PowerPak-4E™

QUICK START GUIDE

This guide provides the basic information you need to setup and begin using your new PowerPak-4E. For more detailed information on the installation and operation of your receiver, please refer to the user manuals provided on the accompanying CD. To order a printed copy of the manuals, free of charge, follow the instructions given on the enclosed User Manuals card.

BOX CONTENTS

In addition to this Quick Start Guide, the following is provided with your PowerPak-4E:

- 1 automobile power adapter cable
- 1 serial cable
- 1 CD containing:
  - An installation program for NovAtel’s GPS PC utilities, including GPSolution®
  - Product documentation, including user manuals
  - The OEM4 Software Development Kit
  - OEM4 Family Quick Reference Guide
  - User Manuals card for requesting printed manuals

ADDITIONAL EQUIPMENT REQUIRED

The additional equipment listed below is needed for a basic setup:

- A Windows-based PC with an RS-232 DB-9 port
- One of the following:
  - A standard 12 VDC automobile power outlet, or
  - NovAtel’s GPS-APWR model AC adapter, or
  - A 10 - 36 VDC power supply capable of at least 4.0 W and a power cable with a standard 2.1 mm center-positive plug at the receiver end
  - A quality GPS antenna, like the GPS-600 offered by NovAtel
  - An antenna RF cable with a TNC male connector at the receiver end, such as NovAtel’s C016 model

1. If an alternative power source is preferred, the automobile power adapter can be cut off from the power cable. The exposed wires (the negative line has text printed on it) can then be tied to a 10-36 VDC supply capable of 4.0 W supply. The use of a 3 A slow-blow fuse is recommended.

SETTING UP YOUR POWERPAK-4E

Complete the steps below to connect and power your PowerPak.

1. Mount the GPS antenna on a secure, stable structure with an unobstructed view of the sky.
2. Using the antenna RF cable, connect the GPS antenna to the ANT port, which is found on the front face of the PowerPak.
3. Connect the COM 1 port on the receiver to a serial port on the PC, using the provided serial cable.
4. Connect the power cable to the power port, which is labeled 10 - 36V DC.
5. Plug in the adapter and/or connect and turn on the power supply. When the PowerPak is properly powered, the POWER LED will be red.

INSTALLING THE PC UTILITIES

Once the PowerPak is connected to the PC, antenna, and power supply, install NovAtel’s GPS PC utilities.

1. Start up the PC.
2. Insert the accompanying CD in the CD-ROM drive of the computer.
3. Install the PC utilities by advancing through the steps provided in the NovAtel GPS PC Utilities setup utility. If the setup utility is not automatically accessible when the CD is inserted, select Run from the Start menu and select the Browse button to locate Setup.exe on the CD drive.

ESTABLISHING COMMUNICATION WITH THE RECEIVER

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

1. Launch GPSolution from the Start menu folder specified during the installation process. The default location is Start | Programs | OEM4 PC Software.
2. Open the Device menu and select Open....
3. Select the New... button in the Open dialog box.
4. Enter a name for the new device configuration in the Name field of the New Config dialog box.
5. Select the Settings button.
6. Select the PC serial port the PowerPak is connected to from the PC Port drop-down list.
7. Select 57600 from the Baud Rate list.
8. Uncheck the Use hardware handshaking checkbox.
9. Select OK to save the settings.

10. Select the OK button to close the New Config dialog box and create the new device configuration.

11. Select the new configuration from the Available device configs list in the Open dialog box.

12. Select the Open button to open communications with the PowerPak.

**ENTERING COMMANDS**

The PowerPak-4E uses a comprehensive command interface. Commands can be sent to the receiver using the Console window in GPSolution, which is opened from the View menu. Commands are entered in the text box at the bottom of the window.

The following information is important when entering commands:

- Commands can be entered in three formats: ASCII, Abbreviated ASCII, and Binary. Abbreviated ASCII is the best format to use when you wish to work with the receiver directly.
- Press the Enter key to send the command string to the receiver.
- The commands are not case sensitive.

The OEM4 Family Quick Reference Guide provided with the receiver lists all the available commands and the parameters they use for the Abbreviated ASCII format.

**LOGGING DATA**

An extensive collection of logs has been created to capture the data your PowerPak receives and processes. These logs can be directed to any of the PowerPak’s serial ports and can be automatically generated when new or changed data becomes available or at regular intervals. The available logs are listed in the OEM4 Family Quick Reference Guide.

To log data, use the LOG command. For example, to log the pseudo-range position to COM2 every 30 seconds, enter the following:

```
LOG COM2 PSRPOS ONTIME 30
```

Logs can be generated in one of three formats: ASCII, Abbreviated ASCII, or Binary. See Volume 2 of the OEM4 Family User Manual for information on the LOG command, specifying the output format, and the details of each log.

If you prefer, GPSolution provides a graphical interface for configuring data logging. Select Logging Control Window from the View menu. In the Logging Control window, you can select which logs to capture and choose which ports to send the data to. In addition, you can specify a file in which to save the data.

**DETERMINING WHEN THE POSITION IS VALID**

When the receiver has a valid position, the VALID POSITION LED will turn green. In addition, the Solution Status field in GPSolution’s Position window will show Computed.

**ENABLING SBAS POSITIONING**

Certain models of the PowerPak-4E are capable of SBAS positioning. This positioning mode is enabled using the WAASCORRECTION command. At the time of publication, the WAAS (North America) and EGNOS (Europe) systems are in test mode. As a result, the following commands are typically used to enable WAAS and EGNOS modes, respectively:

```
WAASCORRECTION ENABLE 0 WAASTESTMODE
WAASCORRECTION ENABLE 120 EGNOSTESTMODE
```

Once enabled, the Position Type field shown in GPSolution’s Position window should change from Single to WAAS.

**AVAILABLE PORTS**

In addition to the power and antenna ports, there are two serial ports, one strobe port, and an external oscillator input provided on the PowerPak-4E. The COM 1 and COM 2 ports provide RS-232 signals, including modem control lines. The I/O port supplies access to supplementary strobe signals such as a mark input and a programmable variable frequency output. The EXT. OSC. port allows you to connect an external oscillator for a higher level of precision. The specifications for these ports, including signal descriptions and connector details, are given in Volume 1 of the OEM4 Family User Manual.

**QUESTIONS OR COMMENTS**

If you have any questions or comments regarding your PowerPak-4E, please contact NovAtel Customer Service using one of 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

© Copyright 2002 NovAtel Inc. All rights reserved. Unpublished rights reserved under international copyright laws. Printed in Canada on recycled paper. Recyclable. GM-14915042 Rev 1 October 3, 2002