
Guide: Using Avenza Maps for Path Tracking and Point Measurement and Processing in QGIS

1. Installation and Setup of Avenza Maps

- Download the app: Download and install the Avenza Maps app from the App Store (iOS) or Google Play Store (Android).
- Registration: Optionally, you can create an account with Avenza to synchronize your data. This is **not** necessary for our purposes.

Workflow:

You have a choice between two workflows...

- Either you navigate to the points using Google Maps and simply load the GPX with the stations there
- Or you can also use Avenza Maps for this; then you have everything in one app, **but you must later pay attention to “active layers”!**

2. Importing a Layer into Avenza Maps

- Open Avenza Maps and navigate to “Layers” at the bottom.
- Tap the ‘+’ icon at the top right and select “Import Layers.”
- Choose the file (in our case, “03_gnss.gpx”), and it will be imported into Avenza Maps.
- The layer should now be displayed on your base map.

You should now see the individual stations and can navigate to them. **Now you must ensure that you create a new layer for your measurements and declare it as the “active layer”:**

- Set as active layer:
 - Now go to “Open Base Map”
 - Click on the layer icon at the bottom right
 - Then select “Set as active layer” with the three dots next to the layer “name-of-your-own-layer”

Now, when you add points, you should be able to add them to your own layer. At the end of the exercise, you can easily export your points.

3. Path Tracking with Avenza Maps

Start Tracking:

- Ensure that your GPS is activated.
- **Make sure that your newly created layer is the active layer!!**
- Tap the measurement icon at the bottom left and select “Measure GPS Tracks.”
- You can then start a track. Keep it active until the exercise is complete :)
- The app will now begin to track your location and record the path on the map.
- Be sure to stay on the designated path (e.g., always on the right side of the path).
- The recorded path will be displayed as a line on the map.

End Tracking:

Once you have finished the circular route, tap the track icon again and select “Stop Tracking.” The path will now be saved as a completed element.

4. Measuring Points

Insert Point:

- **Make sure that your newly created layer is the active layer!!**
- Tap the pin icon at the bottom right during the circular route to save a new point on the map.
- Your current position will be automatically marked as a point.
- Naming Points:
 - After inserting the point, you can name it, e.g., A, B, etc.
 - Add a description (Coverage): Enter a number between 1 and 10 (nothing else!) that approximately reflects the coverage above you. For example, if you are in a forest with many trees, 8 or 9 would be a realistic value. In open air, it would probably be a 1 or 2.
 - Save the point and then proceed to the next one!

5. Exporting the Data

Exporting the Path:

- Open the list of saved tracks (under ‘My Maps’ > Track icon).
- Select the tracked path and tap the three dots (⋮) next to the track name.
- Choose ‘Export’ and export the path as KML (KML is sufficient for importing into QGIS).

Exporting the Points:

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- Open the list of saved points (under 'My Maps' > Point icon).
 - Select all points you saved during the exercise (NOT the ones we provided you!).
 - Export the points as CSV so that you can find them again and load them into QGIS on your home PC.

Now continue following the instructions in ex03.pdf