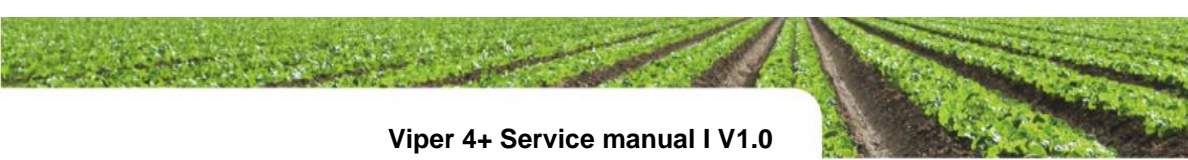




CONFIGURATION MANUAL

Viper 4+ service manual





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1. Remote Support

At a Viper 4+ we use the SlingShot Portal to perform a remote support session. In the SBGuidance Loader of the Viper 4+ or in the SBGuidance software under INFO > SYSTEM > DEBUG a remote support button is added (Figure 1 and Figure 2). Take the following steps to setup a remote session:

1. Press the remote support button in the SBGuidance Loader (Figure 1) or go to INFO > SYSTEM > DEBUG and the 3rd tab in the SBGuidance software (Figure 2).
2. Press in the displayed screen of the SBGuidance Loader *Request Support* (Figure 3) or on the button with the red circle in SBGuidance (Figure 2). A session ID appears. The customer should give the session ID to the technical service specialist.
3. Go to the SlingShot Portal (<https://portal.ravenslingshot.com/>).
4. Login to the SlingShot Portal.
5. Go to *Manage > Remote support*.
6. Fill in the received session ID from the customer and press *Go* (Figure 4).

! When you use the remote session for the first time, make sure you select in the browser that pop-ups of the SlingShot Portal are always allowed.

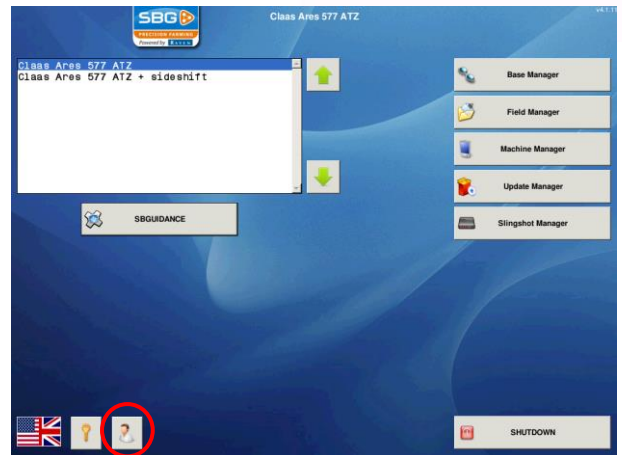


Figure 1 SBGuidance Loader

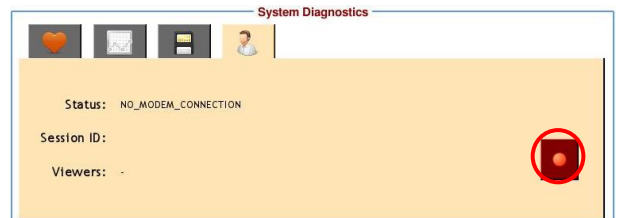


Figure 2 SBGuidance - Remote session

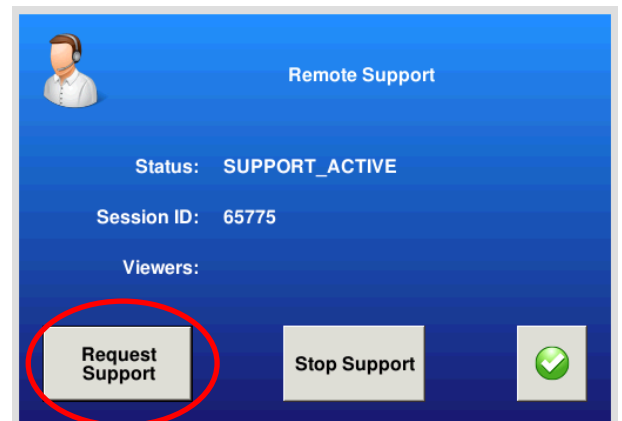


Figure 3 Request remote support session

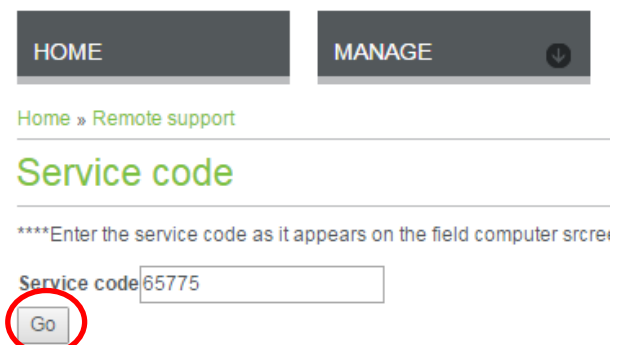


Figure 4 Enter session ID in SlingShot Portal

7. A screen like Figure 5 appears. The technical service specialist is able to take over all the functionality of the screen (similar to TeamViewer).



Figure 5 Remote Support session

2. Connect to internal Septentrio GPS receiver

Take the following steps to make a serial connection to the internal Septentrio GPS receiver:

1. Connect a serial cable or USB-to-Serial converter from your desktop PC/laptop to the SUB-D9 connector with label "NMEA" (Figure 6). In the Harness, In-Cab VPR4 ISO (11158000064) the NMEA connector is located nearby the first DT-connector in the cable. In the Harness, In-cab (terminal) VPR4 (SBG13711-09) the *nmea* connector is located just behind the Viper 4+ field computer. When you use a Harness SBG-VPR4 Adapter M12 (SBG13711-11), use the NMEA output connector with a NMEA cable (SBG10880) to connect.
2. Open Septentrio RxControl on your computer. If Septentrio RxControl is not available on your computer, download the tool from the SBG website.
3. Go to *File > Change connection* (Figure 7). A new screen appears (Figure 8).

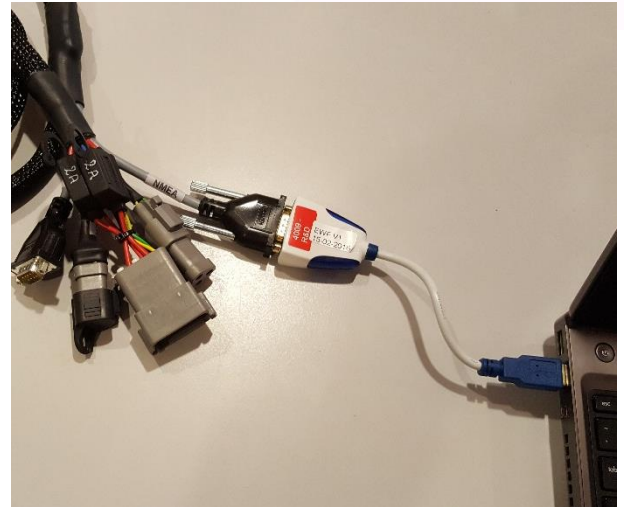


Figure 6 Serial connection to internal GPS receiver

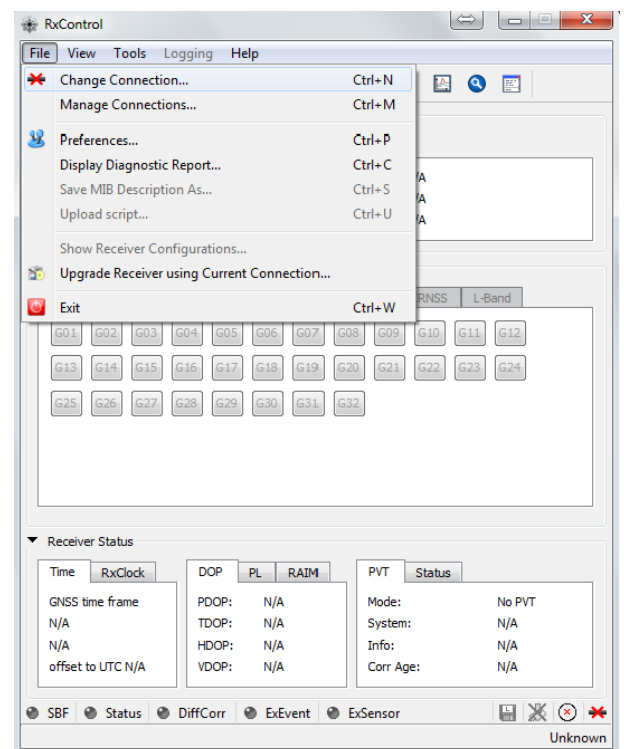


Figure 7 RxControl - Change connection

4. Select *serial connection* and choose the correct COM-port (in this case COM1). If you do not know which COM-port of your computer is used, look in the Windows Device Manager. Take the following steps to do this:
 - a. Open Windows Explorer (Windows + E on your keyboard).
 - b. Right click on *computer* and go to *Properties*.
 - c. Press on *Device Manager* (left upper side of the screen).
 - d. Go to *Ports (COM & LPT)*. If you connected serial search the *Communications Port* (in this case: COM1). If you use an USB-to-Serial converter search for a *USB serial Port* (Figure 9).
5. If the correct COM Port is not in the list behind *serial connection*, choose in the COM Port selection box *new connection* (Figure 10).
6. Press *Next*.
7. Select the correct serial port behind *Serial Port* (Figure 11) and give the connection a name behind *Connection Name*. Always use for the name "COMX_auto". X is in this case the port number.
8. Press *Finish*. The connection will be established and all the functionality (including updating a receiver) of RxControl can be used now. If the connection is not established try a null modem (00-289-2430374) in the serial cable.

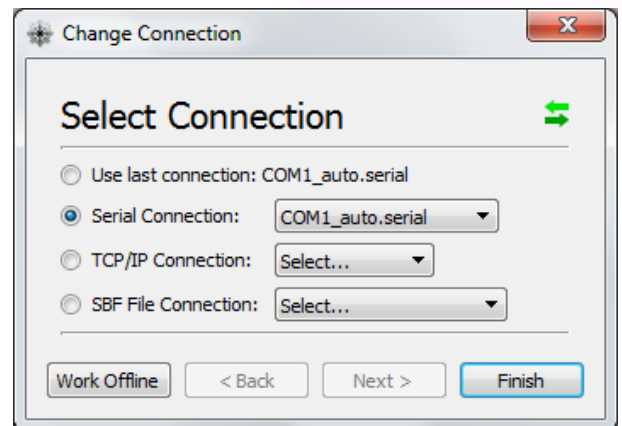


Figure 8 RxCONTROL - Change connection

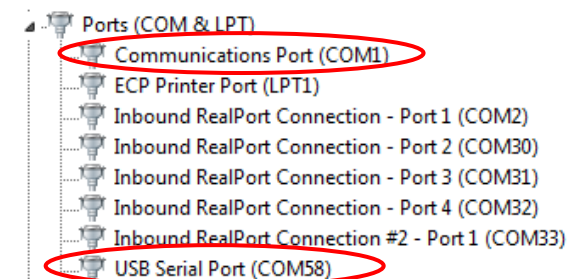


Figure 9 Windows Explorer - Ports

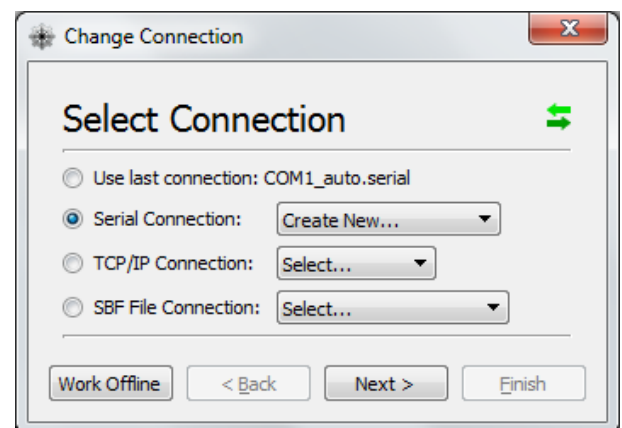


Figure 10 RxCONTROL - Create new connection

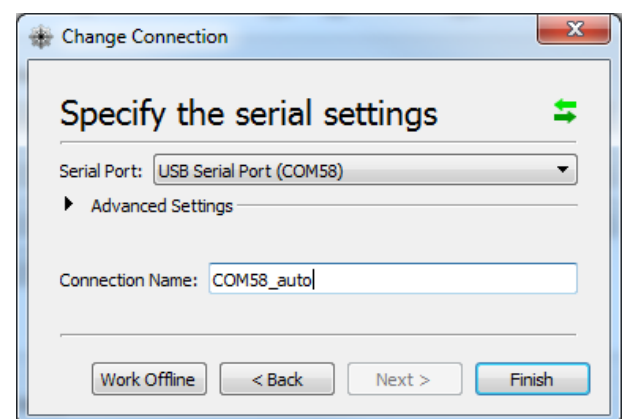


Figure 11 RxCONTROL - Configure new connection

3. Connect to internal Satel radio modem

Take the following steps to connect with a serial connection to the internal Satel radio modem:

1. Connect a serial cable or USB-to-Serial converter from your desktop PC/laptop to the SUB-D9 connector with label “RTK-COR” (Figure 12). In both the Harness, In-Cab VPR4 ISO (11158000064) and the Harness, In-cab (terminal) VPR4 (SBG13711-09) the *RTK-COR* connector is located just behind the Viper 4+ field computer.
2. Start the *Satel Configuration Manager*. If this tool is not available on your computer, download the tool from the SBG website.
3. Go to *Program Preferences* (see red circle in Figure 13).
4. Choose in the *serial port* section the correct *port* and *baudrate 19200* (see green circle in Figure 13). If you do not know which COM-port of your computer is used, look in the Windows Device Manager. In point 4 of chapter 2 is explained how to do this.
5. If the correct port is entered, press *Connect*. The blue status bar at the top of the screen will indicate *Connected* after the connection is established. Now all the functionality of the Satel Configuration Manager are available (check diagnostics, check firmware version, set multiple settings and update firmware). If the connection is not established try a null modem (00-289-2430374) in the serial cable.

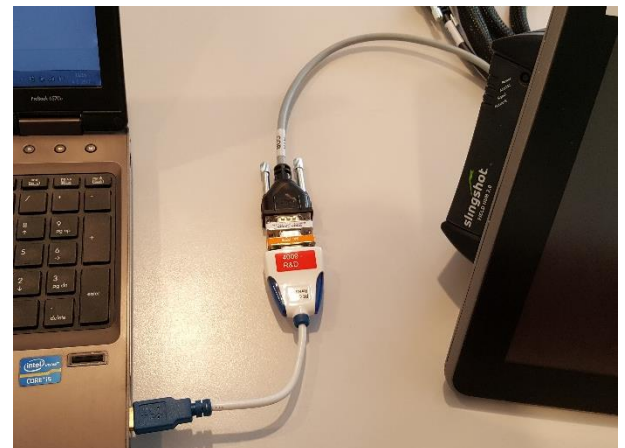


Figure 12 Connection to internal Satel radio modem

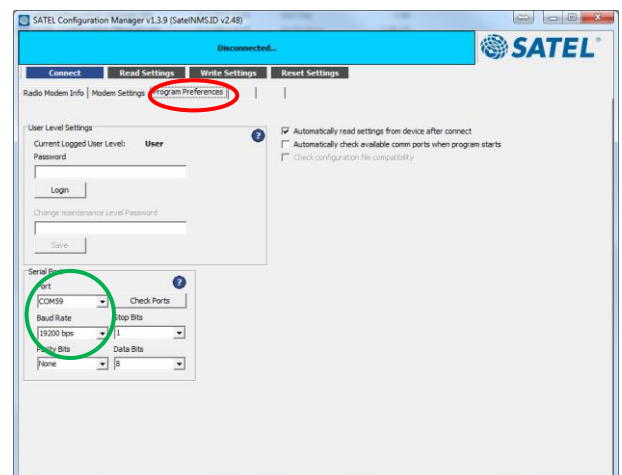


Figure 13 Satel Configuration Manager Preferences

4. Capture screenshots on a Viper 4+

On a Viper 4+ it is not possible to use an external screenshot program, like we can use on a Viper 4 or GeoStar (for example FsCapture). Therefore, to capture a screenshot on a Viper 4+ (only possible in SBGuidance), take the following steps:

1. Insert an USB drive.
2. Press on the GPS-time to capture a screenshot (Figure 14). If this is successful you get a message that a screenshot has been saved (Figure 15).
3. Go to *Info > System > Debug*
4. Press on the export button (see red circle in Figure 16). The screenshots will be exported together with all the other diagnostics data (logs, error.log and trace.log) to a *diagnostics* folder on your USB drive. This can take a couple of minutes. Make sure that you only remove the USB drive when it stops flashing!
5. You can find the screenshots on your USB drive in the *diagnostics > screenshots* folder.



Figure 14 Capture screenshot

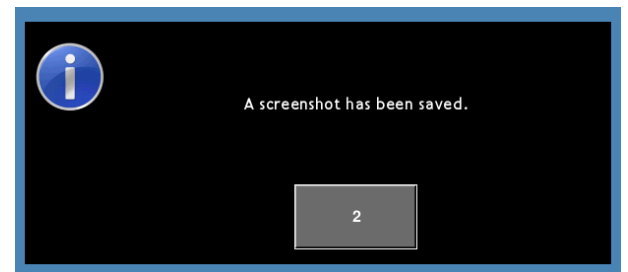


Figure 15 Saved screenshot message

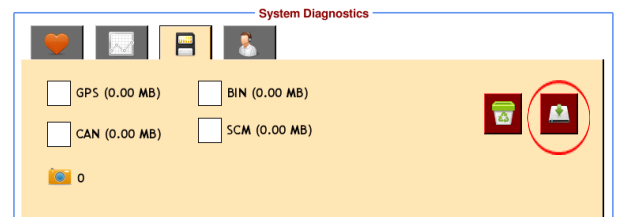


Figure 16 System diagnostics

5. COM-Port overview

In the Viper 4+ in some setup screens the COM-ports are named in a different way compared to the Viper 4 and GeoStar. This is for example noticeable in the GPS receiver setup wizard in the SBGuidance Configurator (Figure 17). See Table 1 for an overview of the COM ports on a Viper 4+.

Table 1 Port overview Viper 4+

Port name Viper 4+	Port name Viper 4	Description
/dev/ttymxc0	COM4	VRA/NMEA2 on Viper 4 terminal harness
/dev/ttymxc2	COM1	AsteRx4 GPS-receiver
/dev/ttyUSB1	COM5	Radio/COM5 on Viper 4 terminal harness.
/dev/ttyUSB2	COM3	COM3 on Viper 4 terminal harness

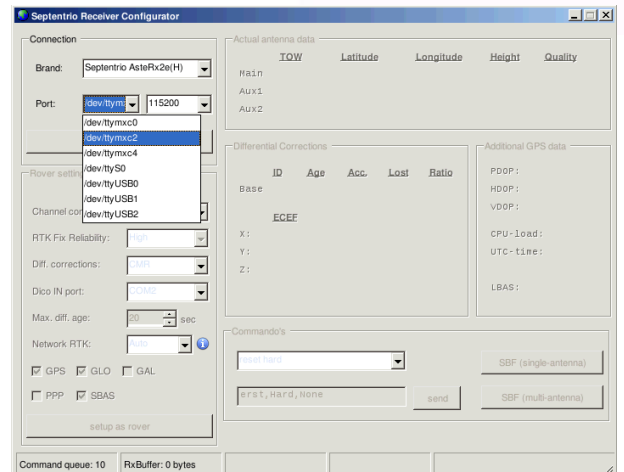


Figure 17 GPS receiver setup wizard