PwrPak7 Family
Quick Start Guide

User Documentation

This guide provides information for the models:

- PwrPak7 PW7700-xxx-xxx-xxx
- PwrPak7-E1 PW7700E1-xxx-xxx-xxx
- PwrPak7D PW7720-xxx-xxx-xxx
- PwrPak7D-E1 PW7720E1-xxx-xxx-xxx
- PwrPak7-E2 PW7700E2-xxx-xxx-xxx
- PwrPak7D-E2 PW7720E2-xxx-xxx-xxx

Where xxx-xxx-xxx represents the GNSS software positioning option.

For detailed information on the installation, operation, logs and commands for the PwrPak7, refer to the OEM7 User Documentation (docs.novatel.com/OEM7).

Radio Information

Description of Service:	WiFi (802.11b/g/n)
Operational Frequency:	2400 MHz to 2480 MHz
Modulation:	OFDM
Rated Power:	17.5 dBm e.i.r.p.
Operating Frequency Stability	+/- 0.001%
Operating Temperature Range	-40°C to +75°C
Emission Designator	12M4G1D, 17M5G1D, 18M1G1D
Spurious Emissions	-36 dBm / -54 dBm

Notice

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

For low-power radio frequency equipment that has been certified, companies, or users are not allowed to change the frequency, increase the power, or change the characteristics and functions of the original design without approval. The use of low-power radio frequency equipment must not affect flight safety and interfere with legal communications; if interference is found, it should be stopped immediately and improved to not interfere before continuing to use. The aforementioned legal communications refer to radio communications operated in accordance with the provisions of the Telecommunications Administration Law. Low-power radio frequency equipment must endure the interference of legal communications or industrial, scientific and medical radio wave radiant electrical equipment.

Box Contents

The following is provided with the PwrPak7:

- Power cable (01019764)
- PwrPak7 DB26 to DB9 COM1 cable (01019765)
- USB A to USB micro B cable (60723175)

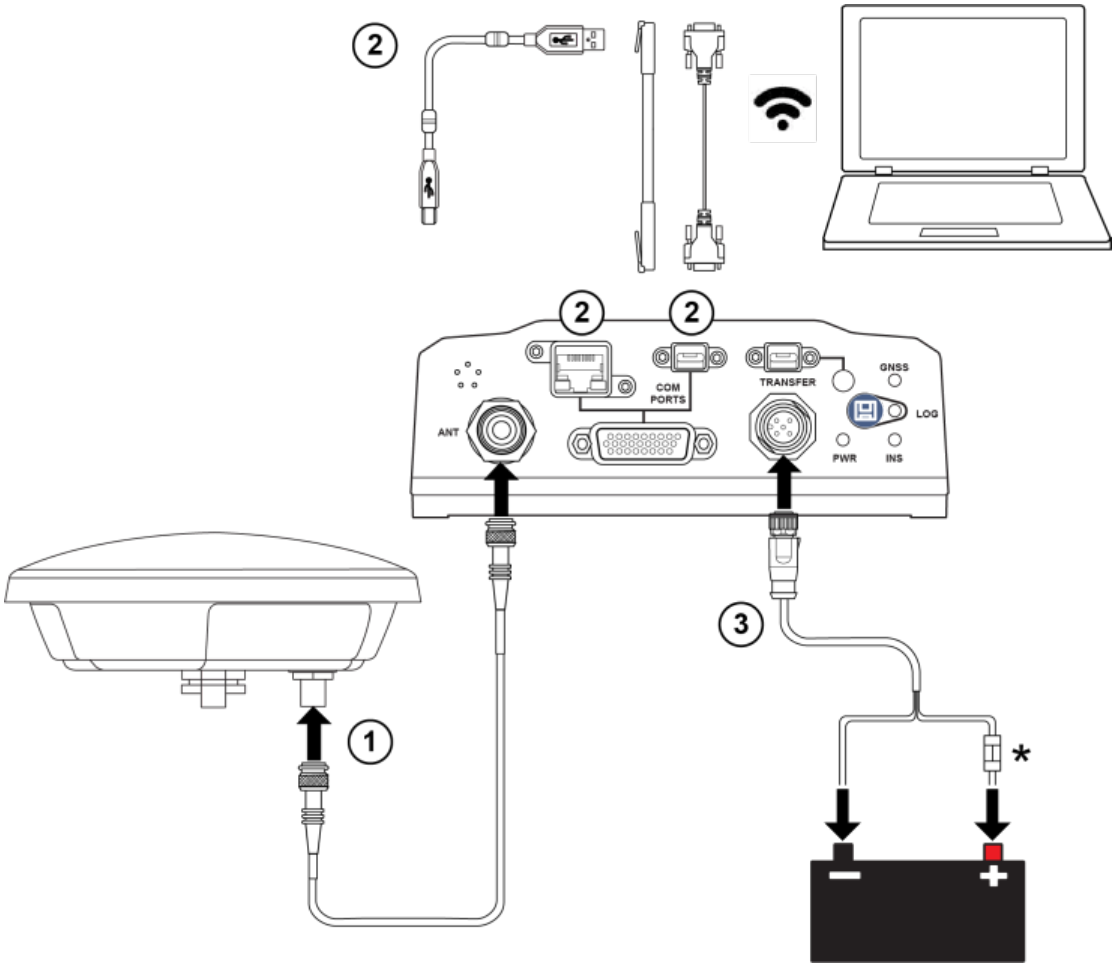
Additional Equipment Required

The additional equipment listed below is required for a typical setup.

- A 9-36 VDC, fuse protected power supply capable of at least 15 W
- A quality GNSS antenna, such as NovAtel's VEXXIS GNSS-500 or GNSS-800 series antennas
- An antenna cable with a TNC male connector at the receiver end such as NovAtel's GPS-C016 model (PwrPak7, PwrPak7-E1 or PwrPak7-E2), or
  Two antenna cables with an SMA male connector at the receiver end such as NovAtel's 2.5 m SMA to TNC cable (60723177) or 5 m SMA to TNC cable (60723178) (PwrPak7D, PwrPak7D-E1 or PwrPak7D-E2)
- Four M5 or #10 size screws for mounting
- A computer/tablet/smartphone with WiFi and a web browser and/or a computer with an RS-232 DB-9, Ethernet or USB port
- A Micro A to USB stick adapter, such as Tensility 10-00649 or equivalent, if you want to connect a USB stick to the PwrPak7 TRANSFER port.

Setting Up the PwrPak7

Complete the following steps to connect and power the PwrPak7.



* 2 A Slow Blow Fuse

1. Connect the GNSS antenna to the ANT port and mount the antenna to a secure, stable structure with an unobstructed view of the sky.

   For PwrPak7D, PwrPak7D-E1 and PwrPak7D-E2, connect the primary GNSS antenna to the ANT1 port and the secondary GNSS antenna to the ANT2 port.

2. Connect the USB, Ethernet or a COM port on the receiver to a USB, Ethernet or serial port on a computer.

   If using a USB connection, install the USB drivers (to obtain the drivers, go to the NovAtel website: novatel.com/novatelconnect).

   A wired connection is not needed if using the Setup & Monitor (Web) interface through a WiFi connection.

3. Connect the power cable connector to the PWR port. The exposed wires can then be tied to a 9-36 VDC power supply capable of at least 15 W.
4. Install a user supplied 2 A slow blow fuse in the positive line of the connection to the power source to protect the power supply wiring and your warranty.

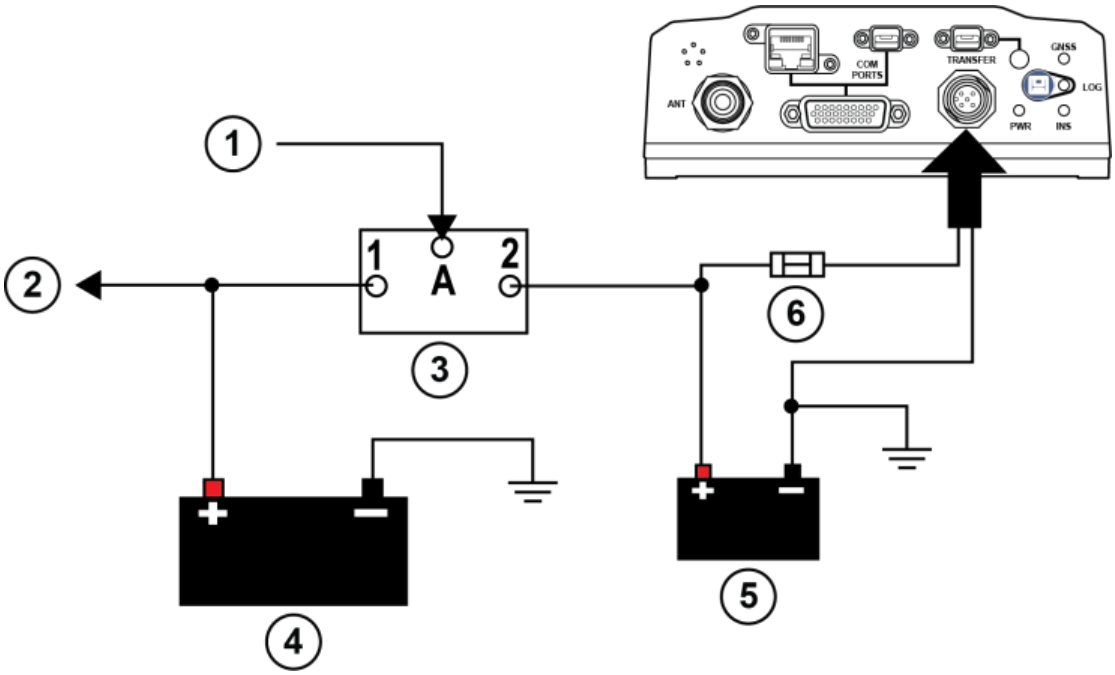
Table 1: Fuse/Holder Recommendations 12 V System

Fuse	Holder
BK/MDA-2-R Fuse (or equivalent) BK/MDL-2-R Fuse (or equivalent)	BK/HFA-R-R Fuse (or equivalent)

The fuse and holder are made by Cooper/Bussmann; available from Digikey.

Vehicle Install

If the receiver is installed in a vehicle, it is recommended that a dedicated battery be provided for the receiver that is isolated from the engine starter battery. When a vehicle engine is started, the voltage on the starter battery can dip below the PwrPak7 minimum voltage or cut-out to ancillary equipment causing the receiver and/or IMU to lose lock and calibration settings.



1 From vehicle alternator

2 To vehicle electrical system

3 Battery isolator

4 Vehicle main battery

5 Dedicated battery

6 2A slow blow fuse

PwrPak7 Mounting

Mount the PwrPak7 in the desired fixed position using four M5 or #10 size screws at a torque not exceeding 15 Inch-Lb.

The PwrPak7-E1, PwrPak7D-E1, PwrPak7-E2 and PwrPak7D-E2 have additional mounting considerations. See PwrPak7-E1 Mounting for more information.

Refer to the PwrPak7 Specifications in the OEM7 User Documentation (docs.novatel.com/OEM7) for details regarding PwrPak7 mounting.

PwrPak7-E1 Mounting

Mount the PwrPak7-E1, PwrPak7D-E1, PwrPak7-E2 or PwrPak7D-E2 and antenna securely to a vehicle. For the simplest operation, align the Y-axis of the PwrPak7-E1, PwrPak7D-E1, PwrPak7-E2 or PwrPak7D-E2 with the forward axis (direction of travel) of the vehicle. Ensure the Z-axis is pointing up. Ensure that the GNSS antenna and PwrPak7 cannot move relative to each other. The distance and relative direction between them must be fixed.

Additional Functionality

Refer to the OEM7 User Documentation (docs.novatel.com/OEM7) for set up and installation instructions for other functionality.

Questions or Comments

If you have any questions or comments regarding your NovAtel receiver, contact NovAtel Customer Service using one of these methods.

Log a Case and Search Knowledge:

Website: novatel.com/support

Log a Case, Search Knowledge and View Your Case History: (login required)

Web Portal: https://novatelsupport.force.com/community/login

Email:

support.novatel@hexagon.com

Telephone:

U.S. and Canada: 1-800-NOVATEL (1-800-668-2835)

International: +1-403-295-4900

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