

SiReNT RTK & DGPS
User Guide FAQ for Topcon GPS+ Receivers
Last updated on: 8 September 2006

HiPer®+ with Internal UHF radio or GSM/GPRS Modem

The new HiPer®+ offer the advantages of a small, lightweight design and the power of dual-constellation satellite tracking. In addition, the new HiPer+ now can be ordered with either internal radio or with internal GSM cell phone communications. With GSM, just add a SIM card from a domestic service provider and TopSURV GPS+ controller software to obtain rover connectivity with cell-based reference station networks and long-range RTK without radios.



HiPer® Pro with transmitting and receiving UHF radio



The innovative integrated design incorporates a transmitting UHF radio in the base receiver, eliminating the need for external radios and batteries. The HiPer® Pro utilizes advanced Bluetooth® wireless technology to give you a system free of the messy cables found at many base stations. No more hassles of dealing with tangled, fragile cables from external batteries, antennas, and RTK radios because the wireless HiPer® Pro provides a complete, integrated RTK GPS system! With HiPer® Pro, there's less equipment to carry into the field, and less to forget back at the office. It doesn't get any easier!

GB-1000

The GB-1000 offers a built in LCD display and operation panel. This display and interface is ideal for checking satellite and receiver status, initializing RTK base operation, or managing static surveying operations. The GB-1000 also provides a Compact-Flash memory card slot and advanced communication support. With USB, serial, and Ethernet connections, nearly all communication links are supported including LAN, WAN, and Internet connectivity.



GMS-2 – The Innovative GIS Handheld GPS Receiver



The new GMS-2, an innovative and small hand-held GPS receiver, provides dual-constellation satellite tracking and dual-purpose signal tracking for either meter-level GIS mapping applications, or single frequency carrier tracking for high accuracy static positioning. GMS-2 also provides an integrated electronic compass and digital camera powered by Topcon's revolutionary imaging technology. This powerful combination of dual-constellation satellite performance and digital imaging technology has set a new standard for GIS field mapping. With an optional external L1 antenna, the GMS-2 can perform post processed surveying applications for accuracies better

than 1 cm. Using its internal Bluetooth connection, the GMS-2 can be configured to connect to a regional GPS reference station network using a Bluetooth Dial-Up networking enabled cell phone.

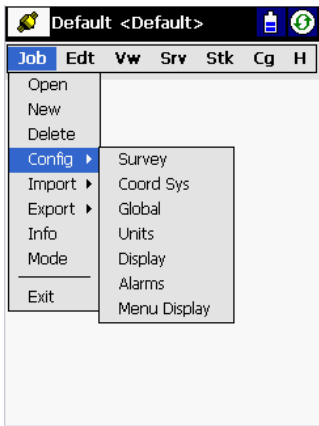
What data format does Topcon GPS+ receivers supports?

- Up to 20Hz update rate for real time position and raw position (code and carrier) for all geodetic Topcon GPS+ receivers.
- RTCM SC104 version 2.1, 2.2, 2.3, and 3.0 CMR, CMR+ real time data outputs
- NMEA 0183 version 3.0 ASCII outputs and TPS format outputs.

What equipment do I need to connect my GPS receiver to SiReNT RTK or DGPS?

- Topcon HiPer®+ receiver, with internal GSM/GPRS modem or internal UHF radio with a Bluetooth® Dial-Up networking enabled cell phone.
- Topcon HiPer® Pro or any geodetic Topcon GPS+ receiver with a Bluetooth® Dial-Up networking enabled cell phone.
- Topcon GMS-2 Handheld GPS receiver with a Bluetooth® Dial-Up Networking enabled cell phone.
- Receiver Firmware, v2.6 and above.
- FC-2000 or FC-100 GPS+ controller.
- TopSURV GPS+ controller software, v5.04 and above.
- Bluetooth® CF Card (where applicable).

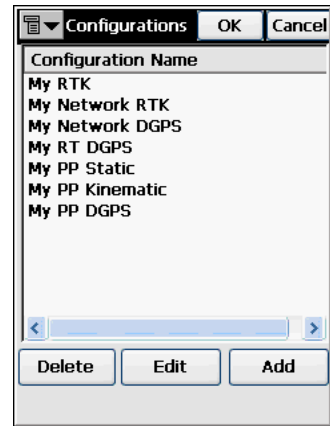
How do I configure Topcon GPS+ receivers to work with SiReNT RTK or DGPS?



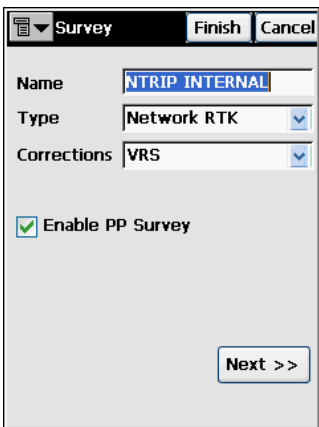
Start Configuration.



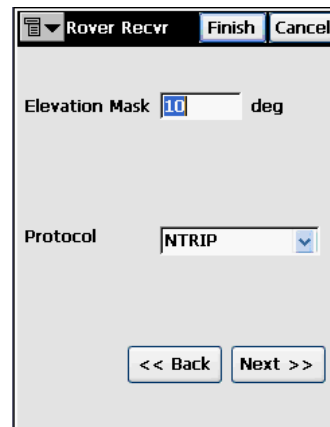
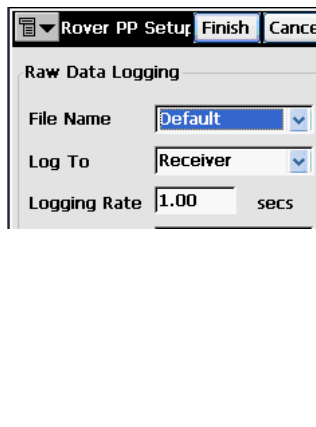
Press "...".



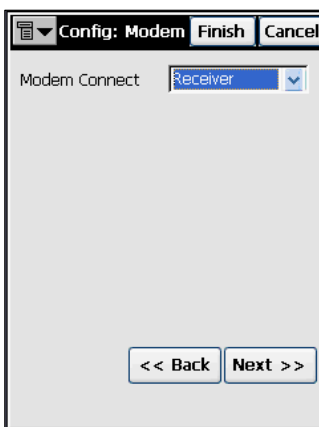
Make a new configuration. Press Add.



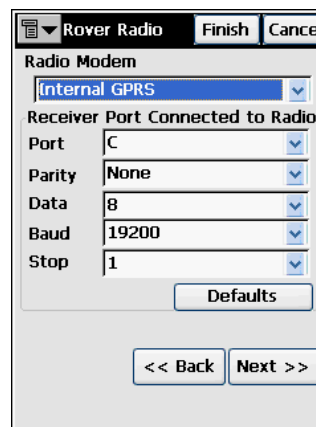
Select "VRS" as Corrections.



Select "NTRIP" as Protocol.



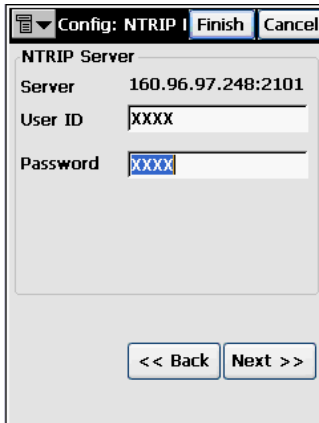
GPRS Modem is internal in the Rover Receiver.



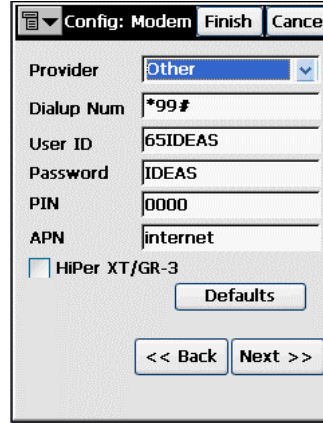
Set baudrate as "19200".



IP Address and Port.



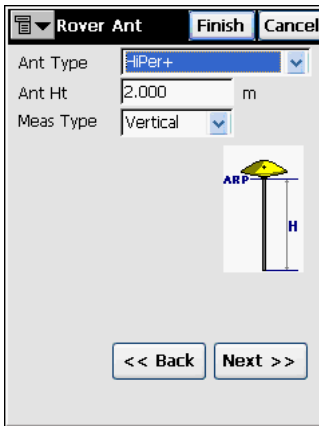
Fill in "User ID" and "Password" provided by your RTK network provider.



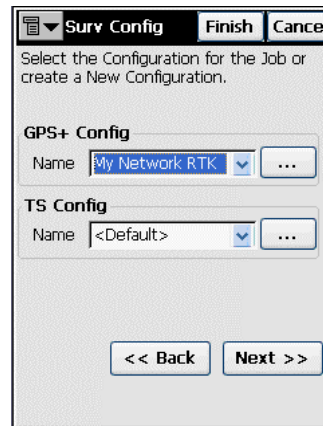
Important settings: Dialup Number, User ID, Password and APN (Access Point Name).



Select Virtual Port. The port that is free,



Select appropriate HiPer Antenna type and height. Press Finish



Configuration Completed.

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