

TEM2Go

User Guide



Ver.1.1.2

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INTRODUCTION

What does the user manual contain

This user manual provides both technical and theoretical specifications for the TEM2Go system. Its purpose is to introduce the TEM2Go system and guide users through the necessary procedures before, during, and after a field survey.

- **Section 2** outlines the components included in the TEM2Go system.
- **Section 3** presents a detailed field operation guide.
- **Section 4** focuses on the TEM2Go Controller App, covering both interface and usage.
- **Section 5** offers recommendations for planning your survey effectively.
- **Section 6** explains how to import acquired data for further processing.
- **Section 7** provides troubleshooting tips for the most commonly encountered issues.

1.1 The Transient Electromagnetic Method

The measurements are made by transmitting a direct current through the transmitter coil. This results in a static primary magnetic field. The current is shut off abruptly, which induces an electrical field in the surroundings (Figure 1). In the ground, this electrical field will result in an electrical current which will in turn generate a secondary magnetic field. As time passes, the resistance in the ground will weaken the current (which is converted to heat), and the current density maximum moves downwards and outwards leaving the current density still weaker. In a conductive ground, the current diffuses more slowly down into the ground compared to a resistive ground where the currents will diffuse and decay fast.

The decaying secondary magnetic field is vertical in the middle of the transmitter coil, and an electro-motoric power is induced in the receiver coil – a voltage – and this is the signal, which is measured as a function of time in the receiver. Just after the current in the transmitter coil is turned off, the current in the ground will be close to the surface, and the measured signal reflects primarily the conductivity of the top layers. At later times the current will run deeper in the ground, and the measured signal contains information about the conductivity of the lower layers. Measuring the current in the receiving coil will therefore give information about the conductivity as a function of depth – this is often called a sounding.

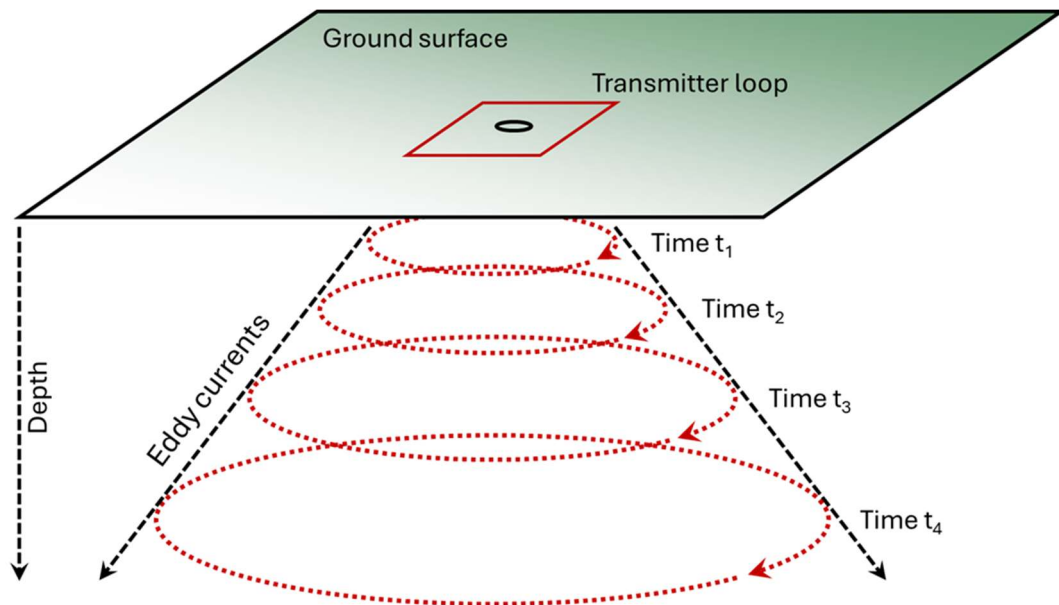


Figure 1: Principal sketch of the TEM method

2. THE TEM2GO SYSTEM – COMPONENTS

TEM2Go Tx unit

- The instruments transmitter (Tx) unit
- Contains main computer for real-time signal processing, data storage, etc.



Figure 2: Main transmitter unit containing electronics

Coil backpacks



Figure 3: Transmitter coil backpack (left) and receiver coil backpack (right) setups

Other parts

- **Tx mast (GPS)** – Connected to the TEM2Go Tx unit and attached to the transmitter backpack (Figure 4).
- **Receiver unit** – The receiver (Rx) unit is connected to the Rx coil and attached to the receiver backpack (Figure 4).
- **Tx cable** – connects TEM2Go unit with Tx coil (Figure 4).



Figure 4: Tx mast (left), receiver unit and pole (middle), Tx cable (right), not to scale

Batteries

TEM2Go requires two batteries to operate: 1 x RRC-2054-2 in the transmitter and 1 x RRC-2040 in the receiver (Figure 5). The charge state of the battery is seen by pressing the indicator.



Figure 5: Batteries required to operate TEM2Go: RRC-2054-2 (left) and RRC-2040 (right)

Battery charging suitcase 2054-2, 2040

- Battery charging unit for two batteries (Figure 6).



Figure 6: Battery charging suitcase for both RRC-2054-2 and RRC-2040 batteries. Instructions for use are provided inside the case lid.

Shipping cases

We provide 2 cases modified specifically for the safe storage and transportation of the TEM2Go system (Figure 7):

Case type	Dimensions (cm/in)	Weight (kg/lbs)
Hard case	60 × 80 × 45 cm (≈ 23.6 × 31.5 × 17.7 in)	32 kg (≈ 70.5 lbs)
Soft case	77 × 75 × 27 cm (≈ 30.3 × 29.5 × 10.6 in)	10 kg (≈ 22.0 lbs)

More information on packing is available in Section 3.6.



Figure 7: Storage and transportation cases of the TEM2Go system. Hard case (left) and soft case (right).

3. FIELD OPERATION GUIDE

The workflow for measuring with the TEM2Go goes through the following steps:

1. Power on the TEM2Go Tx and Rx units.
2. Assemble the transmitter and receiver backpacks
3. Operate the TEM2Go unit from the TEM2Go Controller app.
4. Start measuring along the desired lines.
5. De-mobilize the TEM2Go system.

The following provide instructions on how to perform the different steps.

3.1 Powering the TEM2Go Tx and Rx units on

It is recommended to turn on the Rx unit first, so that its signal can be detected by the TEM2Go Tx unit. To do so:

- Gently push up the cylindrical plastic cover to reveal the battery slot (Figure 8)
- Insert the battery in the designated slot.
- Press the power button located under the base of the Rx unit.
- The LED indicators should light up, confirming the unit is powered on.



Figure 8: Steps to power the receiver unit. After inserting the battery and pressing the power button, the two LED lights turn on.

The next step is to turn on the TEM2Go Tx unit:

- Open the unit and insert the RRC 2054-2 battery into the battery slot
- Close the case and place it up-right.
- Press the power button. The Tx LED indicator should light up (Figure 9). The location light should also light up once the Tx mast is connected to the unit (Figure 19).

Note:

- It will take 2 min, before the Wi-Fi signal of the unit can be detected by your mobile device, so it is recommended to power on the TEM2Go Tx unit beforehand
- Battery life varies depending on usage. The transmitter battery typically lasts up to 80 minutes, while the receiver battery can last up to 8 hours. To extend survey time, ensure you bring extra batteries.



Figure 9: Battery slot of the TEM2Go unit (left) and LED light indicating the unit has been powered on successfully (right).

3.2 Assembling receiver backpack

1. Grab the receiver backpack and the receiver (Rx) coil (Figure 10) and put them in an up-right position.



Figure 10: Receiver backpack (left) and receiver coil (right)

2. Align the hinges of the Rx coil with the hinges of the backpack, then insert the bolts and secure them using the clips (Figure 11).

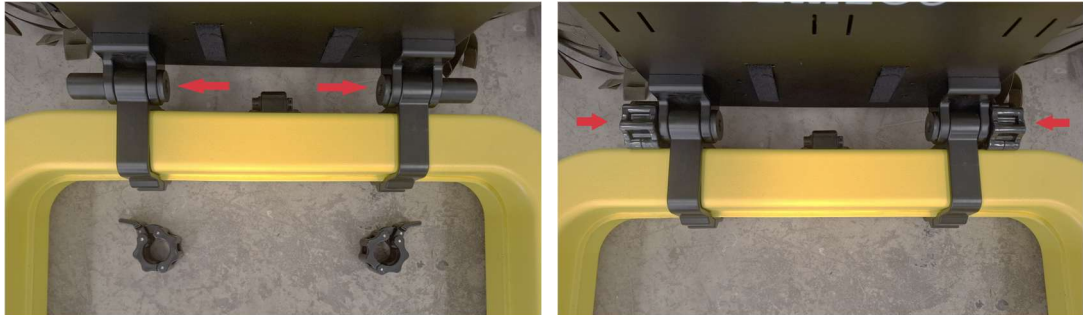


Figure 11: How to secure the Rx coil to the receiver backpack

3. Next, attach the straps of the coil to the backpack. To do so, follow the visual instructions in Figure 12 and Figure 13.



Figure 12: Assembled receiver backpack and coil. Last steps include securing the straps to the backpack.



Figure 13: Detailed steps on how to secure the straps of the coil to the backpack.

4. Proceed by inserting the receiver pole in the designated bracket, using the track as guidance. Once it is in place, insert the Rx unit, making sure

to insert the cable through the pole. Lastly, insert the clips to secure everything in place (Figure 14).



Figure 14: Mounting the Rx unit on the receiver backpack. Insert the pole in the bracket (left), add the Rx unit on top (middle) and secure everything with the provided clips (right).

5. Connect the receiver pole to the Rx coil (Figure 15).

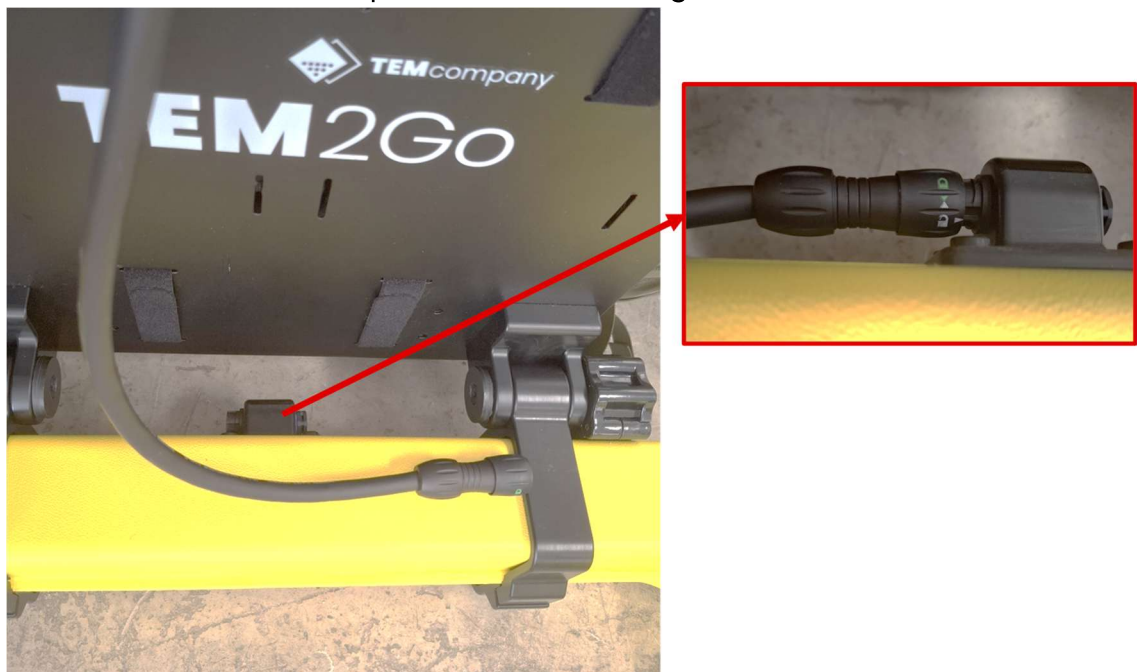


Figure 15: Connect the Rx unit cable to the connector on the Rx coil.

3.3 Assembling transmitter backpack

1. Follow assembly steps 1-3 (see Assembling receiver backpack) to set up transmitter backpack and Tx coil (Figure 16).



Figure 16: Assembled transmitter backpack and coil

2. Align the hooks on the back of the TEM2Go Tx unit with the slots on the transmitter backpack. Gently press the unit into place until you hear a click—this indicates that the unit has locked securely onto the backpack.



Figure 17: How to mount the TEM2Go unit onto the transmitter backpack.

3. Proceed by inserting the Tx mast in the designated bracket, using the track as guidance. Once it is in place, insert the clips to secure it in place (Figure 18).



Figure 18: Insert (left) and secure (right) the Tx mast onto the transmitter backpack.

4. Connect the Tx mast to the TEM2Go unit. Once the GPS has locked the corresponding LED light will start blinking (Figure 19).



Figure 19: Once the Tx mast is connected to the unit the LED indicator will light up when it's receiving signal

5. Using the Tx cable, connect the TEM2Go unit to the Tx coil (Figure 20).

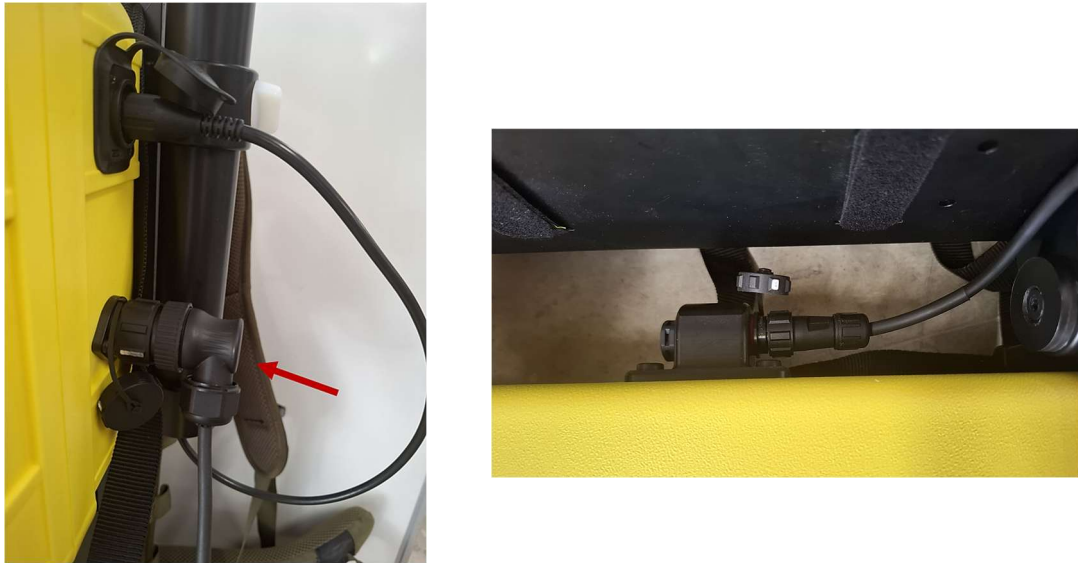


Figure 20: The Tx cable connects unit (left) to Tx coil (right).

3.4 Operation guide

Once the assembly is complete, the field crew should put on their respective backpack. Two people are necessary to operate TEM2Go.

Important:

The user wearing the receiver backpack should not wear any metallic or electronic items (e.g., phone, belt, or excessive jewelry), as these can interfere with the signal and introduce noise into the data.

The user wearing the transmitter backpack is responsible for carrying a mobile device and operating the TEM2Go Controller app. (see section 4)

Before beginning measurements, it is necessary to measure the coil height for both users. These values must be entered into the app when starting a new project.

- The heights, measured in meters, are unique to each user.
- The coils must remain as parallel to the ground as possible during data acquisition (Figure 21: Depiction of proper coil height measurement Figure 21). Use the straps (Figure 13) to adjust their position for optimal alignment, without needing to hunch over.
- While wearing the backpack, measure the distance from the center of each coil (center rim) to the ground (Figure 21).



Figure 21: Depiction of proper coil height measurement

Once both users are ready, position yourselves at the starting point of the survey line. Maintain an approximate 15-meter distance between the transmitter and receiver—this spacing will also be guided by the TEM2Go Controller app.

For more detailed instructions on using the app, please refer to Section 4.

3.5 De-mobilize the system

- Start by turning off TEM2Go Tx unit from the TEM2Go Controller app.
- Power off the TEM2Go Tx unit by pressing the power button.
- Turn off the Rx unit by pressing the power button.
- Disconnect all cables.
- Dismount the TEM2Go Tx unit from the transmitter backpack. To do so, pull on the safety pin on the left of the unit (Figure 22), pull up and away from the backpack's plate.
- Take out the GPS antenna from the bracket of the transmitter backpack.
- Take out the receiver pole from the bracket of the receiver backpack.



Figure 22: Remove safety pin to dismount the TEM2Go unit from the backpack.

3.6 Packing

For the safety of the equipment, we provide two custom cases for secure packing and transportation. Both cases are fitted with foam lining to protect all parts of the system.

The soft case is designed to hold the following components:

- Transmitter (Tx) coil
- Receiver (Rx) coil

Figure 23 shows how the coils are positioned in the soft case.



Figure 23: Packing coils in the soft case. Both coils fit perfectly in the case, make sure to use foam blocks to separate and secure the coils in place.

The hard case is designed to hold the following components:

- TEM2Go Tx unit
- Rx unit with pole
- Tx mast
- Tx cable
- 3 x RRC-2054-2 batteries and 1 x RRC-2040 battery
- Receiver and transmitter backpacks
- Battery charging suitcase

Figure 24 shows how the above components should be arranged in the hard case.



Figure 24: Packing components in the hard case. Start by packing the smaller components in the designated slots in the foam (up). Next pack the two backpack plates, with the battery charging suitcase located between them (down).

3.7 Transportation

As a general rule, we recommend transporting the equipment in the designated cases for maximum protection. However, we understand that repeated assembly and disassembly between sites can be time-consuming. In such

cases, the equipment may be transported *almost fully assembled*, provided extra caution is taken.

Each coil is designed to lock securely onto the mast (Figure 25). To attach it, close the coil until the clip clicks into place on the corresponding mast.

The only part we strongly recommend disassembling is the Rx unit from the pole, as keeping it attached may create a pressure point during transportation.

Additional recommendations:

- Place each assembled backpack on a soft surface, with the backpack handles facing upwards. This helps to relieve tension on the masts.
- Always handle the equipment with care to avoid unnecessary strain on cables and connections.



Figure 25: Assembled transmitter and receiver backpacks in locked position for comfortable transportation.

4. TEM2GO CONTROLLER APP

4.1 Installation and connection

The TEM2Go system is controlled by the TEM2Go Controller app available for Android (v. 14 and higher) and it can be installed from Google Play (Figure 26)



Figure 26: TEM2Go Controller App icon

To connect to the TEM2Go unit, follow these steps:

- Make sure the TEM2Go unit is turned on. It takes a few minutes to set up the TEM2Go Wi-Fi.
- From the mobile device **connect to the TEM2Go** Wi-Fi network.
Wi-Fi name: TEM2Go_0### (ID of the TEM2Go instrument)
Password: 0102030405060708
- Open the TEM2Go Controller app. If it is properly connected it will display the controller interface as shown in Figure.

4.2 Interface

Figure 27 shows the main menu and the different options of the app once you are connected to the unit

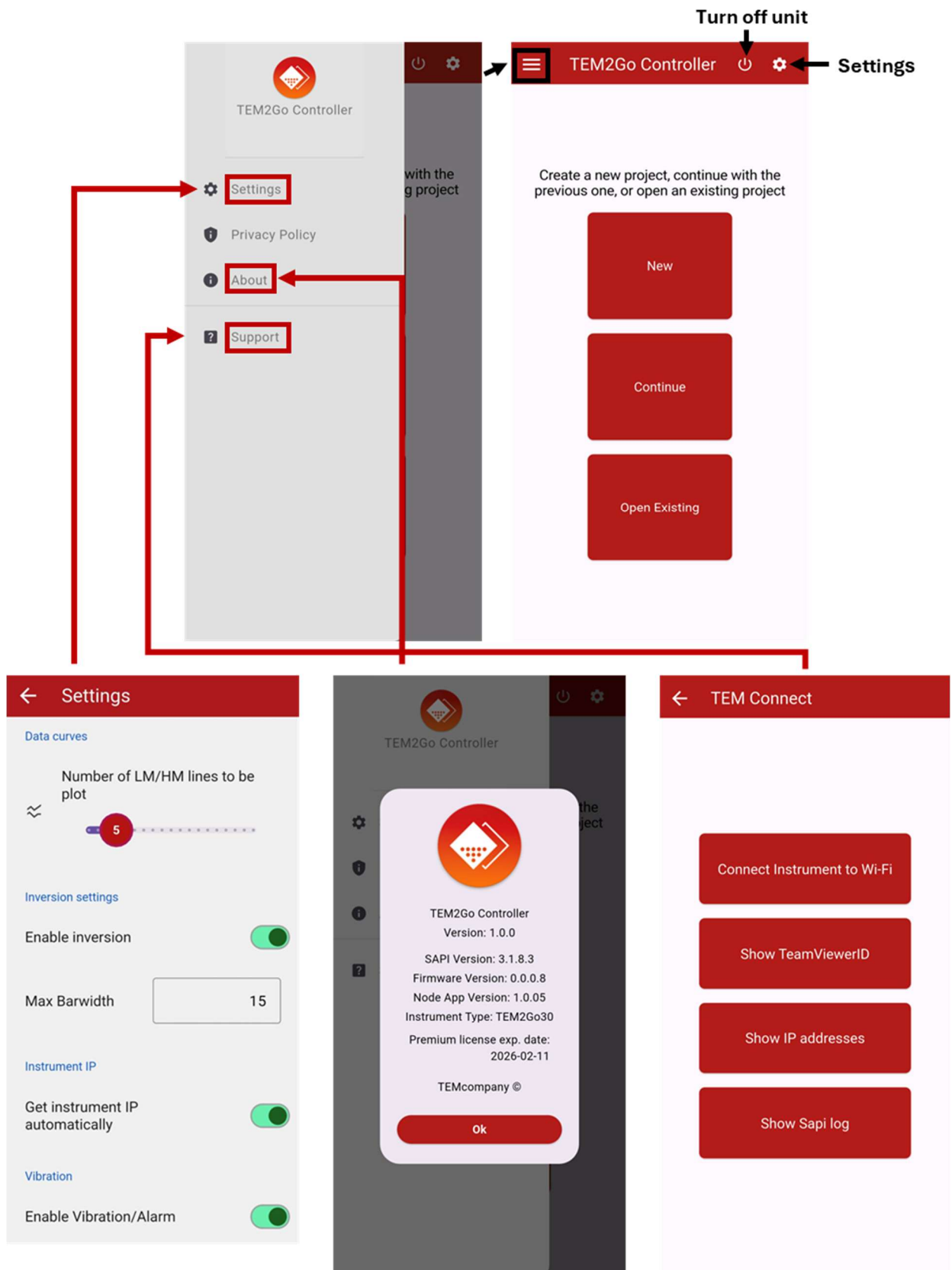


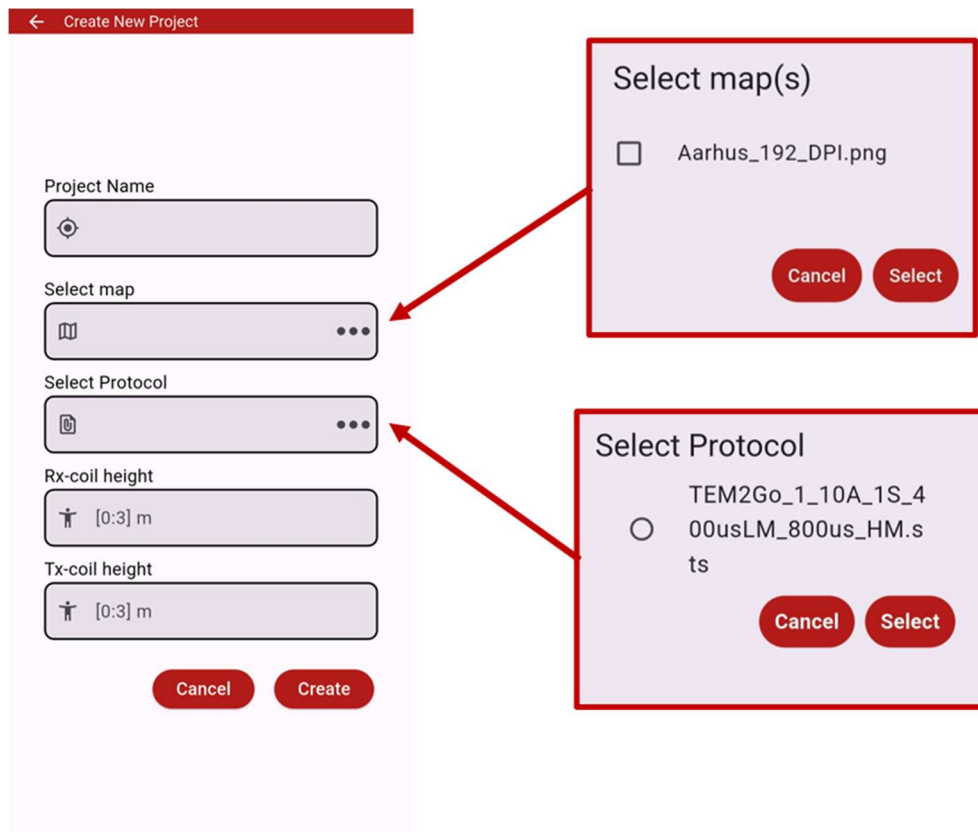
Figure 27: TEM2Go Controller App environment start-up and menu.

4.3 Measurements and data display

Create project

After you have chosen “New” from the starting menu, fill in the fields shown in Figure 28 as explained below:

- Insert “**Project Name**” – provide a name for the project (e.g. Location_date). Special characters and spaces are not allowed (**mandatory field**).
- **Select Map** – select background map. The accepted formats are json, pgw, png (**optional field**). On how to create and import background maps see section 4.5.
- **Select Protocol** – protocols are provided by TEMcompany for different equipment configurations. Make sure to select the correct one, e.g. TEM2Go_1_10A_1S_400usLM_800us_HM.sts (**mandatory field**).
- **Insert Rx and Tx coil height** – these distances are unique to each user, as they depend on the individual wearing the transmitter and receiver backpacks. The coil heights must be measured in meters. While wearing the backpack, measure the distance from each coil to the ground (Figure 21). Enter the measured values in the respective fields (**mandatory field**).



The screenshot shows the 'Create New Project' interface. It includes fields for Project Name, Select map, Select Protocol, Rx-coil height, and Tx-coil height. Two callout boxes are present: one for 'Select map(s)' showing a list with 'Aarhus_192_DPI.png' and 'Cancel'/'Select' buttons; and another for 'Select Protocol' showing a list with 'TEM2Go_1_10A_1S_400usLM_800us_HM.sts' and 'Cancel'/'Select' buttons. Red arrows point from these callouts to the corresponding fields in the main form.

Figure 28: Creating a new project window.

Notes

- To copy the background map to the TEM2Go unit use the **TEM Data Manager** app to upload the files from the local PC to the “Maps folder” using the “Upload” button (Figure 33).
- The file of the map must not exceed 20 Mb. The map needs to be copied to in the TEM2Go unit before starting the project.
- Maps can be created in free access software (e.g. QGIS). (see Section 4.5)
- Imported maps will show up in alphabetical order, first maps and then lines, points.
- If no background map has been selected, a default map from OpenStreetMap will be available for use.
- When the TEM2Go is connected to both TEM2Go Controller App and TEM Data Manager it can be turned off only from the TEM Data Manager. The turn off button on the TEM2Go controller App is disabled in this case to prevent accidentally turning off the instrument and potential failure in the internal hardware.

Continue project

To continue the same project press “Continue”. Alternatively, if a project was made previously press “Open Existing Project” and a window with all the available projects will be displayed to select the desired project (Figure 27).

Starting Screen

When a project is launched, the starting screen (Figure 29) will appear.

- The main view displays a map with your current location marked.

Note: If the default OpenStreetMap does not load, the unit likely needs internet access. Use the Support option in the Main Menu (≡) to connect to an external Wi-Fi or mobile hotspot. Once online, open your project and zoom in/out to prompt the map to load correctly.

- If you have uploaded a **custom map**, tap the “**GIS Settings**” icon in the upper-right corner. Here, you can manage your uploaded layers and adjust their opacity.
- To the left of the “GIS Settings” icon, the “**Map Settings**” button allows you to fine-tune additional map visualization options.
- At the top-left above the map, you’ll find the Start/Stop Measuring button, along with the Project Name and Line Number.

- The upper-right corner of the map features controls for zoom in/out, north toggle, and map scaling using pinch gestures.
- Directly below the map is the Coil Distance Regulator, which helps users maintain an optimal distance between the transmitter and receiver.
- Beneath the coil distance bar, you'll see status indicators for:
 - Data recording
 - Temperature
 - LM/HM current
 - GPS signal

Note: The LM and HM current indicators will display red before measurement begins, as the transmitter has not yet started sending a signal.

- At the bottom of the screen is the **navigation panel**, allowing you to switch between:
 - The **Main tab**
 - The **Real-Time Inversion tab** (if premium features are enabled)
 - The **Additional Info tab**

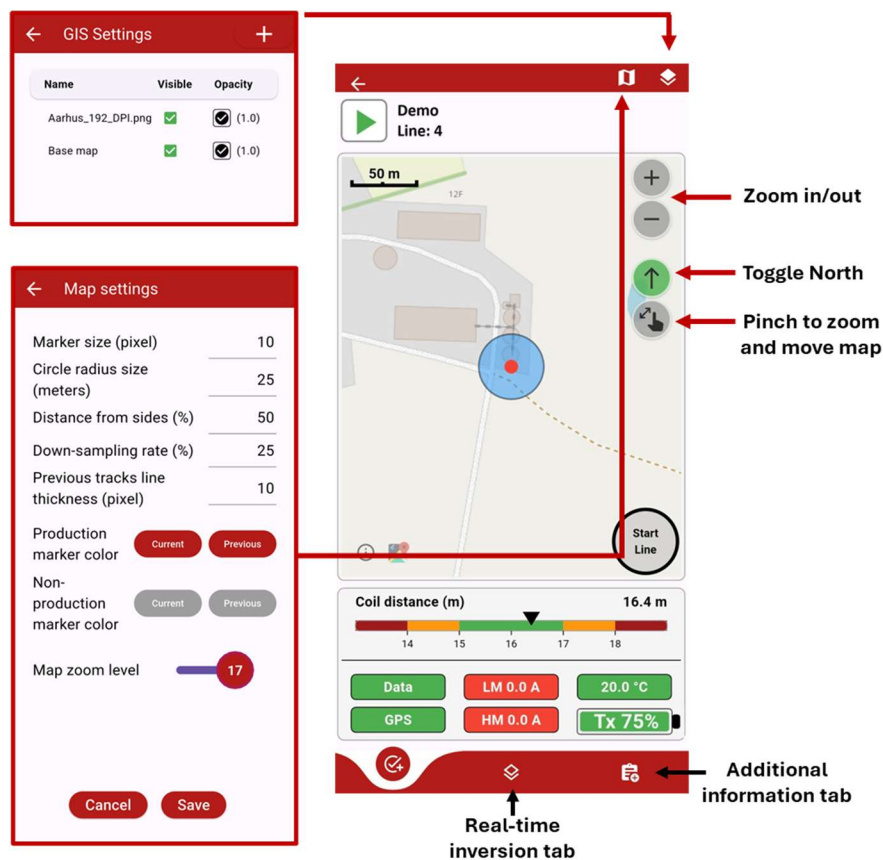


Figure 29: Starting screen and settings tabs once project is created/opened.

Operation

1. To begin data collection, tap the **“Run”** button in the top-left corner.
The transmitter will activate, and the **LM/HM current indicators** should turn green to confirm transmission (Figure 30).
2. Once users are positioned in a relatively straight line and the Coil Distance Regulator shows green, press **“Start Line”** to begin the survey.

Note: The coil distance regulator continuously monitors the spacing between the two users during the measurement. If the distance exceeds or falls behind the acceptable limits, the indicator will move into the red zone, and the device will vibrate to alert you. When this happens, please reposition yourselves to maintain the correct distance.

3. When the desired line is completed, and you're ready to begin a new line or end the session, press **“End Line.”**

Tip: You can also tap anywhere on the screen to start or end a line if needed.

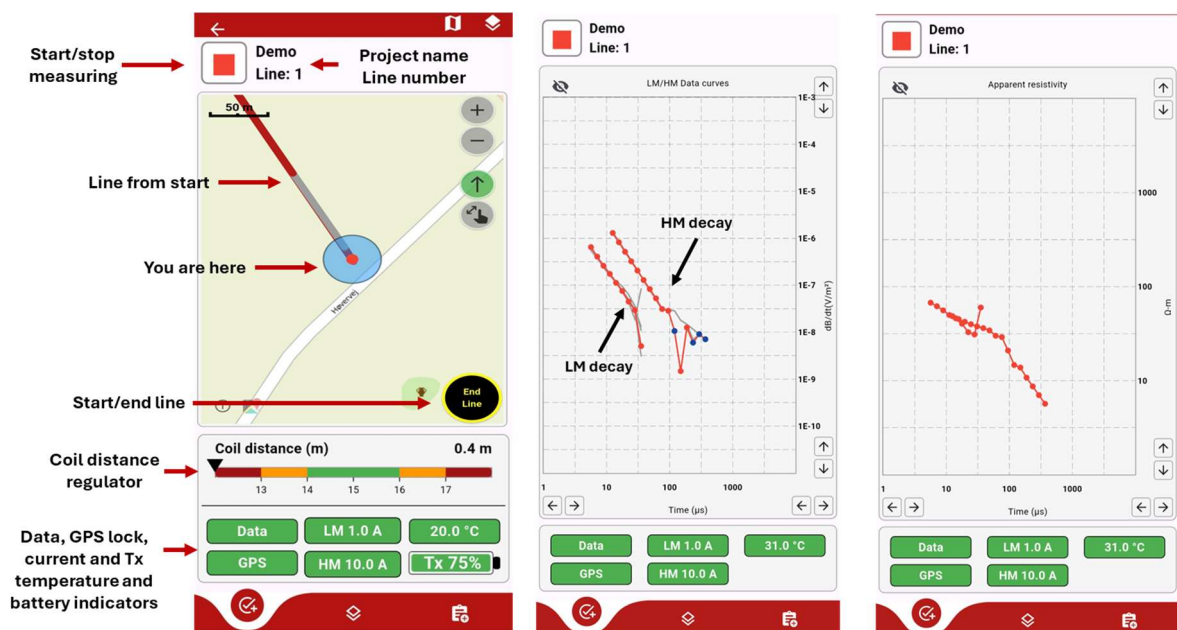


Figure 30: Display after measurement has started. Home screen (left), data can be seen as decay curves by swiping left on the screen. There are two ways to visualize the measurements: as LM/HM decay curves (middle) and as apparent resistivity curves (right).

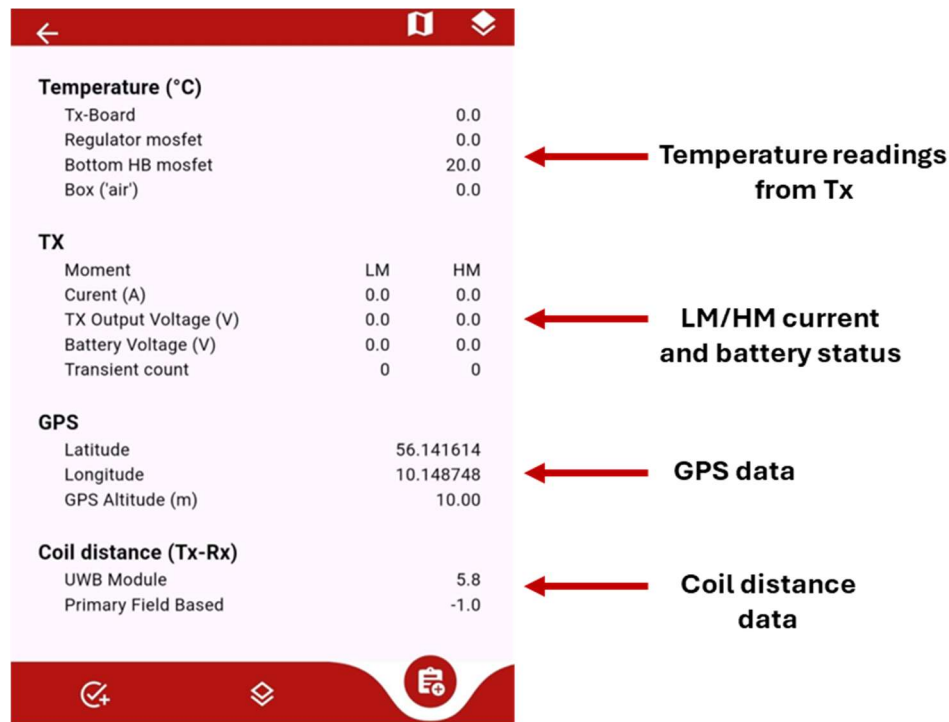


Figure 31: Additional information tab

4.4 Premium features and real-time inversion

If you have access to the Premium features package, you will have access to the real-time inversion option in the TEM2Go Controller app. It is designed to provide immediate insights into your subsurface data while you're still in the field. As data is collected, the instrument will automatically perform a preliminary 1D inversion, using a smooth model. When measuring along a line, this will result in the display of pseudo-2D sections by interpolating the individual 1D models — giving you a quick overview of lateral variations (Figure 32). The app provides insight into the depth of investigation (DOI).

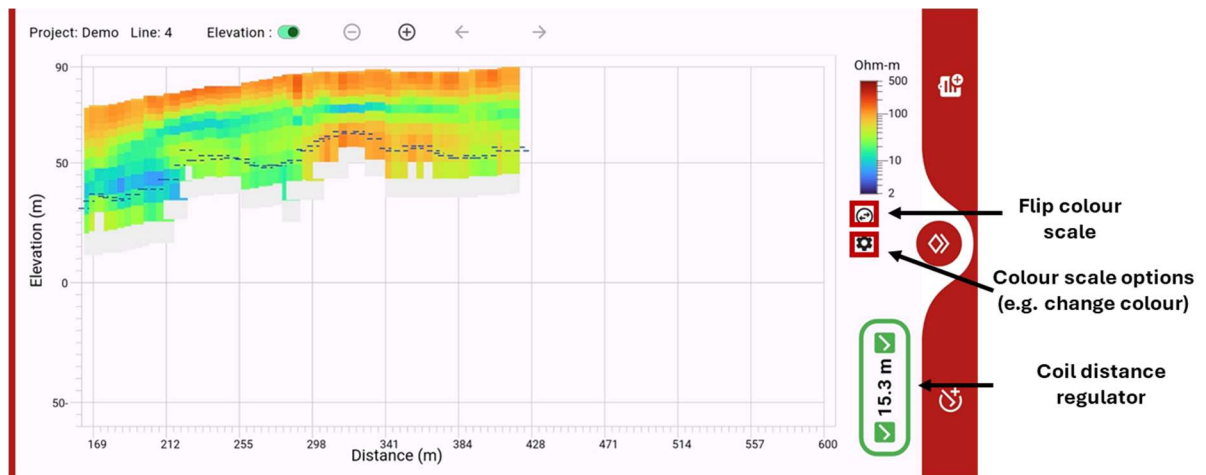


Figure 32: Real-time inversion tab. You can see a pseudo-2D resistivity section of several 1D interpolated models measured in a line.

Real-time inversion Troubleshooting

There are two common situations where an inversion model may not appear:

1. A grey model is displayed

The grey model bar is a dummy bar, that is displayed when the inversion process is running, but the automatic processing rejects too much data for the inversion to be able to run. This usually indicates that the collected data is of poor quality, possibly due to noise, couplings, Induced polarization, 3D effects or something. The relevant log file will display the following message:

Sapi.InversionThread: Lupus inversion returned error {type: ValueError, message: Not enough data points, has 0, expect at least 5}

2. The inversion window is completely blank

This typically points to a problem with the inversion function itself, rather than the data. This can happen due to the following reasons

a) Inversion is turned off – Go to **Settings** and make sure inversion is enabled (Figure 27).

b) License issue – The instrument does not have a Premium Functionality License, or it has expired. Check the expiry date under the **About** section. Contact support@temcompany.com for information on how to get it renewed.

c) Inversion process not running – If the above two are fine, then contact support@temcompany.com for help.

4.5 Export Background Images & Shapes for TEM2Go Controller App

TEM2Go Controller app supports commonly used **EPSG3857** (WGS 84 / Pseudo-Mercator) and **EPSG4326** (WGS 84) Coordinate Reference Systems (used by Google Maps, OpenStreetMap, Bing ArcGIS, ESRI, QGIS, etc.).

In **EPSG3857** the coordinates are in meters and use Mercator projection, while **EPSG4326** uses latitude and longitude for coordinates. Both CRSs are based on the World Geodetic System 1984.

*The suggested software is QGIS since it is an open-source software.

Background Images

To display satellite images exported from QGIS in TEM2Go Controller app the world file is required. World files contain georeferenced information for the image and must have the same name as the image file name. Extension will be .pgw for PNG and .jgw for JPG file (i.e. image.pgw & image.jgw).

Before export, make sure that the correct CRS (Coordinate Reference System) has been selected. From the menu bar on the top select "Project" then "Import/Export" and "Export Map to Image" to export map as image.

Make sure that "Append georeferenced information (embedded or via world file)" checkbox has been selected. This is necessary to create the world file that contains georeferenced information for the created image.

Exporting shapes (points, lines, polygons) from QGIS

To export shapes from QGIS, right click on the shape layer in "Layers" section of QGIS, select "Export" then "Save Features As...". In the dialog window, select CRS ("EPSG: 4326 – WGS 84" or "EPSG:3857 – WGS 84 / Pseudo-Mercator").

If you need to export more layers, you need to do the same for each layer separately, so each layer is contained in a separate file.

Upload Map Files to TEM2Go instrument

See Download and upload data for more information on how to upload the created files.

5. PLANNING A SURVEY

General Guidelines

- **Do not connect or disconnect cables while data is being recorded.**
This may lead to equipment malfunction and/or data loss
- **If connection is lost, try connecting again before rebooting**
If a reboot is necessary, wait a few minutes before trying to reconnect.
- **Avoid using damaged plugs or cables.**
If you notice any damage, please contact TEMcompany or your local re-seller for repair or replacement options.
- **Never connect plugs if the internal connectors are wet or dirty.**
Moisture or debris can cause short circuits or permanent damage to the equipment.
- **Always use the transport case for storage and transport outside of field operations.**
This ensures the instrument is protected during handling, shipping, or long-term storage.

Couplings and noise

TEM measurements taken near man-made conductors are often heavily distorted and unusable. These conductors can generate bias signals in the data due to coupling with the transmitted electromagnetic (EM) field.

Common sources of coupling/noise include:

- Power lines and buried cables
- Railways and fences
- Buildings and gas pipelines
- Wind turbines and vehicles

To minimize interference, maintain a **minimum safety distance of 100 meters** between the **Tx coil** and any potential coupling source. The optimal distance may vary depending on both the source type and local ground conductivity.

Batteries charging

- Do not charge batteries when the ambient temperature is below 0 °C.
- Ensure the battery temperature itself is above 0 °C before initiating charging.

Cold environment

When operating the system in cold conditions, please keep the following in mind:

- Avoid powering on the TEM2Go unit immediately after bringing it indoors from the cold. Allow it to reach room temperature first to prevent condensation and potential short circuits.
- When very cold, casings, cables and plugs may become more brittle, increasing the risk of damage.
- Battery performance may be reduced, although the batteries are rated for use down to -20 °C.

Warm environment

To protect the instrument from overheating:

- The TEM2Go unit will automatically shut down if its internal temperature exceeds 75 °C.
- The internal temperature can be monitored via the Controller App.
- Ensure good airflow around the cooling plate and, where possible, provide shade for the unit during use.

Water conditions

The system is water-resistant, but not waterproof. This means that rainy conditions should not be a problem, but the equipment should be handled with caution in extreme precipitation or in case saltwater enters any of the components.

Personal safety

For general safety in the field, we strongly recommend that surveys be conducted by a **minimum of two people**.

6. DOWNLOAD AND UPLOAD DATA

The recorded data is downloaded/copied from the TEM2Go unit to a PC using the *TEM Data Manager* program. *TEM Data Manager* program is available from TEMcompany website (<https://www.temcompany.com/products/software-product-downloads/>). This section is written for version 3.0.2.4.

Connecting to TEM2Go Wi-Fi

The first step is connecting the *Local PC* to the Wi-Fi of the TEM2Go unit. To do so:

- Insert the battery into the TEM2Go unit and turn it on.
- Insert the battery into the Rx unit and turn it on.
- From the *Local PC* connect to TEM2Go Wi-Fi network.

Wi-Fi name: TEM2Go_0###, Password: 0102030405060708

TEM Data Manager program

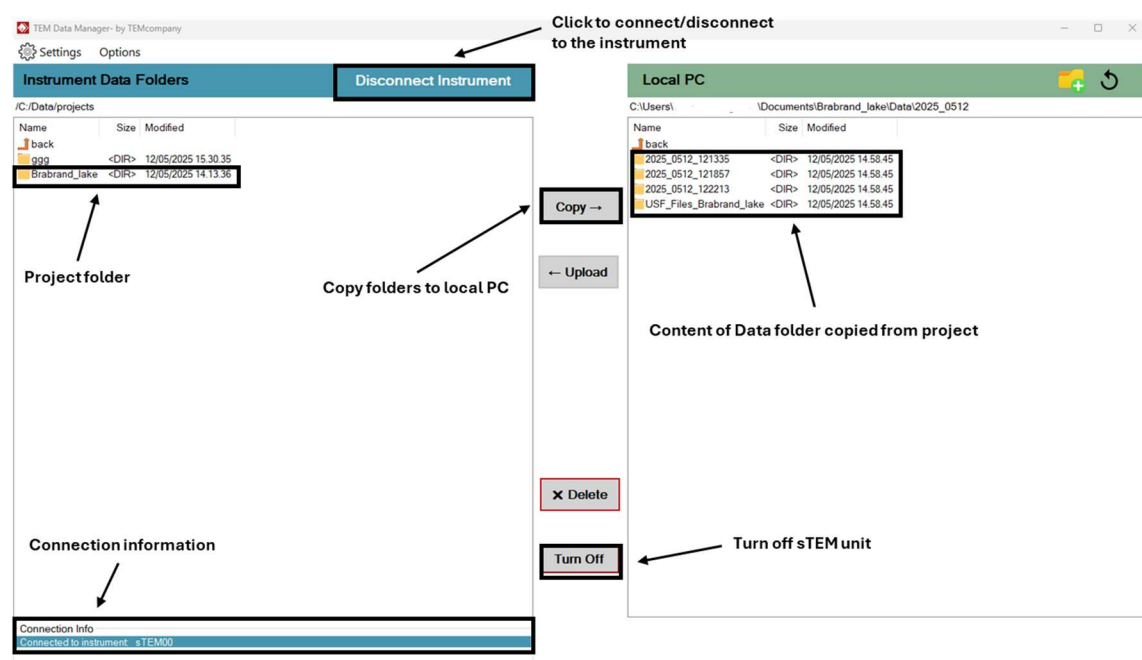


Figure 33: Steps for copying data from TEM2Go unit to Local PC (after connecting to the instrument).

To copy data from Instrument to Local PC

- Press *Connect to Instrument* to display the data folders on the TEM2Go unit
 - The TEM data on the instrument is sorted in main folders named by (yyyy_mmdd)

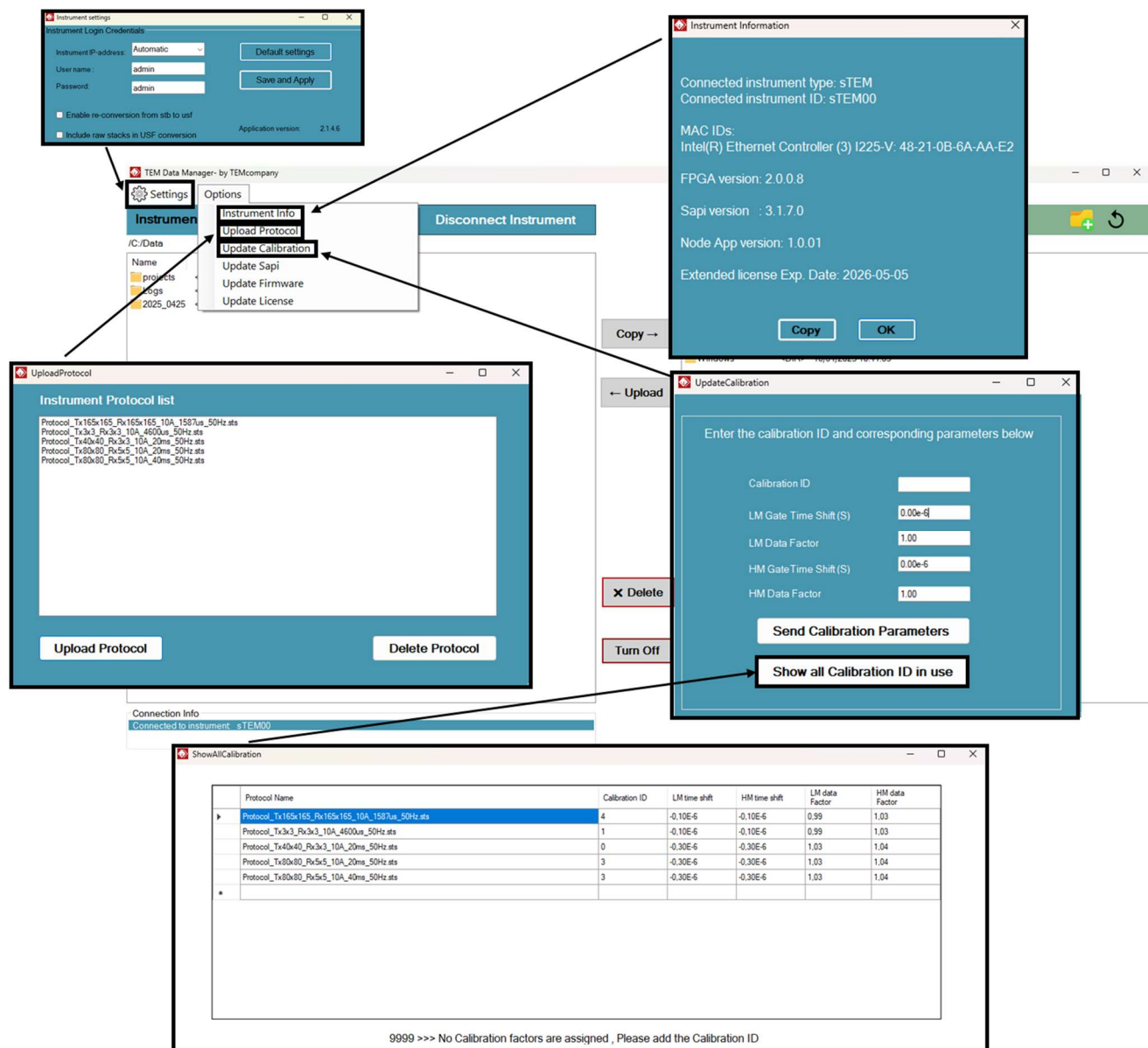
- Select main- or sub-folder(s) to copy to Local PC and set a target folder on the Local PC.
- Turn off the Instrument PC from the TEM2Go Controller app before turning off the TEM2Go unit.

Note

- Folders/files with date/time names are named using UCT-time (GPS date/time).
- Data from a line is created both on the Rx and Tx units but will appear as a joined .stb file that can be then uploaded for processing.
- Before deleting data from the instrument, verify that the data files are copied to your Local PC.

Updating TEM2Go instrument from TEM Data Manager

Figure 34 shows other useful menus in the application, such as settings and options regarding instrument information, existing protocols and calibration factors.



The image displays several windows from the TEM Data Manager software:

- Instrument settings**: Shows login credentials (User name: admin, Password: admin) and checkboxes for "Enable re-conversion from stb to usf" and "Include raw stacks in USF conversion".
- Instrument Information**: Displays connected instrument details:
 - Connected instrument type: sTEM
 - Connected instrument ID: sTEM00
 - MAC IDs: Intel(R) Ethernet Controller (3) I225-V: 48-21-0B-6A-AA-E2
 - FPGA version: 2.0.0.8
 - Sapi version: 3.1.7.0
 - Node App version: 1.0.01
 - Extended license Exp. Date: 2026-05-05
- TEM Data Manager - by TEMcompany**: The main interface showing a tree view of projects and logs.
- Instrument Info**: A menu with options: Upload Protocol, Update Calibration, Update Sapi, Update Firmware, and Update License.
- UploadProtocol**: A window titled "Instrument Protocol list" showing a list of protocols with buttons for "Upload Protocol" and "Delete Protocol".
- UpdateCalibration**: A window for entering calibration parameters:
 - Calibration ID: [input field]
 - LM Gate Time Shift (S): 0.00e-6
 - LM Data Factor: 1.00
 - HM Gate Time Shift (S): 0.00e-6
 - HM Data Factor: 1.00
 - Buttons: "Send Calibration Parameters", "Show all Calibration ID in use", "Delete", "Turn Off".
- ShowAllCalibration**: A window displaying a table of calibration data.

Protocol Name	Calibration ID	LM time shift	HM time shift	LM data Factor	HM data Factor
Protocol_Tx165x165_Rx165x165_10A_1587us_50Hz.sts	4	-0.10E-6	-0.10E-6	0.99	1.03
Protocol_Tx3x3_Rx3x3_10A_4600us_50Hz.sts	1	-0.10E-6	-0.10E-6	0.99	1.03
Protocol_Tx40x40_Rx3x3_10A_20ms_50Hz.sts	0	-0.30E-6	-0.30E-6	1.03	1.04
Protocol_Tx80x80_Rx5x5_10A_20ms_50Hz.sts	3	-0.30E-6	-0.30E-6	1.03	1.04
Protocol_Tx80x80_Rx5x5_10A_40ms_50Hz.sts	3	-0.30E-6	-0.30E-6	1.03	1.04

9999 >>> No Calibration factors are assigned, Please add the Calibration ID

Figure 34: Settings and Options in TEM Data Manager

7. TROUBLESHOOTING – FAQ

Problem	Solution
The TEM2Go Wi-Fi does not show up on mobile device	<ul style="list-style-type: none"> • Note that it takes a few minutes from turning on the TEM2Go unit until TEM2Go Wi-Fi is available. • Check TEM2Go unit is on (both LED on). • Check that Wi-Fi is turned on, at mobile device. • Refresh available Wi-Fi list on mobile device. • Move closer to the TEM2Go unit. • Re-start the TEM2Go unit via the power button.
TEM2Go controller app/TEM2Go Wi-Fi keep disconnecting	<ul style="list-style-type: none"> • Ensure that mobile data is turned off on your mobile device. • Move closer to the TEM2Go unit to improve the connection. • Turn off Battery Saving Mode on your mobile device. • Add the TEM2Go Controller App to the “Never Sleep” category so it can run continuously in the background. • Allow notifications for the TEM2Go Controller App (important for proper background operation).
Can't get GPS lock / GPS LED is not flashing	<ul style="list-style-type: none"> • Note that it can take a few minutes from turning on the TEM2Go unit until GPS lock is obtained. • Make sure that the GPS-antenna is pointing up and is not covered/shielded. • If the mobile device can obtain a GPS-position, this position will be stored in the stn-data file and used if GPS data from TEM2Go unit is not available. • At some locations GPS-signal can't be obtained. A GPS-position can then, manually, be associated with the data in the later data processing.
LM/HM current is not stable and/or not within the green zone of the of the meter	<ul style="list-style-type: none"> • Stop the measurement (!) • Check Tx coil connection to the TEM2Go unit (clean plugs if needed).

	<ul style="list-style-type: none"> • Check the stage of charge of the batteries / replace batteries.
"Alternating sign pattern not detected" error	<ul style="list-style-type: none"> • Very strong noise sources/couplings can cause disturbances in the sign pattern. • Constant "Alternating sign pattern not detected" errors from multiple locations can indicate general instrument errors and service might be needed.
Not able to stop a measurement	<ul style="list-style-type: none"> • Only the mobile device that started a measurement can stop it again manually. • Double-check the instrument is still connected to your mobile device
The TEM signal looks very noisy	<ul style="list-style-type: none"> • Check connections between receiver coil and receiver pole/or transmitter coil and TEM2Go unit.
My data curves are negative (blue)	<ul style="list-style-type: none"> • TEM2Go automatically detects and corrects the polarity of the TEM signal.
My data curve changes sign (blue and red) above the noise level	<ul style="list-style-type: none"> • If part of the data, above the noise level, is negative, it is most likely caused by a strong noise/coupling source (data cannot be used) or induced polarization (IP) effect in the ground (review the literature of IP in TEM measurements).

7.1 Checking Instrument Functionality in Weak Signal Conditions

A very resistive subsurface can produce a weak signal, sometimes even below the natural background noise level. To determine whether this is caused by the ground conditions or by the malfunction of the instrument, follow this quick check:

1. Bring the transmitter and receiver coils close together.
2. If this results in a strongly biased signal in the receiver (Figure 35), the instrument is functioning properly.
3. If the signal does not change, there may be an issue with the instrument, and you should contact support.

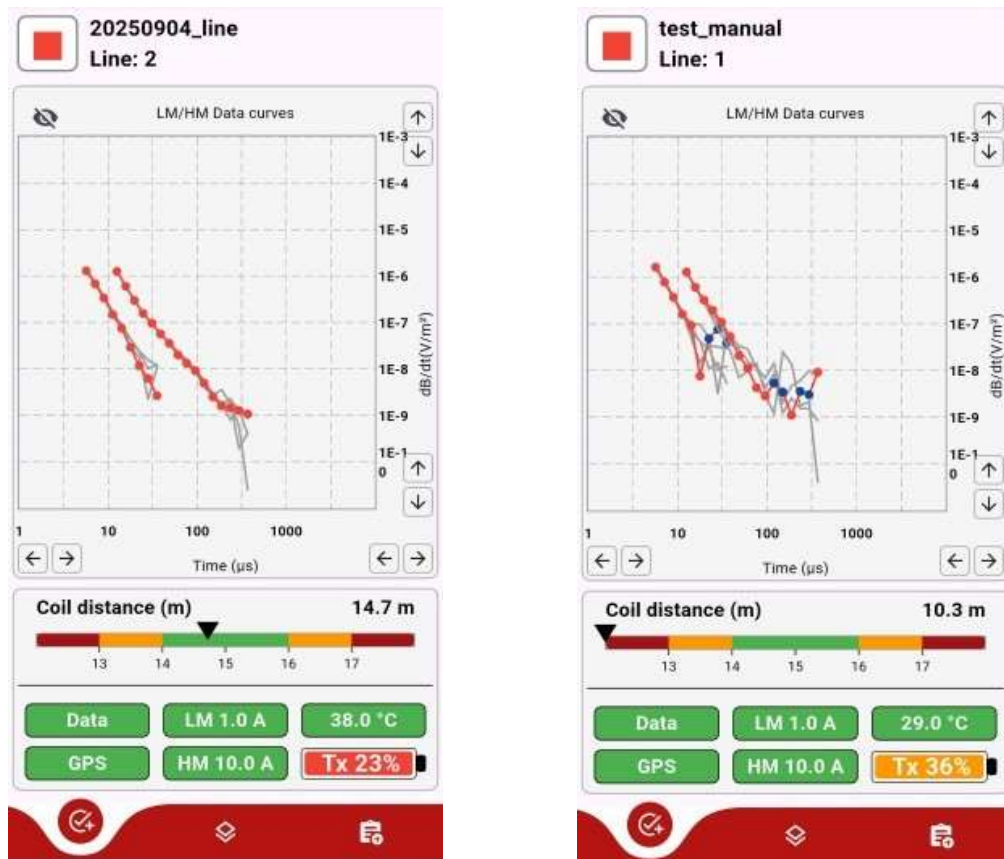


Figure 35: Examples of good data (left) and biased data (right) due to close distance between coils (<10m)

7.2 How to get access to TEM2Go remotely

If neither of the above solves the issue, TEMcompany support can help by accessing the unit remotely. To do this the TEM2Go unit must be connected to the internet, and we need to get the TeamViewer ID and password to access it remotely.

There are 2 ways to connect the instrument to an external Wi-Fi network and get the TeamViewer ID and password.

1. By using the TEM2Go Controller App (Figure 36)

- Launch the app on a mobile device
- Tap the **Menu** (≡ three horizontal lines in the upper-left corner).
- Select **"Support."**

- Tap “**Connect Instrument to Wi-Fi.**”
- Choose your local Wi-Fi network and enter the password.
- In the same menu click on “**Show TeamViewer ID**”

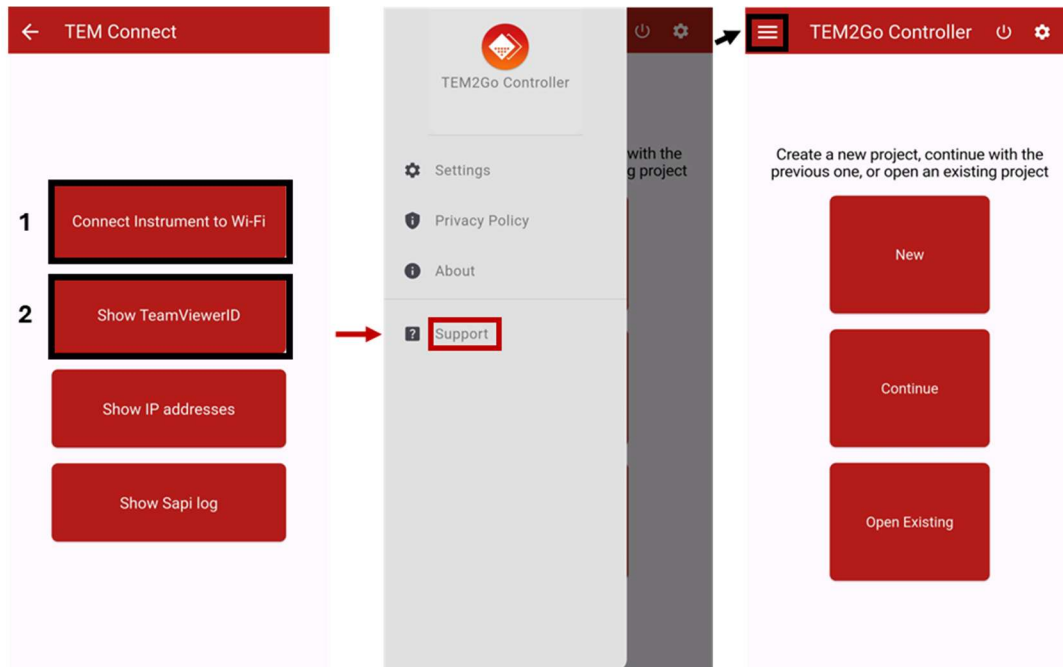


Figure 36: How to connect the unit to external Wi-Fi by using the Controller App

2. By using the TEM Data Manager program (Figure 37)

- Use a PC to connect to the tTEM’s Wi-Fi. **Wi-Fi password is: 0102030405060708**
- Launch the TEM Data Manager and open the **Options** menu.
- Select “**Connect Instrument to External Wi-Fi.**”
- In the window that appears, choose your Wi-Fi network and enter the password.
- Once connected, open the **Options** menu again and click on “**Show TeamViewer ID**”

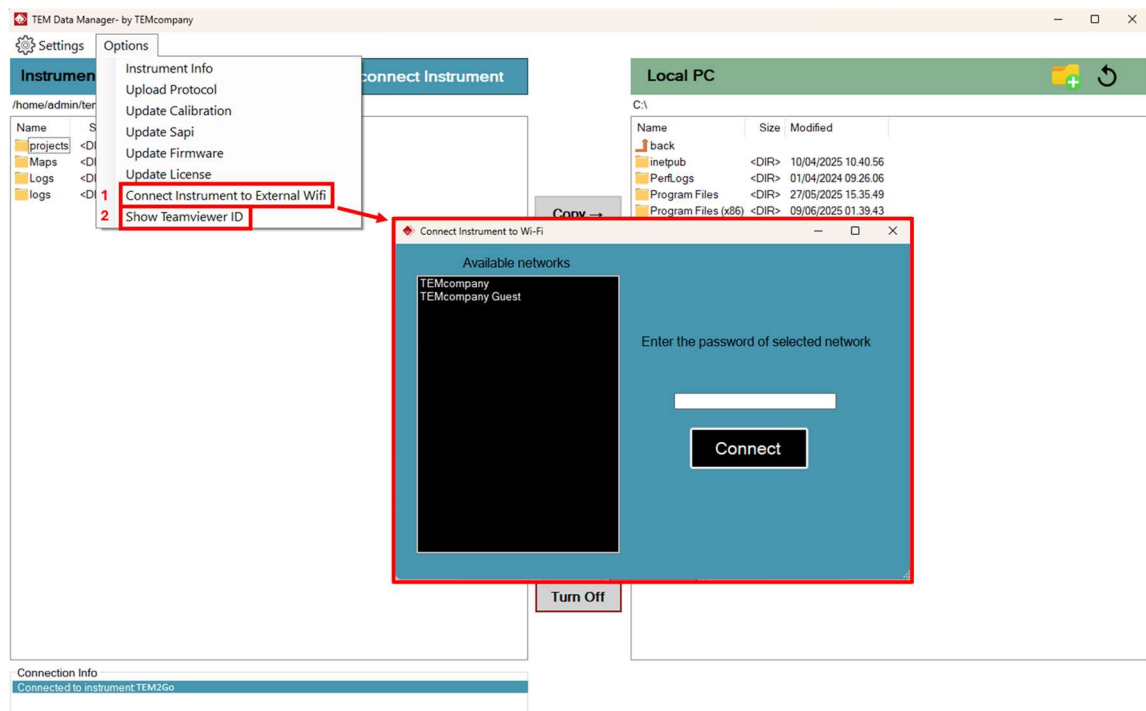


Figure 37: How to connect the unit to external Wi-Fi by using the TEM Data Manager

APPENDIX I: SOFTWARE FOR TEM2GO DATA

To get the most value out of your TEM2Go measurements, the collected data can be further processed, analyzed, and visualized using specialized software tools. These tools help transform the raw survey data into clear and interpretable results for decision-making.

For data processing, we have developed our own in-house software, specifically designed for TEM data, called **TEMImage**. In addition, once **Workbench version 2025.2** becomes available, it will also support the processing and visualization of TEM2Go data.

For data visualization, we provide **TEM Model Viewer**, a dedicated free tool for displaying and exploring processed models in an intuitive way.

TEM2Go Data in TEMImage

TEMImage is a user-friendly software designed to view collected data, remove unwanted or poor-quality data points, and perform inversions to generate resistivity sections. A variety of settings and visualization options are available to suit different customer needs. The software is available through subscription; however, if you are interested in exploring its features, please contact us to request a complimentary 3-month trial.

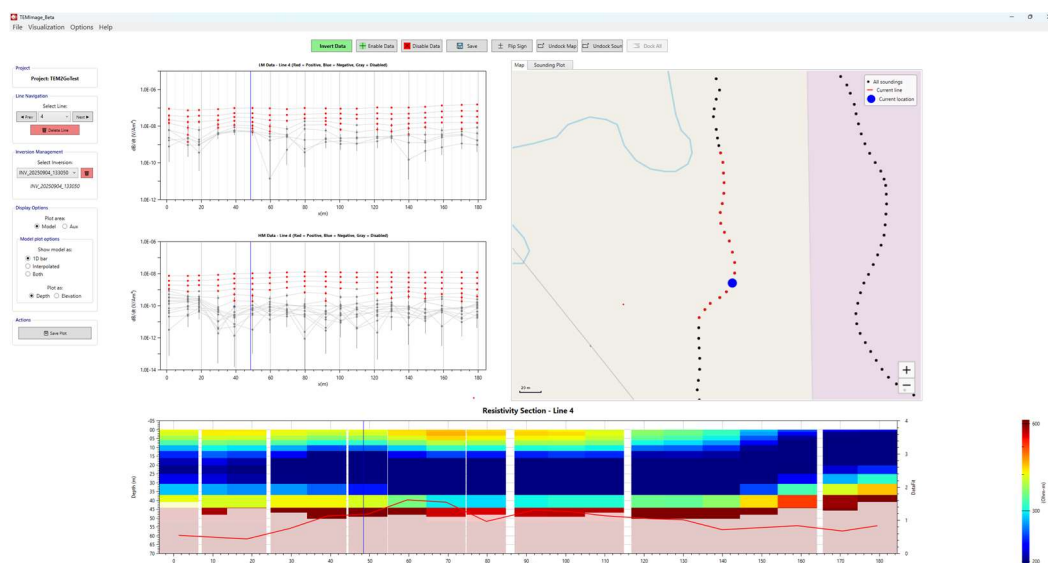


Figure 38: Main window in TEMImage

TEM Model viewer

This software is designed exclusively for viewing real-time inversion models generated during data collection in the field. To get started, go to <https://www.temcompany.com/products/software-product-downloads/> and download the software for free.

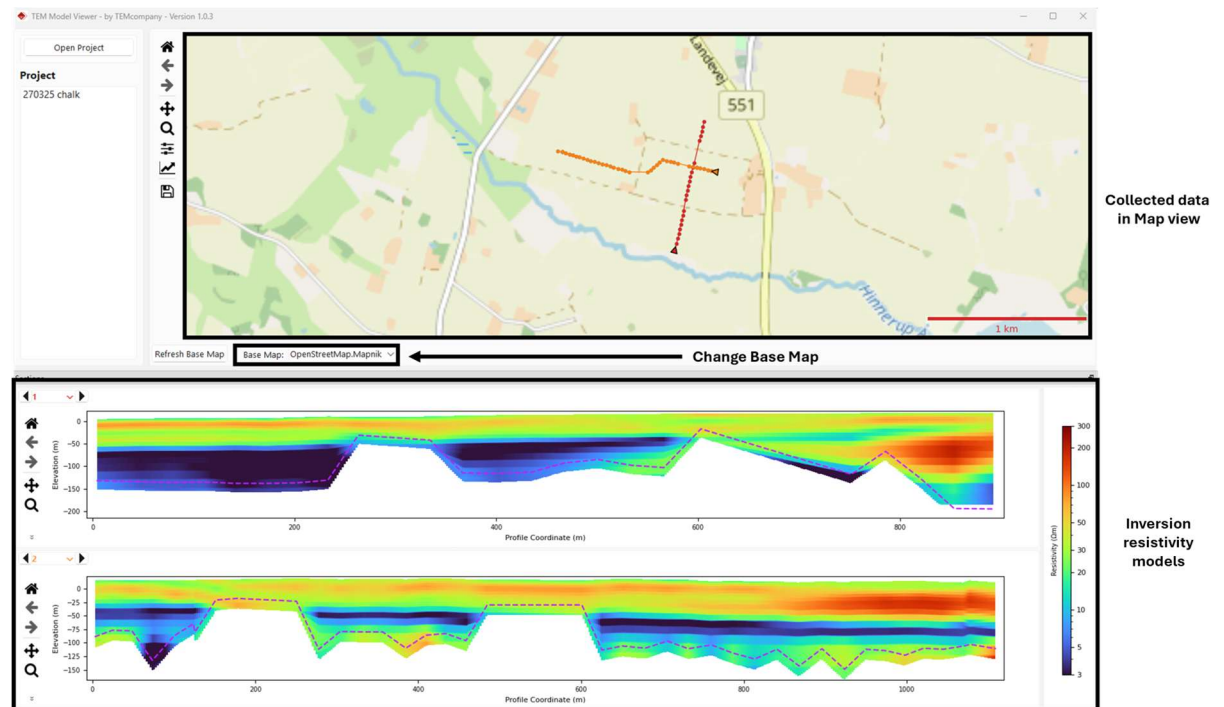


Figure 39: Main window in TEM Model Viewer once you open a project