GUTERMANN

# User Manual

# ZONESCAN SMART


**Version: 2.5**

**Language: English**

*For any questions relating to this product, please write to:*
*support@gutermann-water.com*

# Contents

# 1 Safety Instructions

It is essential to read the operating instructions carefully and completely before using the equipment and software for the first time. They contain important information on safety, installation, and use. Keep these instructions in a safe place.

## 1.1 Symbols

| | |
|---|---|
|  | Warning of dangerous situations that can cause injury and damage to the devices. |
|  | Warning<br>The ZONESCAN Correlating Noise Logger contains a very powerful magnet. The operation of cardiac pacemakers and implanted defibrillators can be influenced. People with cardiac pacemakers and implanted defibrillators are not permitted anywhere near this product. |
|  | Important notes and tips are provided. Follow these guidelines. |
|  | Never put it in your household waste bin. |

## 1.2 General Safety

Operating and maintenance personnel must read the instructions carefully before using the equipment. Knowing all the information contained therein - in particular the warning and safety instructions - is needed to safely operate the equipment, and to protect yourself and others against possible dangers. Ignoring the warning, safety and operating instructions can result in injury, damage, or a considerable shortening of the equipment lifetime. Do not make any changes or alterations to our products. Never open the device, otherwise any warranty and conformity expire. For questions concerning replacing the battery, please contact your Gutermann distributor. When using the software or the equipment, make sure you adhere to any applicable regulations, in particular traffic regulations.

## 1.3 Health Warning

The ZONESCAN Correlating Noise Logger contains a very powerful magnet. The operation of cardiac pacemakers and implanted defibrillators can be influenced. People with cardiac pacemakers and implanted defibrillators are not permitted anywhere near this product.

## 1.4 Warning of magnetic fields

The very strong magnet in the correlating ZONESCAN noise logger can erase magnetic media and render it useless. Keep loggers away from debit and credit cards and hard disks. Also, the function of wristwatches, mobile phones and tablet computers can be impaired by magnets.

## 1.5 Intended Use

ZONESCAN products, hardware, software, and accessories are exclusively intended for industrial use and exclusively intended for leak detection on water pipes of the public water supply. In particular, these products are not intended to be used on waste water and gas pipes. Gutermann Technology GmbH is not liable for any damage caused by misuse, improper operation, and as a result of noncompliance with safety instructions and warnings.

# 2 Overview

## 2.1 Delivery Contents


The ZONESCAN SMART System contains the following components:

- Smartphone or tablet computer with Android OS (optional)
- Car roof antenna with magnetic fixture
- System Communication Link including battery charger and cable
- ZONESCAN 820 Correlating Noise Logger
- Robust carrying case

## 2.2 Features

ZONESCAN SMART has the following features:

- Programming of ZONESCAN 820 Correlating Noise Logger via Communication Link
- Deploy / collect loggers with QR scanning
- Show loggers in map and table, including detailed view with Leak Score history, noise level histogram and spectrum
- Correlation with manual or pre-set filter settings
- During Drive-By, the loggers and the current vehicle position are shown on the map
- Online or downloadable hi-res offline vector maps (for the latter no mobile network and SIM card are required)
- Upload measurements for an area, or the complete project, to ZONESCAN NET
- Export measurements for an area, or the complete project, to other Android devices via email or Bluetooth
- Pipe Wizard to manually draw the pipes between the loggers
- Listen to the recorded sound by the logger

# 3 First Steps

## 3.1 Charging

To charge the Communication Link, always use the included battery charger and cable. While charging, the red LED blinks. When the Link is fully charged, the LED switches off.

## 3.2 Android Device Requirements

The ZONESCAN SMART App works on devices with the following requirements:

Minimum: Tablet computer (or smartphone) with

- Android OS 6 or higher
- GPS

Recommended:

- Rear camera with > 3 M pixel and autofocus
- Screen size > 4'' for Lift & Shift
- Screen size > 5'' for Drive-By
- Quad-core processor
- 4GB of RAM
- 32GB internal storage

## 3.3 Installation ZONESCAN SMART Software

To install ZONESCAN SMART from the Play Store proceed as follows:

- Go to the Play Store app on your device and search for ZONESCAN SMART
- Alternatively, scan the below QR code with your device and click the link

After the installation, you can start ZONESCAN SMART with the icon on the home screen:

## 3.4 App setup wizard

To set up the ZONESCAN SMART app, please follow the steps below:

- Launch the app
- Grant the necessary permissions required for the app
- Accept the terms and conditions
- Once the terms and conditions are accepted, the user will be asked to enter the "Company Name" and "Link Serial Number". Enter your company name and Link Serial Number that is printed on the back of the Commlink and click on Continue.

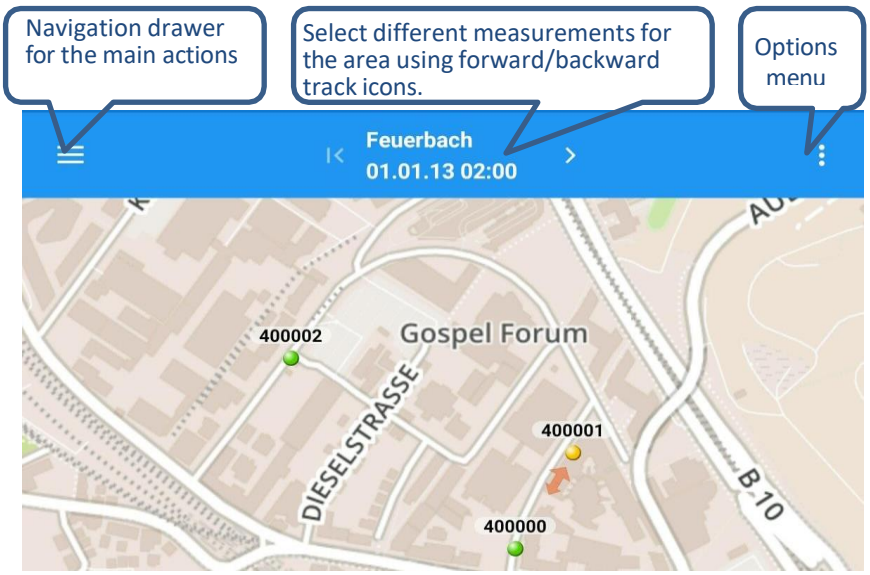

*Fig: Shows the Link Serial Number on Commlink*

- On the next screen, the user is asked to pair the Commlink with the Android Device using the Android Bluetooth Settings. When asked to enter the PIN for pairing, please enter "0000".
- You can move to the next screen by clicking on the "Tick mark" button. This completes the app setup.

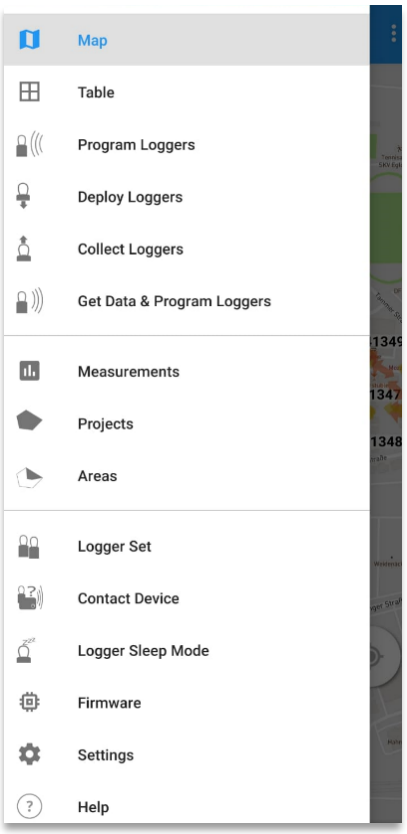
## 3.5 Action Bar

At the top of the app screen is the "action bar". The action bar on the main screen has the following functions:

- Navigation drawer for the main actions in the app
- Navigate through all the measurements of the area using forward/backward icons
- Options menu for additional menu items



### 3.5.1 Navigation Drawer




The navigation drawer has three sections.

The **top section** contains all the actions for viewing and recording the data.

1. **Map and Table** to view the data either on the map or in a tabular form
2. **Program Loggers** to update the loggers with the new settings (make sure Commlink is switched on)

   **Note**: **Any previous recordings will be erased, if they have not been read before**

3. **Deploy Loggers** to deploy loggers in a selected area

   **Note**: **The user must deploy the loggers before they start recording the data**

4. **Collect Loggers** to collect the loggers from a selected area or a project
5. **Get Data & Program Loggers** to read the data and re-program the loggers with the new settings.

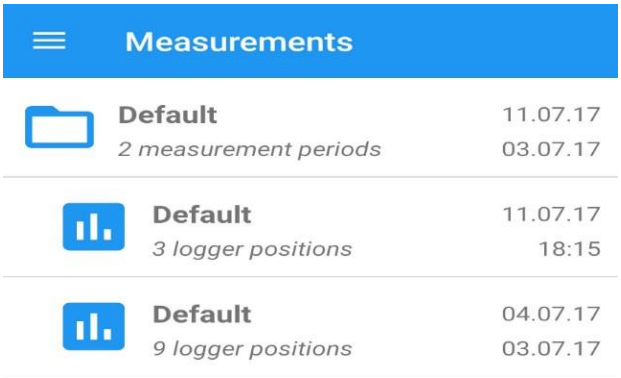
The above options change the order automatically based on the project type, to give the user an indication of what to perform next.

The **middle section** contains all the actions for changing/creating projects, areas and measurements.

1. **Measurements** Shows the user a complete view of measurement periods performed for a selected project (including all the areas). A measurement period is a set of measurements in a specific area.

> **Note**: **A new measurement period will automatically be created if there is a gap of 3 days between the measurements.**

The selected measurement period is shown on the map by default, the user can then use the **'<'** or **'>'** icon on the action bar to select different measurements in the measurement period. The User can also switch between the measurement periods of the area using the **'|<'** or **'>|'** icons.




2. **Projects** Used to select/create new projects (Refer to section 3.6)
3. **Areas** Used to select/create new areas under a selected project

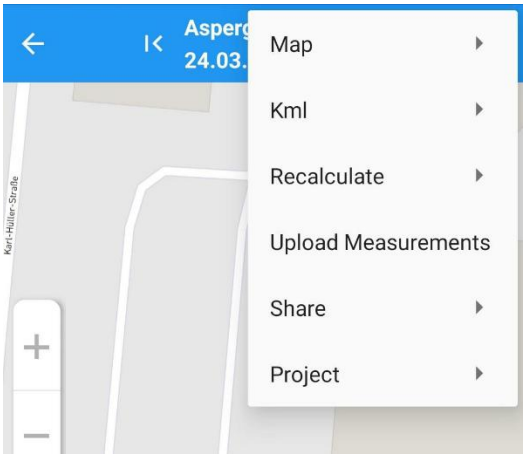
The **bottom section** contains all the actions for contacting the loggers, adding new loggers to the logger set, activating logger sleep mode, general settings and share feedback.

1. **Logger Set** is used to add more loggers to the existing logger set or create/edit a logger set.
2. **Contact Device** (Refer to section 5.3)
3. **Logger Sleep Mode** (Refer to section 5.10)
4. **Firmware** (Refer to section 5.12 )
5. **Settings** include settings to change the measurement units, Leak Score and correlation calculation parameters
6. **Help** lets you send a problem report and the ZONESCAN SMART database to Gutermann support to analyze and fix issues with the app. You can also contact Gutermann support, see the newly released feature, and check the app's version number.

### 3.5.2 Navigation Icons

Navigation icons are used to navigate between different measurements/measurement periods in the selected area. The user can use the **'<'** or **'>'** icon on the action bar to select different measurements in the measurement period or **'|<'** or **'>|'** icons to switch between the measurement periods of the selected area.

### 3.5.3 Options Menu

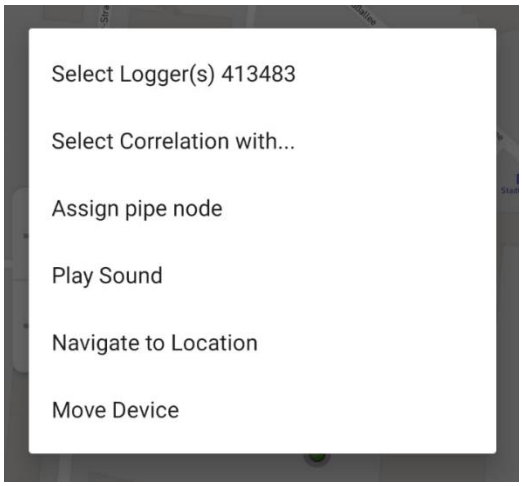



Click on the three vertical dots icon on the top right corner to open the Options menu. The action items available are explained below.

- **Map –** ZONESCAN SMART uses online OpenStreetMap. Select Map to view the online or offline map. Refer to section 5.5 for more details.
- **KML -** For more details on KML/GIS, refer to section 5.13
- **Recalculate –** There are two options available here
    1. **Recalculate Measurements** is recalculating the correlations for a period entered by the users.
    2. **Recalculate Measurement Periods** is recalculating correlations in time periods for which measurements are available in a given area.
- **Upload Measurements** – Use this option to upload the measurements to the assigned project in ZONESCAN NET. For detailed information refer to section 5.8.
- **Share** – This action allows you to email or share deployments, screenshots and measurements. Refer to section 5.9 for more details.
- **Project** – The "Project Settings" option can be used to set the parameters for Leak Score calculation and correlation calculation.

### 3.5.4 Context Menu

To view the context menu, long-press the logger.

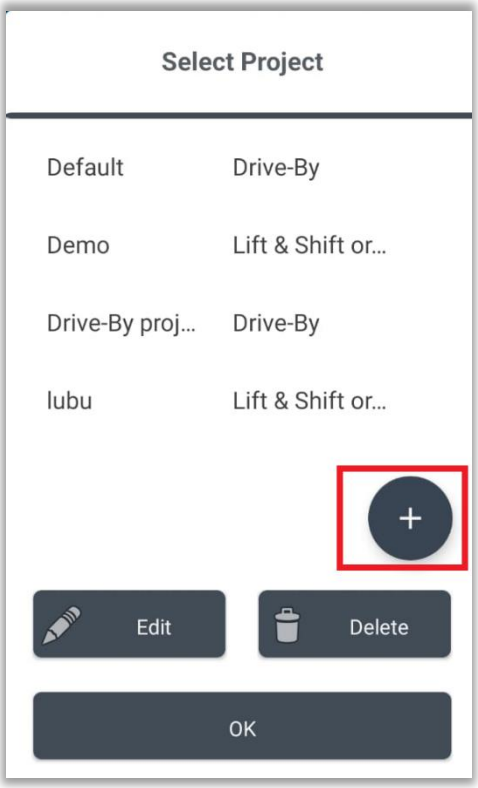



The following options are available in the context menu:

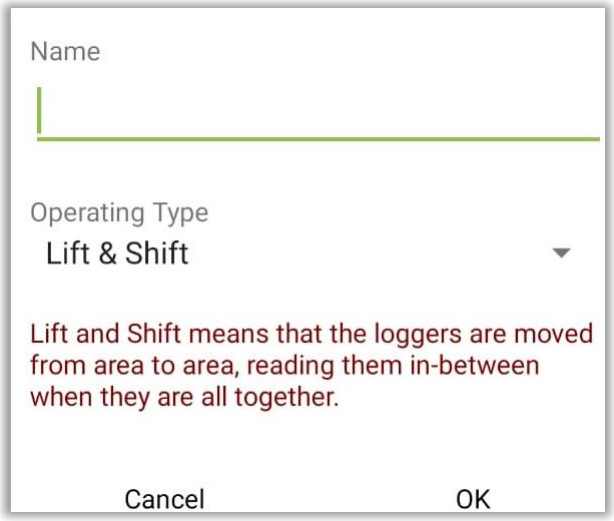
- **Select Logger (s) XXXXX** – This displays all the information collected by the logger such as Leak Score history, details of the logger, histogram
- **Select Correlation with …** - This option calculates the correlation between the loggers.
- **Assign pipe node** assigns the selected logger to the pipe node. Before doing so, you need to download the KML/GIS from the Gutermann Cloud.
- **Play Sound** – Select this option to play the sound recorded by the logger. Refer to section 5.7 for more details.
- **Navigate to the Location** – This option takes you to the logger location using Google Maps.
- **Move Device** - To reposition loggers, click “Move Device” and tap on the new location.

## 3.6 Creating a Project

- Go to the Navigation drawer and select "**Projects**"
- Click on the **"+"** to open create a new project.

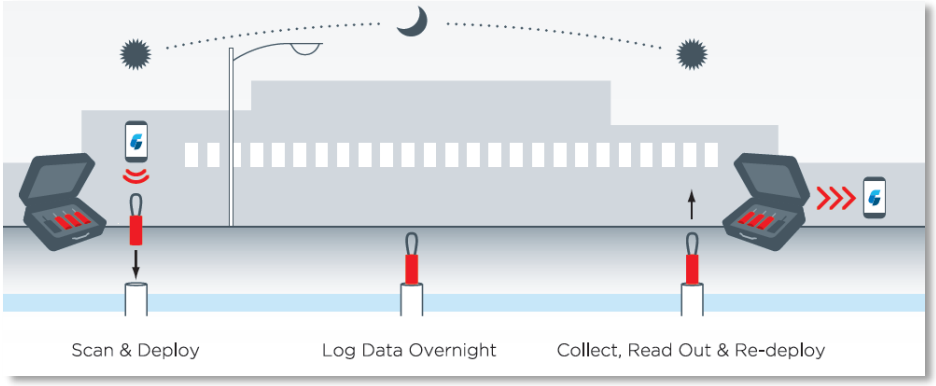



- Enter a project name in the dialog field. Select "***Lift & Shift***" or "***Drive By***" from the Operation Type drop-down menu.



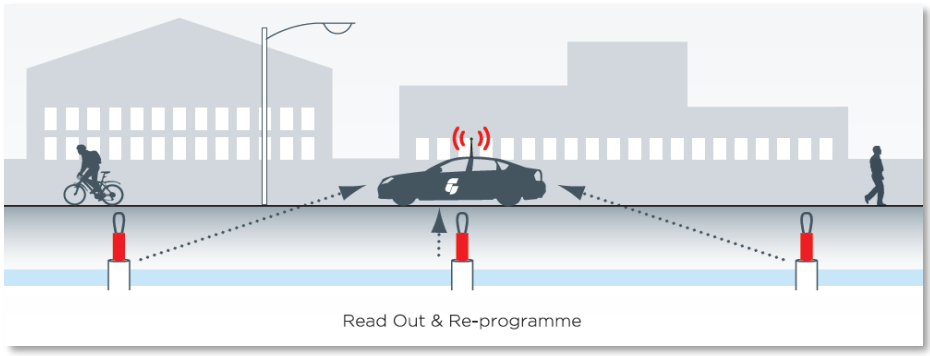
### 3.6.1 Operating Type Lift & Shift

In the Lift & Shift operation, a set of loggers is moved from place to place. Before moving the loggers to a new location, they are all collected together for reading the measurements of the previous nights.




### 3.6.2 Operating Type Drive-By

In the Drive-By operation type the loggers remain permanently at their assigned location in the pipe network. A car regularly drives past the loggers to collect the measurement data via a radio link.



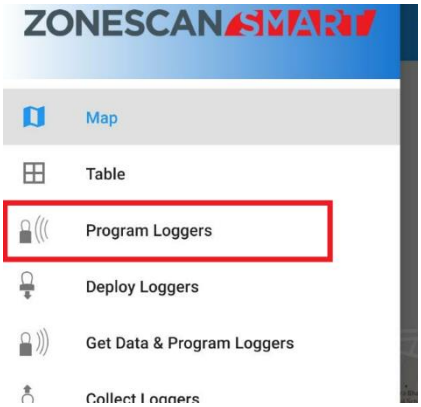
# 4 Standard Operation

This section describes the routine steps for recording noise measurements. It can serve as a Quick Reference Guide and can be printed separately.

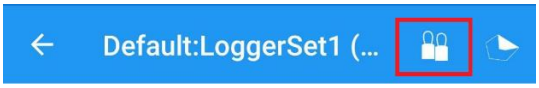
## 4.1 Program Loggers

Before deploying loggers for Lift & Shift or Drive-by operations, their radio and measurement parameters must be programmed while the loggers are still all together.

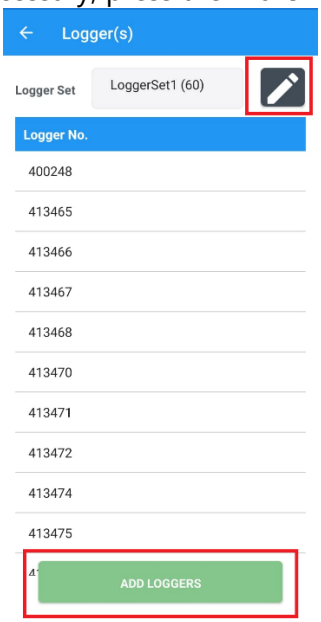
1. Select "**Program Loggers**" from the Navigation Drawer on the left.



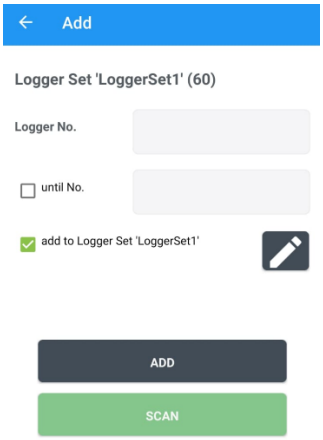

2. Select the "**Loggers**" icon as shown in the image below to choose the loggers to be programmed.



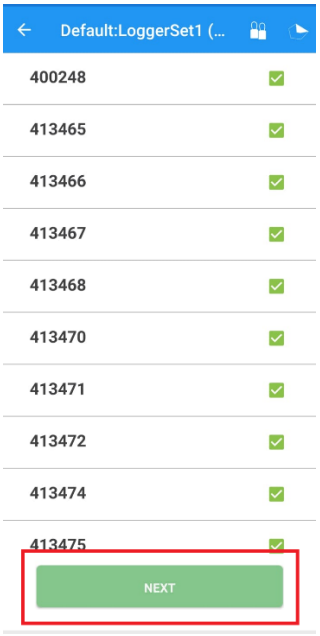

3. Select the name of the logger set you want to deploy. A logger set is a group of loggers which are deployed together in an area. If necessary, press the "**Edit**" icon to create a new logger set



4. If necessary, press "**Add Logger**" at the bottom of the loggers screen shown above. On the add screen, you can enter the logger numbers or scan the barcode of the new loggers as shown below.




5. Press the back button to get back to the "Loggers" screen. The added loggers are shown in the list.
6. Press the "**Next**" button to continue programming the loggers.



7. Only for ***Drive-By*** operation: Activate "Radio Active". This is the time when you can drive around and get the data from the loggers. Turn on the "Noise Level Measurements "settings.

"**Radio Active" duration should be no more than 4h/day to save battery.**

For **Lift & Shift** operation: Activate "Noise Level Measurements".

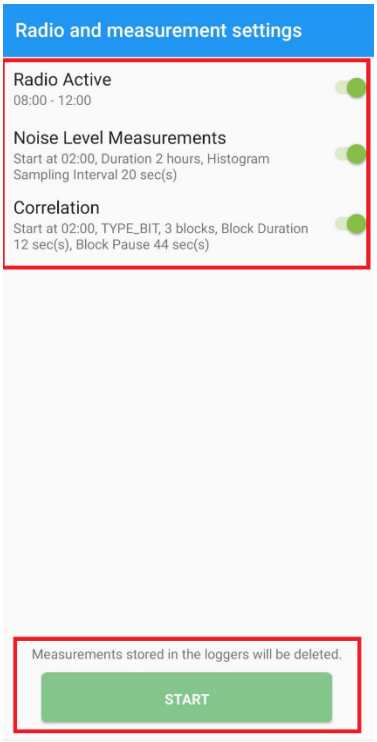



*Fig: Option for Drive-By*

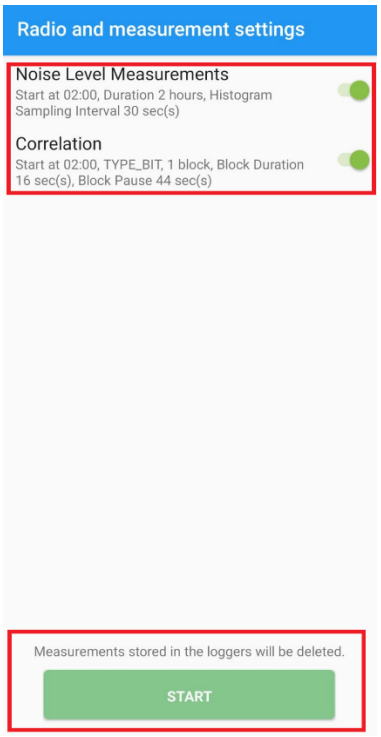
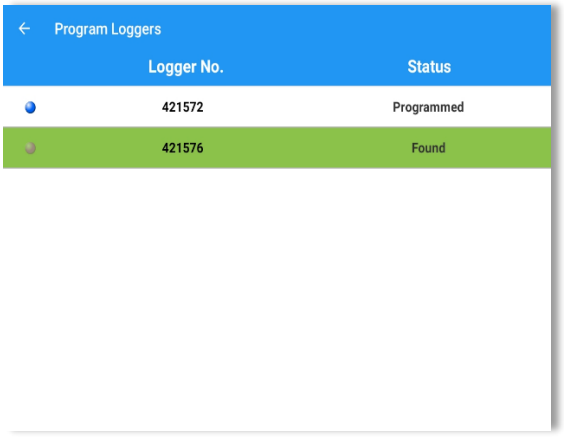



*Fig: Option for Lift & Shift*

Switch on the "Correlation" settings. If activated, a correlation noise recording will be made on the first night after the loggers were programmed.
Press "Start" to start programming as shown above.

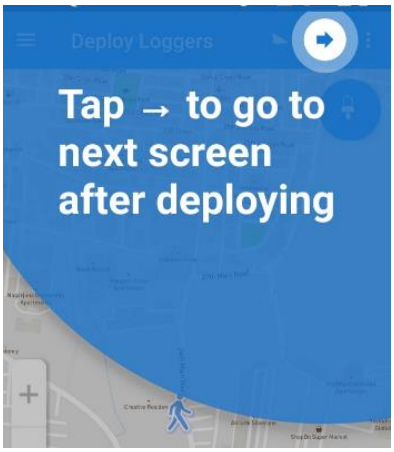
**Note**: During programming, any old measurements stored in the loggers will be deleted. If you want to retrieve the stored measurements, use "Get Data & Program Loggers" instead.



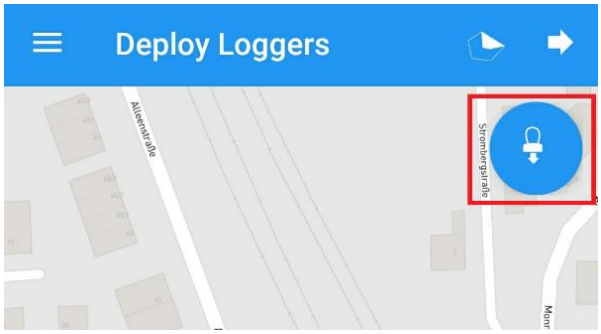
8. If some loggers are not found, then you can select "Retry x missed" loggers on the bottom of the screen to reprogram them, else you will be taken to the deploy screen automatically or you can also use the "Deploy Loggers" button from the navigation drawer to switch to the "Deploy Loggers" screen. If no area within the project is selected yet, you will be asked to select one before deploying.

## 4.2 Deploy Loggers

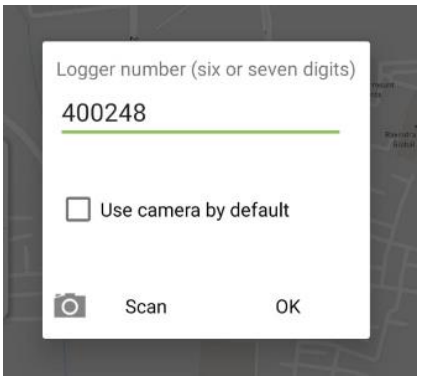
1. Navigate to the "**Deploy Logger**" option from the navigation drawer menu.
2. On entering the deploy screen, you will be shown some tips. Click outside the tip or on the highlighted icon to discard the tip.

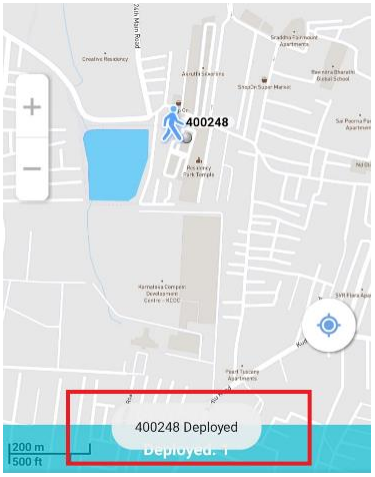



3. In the deploy screen, if GPS is available and switched on then you can press the "Deploy" icon (logger with down arrow) button on the right corner of the map.



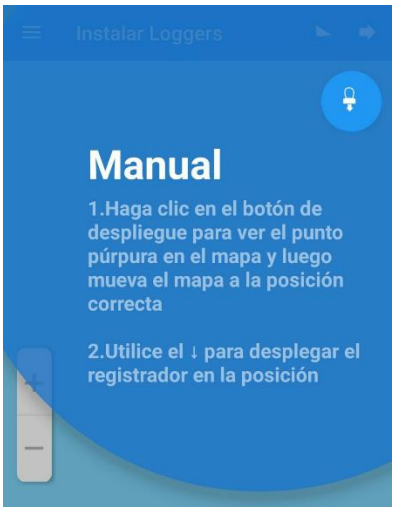
4. Scan the QR code or enter the logger serial number each time before putting a logger in the ground.



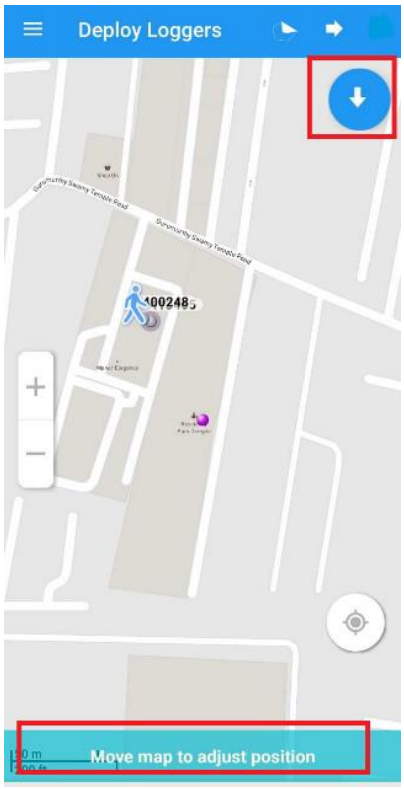




5. If GPS is unavailable or tracking is disabled then the app automatically guides you to manual mode.

You can follow the onscreen instructions.




6. In manual mode, once the logger number is entered, the logger turns purple on the map. You can now move the map to adjust the position of the logger and then select the "Deploy" icon (down arrow) as highlighted below to complete the deployment.




7. After deploying all the loggers, select the right arrow on the top right corner of the screen to move to the next screen.

Put the logger on the valve or pipe. Make sure that the magnet on the bottom of the logger has a stable, dirt-free contact with the metal. A clean connection is needed for good measurements.

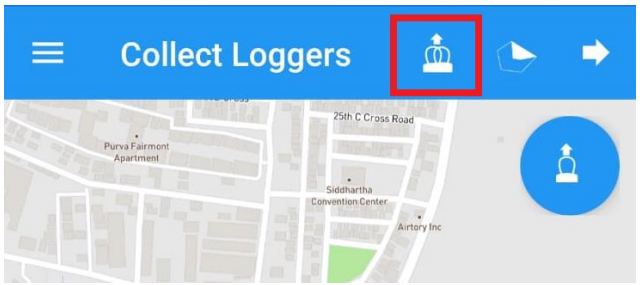
The loggers measure the noise every night and store the data in the internal memory.

# 4.3 Reading Measurements

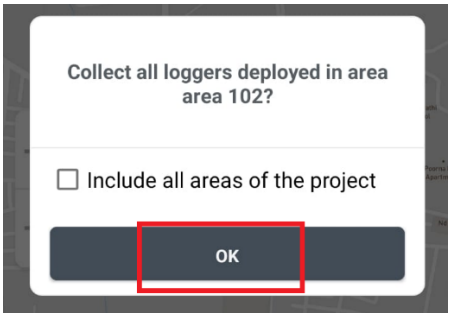
## 4.2.1 Lift & Shift Operation

After the measurements are completed, for Lift & Shift operation continue with these steps:

1. Collect loggers: When enough measurements have been made after one or several days, select "**Collect Loggers**" from the navigation drawer. You can either use the "Collect" button to collect the loggers one by one or use "**Collect All**" as highlighted below to collect all the loggers of the area in one go.




Select "**Ok**" after collecting all loggers. You can check "Include all areas of the project" also.



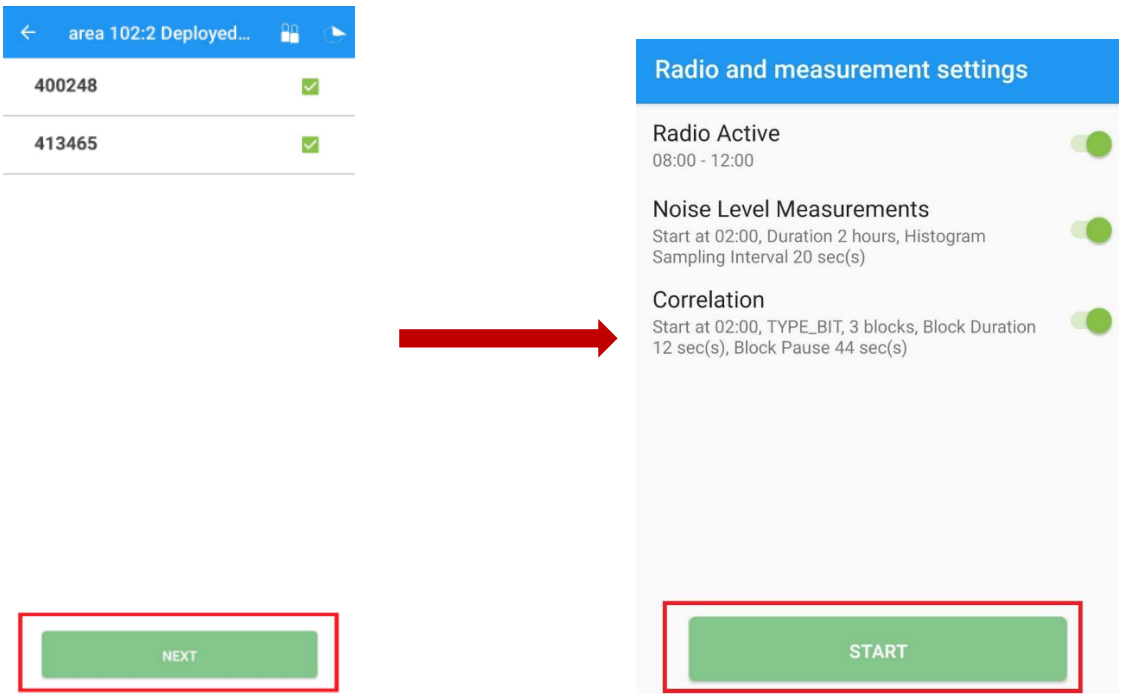

2. On collecting all the loggers, select the right arrow on the top right corner of the screen to exit the collect screen.

3. Read the measurements from the loggers: Select "**Get Data & Program Loggers**" from the navigation drawer. If the project has the correct operation mode "Lift & Shift", the loggers will then be read one after the other in a table.

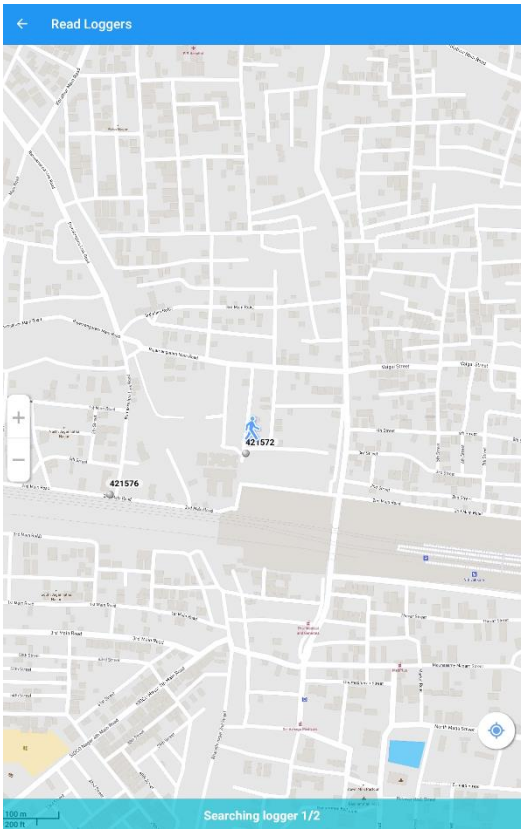
### 4.2.2 Drive-By Operation

To read out the deployed loggers in Drive-By mode:

1. Select "**Get Data & Program Loggers**" from the navigation drawer. After checking that the settings are still correct, press "Start".




A map with the deployed loggers will be shown, and you can now drive past each logger and read the measurements.



2. When you drive past each logger, the color of the logger changes.

   - Purple: When the logger is found
   - Green: Leak Score of the measurement < 40
   - Yellow: Leak Score of the measurement < 70 and >= 40
   - Red: Leak Score of the measurement >= 70

3. If loggers are missed during the Drive-By then you can read the missed ones by following the steps below:
   - Open "Get Data & Program Loggers" again from the navigation drawer
   - Navigate to the logger screen by selecting the "Logger" icon as highlighted below.


   - Now from the drop-down select "Deployed Loggers not reached today".


On the day of collecting the logger, retrieve the measurements from the logger by using "Get Data & Program Loggers" from the navigation drawer and follow the steps to collect measurements.

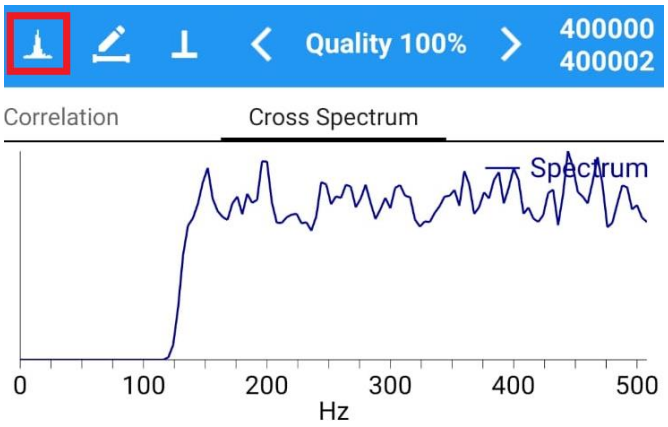
# 5 Advanced Functions

## 5.1 Analyzing Measurements

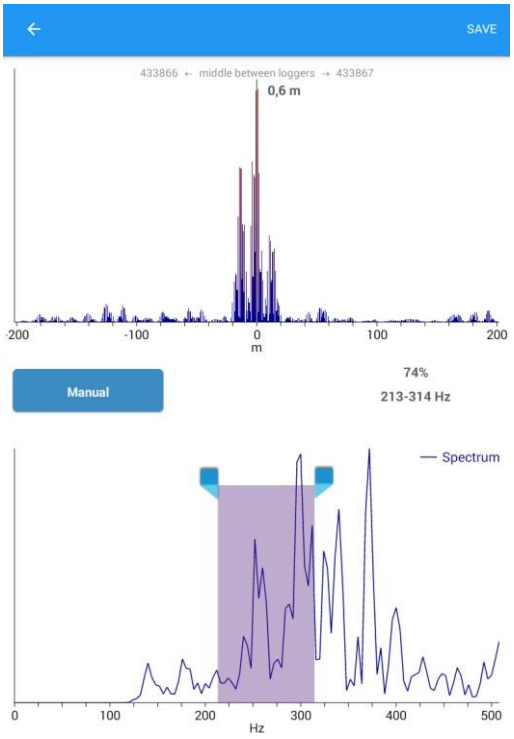
- Use the navigation drawer to switch between the map and table on the main screen
- Touch a logger in the table or double-tap a logger in the map to show the details of the measurements:
  - Leak Score history
  - Histogram
  - Noise spectrum
  - Battery voltage
- Double-tap a correlation in the map to show the details of the correlation:
  - Correlation chart showing the distance of the leak
  - Correlation spectrum
- To switch between the details charts, swipe left or right in the area at the bottom

### 5.1.1 Filter Settings

- To change the filter settings for a specific correlation, select the filter button as shown below. This will open a new screen for a detailed analysis.

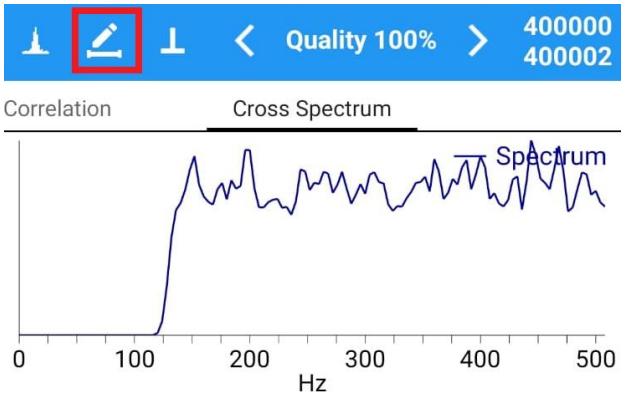



- In filter settings, further analysis can be done by moving the filter. The filtered results are updated on the chart as shown below.

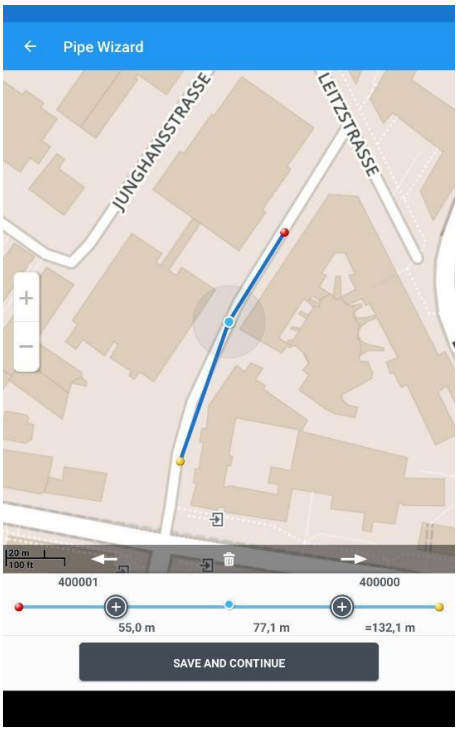



## 5.1.2 Drawing Pipes

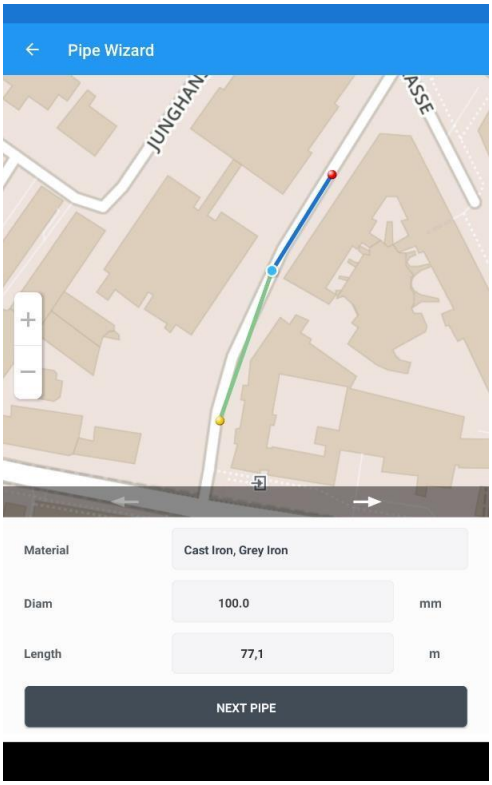
- To draw the pipe information between the logger you can double-tap on the correlation and then select the pipe wizard button as shown.
- To clear the pipe information added above, you can long touch on the logger and select “Clear Pipe Segments between” and tap on the other logger where the pipe connection ends.



- In the pipe wizard select "+" to add a new node or select the button "Delete" to delete a node and then move the map to adjust the node position. Press "SAVE AND CONTINUE" to enter pipe details.

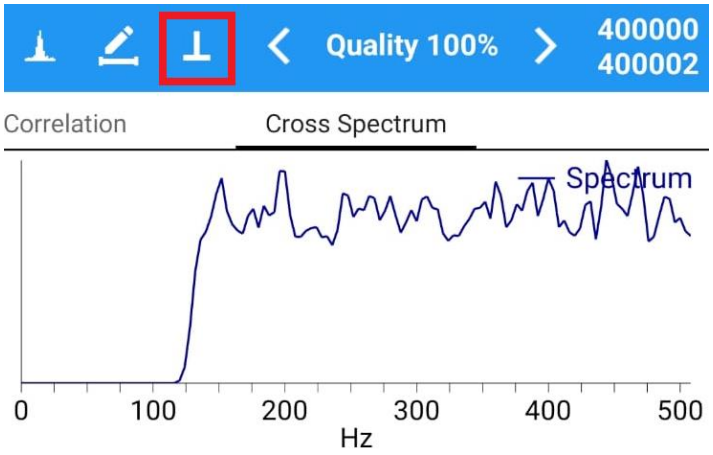



- Press the "Next" button to enter the pipe material, length and diameter for each pipe and press "Save" to complete the correlation calculation.

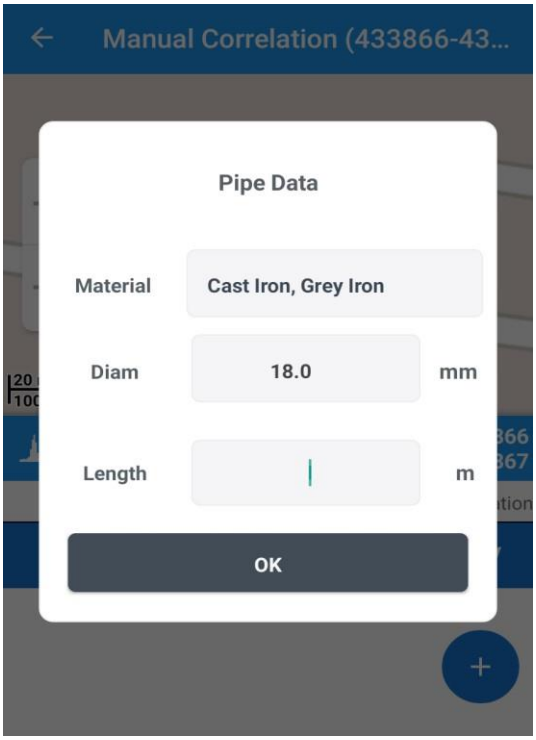


### 5.1.3 Manual Correlation Wizard

- To manually add the pipe info select the manual pipe info button shown below. This will open a new "Manual Correlation" window.




- On the "Manual Correlation" screen swipe left to go to pipe data. Select the "+" button to add the Pipe Data. Press the "OK" button to recalculate the correlation.



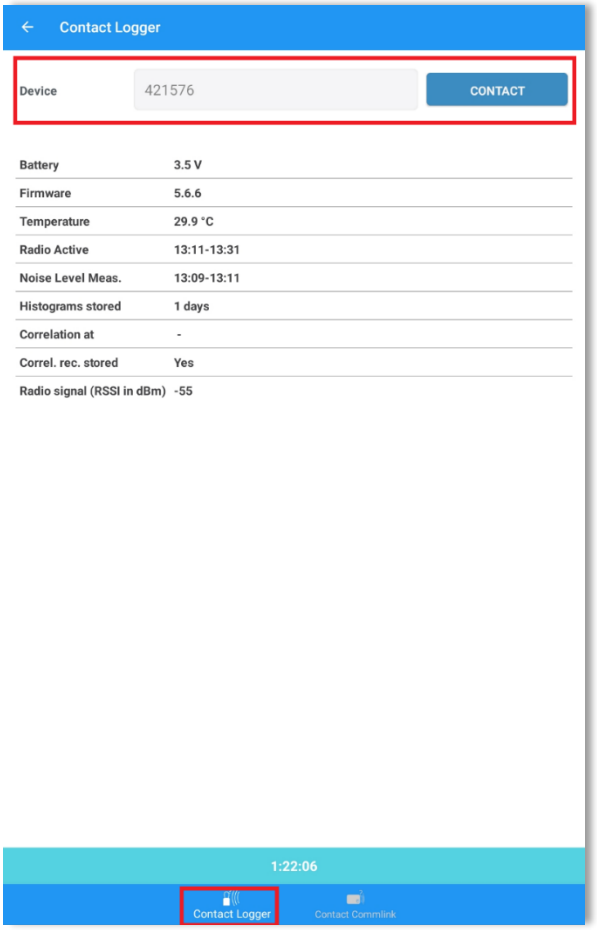

- Leaving the "Manual Correlation" screen will discard the intermediate calculation results.

## 5.2 Contact Device

To test communication with a logger or Commlink, choose "Contact Device" from the Navigation Drawer menu.

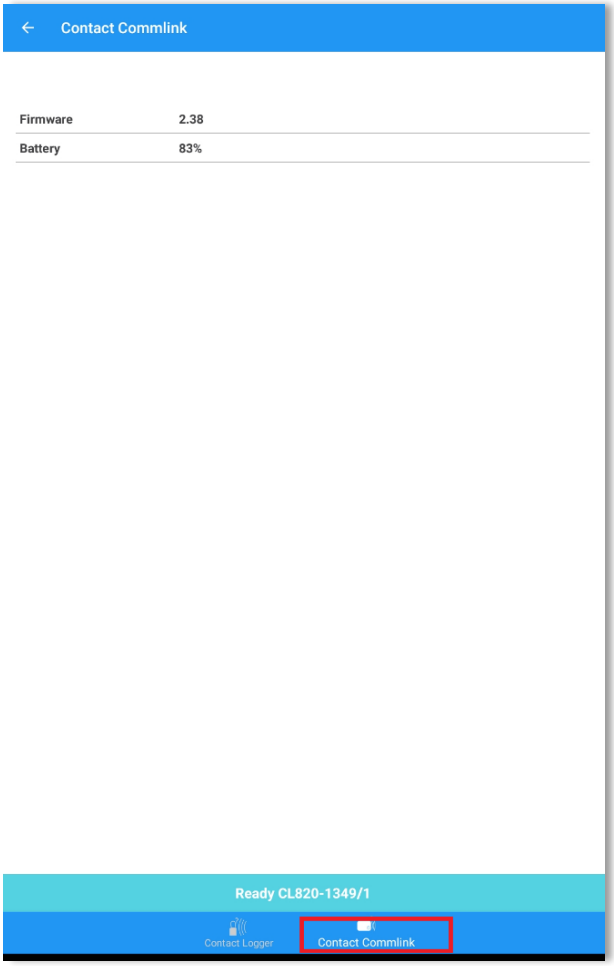
- To contact a logger, select the "**Contact Logger**" option at the bottom of the screen.
- Then, enter the logger number and select the "**Contact**" button to initiate the communication.

When the logger is contacted, its settings will be displayed and the logger time in the status bar is updated every second. Contacting the logger may take a long time or may not work if the logger's radio window is currently not active.




- To contact the Commlink, make sure the Commlink is switched on and paired with the Android device.

- Select the "**Contact Commlink**" option at the bottom of the screen to display its firmware version and battery details.

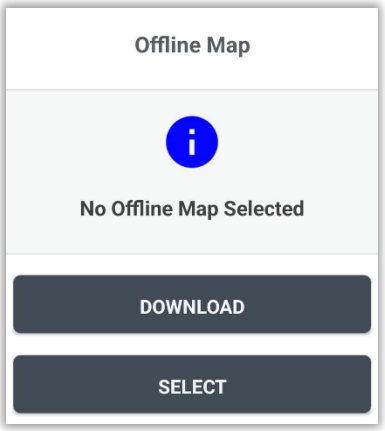



## 5.3 Check Commlink Battery

When the Commlink is connected, you will see a little "G" icon in the status bar in the top left corner of your Android device. Open that status message to see the Commlink battery voltage and firmware version.

## 5.4 Offline Maps

In ZONESCAN SMART Online map has been discontinued. It only supports Offline maps. If no map has been selected, the map dialog will prompt you to either download the map or select from the existing downloaded map.

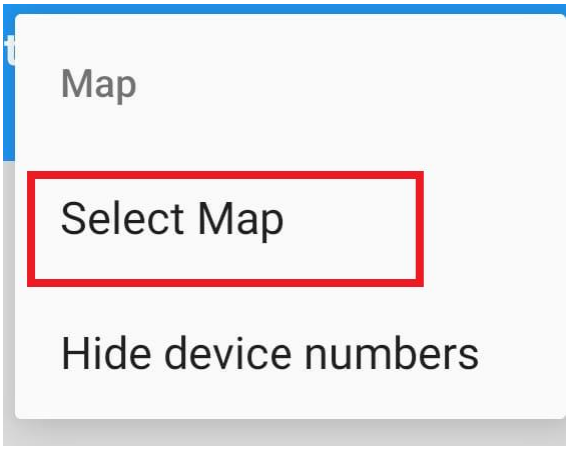



To download an offline map, you need a fast internet connection. Then choose "Options Menu > Map > Download Map". After the download, select the new map with "Map > Select Map".

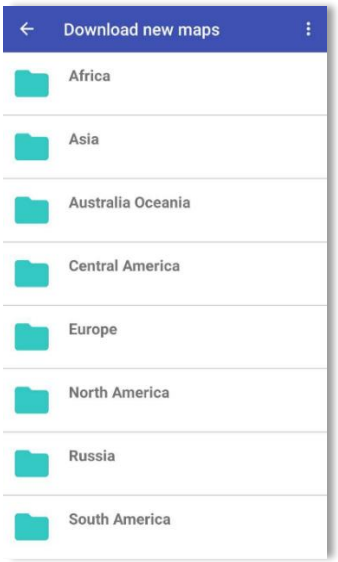
In versions below Android 10 the downloaded maps would be stored in the folder Download/Gutermann-offline-maps" on your Android devices. If your Android device has an SD card, then the Download folder is typically under "sdcard".

Detailed usage of how to download maps is provided in the Storage Access Framework User Manual, please refer to it for further details. For a quick reference follow the steps below to download the maps

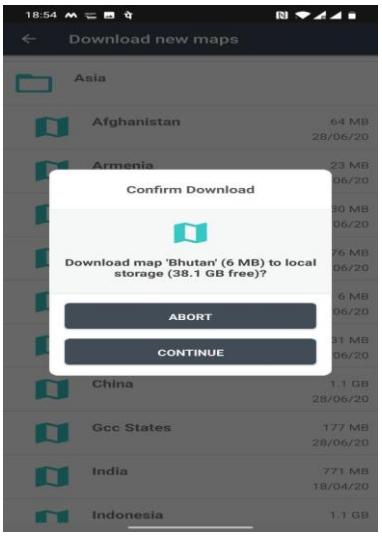
*Step 1:* From the left-hand menu, select "Map". Then choose "Options Menu > Map > Select Map.




*Step 2:* Choose the respective region and country.

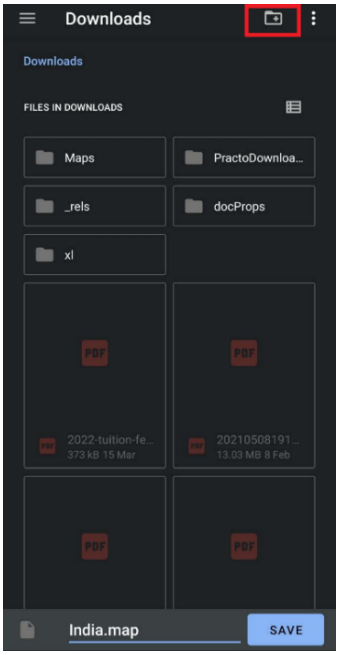



*Step 3:* Select the offline map you want to download and press "Continue" in the confirmation dialog.

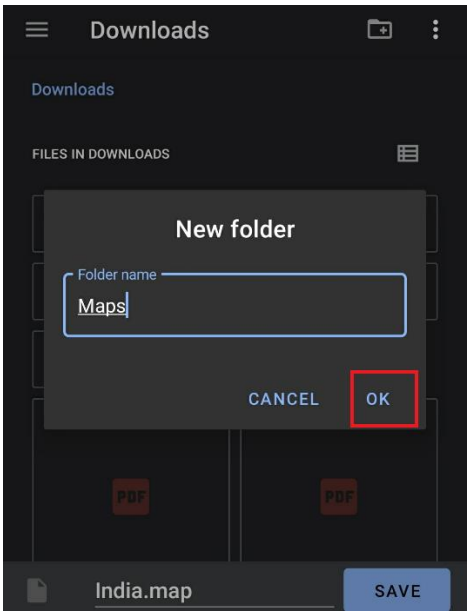



*Step 4:* Once the downloading is finished you will get a screen to save the downloaded file. You can store the downloaded map in the already existing folders or you can create a new folder by clicking on the button highlighted in red as shown in the figure below.

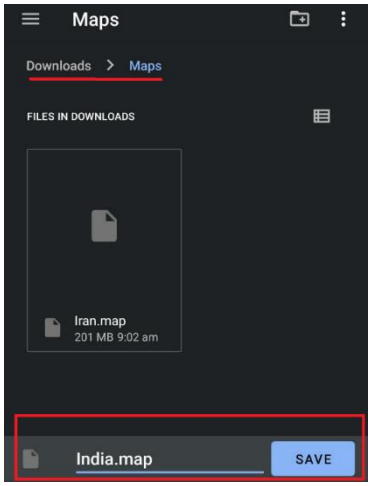
For versions of Android 10 and above we insist that you download the maps in a new folder. Delete all the existing maps to avoid confusion.




After making the selection to create a new folder, you will have an option to provide a name to the folder. Any name can be provided. Then select “Ok”.

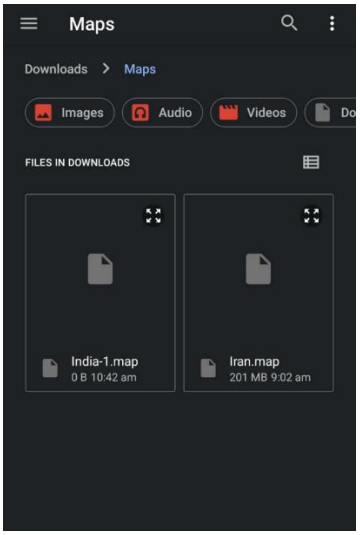



*Step 5:* After creating the new folder select the Save button to save the map file in the newly created folder. Once the file is saved the map is automatically selected by the app.




*Step 6:* To change the map, select the "Map" option. And then choose "Select Map".

*Step 7: 7*,A system picker will open to choose the file from the folder. Navigate to the folder where the map is downloaded to choose the map. Select the map required. After selecting, the map is loaded on the app.




## 5.5 Navigation & Moving Loggers

These functions are available in the context menu when long touching on a logger.

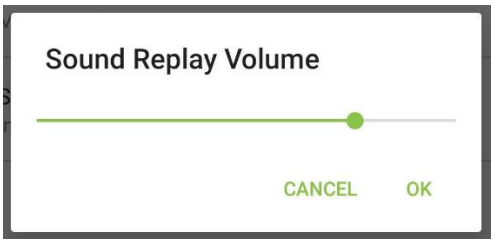
## 5.6 Listening to Sound Recording

Select "Play Sound" in the context menu when long touching on a logger to listen to the recorded sound by the logger.

To increase or decrease the volume of recorded sound of the logger, follow the steps below:

- Select Navigation Drawer menu > Settings > General > Sound Replay Volume"

- You can increase or decrease the sound by moving the slider and selecting OK.

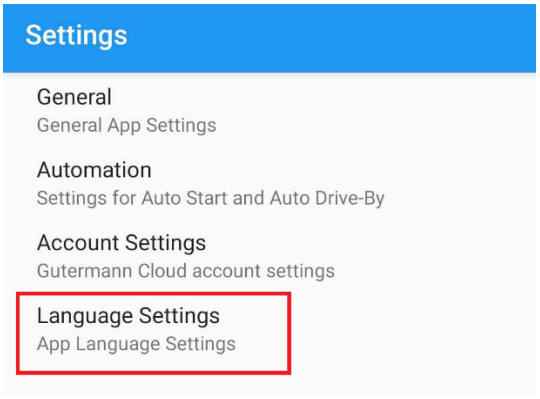



## 5.7 Change Language in the app

In ZONESCAN SMART, you have the option to choose the language in which you wish to use the app.

Follow the steps below to change the language:

- Open the 'Navigation Menu' -> "Settings"
- Select Language Settings

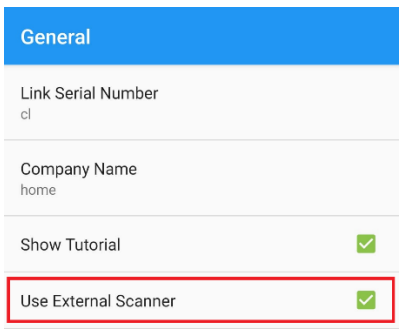



- Select the language of your choice and the language of the app will be changed immediately.

## 5.8 Use External Scanner

In ZONESCAN SMART, you have the option to choose the external scanner in the app in case the scanner doesn't work.

- Open the 'Navigation Menu' -> "Settings"
- Select General
- Use External Scanner – You can select this to use external scanning



# 5.9 Upload of measurements to ZONESCAN NET

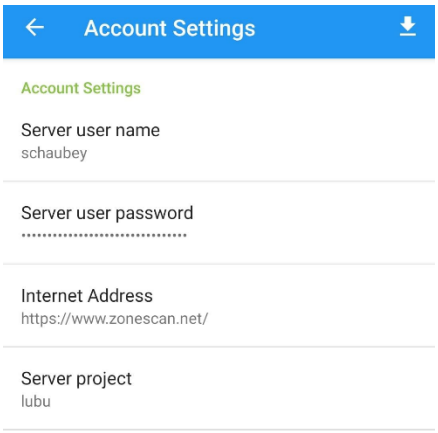
In ZONESCAN NET

- Enable the HTTP import for your project in "Administration > Settings > General"

In ZONESCAN SMART

- Select "Options menu > Upload Measurements"
- The first time you do this, there's a notification at the bottom of the screen to activate your account settings. Click on Enable button at the bottom of the screen.


- Enter the ZONESCAN NET project name, username, password, and internet address (https://www.zonescan.net).



In ZONESCAN NET

- Depending on the amount of data sent it can take a few minutes until the new measurements are available in ZONESCAN NET.
- If you were already logged in before, you have to press “F5” or log out and in again to see the new measurements

## 5.10 Exporting Measurements

With the ZONESCAN SMART Software, you can share the measurements for a selected time period with another Android device. The sharing can be done through one of several channels, depending on what is available on your and the other Android device, for example, email, Bluetooth, Dropbox, Google Drive, Skype, etc.

### 5.10.1 Email Deployments

Email deployments allows the user to share logger deployment information such as its location, deployed time, etc in a text format that can be opened with Microsoft Excel or other tools.

- Select “Options menu > Share > Email Deployments”
- Select the time period. You can also select all areas of the project

### 5.10.2 Email Screenshots

You can share the screenshot of the deployed logger by using this option.

- Select “Options menu > Share > Email Screenshot”

### 5.10.3 Email Measurements as CSV

Email measurements as CSV allows the user to share Leak Scores, noise levels (in dB) or logger deployment dates/positions in a text format which can be opened with Microsoft Excel or other tools.

- Select “Options menu > Share > Email Measurement as CSV”
- Select the time period and the type of information you want to export.

For each type of information, a separate CSV file will be attached to the mail. Depending on your country, the CSV file will contain commas or semi-colons as delimiters.

### 5.10.4 Share Measurements

- Select “Options menu > Share > Share Measurements”
- To import the measurements on the other device, just open the .zbn or .zbz email attachment there, and the import will start automatically. If a project with the same name already exists, the imported measurements will be added to that.

### 5.10.5 Share Logger Sets

You can share the logger sets of an area using this option.

- Select "Options menu > Share > Share Logger Sets". A devicesets.dst file is shared.
- To import the shared logger set on the other device, open the .dst file using the ZONESCAN SMART app.

## 5.11 Automation (For Drive-By)

ZONESCAN SMART software allows performing the Drive-By operation directly after launching the app or switching on the phone/tablet.

### 5.11.1 Start Drive-By automatically on app launch

- Go to Navigation drawer > Settings > Automation
- Select "Start Drive-By Automatically"

### 5.11.2 Start Drive-By automatically when phone/tablet is switched on.

- Go to Navigation drawer > Settings > Automation
- Select both "Start App Automatically" and "Start Drive-By Automatically"

When using this feature, please make sure that:

- Bluetooth is switched on
- Screen lock is disabled
- The Commlink is switched on

## 5.12 Logger Sleep Mode

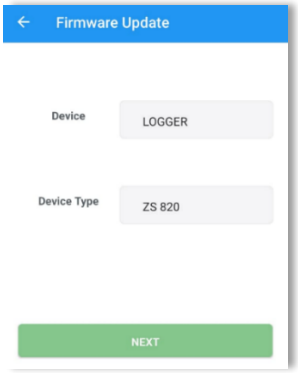
If the loggers are not used for a long time, you can put them to sleep mode to save the battery life of the loggers

- Go to Navigation drawer > Logger Sleep Mode
- Select the loggers and click the "Next" button
- Loggers are then programmed to use as little energy as possible

## 5.13 Firmware Update

Firmware update of a logger and Commlink can be done from the app. Follow the steps mentioned below to update the firmware of the respective device.

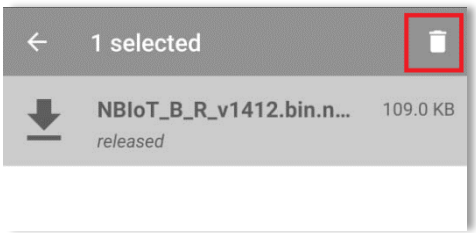
- Go to Navigation drawer > Firmware
- Choose “Device” and “Device Type”. Then select Next to download the firmware updates.




Tap on Device to choose from ***Loggers*** and ***Commlink*** as shown below


- You will get a list of available firmware files on the server
- Select the one you want to use

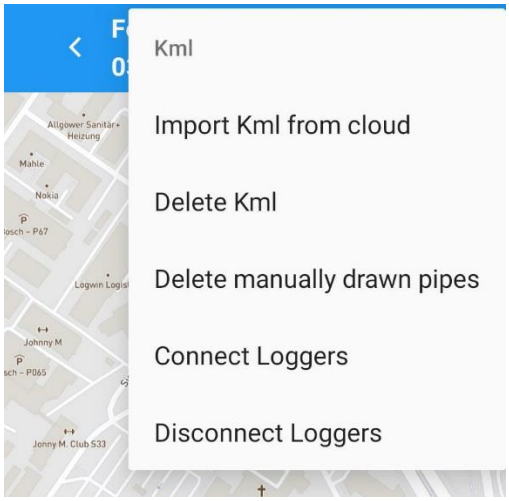
- To delete the firmware, you can long tap on the firmware and select the delete icon on the top right corner. This action will delete the firmware from local storage. Multiple selections of firmware files are supported.



# 5.14 KML or GIS Data

This feature displays the pipe network and logger location on the map so that the position of the leak can be located.

You can now import the KML data which is exported from ZONESCAN NET to the app as a display layer.




The following options are available in the KML menu:

1. **Import KML from the cloud** - This option lets you download the pipe data for the project from ZONESCAN NET
2. **Delete KML** – Use this option to delete the KML of the project from the map
3. **Delete manually drawn pipes** – This option can be used to delete manually drawn pipes
4. **Connect loggers** – This option can be used to connect loggers to the imported pipe data
5. **Disconnect Loggers** – Select this option to disconnect loggers from the pipe data.

# 6 Further Hints

## 6.1 Timing of quick test measurements

The Commlink clock can be off compared to the tablet clock by up to 1 minute. This does not affect the correlation accuracy since the loggers are all synchronized with the Commlink clock. However, when deploying the loggers quickly before the measurement or collecting them quickly after, please add an extra minute to make sure they are deployed during the measurement. The same is true when opening a hydrant for test measurements: please open it at least one minute before the programmed measurement time and leave it running until one minute after.

## 6.2 Correlation Accuracy

To increase the accuracy of the correlated leak position:

- Use the same Commlink device for programming and reading the correlation measurements.
- Read out the loggers no longer than 24 hours after programming them for correlation.

## 6.3 Blue Loggers

There are two conditions where the loggers are blue in color.

***Condition One:*** When the measurements are not recalculated. To recalculate the measurement, refer to section 3.5.3. Once the measurements are recalculated leak score can be found.

***Condition Two:*** Where loggers only contain the sound signal. Blue loggers are shown for measurement with only sound signal ie when the customer just selects correlations when programming.

## 6.4 Back Up ZONESCAN SMART

To ensure the availability of the latest data at all times, ZONESCAN SMART data should be backed up regularly. This will help in recovering the current data in case the device is lost or corrupted.

There are 3 ways by which data can be backed up in ZONESCAN SMART. These options are as follows:

**Option 1:** Upload the data to ZONESCAN NET cloud

This option can be used to send the current copy of the data to the ZONESCAN NET cloud. This will allow users to import the current copy of data from the cloud at any time on the device. Refer to section 5.8 on how to upload measurements to the cloud in detail.

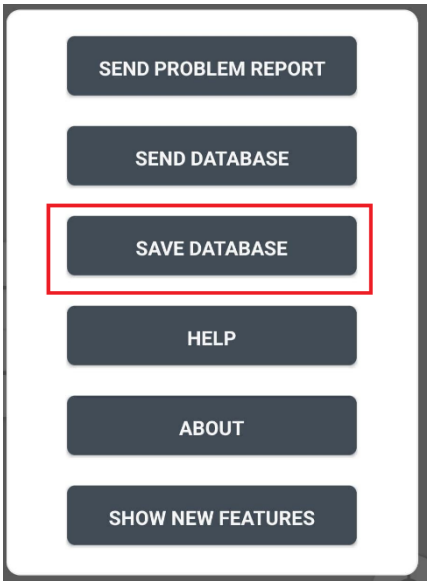
**Option 2:** Share the Measurements

Another way to back up data is to share the current measurement from the app. This will create a .zbz or .zbn file which can be shared over email, Skype, Google Drive, etc. You can refer to section 5.8.4 for more details.

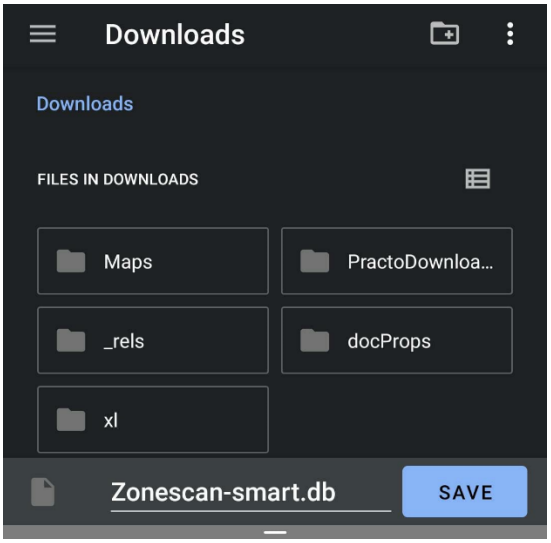
**Option 3:** Save the database locally

The third option is to save the database locally or on an Android device. Follow the steps below to do so.

- Go to "Help" under the Navigation menu.
- Select "Save Database"




For devices above Android 10, the .db file will be saved in the Downloads folders. Users can also create a new folder and save the database file in that location.




For devices below Android 10, the .db file will be stored in the "Downloads/gutermann-backup-db" folder.

# 7 Technical Data

ZONESCAN 820 Correlating Noise Logger

- Casing: High-quality Aluminum casing (stainless steel casing upon request)
- Ingress Protection: IP68, submersible up to 2 meters
- Temperature Range: -30ºC to +70ºC
- Battery Life: Depending on user-specific usage, but optimized in firmware
- Dimensions: 100 mm x Ø 41.5 mm (height x diameter)
- Weight: 310 grams
- Data Transmission: Proprietary radio, country-specific public frequency

# 8 Disposal

Never put electrical appliances in a household waste bin. Always collect them separately and perform environmentally friendly recycling. When disposing of electrical appliances always comply with national and regional waste disposal regulations. If orderly disposal of our products is not possible, send the unit to Gutermann at the address below in the Imprint. Gutermann ensures its products are disposed of environmentally friendly.

# 9 Imprint


Manufacturer:
Gutermann Technology GmbH
Gottlieb-Daimler-Str. 10
88214 Ravensburg, Germany

Tel: +49 751 3590 1682
Fax: +49 751 3590 1699
gt@gutermann-water.com

International Headquarters:
Gutermann AG
Sihlbruggstrasse 140
6340 Baar, Switzerland

Tel: +41 41 760 6033
Fax: +41 41 760 6034
ch@gutermann-water.com
www.gutermann-water.com


CE

Subject to changes