STARBOX™

This guide provides the basic information you need to set up and begin using your new STARBOX. For more detailed information on the installation and operation of your receiver, please refer to the user manuals, which may be found on our website at:

http://www.novatel.com/Downloads/docupdates.html

The *StarView* interface program is available from Firmware/Software Updates in the Support side menu of our website at:

www.novatel.com

DEVELOPMENT KIT BOX CONTENTS

If you purchased a Development Kit, the following is also provided with your STARBOX:

- 1 STARBOX interface cable for power and serial connections with one automobile power connector and DB-9 connectors
- 1 AC/DC adapter
- 1 +12 dB active GPS antenna with magnetic mount and a 6 m RF cable

ADDITIONAL EQUIPMENT REQUIRED

In addition to the equipment listed in the previous *Development Kit Box Contents* section, the following is needed for a basic setup:

- A Windows-based PC with an RS-232 DB-9 port
- One of the following:
  - A 120 V AC wall outlet
  - A standard 12 VDC automobile power outlet, or
  - A 9-32 VDC power supply

SETTING UP YOUR STARBOX

Complete the steps below to connect and power your STARBOX.

1. Mount the antenna on a secure, stable structure with an unobstructed view of the sky.

2. Using the antenna cable, connect the antenna to the *RF* port, which is found on the front face of the STARBOX.
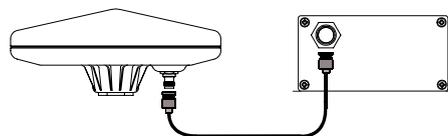
3. Connect the STARBOX interface cable from the DB-25 port on the front of the receiver to a serial port on the PC.
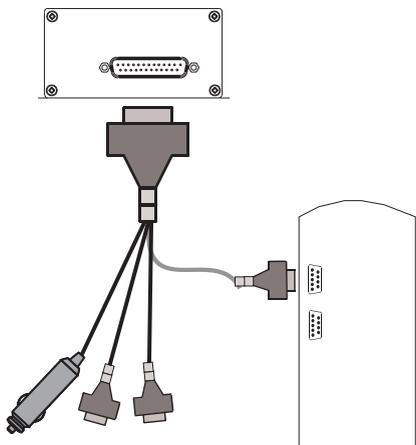
4. Insert the power cable connector into a 12 V power source or into the adapter cable.
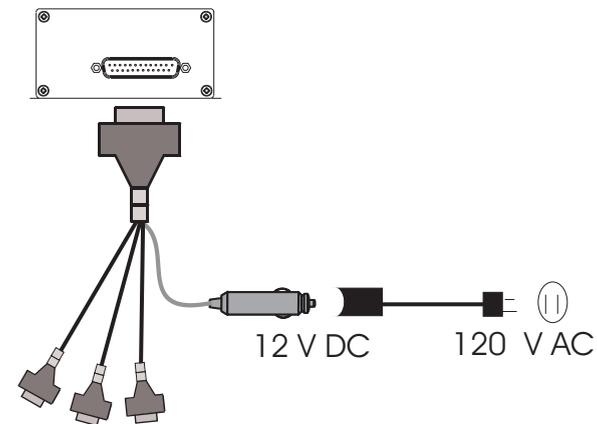
5. Plug in the adapter and/or connect and turn on the power supply. The power LED will be green when the STARBOX is properly powered.

INSTALLING STARVIEW

Once the receiver is connected to the PC, antenna, and power supply, install the *StarView* software. *StarView* is available on our website.

To install *StarView* from our website:

1. Start up the PC and launch your internet service program.

2. Go to our website at http://www.novatel.com/Downloads/fwswupdates.html and scroll down to the *Other Application Software* section.

3. Download the *StarView* setup program and save it in a temporary directory (for example, C:\temp).

4. Use the setup program to install the *StarView* software by following the steps on the screen.

✉ After installation, *StarView* also appears in the Windows Start menu at *Start | Program Files | NovAtel L1 Software*.

ESTABLISHING COMMUNICATION WITH THE RECEIVER

To open a serial port to communicate with the receiver, complete the following.

1. Launch *StarView* from the folder you specified during the installation process or from the Windows Start menu at: Start | Program Files | NovAtel PC Software.

2. Open the *File/Port* menu and select *Auto Connect*.
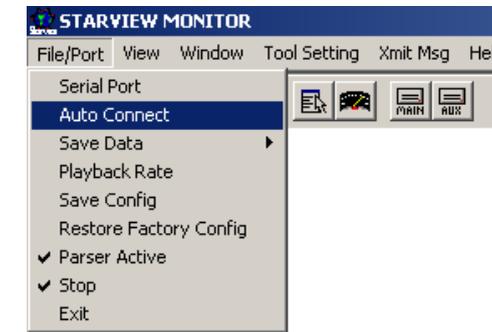
✉ The default data transfer rate is 9600 bps unless your receiver has one of the Carrier Phase Output (CP) options in which case it may be 19200. A list of options is in *Appendix A* of the *L1 GPS Firmware Reference Manual* (for SUPERSTAR II-based and ALLSTAR-based products).

3. Select the PC serial port that the STARBOX is connected to from the *Com Port* drop-down list.
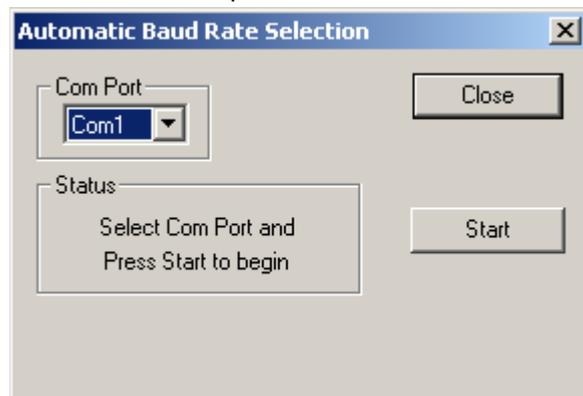
4. Select the *Start* button and *StarView* will search for the STARBOX receiver on the specified port at various baud rates.

USING STARVIEW

StarView provides access to key information about your receiver and its position. The information is displayed in windows accessed from the *Window* menu. For example, to show details of the GPS satellites being tracked, select *Satellites | Status* from the *Window* menu.

Select *Navigation | LLH Solution* from the *Window* menu to display the position of the receiver in LLH (latitude, longitude and height) coordinates.

DETERMINING WHEN THE POSITION IS VALID

The receiver is in Navigation mode whenever sufficient satellite information and measurement data is available to produce a GPS fix. When the receiver has a valid position, the *Nav Mode* field in *StarView*'s *LLH Solution,* or *XYZ Solution,* window shows Nav 3-D, Alt Hold 2-D, Diff 2-D or Diff 3-D. If it shows Initialized there is no valid position yet.

ENTERING COMMANDS

The STARBOX uses a comprehensive command interface. Logs and commands can be sent to the receiver using the *Xmit Msg* and *Tool Setting* menus in *StarView*.

The following information is important when selecting commands:

1. Message requests are only output to the receiver in binary format. They may however be viewed in ASCII format through *StarView* windows.
2. You can send a message request using one shot (normal mode) or continuous (special mode) by selecting *Xmit Msg | General Message Request* in *StarView.*
3. There is an option in *StarView* to save all messages transmitted by the receiver into a file. Select *File/Port | Save Data* after you have finished selecting messages in Step #2 above.

The *L1 GPS Firmware Reference Manual* (NovAtel part number OM-20000086) provides the available messages and parameters that the STARBOX uses.

ENABLING SBAS POSITIONING

Certain models of the STARBOX are also capable of SBAS (for example, WAAS and EGNOS) positioning. *StarView* allows you to select and deselect GPS and SBAS system satellites.

Select *Tool Settings | Deselect | SVs* from the main menu.To track SBAS satellites, select *SBAS SVs* and click on the *Send* button. To also track GPS satellites, select *GPS SVs* and click on the *Send* button again. Refer to the *StarView User Manual* for more information.

✉ By default, if you select SBAS SVs alone, the unit is searching for satellite PRNs 120, 122 and 134.

Select *Status | SBAS* from the *Window* menu to see the number of valid SBAS messages that are being decoded for a specific SV number since the last power-up. When the *Valid Messages*

count is not incrementing, either the receiver is not tracking any SBAS satellites, or it is unable to read the SBAS data.

QUESTIONS OR COMMENTS

If you have any questions or comments regarding your STARBOX, please contact NovAtel Customer Service using one of the methods provided below.

Email:support@novatel.ca

Web:www.novatel.com

Phone: 1-800-NOVATEL (U.S. & Canada)

403-295-4900 (International)

Fax: 403-295-4901