GUIDELINEGEO

Quick Guide MALÅ Controller App

APP-ENABLED

Items needed

- A compatible Android mobile device
- An App-enabled GX antenna.
- The MALÅ Controller App package.

Installation

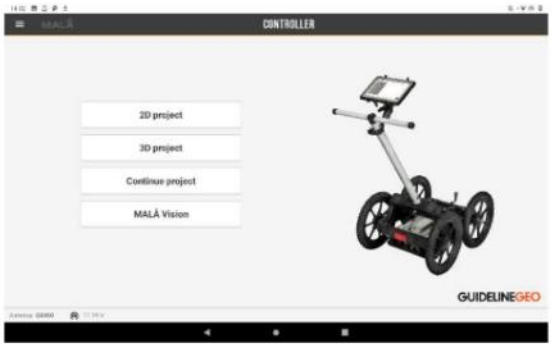
Scan the QR code and install the app (provided as an apk file) on your Android mobile device.

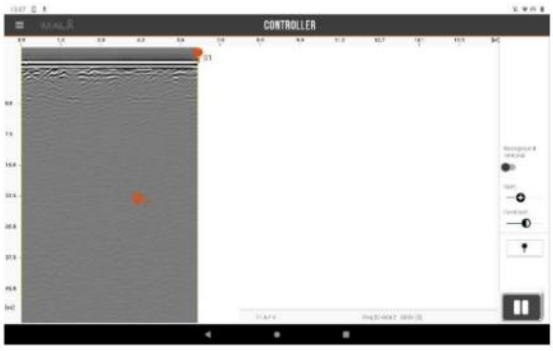
Set up mobile hotspot

- For the mobile hotspot set up you will need the serial number of the antenna to connect.
- Change the network name to **MALAxxxxxxxx**, where xxxxxxxx refers to the antenna serial number.
- Change the password for the mobile hotspot to **mala0123**
- Enable the mobile hotspot to allow this specific antenna to connect to your mobile device.

Start measurements

Start the app and select 2D or 3D project. Check the Measurement settings in the Main menu ☰ and start measurements by pressing the red button on the Measurement screen.





Upload to MALÅ Vision. And Ready

Export of data to MALÅ Vision is seamless and simple. Make sure your mobile device is connected to the Internet. Simply press the MALÅ Vision button on the Main screen and choose if you want to Open or Export data. Then select the project to be uploaded, please note that only one project at time, can be uploaded.

Contents

Items needed

- A compatible Android mobile device. Please contact your Guideline Geo representative for more information on recommended units.
- For some mobile devices, a power bank is recommended to extend the survey time.
- An App-enabled GX antenna with firmware version 5184 (or higher). Contact **support@guidelinegeo.com** with your antenna serial number for information on compatibility or required upgrade.
- The MALÅ Controller App package. **Scan the QR code for download**

APP-ENABLED

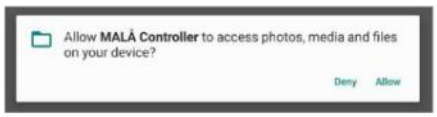
Installation

Install MALÅ Controller App

Copy the installation file (APK) to your mobile device storage and install the app by double-clicking.

Note! If you receive a security warning for unknown apps, enter SETTINGS and allow installation from this source.

When opening the MALÅ Controller App for the first time allow the app to access photos, media and files.



Set up a Mobile Hot Spot

To set up the mobile Hotspot, you will need the serial number from the MALÅ GX antenna to be used. This is found on a label, close to the battery.

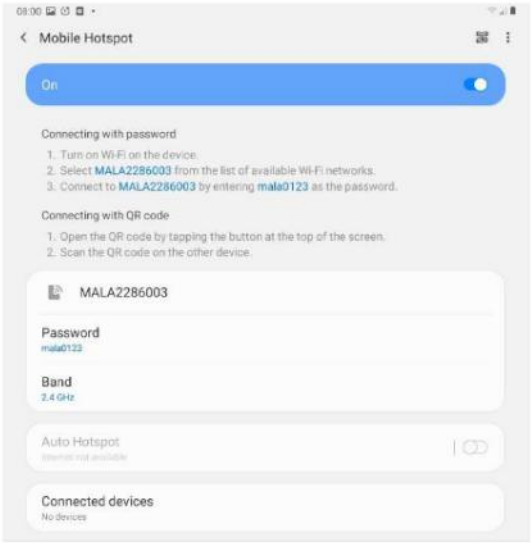
In the example: 22864003

On your mobile device, enter Settings -> Connections -> Hotspot or Tethering .

Change the network name (SSID) to **MALAxxxxxxxx**, where xxxxxxxx shall be replaced with **all 8 digits** from the antenna serial number.

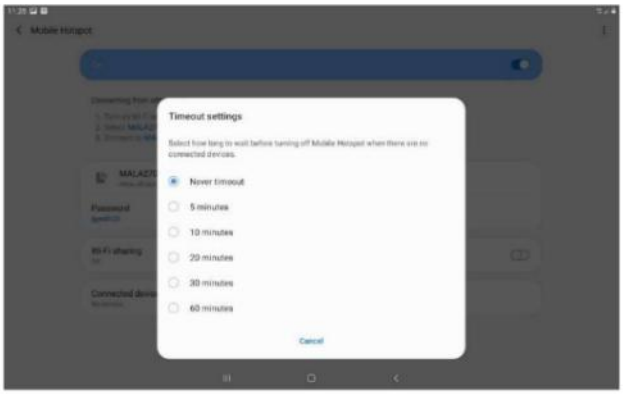
Change the password for the mobile hotspot to **mala0123**.

Finally, enable the mobile hotspot to allow this specific antenna to connect to your mobile device.



Change the Mobile Hotspot timeout settings to **Never timeout**, to avoid corrupt measurements due to mobile hotspot deactivation by the android system.

To change this settings enter the Mobile Hotspot settings (three dots, upper right corner) and then Timeout settings.



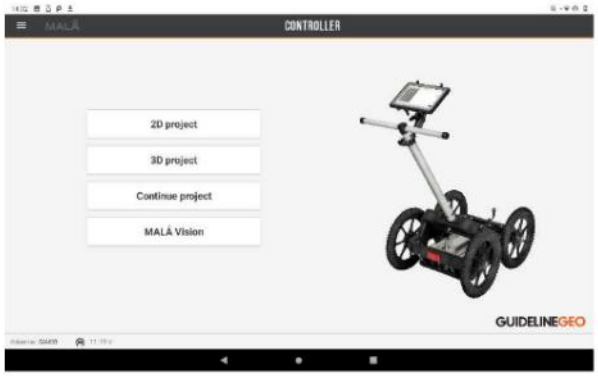
Note! Here you also can change the settings for Wi-Fi sharing. Enable sharing to have both Wi-Fi and Mobile Hotspot running at the same time. If this is not available, use a Bluetooth pairing to another mobile device to enable data sharing.

Note! For some mobile devices, a dummy sim card is needed, to make the hot spot work without Internet connection.

Start a project and Main Menu

When opening the MALÅ Controller App the start screen is seen.

After a short time, the Home page is opened.



Here you have the option to:

- start a new **2D project** (single profiles)
- start a new **3D project**
- **Continue project** with the last used project
- export or open data in **MALÅ Vision**

Here you also find the Main menu ☰ for navigation between:

- **Home** page
- **Measurement** page
- **Settings** page (change antenna settings such as sample depth, trigger type, etc.)
- **About** page, giving information on the connected antenna and the app itself.

When choosing **New Project** (2D or 3D) you have the possibility to change the name or keep the automatically assigned name.

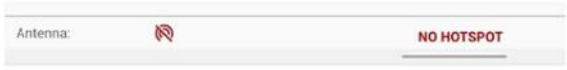
When done, the app opens the Measurement page.

If you select the **Continue project**

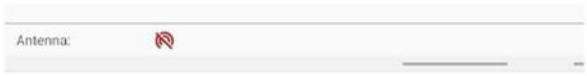
, the app opens the Measurement page for the last used project (being either a 2D or 3D project) and measurement can be started.

On the bottom bar you find the following information:

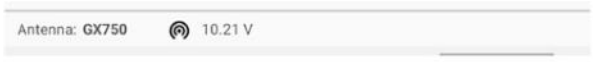
When the hotspot is not enabled, a red icon indicating no connection with the antenna and the text **NO HOTSPOT** is displayed.



If hotspot is enabled but the antenna is turned off, only the antenna icon is seen.



When contact is made with the antenna (this can take approx. 90 sec), a black antenna icon is shown and information regarding the antenna.



The name of the current project and the profile number for the last recorded (if any) is also shown in the bottom bar.

The GPS symbol, in the bottom bar, represents:


No GPS active


GPS active but no Fix


GPS active and Fix

Note! In some cases (poor Wi-Fi connection, Wi-Fi disturbances, etc.) trace data will not be received from the antenna during the normal measurement procedure.

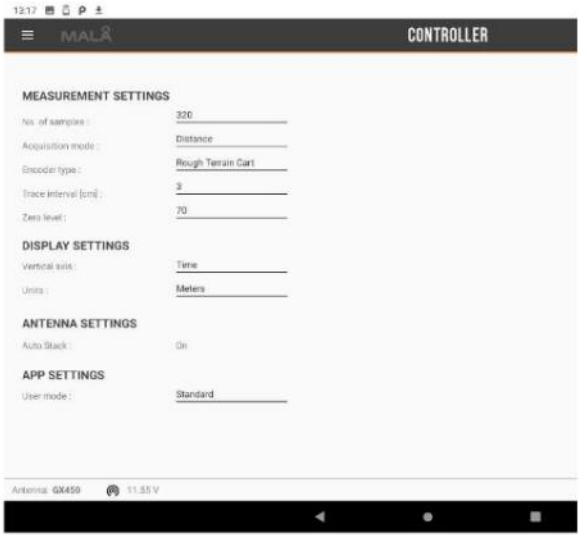
However, the antenna will store all traces for the current profile and to ensure that all traces will be written to the profile file by the MALÅ Controller App, the app will request all missing traces during the sync function that will be executed after each measurement.

Measurement settings

Select Settings in the Main Menu 
Here the following can be adjusted:

- Numbers of Samples to collect in your trace.
- Time or wheel triggering.
- Wheel type.
- Trace or time interval.
- Vertical scale: Time or Distance.
- Measurement Units: Meters or Feet.
- Auto stack: On or number of stacks.

User mode is always left on Standard.



Note! The settings are automatically saved and if the application is restarted, the same settings will be used.

Positioning

In the Measurement settings you will also find the options for collection of positioning data:

- None: No positioning data is collected.
- Internal GPS: Positioning data is collected from internal GNSS in the GX antenna and data stored in a cor-file.

Mobile device GPS: Positioning data is collected from tablet and data stored in cor-file.

Note! When measuring a 3D project, the MALÅ Controller App creates temporary coordinates for relative positioning of the measured files in the grid.

If an external GNSS is used, choose the option **Mobile Device GPS** and carry out the following steps:

1. Install NTRIP "Lefebure NTRIP client" on the phone/tablet
2. Go to **Settings** > About > Tap Rapidly on Build Number until it says, "You are now a developer." Then go into your developer **setting** and select the Lefebure NTRIP Client as the app to fake location.
3. Start the RTK device and connect the Bluetooth with the device.
4. Start NTRIP Client and go into Receiver Settings and choose:
   Receiver connection: External via Bluetooth
   Bluetooth device: <the name of the connect RTK device>
   GPS Mock Locations: Check this checkbox
5. Press Connect in the NTRIP clients main window and verify that connections are made with external RTK device
6. Measure

When ready, the mobile device can be re-set by:

1. Go to Settings > About > Tap Rapidly on Build Number until it says, "You are now a developer." Then go into your developer setting and select None

Measurements

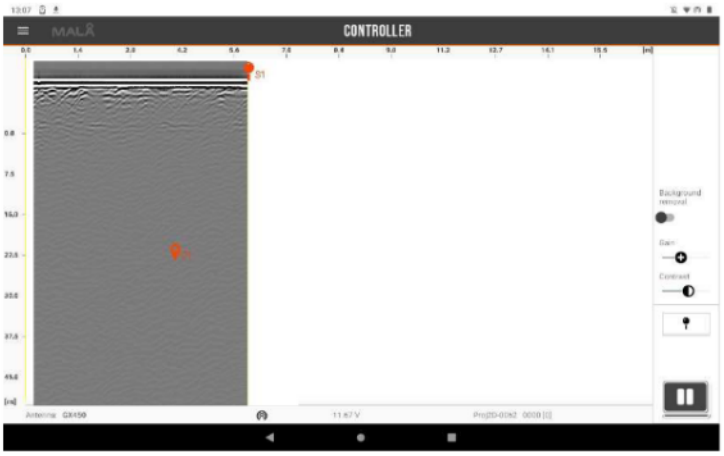
2D measurements

In the 2D Measurement page, press  to start a new profile

Note! If the dot is grey, there is no connection to the antenna, check antenna and Hotspot.

During measurement you can:

- Apply filters as background removal and gain.
- Change the contrast
- Apply surface markers (at the location of the antenna) with 
- Apply object markers anywhere in the measured radargram by tapping the screen.



If you want to use a known object (as a pipe on a known depth) press and hold the object for a longer time period, insert the depth, the depth scale and velocity of the radargram will change accordingly.

Press  to stop a profile. Data is automatically stored in the mobile device.

Note! Markers can be deleted, moved or change color by tapping on the marker for a longer time period. A pop-up window will appear with the different options.

Note! The backtrack function, when going backwards with the measurement wheel, is the same as on any other MALÅ device. The current position of the antenna is shown by a vertical yellow line.

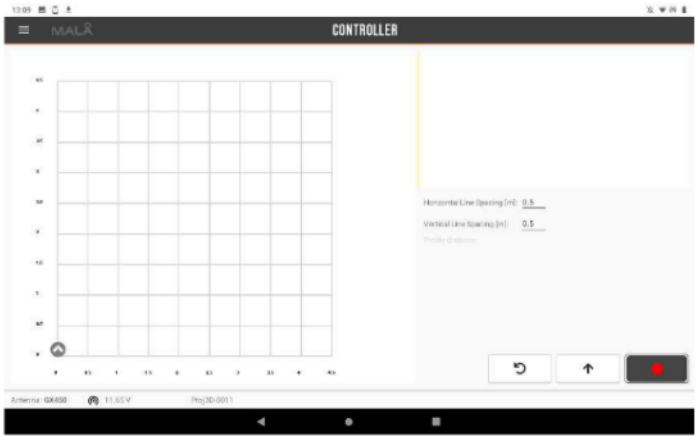
Note! If the connection between the antenna and the MALÅ Controller App is lost during measurements, the collected data will be stored in the internal memory of the antenna and retransmitted to the MALÅ Controller App once the connection is re-established.

3D Measurements

The project is started by defining the size of the grid.

Set the horizontal and vertical line spacing and measure as many lines (in any length), in each direction as you wish.

Data collection will be seen in the upper right corner and measured profiles are indicated with darker grey in the grid on the left side.



Each line is started and stopped by  and 

When ready with one direction, stop the line and press ↑ and start a new line.

If you need to undo the last line, press ↩

If needed, change direction again to collect more data with ↑ and →

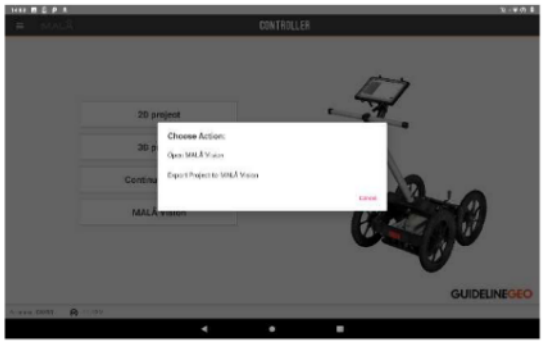
Data is automatically stored in the mobile device.

Upload. And ready

Export of data to MALÅ Vision is seamless and simple. Make sure your mobile device is connected to the Internet or share connection with the used device with any other mobile device with Internet connection.

Simply press the MALÅ Vision button on the Main screen and choose if you want to Open or Export data.

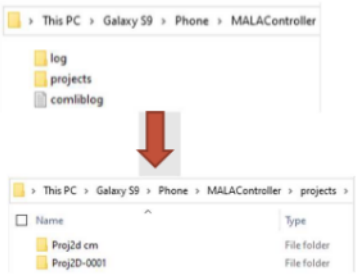
Select the project to be uploaded. One project at time, can be uploaded.



Data can be downloaded by connecting the mobile device to a computer.

The MALÅ Controller App creates a MALA Controller folder and, in this folder, all created projects can be found.

You can also map this local folder to any cloud storage solution to sync automatically.



As for all Guideline Geo MALÅ products, the following files are created:

- rd7-files
- rad-files
- mrk-files
- cor-files