

How to debug a positioning issue with a specific Android phone

Due to differences in mobile phone hardware components and radio antenna design you may occasionally experience sub adequate indoor positioning accuracy. This is typically caused by the [Received signal strength indication](#) (RSSI) varying between devices.

We can compensate for the difference by applying an RSSI offset.

Symptoms of this problem are:

- The Bluedot outer accuracy ring is often extremely large, indicating we're unable to determine a good user location.
- The Bluedot is moving around the map frantically and appears unstable.
- The overall Bluedot accuracy is poor and doesn't update as expected when you move throughout the venue.

How do I know what the offset should be for my problematic mobile phone?

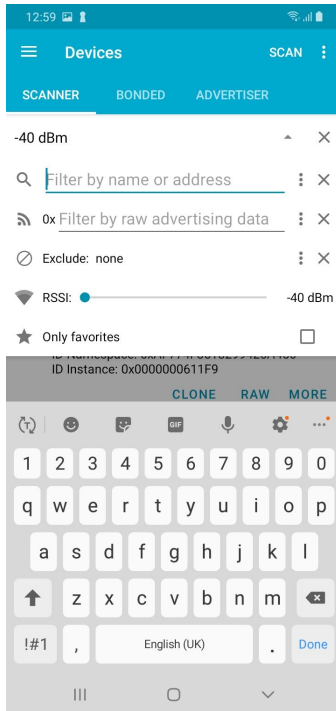
There's a simple process for us to determine the offset by you measuring the RSSI at 1 meters distance to the beacon. Once you know the RSSI@1m please email us that information to support@steerpath.com along with the phone make and model. We'll then add the offset to our system and the next time you use Steerpath it will automatically apply the change for that phone.

How to measure the RSSI@1m on the problematic device

Step 1

Install [nFR Connect for Mobile](#) from the Play Store

Step 2



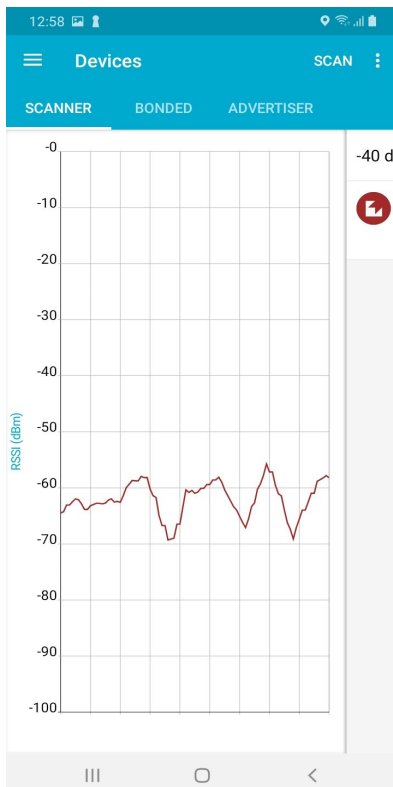
Open the app, then select the scanner tab from the top.

Click filter and set the RSSI to -40dBm which means it will only display a beacon that's very close to the phone.

Place our beacon somewhere with the top (Steerpath label) facing you holding the phone.

Hold the phone touching the beacon and click Scan. The beacon should appear in the list in the app.

Move back and hold the phone 1 metre distance from the beacon. Then slide the list across to show the graph view as seen below.



The graph will start to plot the RSSI measurements as they arrive. You can click the Scan button again to get a more results

The RSSI measurements should be around -63dBm but it will oscillate above and below as shown in the example to the left. This is completely normal and to be expected.

A mobile phone with poor indoor positioning will typically have a much higher or lower average RSSI. Sometimes the difference can be as much as +/- 20dBm

Sending us a screenshot of the results will be enough for us to determine the required offset.