

Using the GLRM Receiver with Field Maps

ArcGIS Field Maps is a powerful all-in-one mobile app designed for efficient field data collection, asset inspection, and real-time location tracking. It combines mapping, form-based data entry, and offline capabilities into a single platform, enabling field workers to seamlessly capture and update geospatial data. Built on the ArcGIS system, Field Maps ensures that both field and office teams work with the same authoritative data. To enhance positional accuracy, Field Maps can be paired with external GNSS receivers like the GLRM. With the help of the GL Connect app, corrected GNSS positions from the GLRM receiver can be streamed to Android devices via mock location, enabling high-precision mapping directly within Field Maps.

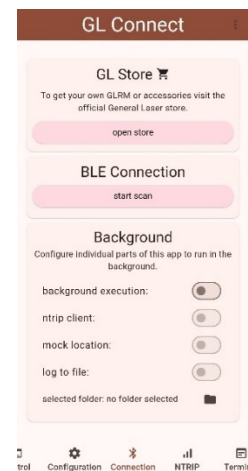
After installing and launching the ArcGIS Field Maps app. Once signed in, your current location will be displayed, and the app will start using your device's internal GNSS by default. To view the current GNSS status and positioning accuracy, tap the location icon from the top menu. Here, you can monitor key values such as horizontal and vertical accuracy, altitude, and satellite count.

At this stage, Field Maps is ready to receive location data; however, for high-precision GNSS positions from your GLRM receiver, you need to configure GL Connect as a mock location provider on your Android device, as described in the following steps.



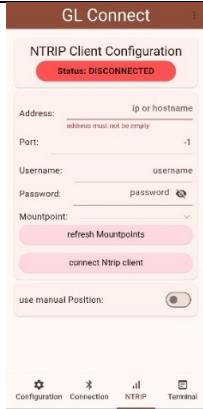
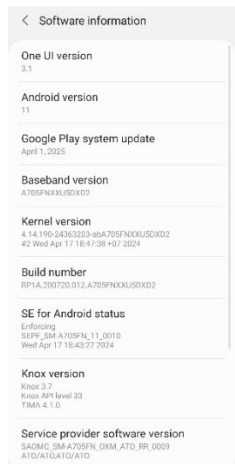
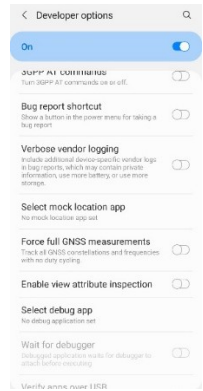

To ensure proper communication between the GLRM GNSS receiver and Field Maps, configure the GL Connect app as follows:

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.

	
<p>Enabling Developer Options on Your Android Device</p> <p>To allow the use of Mock Location with external GNSS receivers, you first need to unlock the Developer Options on your Android device:</p> <ol style="list-style-type: none"> 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. 	
<p>To allow your device to use corrected GNSS data from an external NTRIP client, follow these steps:</p> <ol style="list-style-type: none"> 1. Navigate to Developer Options (previously unlocked). 2. Tap on Select mock location app. 3. From the list of available apps, select GL Connect. 	
<p>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.</p> <p>You can now open ArcGIS Field Maps and begin surveying without any additional configuration. The app will use the corrected coordinates provided by the external receiver instead of the internal GPS.</p>	

Once GL Connect is configured and set as the mock location provider, return to the ArcGIS Field Maps app. If the setup is successful, Field Maps will begin receiving high-precision GNSS position data from the GLRM receiver instead of the internal GNSS.

You can verify this by opening the GPS Details panel from the map menu. The horizontal and vertical accuracy values should now reflect the enhanced precision provided by the external receiver. This confirms that Field Maps is successfully using the corrected GNSS stream from GL Connect for accurate, georeferenced data collection in the field.

