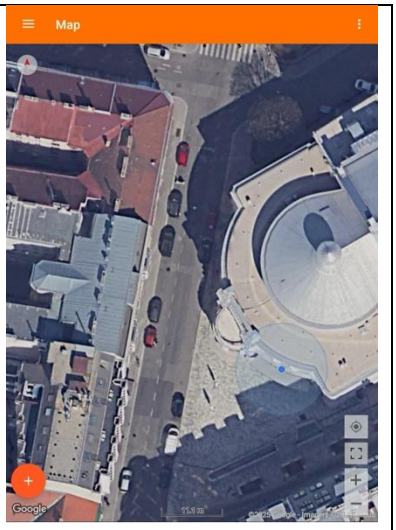
Using the GLRM Receiver with Planimeter

Planimeter is a GPS-based app for easy measurement of areas, distances, and perimeters. It is especially useful for land surveying, construction, and agriculture, offering precise measurements directly on Google Maps. The app also allows you to mark points, share maps, and capture additional data such as angles, bearings, and coordinates in various formats. This guide explains how to use the GLRM receiver together with the GL Connect app to provide precise positioning data to the Planimeter app on Android devices. GL Connect acts as a mock location provider by receiving corrected GNSS data from the GLRM receiver and forwarding it to other apps. To use it with Planimeter, you need to configure GL Connect with your NTRIP credentials and select it as the mock location app in the Android system settings.

After installing and launching the Planimeter app, the main map view appears immediately. In this view, you can select points by tapping the plus button in the bottom left corner and choose to measure either an area or a distance.

At this point, Planimeter is ready to receive location data. However, to use the high-precision GNSS positions from your GLRM receiver, you need to set up GL Connect as the mock location provider – as described in the following steps.



To ensure proper communication between the GLRM GNSS receiver and QField, configure the GL Connect app as follows:

1. Open the GL Connect app.
2. Navigate to the “Connection” tab.
3. Enable the following options:
    - **Background Execution** – Allows the app to run continuously in the background.
    - **NTRIP Client** – Activates real-time correction data streaming via an NTRIP connection. Please note: this option becomes available only after completing the NTRIP configuration in GL Connect.
    - **Mock Location** – Enables the app to provide corrected GNSS coordinates to other applications by overriding the internal GPS location. Please note: this option becomes available only after selecting GL Connect as the mock location app in your Android device’s developer settings.

Adding an NTRIP Profile in GL Connect

From the GL Connect main screen, navigate to the NTRIP section. Enter the required connection details, including the server address, port, username, and password. Then, select the appropriate mount point from the list. Once all fields are completed, initiate the connection by tapping Connect to NTRIP Client.

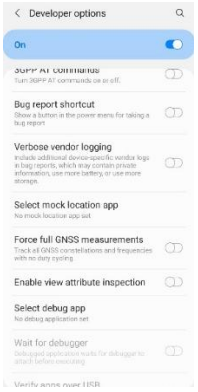
Enabling Developer Options on Your Android Device

To allow the use of Mock Location with external GNSS receivers, you first need to unlock the Developer Options on your Android device:

1. Open your device's Settings.
2. Scroll down and select About Phone (or About Device, depending on your Android version).
3. Locate the Build Number entry.
4. Tap the Build Number repeatedly (approximately 7 times) until you see a message confirming that Developer Options have been unlocked.
5. Return to the main Settings menu, where you will now find a new section called Developer Options.

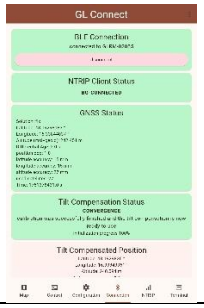
To allow your device to use corrected GNSS data from an external NTRIP client, follow these steps:

1. Navigate to Developer Options (previously unlocked).
2. Tap on Select mock location app.
3. From the list of available apps, select GL Connect.



Once the mock location app is selected and active, all applications on your Android device that use location services will automatically receive the high-accuracy positional data streamed from the GLRM GNSS receiver.

You can now open QField and begin surveying without any additional configuration. The app will use the corrected coordinates provided by the external receiver instead of the internal GPS.



Once GL Connect is configured and set as the mock location provider, return to the Planimeter app. If everything is set up correctly, Planimeter will now receive position data from the GLRM receiver. You should now notice a clear improvement in the displayed positioning accuracy. The vertical and horizontal accuracy should reflect the enhanced precision provided by the GLRM receiver. This confirms that Planimeter is successfully using the corrected GNSS stream for georeferenced data collection.