

Using the GLRM Receiver with SW Maps

SW Maps supports high-precision GNSS data by allowing location input from external receivers via mock location. This guide explains how to use the GLRM receiver together with the GL Connect app to deliver accurate GNSS positioning to SW Maps on Android devices. GL Connect serves as a mock location provider, streaming corrected GNSS data from the GLRM receiver into the Android system. To use it with SW Maps, you'll need to configure GL Connect with your NTRIP credentials and set it as the mock location app in your device settings.

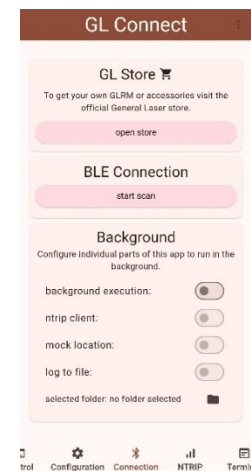
After installing and launching the SW Maps app, you will be prompted to create a new project. Once the project is created, you will be redirected to the main map view, where your rough current location will be displayed using the internal GNSS receiver. To check the detailed positioning status, tap the icon in the top center of the screen (showing values like ΔH and ΔV). This opens the GNSS Status panel, which displays key information such as fix type, accuracy (horizontal and vertical), and coordinate system values.



At this stage, SW Maps is using your device's internal GNSS, but for high-precision positioning with the GLRM receiver, you need to configure GL Connect as a mock location provider in your Android settings, as described in the next steps.

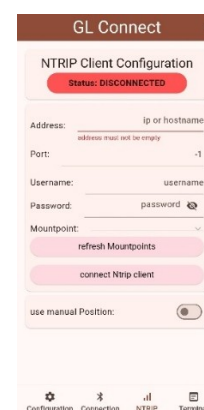
To ensure proper communication between the GLRM GNSS receiver and SW Maps, configure the GL Connect app as follows:


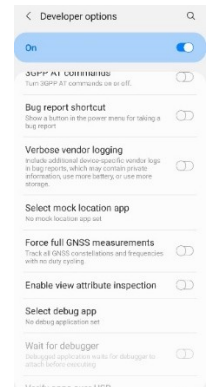

1. Open the GL Connect app.
2. Navigate to the "Connection" tab.
3. Enable the following options:
 - **Background Execution** – Allows the app to run continuously in the background.
 - **NTRIP Client** – Activates real-time correction data streaming via an NTRIP connection. Please note: this option becomes 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 SW 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>	
<p>Once GL Connect is properly configured, return to the SW Maps app. If everything is set up correctly, SW Maps will now begin receiving high-precision GNSS data from the GLRM receiver. You can monitor this by opening the GNSS Status panel (tap the accuracy values at the top center). You should observe a significant improvement in both horizontal and vertical accuracy</p>	

values. This confirms that SW Maps is successfully using the corrected GNSS data stream from the external receiver for accurate positioning and mapping.

