Interfacing the Sokkia GSR2700 RTK Receiver to a PC

By Ivan Izaak

1. **Set up the HYPER TERMINAL**.
   a. **Create a new connection**.
      i. Select "Connect Using COMx" from the dropping list.
      ii. Set the properties for serial communication: 9600/8/None/1/None.
      iii. Select FILE – PROPERTIES, click SETTINGS tab. Under SIMULATION, set VT100 instead of AUTO DETECT
      iv. Click ASCII SETUP button. Check the first two boxes (Send Line Ends, Echo…). The first one makes sure the GPS receiver correctly understands the ENTER key. The second one will allow you to see what do you type on the screen.
      v. Click [OK] in the SETUP.
   b. **Select FILE – SAVE AS to save the settings.** This is quite useful, because every time you change receiver settings with SOKKIA GSR Controller, you will have to repeat initialization once again! Now you're ready to talk to the receiver.
2. **Set up the receiver.**
   a. Be sure the receiver is powered up and connected to the serial port on your PC.
   b. Test the receiver by typing something like this: LOG VERSION. Press ENTER to send this message to the receiver. You should see a response with the serial number, firmware version, etc. from the receiver.
3. **Set up communication with the receiver from HYPER TERMINAL. Type each string below in the Hyper Terminal window and press ENTER** – you should see and "OK" response to every command you send. Note that all these steps are only used to communicate the Rover and not appropriate for Base unit.

   LIST OF THE COMMANDS:
   posave off
   group clear
   group add POWERUP
   grouplog add POWERUP FILE RANGECMPB ontime 10
   grouplog add POWERUP FILE IONUTCB onchanged
   grouplog add POWERUP FILE ALMANACB onchanged
   grouplog add POWERUP COM1 BESTPOSA ontime 1
   grouplog add POWERUP COM1 GPGSA ontime 1
   grouplog add POWERUP COM1 GPGSV ontime 1
   grouplog add POWERUP COM1 GPZDA ontime 1
   grouplog add POWERUP COM1 GPGGA ontime 1
   groupmode set POWERUP kinematic
   fix none
   groupinterfacemode set POWERUP com2 rtca none off
   saveconfig

Tip: You may prefer just to copy and paste these strings one by one instead of typing them!

Beware! Do not enter any other commands or you will lose all the above settings!

4. **Switch off the receiver and turn it on again.** You should see the LED indicator at the receiver itself blinking green – it means that the receiver is talking to the computer via the serial port.
5. **Wait for about 10 minutes** to track all the satellites and to collect the almanac data.
6. **Be sure you see GGA and other messages in HYPER TERMINAL**.

Now your receiver is communicating with your PC. You may close the HYPER TERMINAL and start HYPACK®.

Note: Each time you change any settings through the Sokkia Terminal, you will have to repeat all of the above procedures.