

Technical Note

(tcpgps_android_es_v20_001_spectra_configuration)

Configuration of Spectra receivers

Update Date

20/10/2020

Requirements

Hardware:

Android device

Software:

Android OS + TcpGPS 2.0

Objective

Configure Spectra receivers with the different method supported using TcpGPS Android app.

Detalles

TcpGPS 2.0 Android version currently is supporting Spectra SP60 configuration with the following modes.

Base UHF working mode

Base coordinates are needed to start the configuration of the base UHF working mode.

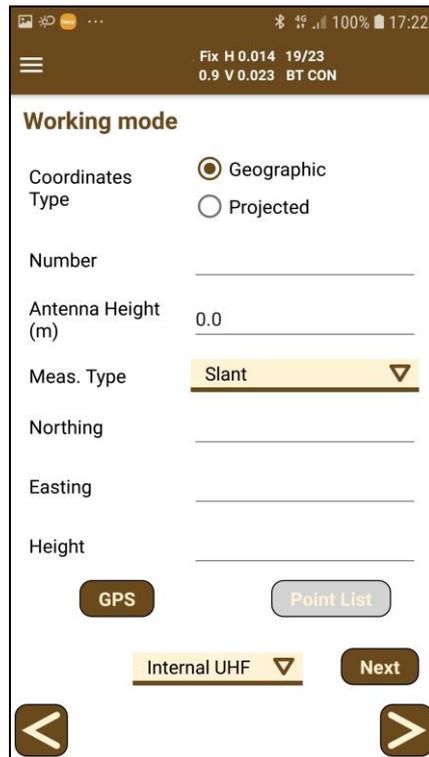


Figure 1. Base coordinates screen

This screen allows the user to introduce the coordinates both, geographic or projected (using the coordinate system of the current project), manually, by taking the coordinates from the GPS or selecting a point from the current loaded project if available.

The antenna height and the type of measures (vertical or slant) can also be set.

Once the position is set, the user must choose one of the three options in the list and press **Next** to access the mode configuration screen.

UHF

In this mode the base emits corrections from its reference location to the devices working as UHF rover mode.

In this mode, the available parameters are:

Parameter	Description
Elevation Mask	Value of elevation or zenith angle of the satellites below which they are not used, in sexagesimal degrees.
RTK corrections type	RTK corrections list.

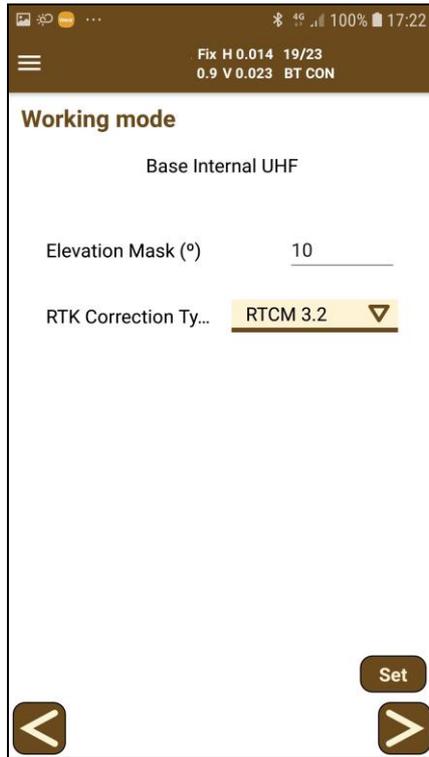


Figure 2. UHF Base working mode

Rover working modes

All SatLab receivers shown in the table can work as rover. However, SL800 only the mode for receiving corrections from the smartphone is available.

UHF

In this mode, the rover will be listening for corrections of any base configured in UHF mode.

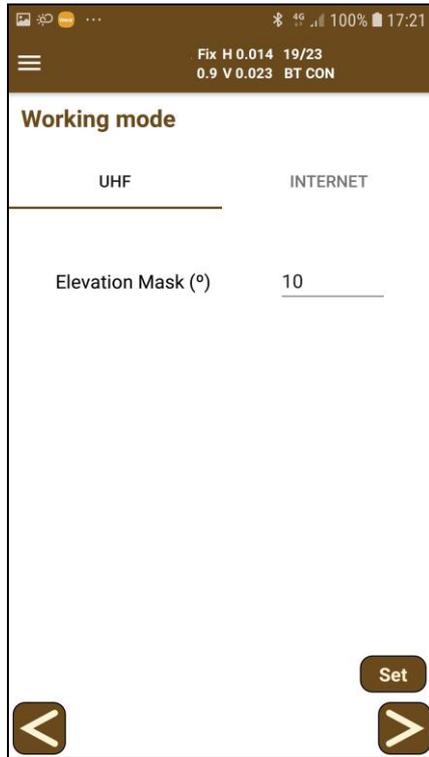


Figure 3. Rover UHF working mode

In this mode, the available parameters are:

Parameter	Description
Elevation Mask	Value of elevation or zenith angle of the satellites below which they are not used, in sexagesimal degrees.

Internet

In this case, TcpGPS will connect to an NTRIP server and send the corrections received to the GNSS device.

In this mode, the available parameters are:

Parameter	Description
Elevation Mask	Value of elevation or zenith angle of the satellites below which they are not used, in sexagesimal degrees.
Server	NTRIP or iRTK server as source of corrections.

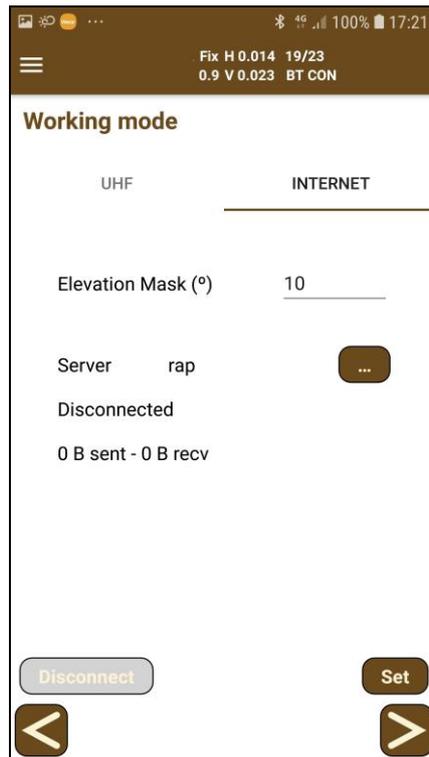


Figure 4. Rover Data Collector working mode

Static recording

This option allows to record status data for postprocessing in the GNSS receiver.

In this mode, the available parameters are:

Parámetro	Descripción
Elevation Mask	Value of elevation or zenith angle of the satellites below which they are not used, in sexagesimal degrees.
ID	Identifier of the point to record.
Antenna Height	Height of the pole or tripod where the receiver has been placed.
Measures Type	Type of measures: vertical or slant.
Interval	Time interval for point measures.

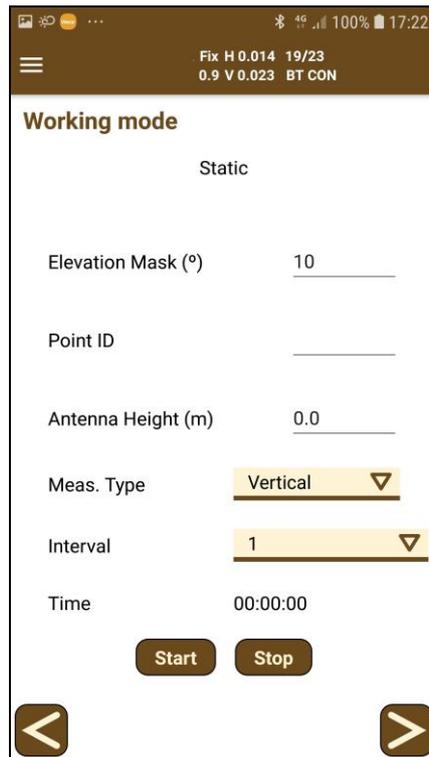


Figure 5. Static recording configuration

APN configuration

An **Access Point Name (APN)** is the name of a gateway between a GSM, GPRS, 3G or 4G mobile network and another computer network, frequently the public Internet.

A mobile device making a data connection must be configured with an APN to present to the carrier. The carrier will then examine this identifier to determine what type of network connection should be created, for example: which IP addresses should be assigned to the wireless device, which security methods should be used, and how or if, it should be connected to some private customer network.

A dialogue allows the user to configure these APNs, creating a new one by choosing in the spinner the option **New** or selecting one of the previously configured from the same list.

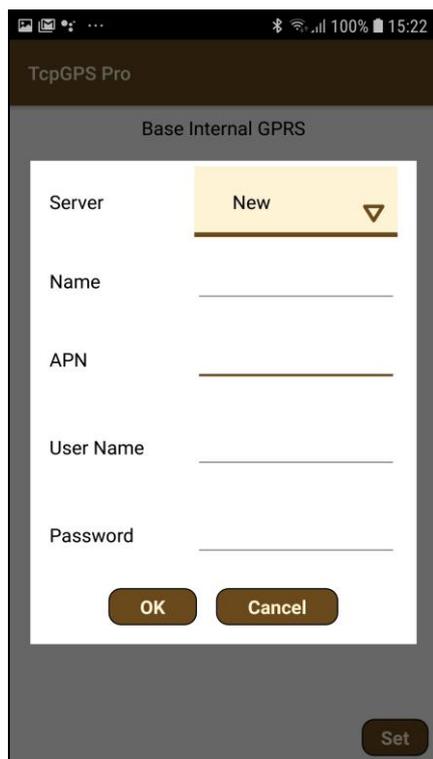


Figure 6. APN configuration

A new APN can be created introducing the **Name**, the **APN**, an URL or IP, and the **user** and **password** for getting Access to that APN.

NTRIP configuration

The **Networked Transport of RTCM via Internet Protocol (NTRIP)** is a protocol for streaming differential GPS (DGPS) data over the Internet in accordance with specification published by RTCM. NTRIP is a generic, stateless protocol based on the Hypertext Transfer Protocol HTTP/1.1 and is enhanced for GNSS data streams.

A dialogue allow the user to configure a NTRIP server, by adding a new one selecting the option **New** in the list or choosing a previously configured server in the same list.

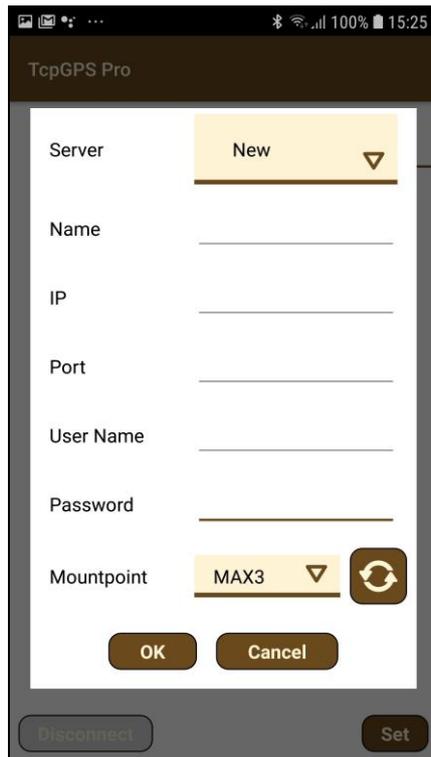


Figure 7. NTRIP configuration

For adding a new NTRIP server the user must introduce a **name** for the server configuration, the **IP** and **port** of the server, and the **user** and **password** for making the identification. Once these parameters are filled, pressing the button  will request the list of **mountpoints** which provide different types of corrections.