



CONFIGURATION MANUAL

SBGuidance 4.0.0

Viper 4 TWIN







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1. Software configuration

This manual describes how to configure SBGuidance software version 4.0.0 or higher running on a Viper 4 TWIN field computer. SBGuidance 4.0.0 is running on Windows 7 embedded operating system. You can recognize the operating system during startup of the field computer. After startup the disclaimer (Figure 1) will be shown. The user should understand the text. By clicking *I agree*, you will enter the Loader screen (Figure 2).

Connect a keyboard into the USB port of the Viper 4 field computer to be able to change configuration settings.

1.1. Loader

In SBGuidance Loader, the user can select the tractor and implement profiles to run with. SBGuidance software with the right settings can be started by choosing the right tractor and implement combination and pressing SBGuidance. On the right hand side of the screen the installed applications are shown.

Execute the following steps to add machines and applications to the Loader screen:

1. Hold CTRL when pressing the SBGUIDANCE button to open the configuration window (Figure 3).
2. Press the Machines tab: remove all machines in list and press *auto-detect* to load all the machine profiles.
3. Press the Applications tab: remove all applications in list and press *auto-detect* to load all installed applications.
4. *Save changes* and close window.

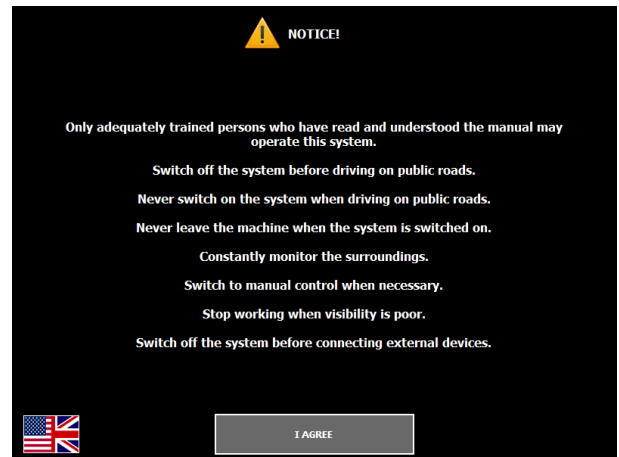


Figure 1 Disclaimer Loader

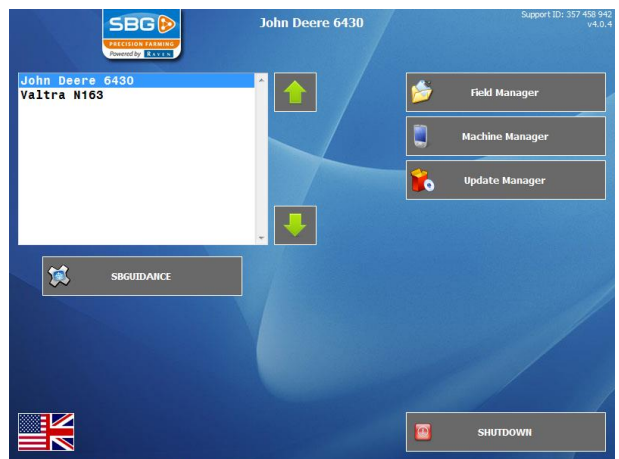


Figure 2 Loader

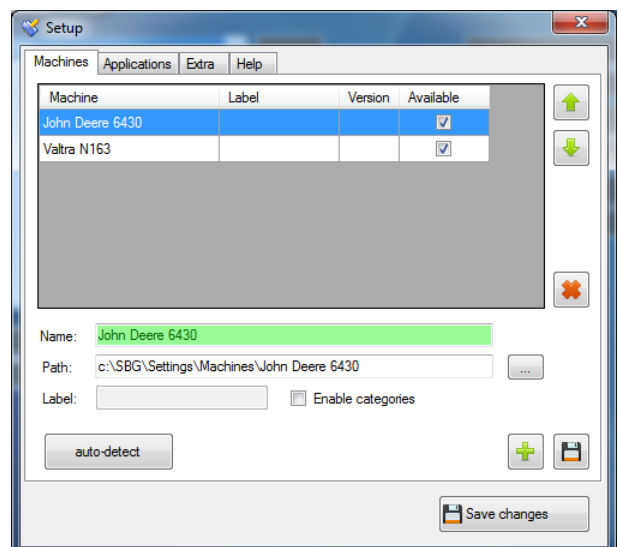


Figure 3 Loader configuration

1.2. Configurator

In SBGuidance Configurator, system settings, machine settings and user settings can be configured. Machines can be added as well. Open the Configurator by holding SHIFT and pressing the SBGUIDANCE button:

1. Go to Settings > System to open the System settings.
2. Press the Terminal tab. IO module should show *Viper 4*.
3. Press the GPS tab (Figure 4). Receiver should be *Septentrio AsteRx4H (Viper 4)* in case of Viper 4 TWIN. When equipped with an internal radio modem, the *Satel* option should be checked.
4. Press the NTRIP tab. When a Slingshot field hub is used, the first two check boxes should be checked: *Enabled* and *Initialize at startup*.
5. Press the CAN tab. Hardware should be *Viper 4*.
6. Go to Settings > Machine to change Machine settings. The machine configuration is explained in the Configuration Manual – SBGuidance Auto.
7. Go to Settings > User to open the User settings (Figure 5). Username is the name of the customer. Theme should be *Raven* on a Viper 4.
8. Go to Settings > Machine Selector to add or remove a Machine and switch between the existing tractor implement profiles (Figure 6). Added or removed machines will be added or removed automatically in the Loader screen as well.

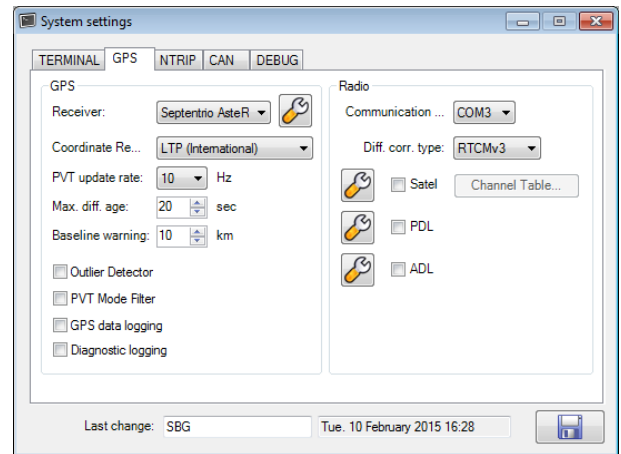


Figure 4 System settings GPS

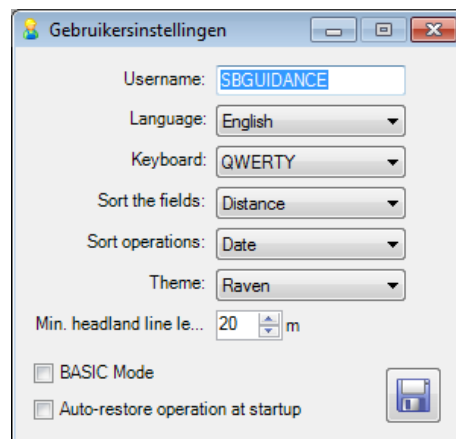


Figure 5 User settings

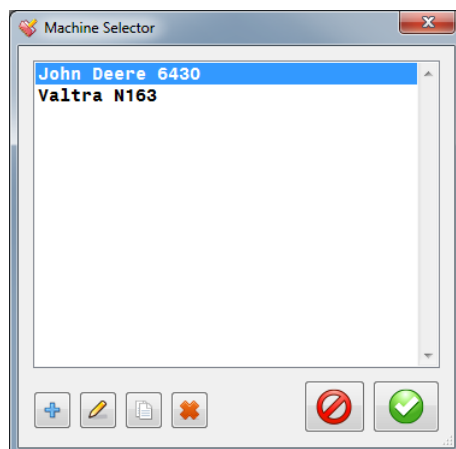


Figure 6 Machine Selector

1.3. Update Manager

SBGuidance Update Manager can be used to update the applications (Loader, Field Manager, Machine Manager, Update Manager and Base Manager) and the SBGuidance software. Download the software from our website by using the desktop application SBGuidance Live Update which puts the new versions on USB drive or download the new versions on the field computer itself by using a mobile internet connection. The Viper 4 TWIN is equipped with a WiFi modem. Set up a WiFi hotspot on your smartphone to provide the Viper 4 with an internet connection:

Username: *raven*
Password: *ravensupport*

If the Viper 4 is using a Slingshot field hub or GeoConnect modem, there will be already a mobile internet connection. In this situation, using a WiFi hotspot is not necessary.

Start Update Manager (Figure 7) to update the SBGuidance software and applications. Press on each separate application and choose *Upgrade* if a newer version is available.

1.4. Quick Windows key combinations

In Table 1, some quick Windows key combinations are summarized:

Table 1 Quick Windows key combinations

Key combination:	Will open:
CTRL + SBGUIDANCE	Loader configuration window
SHIFT + SBGUIDANCE	Configurator with selected machine profile
ALT + SBGUIDANCE	Windows Explorer
CTRL + SHIFT + ESC	Windows Task Manager

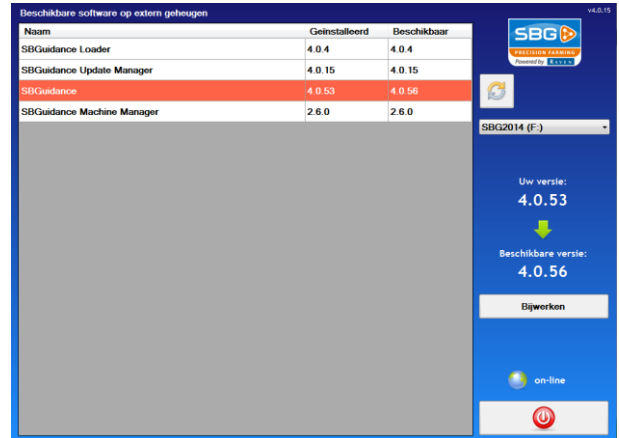


Figure 7 Update Manager



Windows Explorer can be opened alternatively by opening Task Manager and choose *New Task*. Open: *explorer*. Windows Explorer will be opened.

Service tools like *Septentrio RxControl* and *Satel Configuration Manager* can be opened within Configurator by pressing on the GPS menu item.

1.5. Folder structure

The Windows folder structure of SBGuidance 4.0.0 on a Viper 4 TWIN is shown in Figure 8. On the C:\ drive of the field computer is a SBG folder created which contains all the settings, fields and other SBGuidance related data. In Table 2 is shown which folders can be expected in the SBG folder and what each folder contains.

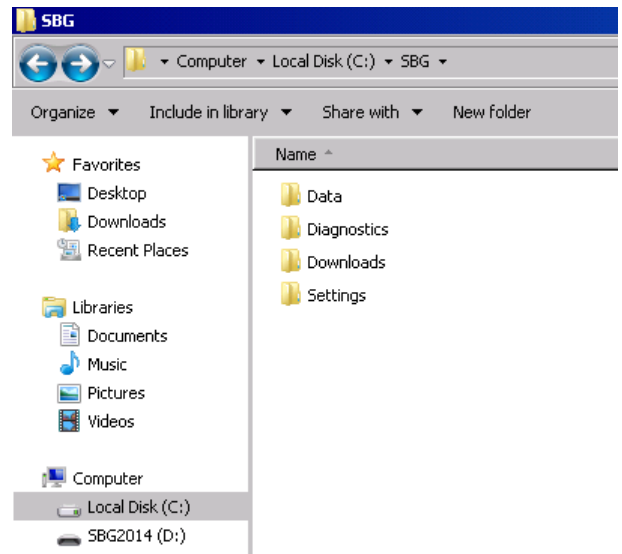


Figure 8 Windows folder structure SBGuidance 4.0.0

Table 2 Windows folder structure SBGuidance 4.0.0

Folder:	Contains:
Data	Fields, overlap data, task data and VRA maps
Diagnostics	Diagnostic logs if logging is enabled
Downloads	Temporary installer files
Settings	System, user and machine settings

2. Hardware configuration

In this section is described which connections of the terminal harness are available and which should be connected to get correction signal. To connect the Viper 4 to a SBG tractor kit, a Viper 4 terminal harness or a Viper 4 adapter cable is needed.

2.1. Viper 4 terminal harness

The Viper 4 terminal harness is equipped with several serial sub-D9 connectors (Figure 9). Depending on the type of modem, the following sub-D9 connectors should be connected:

Internal radio modem:

- Connect COM5 to RTK
- Connect NMEA to COM3 (optional). NMEA can be used to provide third party system with NMEA GPS information.
- Navigate in SBGuidance to Setup > GPS > Modem > Radio and check *Enable internal SATEL radio*

External radio modem:

- Connect external radio modem to RTK connector. COM5 connector will be unconnected.
- Connect NMEA to COM3 (optional). NMEA can be used to provide third party system with NMEA GPS information.

GeoConnect modem:

- Connect COM5 to RTK
- Connect NMEA to COM3 (optional). NMEA can be used to provide third party system with NMEA GPS information.
- Connect ethernet cable directly into Viper 4.

Slingshot field hub:

- Connect Slingshot field hub to RTK connector. COM5 connector will be unconnected.
- Connect NMEA to COM3 (optional). NMEA can be used to provide third party



Figure 9 Viper 4 terminal harness

- system with NMEA GPS information.
- Connect ethernet cable directly into Viper 4.

2.2. Viper 4 adapter cable

The Viper 4 adapter cable is equipped with several Phoenix connectors (Figure 10). The adapter cable can be used to connect to a GeoSTAR terminal harness to be able to connect a Viper 4 or a GeoSTAR to the same tractor kit. Depending on the type of modem, the following Phoenix connectors should be connected:



Figure 10 Viper 4 adapter cable

Internal radio modem:

- Connect DiCo out to DiCo in
- Navigate in SBGuidance to Setup > GPS > Modem > Radio and check *Enable internal SATEL radio*

External radio modem:

- Connect external radio modem to DiCo in connector. DiCo out connector will be unconnected.

GeoConnect modem:

- Connect DiCo out to DiCo in
- Connect ethernet cable directly into Viper 4.

Slingshot field hub:

- Connect Slingshot field hub to DiCo in connector. DiCo out connector will be unconnected.
- Connect ethernet cable directly into Viper 4.