CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

RF500B

RF Base Station

Base Station

For networks with narrowband, UHF/VHF, licensed radios

RF500B components: PS150 power supply (left), RF500M modem (right), 18657 DB9-female null-modem cable (beige cable), 14291 field power cable (black cable), and 10-in. x 12-in. metal plate.

Overview

The RF500B base station resides at the computer site and serves as a link between field stations and repeater stations. It includes an RF500M radio modem connected to a PS150 power supply. The modem and power supply are then mounted to a 10 inch by 12 inch metal plate.

The radio, antenna, antenna cable, and wall charger need to be ordered separately. Compatible radios include our RF320 series, our RF310 series, our RF300 series, and the DataRadio DL-3400. Software support is provided by LoggerNet.

Benefits and Features

- Includes the RF500M RF modem and PS150 power supply mounted to a metal plate
- Supports multiple radio configurations including our RF320-series, our RF310-series, our RF300-series, and the DataRadio DL-3400 radio
- Provides an RS-232 port (DTE) for modem configuration or attachment of an RS-232 radio
- Uses software (i.e., DevConfig) instead of hardware modifications to upgrade the operating system (OS) and change RF ID or other settings
- Avoids all collisions within a network, thus increasing polling speeds and reducing overall current drain

Ordering Information

Radio Modem	
Must choose an OS option and a radio jumper setting option (see below).	
RF500B	Radio Base Station consisting of the RF500M Radio Modem, PS150 Power Supply, and 10 in. by 12 in. metal plate. .
Operating System (OS) Options (see below)	
-PB	PakBus OS.
-AL	ALERT Dual Mode OS.
-DA	Dial OS.
Radio Jumper Setting Options	
-J1	Jumper for RF320-series or RF310-series radios.
-J2	Jumper for RF300-series radios.
-J2	Jumper for radios purchased directly from DRL.
Accessories	
29796	Wall Charger 24 Vdc 1.67 A Output, 100 to 240 Vac, 1 A Input, 5 ft Cable. Must choose a power cable option (see below).
Power Cable Options (choose one)	
-US	US and Canada Plug.
-IP	7 International Plugs.

Operating System (OS) Options Descriptions

PakBus OS

Considered the standard for the RF500M, the -PB OS uses TDRF polling to quickly and efficiently move data through a network. Each station can be individually dialed by LoggerNet. This OS is compatible with -TD, -PB, and our current generation of PakBus dataloggers.

ALERT Dual Mode OS

The ALERT (Automated Local Evaluation in Real Time) OS allows for transmission, repeating, and reception of binary ALERT formatted data. It is a derivative of the -PB OS, and therefore supports both ALERT and TDRF communications (allowing true two-way communication with a station). This OS is compatible with the CR200(X)-series, CR800-series, CR1000, and CR3000 dataloggers.

Dial OS

The dial OS works with both mixed-array and PakBus/table-based dataloggers. Each station can be dialed by LoggerNet for downloading data, sending programs, and performing other tasks. Additionally, this OS allows stations to create point-to-point networks for sharing of measurement and control tasks.

Specifications

RF500M Modem

- Voltage: 7 to 20 Vdc (can be provided by the CS I/O port)
- Active Current Drain: < 8 mA RMS @ 12 Vdc
- View the EU Declaration of Conformity document at: www.campbellsci.com/rf500m
- Dimension: 160 x 95 x 22 mm (6.31 x 3.69 x 0.88 in.)
- Weight: 0.18 kg (0.4 lb)

Transceiver Audio Output (pin 5)

- J1 Jumper Configuration: 310 mV peak-to-peak (Campbell Scientific adjusts the audio input gain so that it is compatible with J1)
- J3 Jumper Configuration: 670 mV peak-to-peak

PS150 12 Vdc Power Supply

- Battery Charging: Float
- ETL Listed Class 2 power supply

Input Voltage

- Charge Terminals (ac or dc source)
  AC: 18 to 24 VRMS internally limited to 1.2 A RMS
  DC: 16 to 40 Vdc internally limited to 1.2 A dc
- SOLAR Terminals (solar panel or other dc source)
  Input Voltage Range: 15 to 40 Vdc
  Maximum Charging Current: 4.0 A dc typical

Power Out (+12 terminals)

- Voltage: Unregulated 12 V from battery
- Current: 4.65 A with solid-state circuit breaker