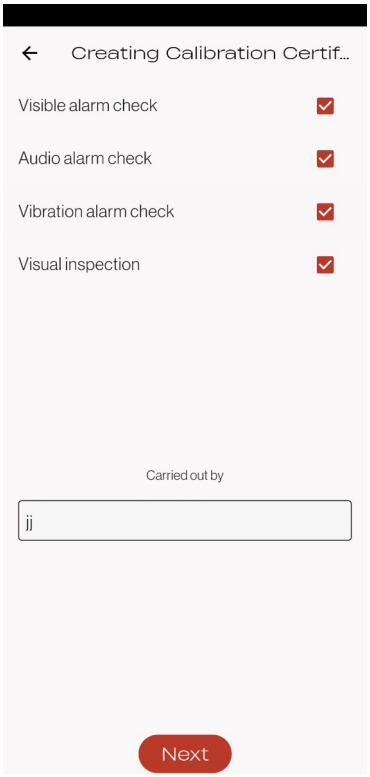
Activate NFC on the detector and tap to activate NFC on the Device Link App.

Wait for the Fresh Air Calibration to finish.

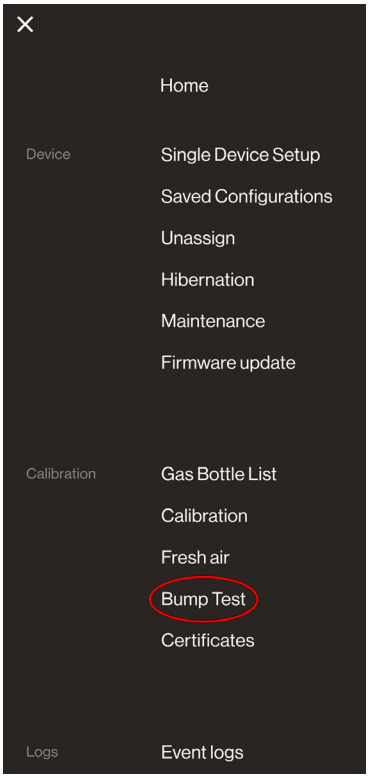
Sign the Calibration Certificate, and press the **Next** button to complete the Fresh Air test.



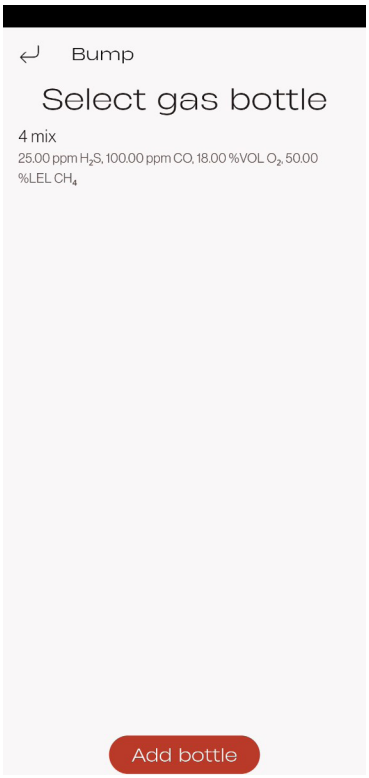




4.4 Bump Test



To conduct a Bump Test, navigate to **Bump Test**.



Select a bottle from the list below. Users can add bottles ahead of time using the **Gas Bottle List** function.

Or press the **Add bottle** button to add a new bottle.

Transition to a standard ambient atmosphere with 20.9% oxygen concentration, free of any hazardous gases.

Activate NFC on the detector and tap to activate NFC on the Device Link App.

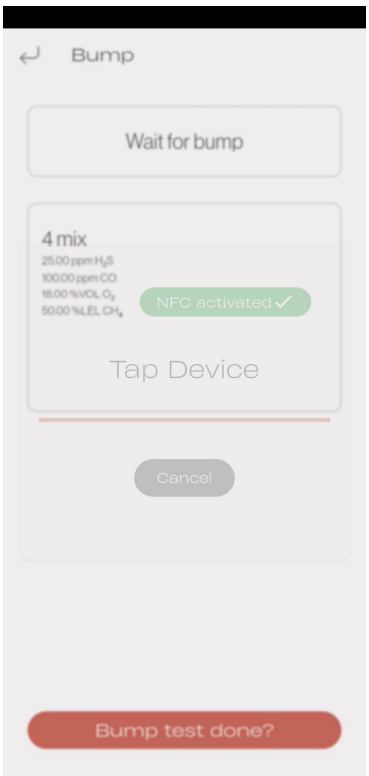
Connect the gas to the detector using the original calibration cap.

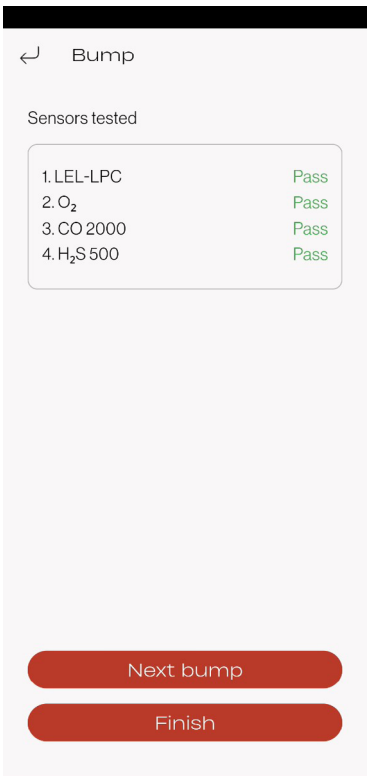
Start the flow of gas and wait for the Bump Test to finish.

When the Detector shows PASS, stop the gas.

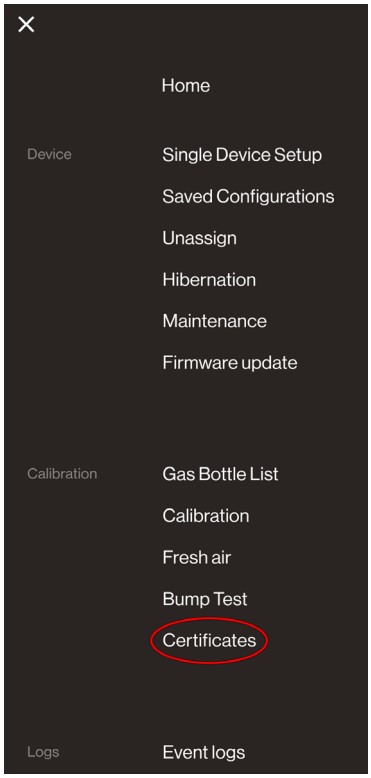
The Bump Test result is displayed.

Press the **Finish** button to complete the Bump Test.

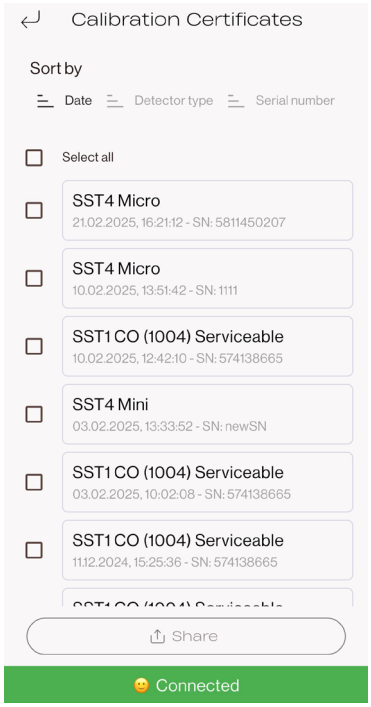




4.5 Certificates



To view all of the Calibration Certificates, navigate to **Certificates**.

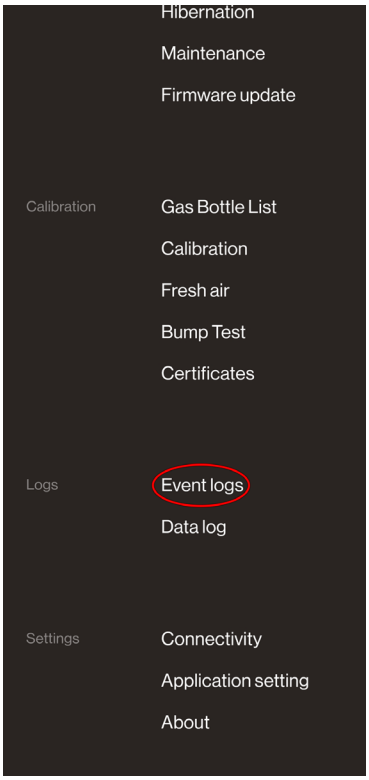


This is where all of the **Calibration Certificates** are stored.

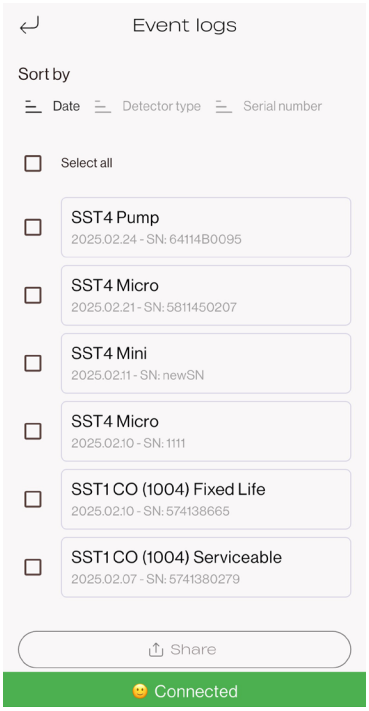
Users can share these Certificates by pressing the **Share** button on the bottom of the screen.

5. Logs

5.1 Event Logs

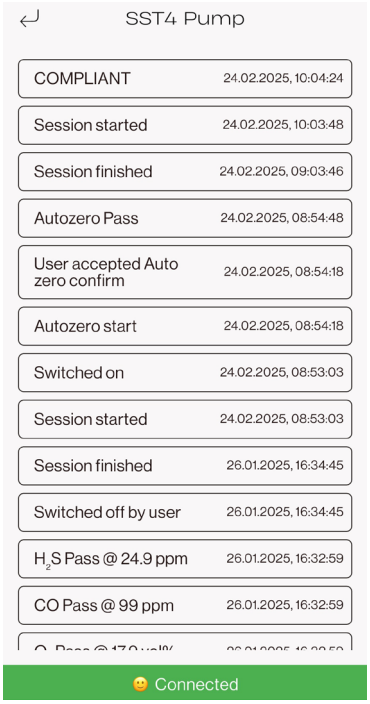


To view all Event logs, navigate to **Event logs**.



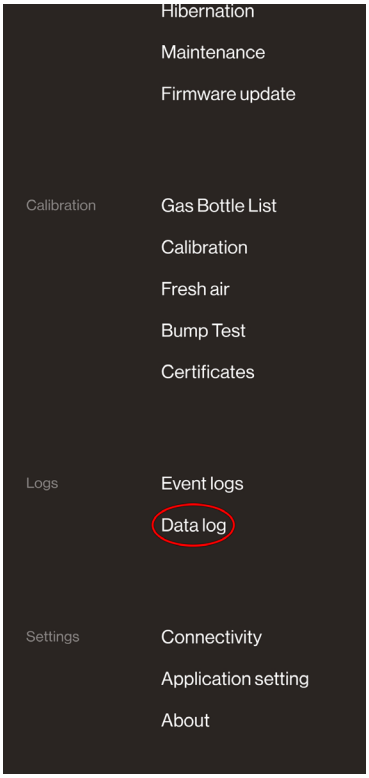
This is where all of the **Event logs** are stored.

These can be sorted by Date, Detector type, or Serial number.

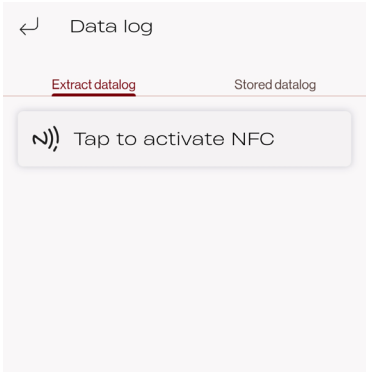


Select the Detector from the list to see all of the event logs that the detector has recorded.

5.2 Data Log

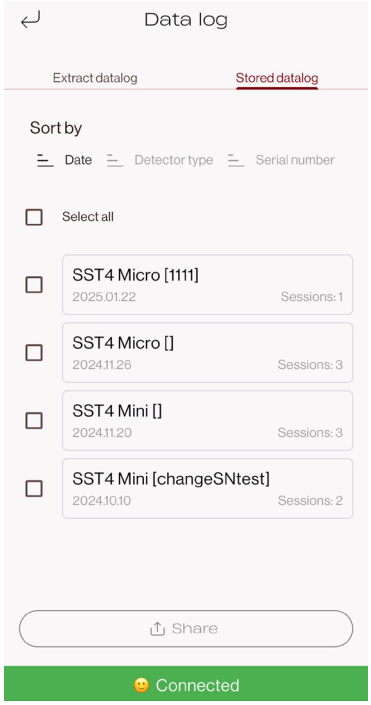


To view all Data logs, navigate to **Data log**.



This is where users can extract the datalog from the detector, as well as see all the stored datalogs.

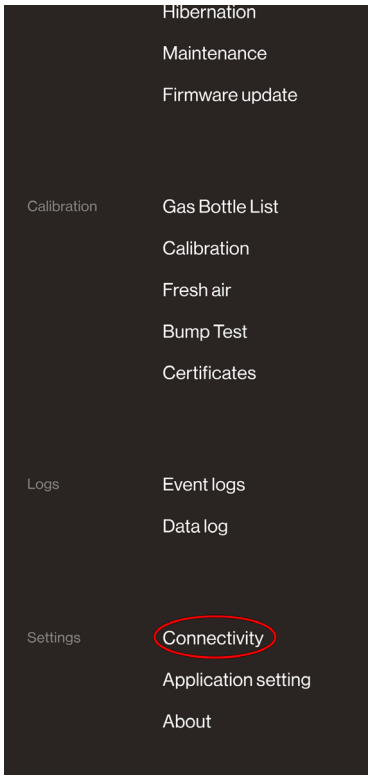
To extract the datalog from the detector, turn on the NFC on the detector and press the **Tap to activate NFC** button.

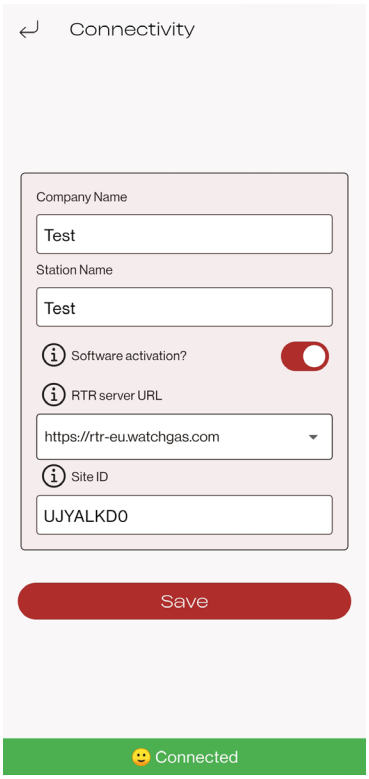


To see all stored datalogs, press the **Stored datalog** tab.

6. Settings

6.1 Connectivity





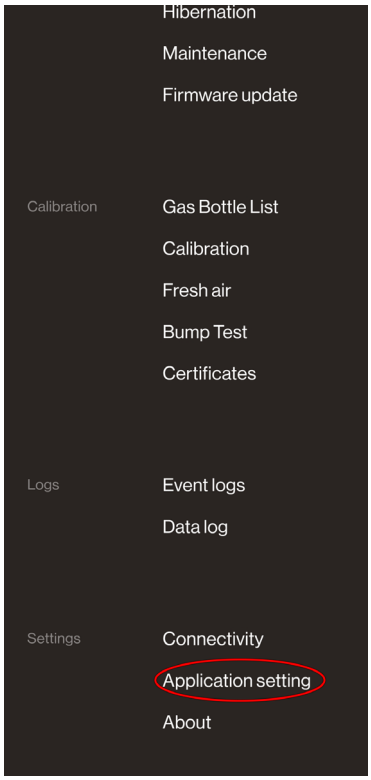
For connectivity options, navigate to **Connectivity**.

This is where users can use the Device Link to connect to the WatchGas SST RTR Web Reporting Software.

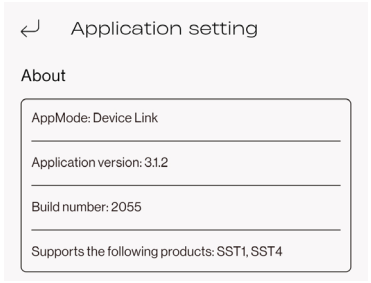
To connect to the RTR:

- Add the **Company Name** and **Station Name**.
- Turn on the **Software Activation?** toggle.
- Make sure that the URL is set to https://rtr-eu.watchgas.com, or https://rtr-us.watchgas.com, depending on the user's location.
- Log into the **RTR website** with the user's login credentials - https://rtr-us.watchgas.com for the USA, or https://rtr-eu.watchgas.com for the EU region and the rest of the world.
- Press the **Sites** option on the left side of the screen and find the unique **Site ID**.
- Copy this Site ID and paste it into the **Site ID** field in the WatchGas Device Link Application.
- Press **Save**.
- Look for the **Connected green banner** on the bottom of the WatchGas Device Link Application that indicates that the device link is successfully connected to the RTR Software.
- For more information regarding RTR, refer to the RTR User Manual.

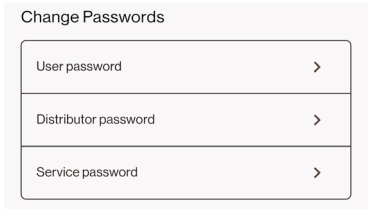
6.2 Application Setting



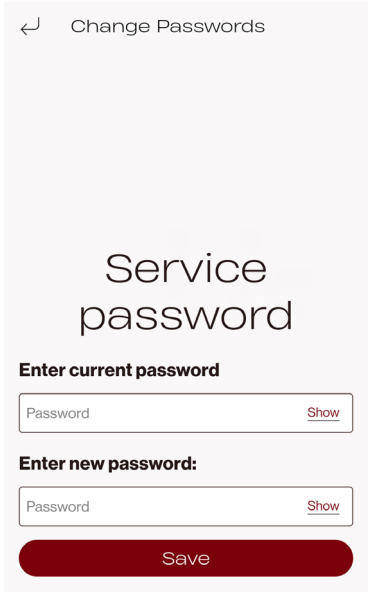
For application setting options, navigate to **Application setting**.



The **About** section lists out basic information about the app, such as the app version and build number, as well as which products it supports.

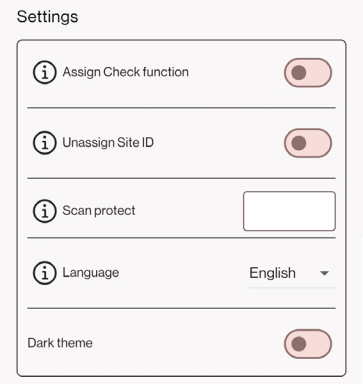


To change passwords, select the **User/Distributor/Service password**.



Input the current password in the **Enter current password** field and input the new password in the **Enter new password** field.

Press the **Save** button to save the new password.

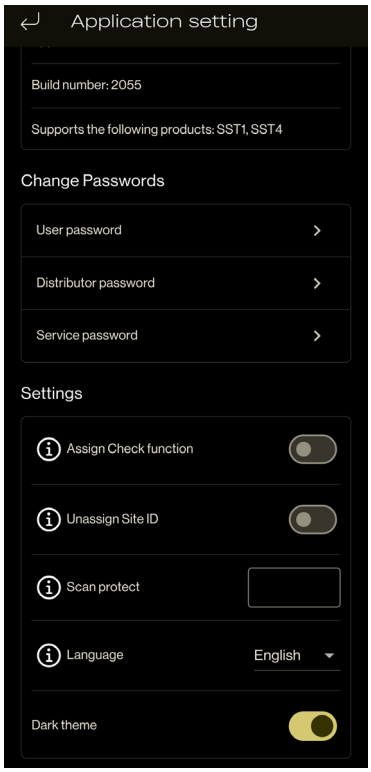


Enabling the **Assign Check Function** option triggers the Device Link to prompt users to assign any unassigned detectors to a user and site.

Enabling the **Unassign Site ID** option will unassign the Site ID of the detector.

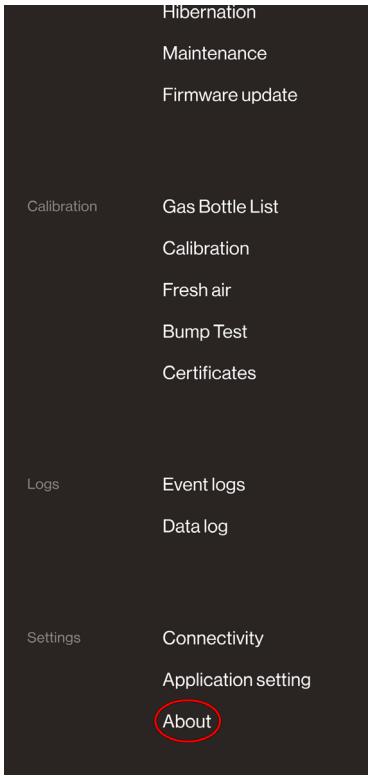
The **Scan Protect** option enables an NFC pin to protect the detector against connecting with an unauthorized Device Link.

Language allows users to change the language of the Device Link App. Currently, the following languages are supported: English, Arabic, Danish, Dutch, French, German, Italian, Romanian, Russian, and Japanese.

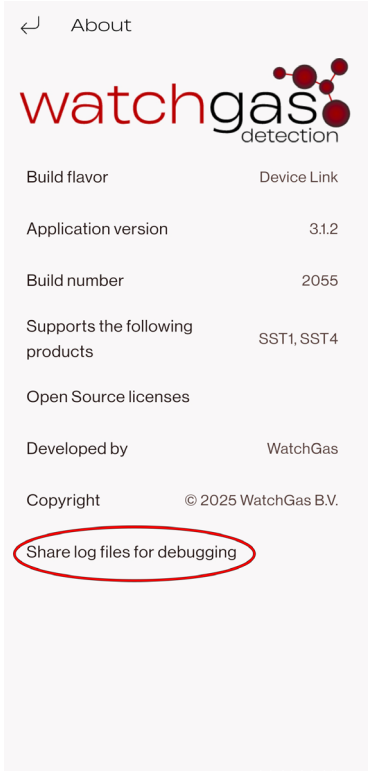


Enabling the **Dark theme** will turn on the Dark theme mode for the app.

6.3 About

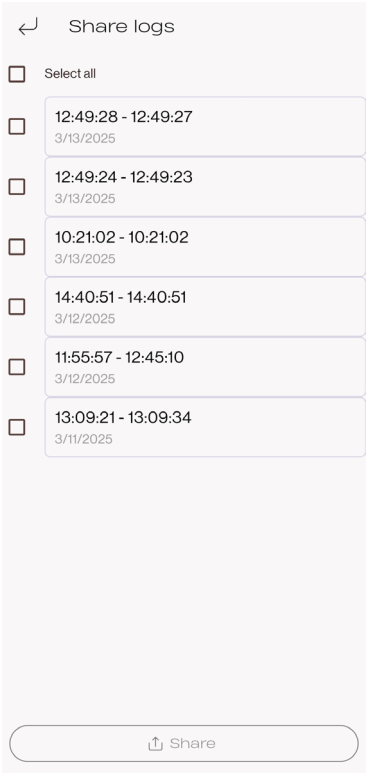


For general app information, navigate to **About**.



In the About section, users can see general information regarding the Device Link App. This includes info such as the application version, build number, which products the app supports, list of Open Source licenses, developer, and copyright.

To share log files for debugging purposes, press the Share log files for debugging option.



Select the log files for debugging and press the **Share** button.

7. Contact Details

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