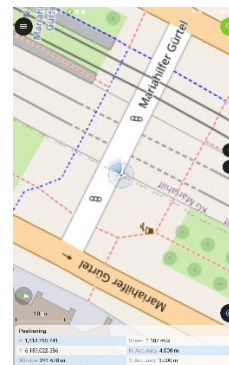## Using the GLRM Receiver with QField

QField supports high-accuracy positioning by connecting to external GNSS receivers through NMEA streams over Bluetooth, TCP, or UDP. This guide explains how to use the GLRM receiver in combination with the GL Connect app to provide precise positioning to QField on Android devices. GL Connect acts as a mock location provider, streaming corrected GNSS positions from the GLRM receiver and making them available to other apps. To use it with QField, you'll need to configure GL Connect with your NTRIP credentials and set it as the mock location app in Android system settings.
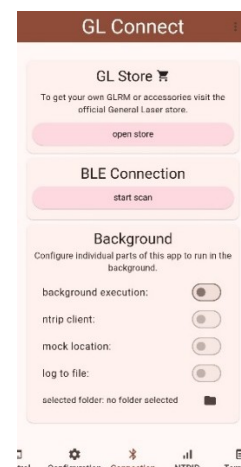
| | |
|---|---|
| After installing and launching the QField app, begin by logging into your QFieldCloud account. Once logged in, create a new project or open an existing one. When the project is loaded, the main map view will appear. In this view, QField displays the current positioning data in the bottom bar, such as accuracy, coordinates and altitude.<br><br>At this stage, QField 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 a 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:<br><br>1. Open the GL Connect app.<br><br>2. Navigate to the "Connection" tab.<br><br>3. Enable the following options:<br><br>&bull; **Background Execution** – Allows the app to run continuously in the background.<br>&bull; **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.<br>&bull; **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**<br><br>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. |  |
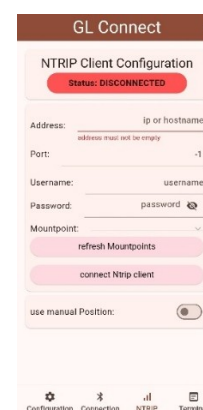
**Enabling Developer Options on Your Android Device**

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.



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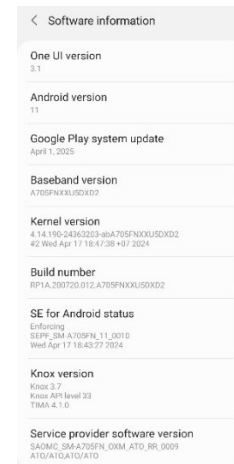
To allow your device to use corrected GNSS data from an external NTRIP client, follow these steps:

1. Navigate to Developer Options (previously unlocked).

2. Tap on Select mock location app.

3. From the list of available apps, select GL Connect.



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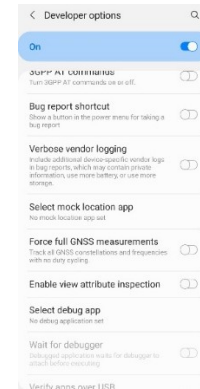
Once the mock location app is selected and active, all applications on your Android device that use location services will automatically receive the high-accuracy positional data streamed from the GLRM GNSS receiver.

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



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Once GL Connect is configured and set as the mock location provider, return to the QField app. If everything has been set up correctly, QField will now receive position data from the GLRM receiver.

You should notice an improvement in the displayed positioning accuracy in the map view's status bar. The vertical and horizontal accuracy should reflect the enhanced precision provided by the GLRM receiver. This confirms that QField is successfully using the corrected GNSS stream for georeferenced data collection.