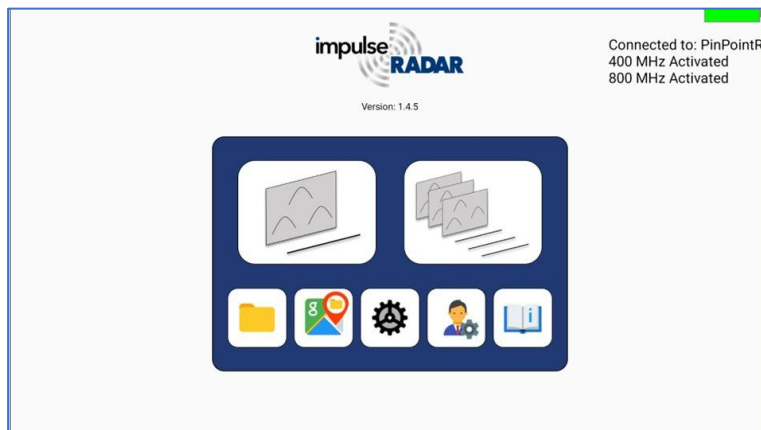



# ViewPoint App – Quick Start Guide



## 1.1. Setup & Connection

1. Download and install ViewPoint <sup>VP</sup> from 'Google Play Store' by searching for 'ViewPoint' in the search-bar. It is also available on ImpulseRadar website.
2. Now, start the PinPointR/CrossOver GPR system and turn the Wi-Fi 'ON' on your android device. It might take few minutes for the GPR system's Wi-Fi to be detected by the android device. System's Wi-Fi id is like 'CO\_XXXXXXXX' where 'XXXXXXXX' is the serial number of the GPR system.
3. Use password 'impulseradar' to connect with the GPR system. If prompted, allow the android device to connect to this network without internet access.
4. Now open the App. If prompted, allow it to access device location and photos, videos, music, & audios.
5. Accept End User License Agreement.
6. If prompted, select suitable default wheel (Direct Drive vs. Belt).
7. Upon successful connection, the app will show connected antenna information and the GPR battery status will be displayed as shown in the Figure below.



8. If you wish to connect an external GPS device with the GPR system, make sure the option 'external GPS + Time Pulse' is selected in the 'Antenna Settings' menu  under the submenu 'GPS'. Also adjust for correct baud-rate and data bits for communication between external GPS and device. External GPS should output 0183 standard NMEA GGA sentence.

## 1.2. Survey Settings

1. To access 'Antenna Settings', tap this  icon on the main start screen. You can select trigger source either wheel, time, or manual trigger. Also, several other antenna parameters such as trace interval & samples, soil velocity, GPS type and data mode can be set here.
2. Tap user 'Preferences Menu'  if you wish to modify measurement system, vertical scale type or want to add company information etc. in the generated pdf report.

## 1.3. Data Acquisition & Export

- Two project types are available: Single Line and Reference-Line (RL) Project . Normally, Single line project is sufficient for most survey needs.
- Select the single line project and then start the project. A data acquisition window will open as shown in figure to the right.
- Now tap to start the profile. A cursor (vertical red-line ) will show data acquired so far. You can either pause/resume the profile by tapping while pressing will stop the profile.
- Options to view data from only high-frequency (HF), low-frequency (LF) or both (HF/LF) channels are located on top-left of the header toolbar . On top-right of the header toolbar, information about the profile direction (-Forward vs. -Reverse), GPS signal quality and Device's battery status is displayed. To access Antenna/User settings, tap icon located on the right-side of the header toolbar. These settings are available only when data acquisition is not active.
- In the footer toolbar, several options are available. To calculate the velocity of the media, tap the hyperbola fitting tool to activate a simulated hyperbola superimposed on top of the A-scan. After fitting simulated hyperbola to the measured hyperbolic response, tap to assign new velocity field. You can also depth-calibrate the A-scan by adjusting to a known depth via tool. Marker assignment tool is displayed as a solid dot . Press it to toggle to quick marker mode . Now, every tap on the radar data will result in assignment of a marker. You can fine-tune the marker position by the arrow tool . Press to delete last marker. In the filter settings menu , several different filter options are available such as background removal, dynamic and manual gains, and contrast settings. If 'HF-LF SYNC' is enabled, then all filter operations will apply to both channels.
- By default, beside the radargram, the App displays a map showing profile tracks and markers. Current location is denoted by a wheel symbol . Active profile colour is green, the previous profile is in 'yellow' while all the other profile tracks are marked in red colour. You can centre current location by tapping icon given on top-right of the map window. User can also take a screenshot of the map view by tapping icon.
- Press usual android controls to close the project. Upon leaving the current project, ViewPoint will ask for generating 'Field Summary Report' pdf and KMZ file for later use in GIS applications. Acquired data can be accessed and shared from the 'File Explorer' located on the main start screen.

