



Shown: P485BTB converter
(Palm not included)

Models: P485BTB, P485BTB1, P485BTB2

Connect Palm to RS-422/485 CE

Overview

The Palm PDA is finding its way into a variety of mobile applications, such as data acquisition and field service. B&B's Model P485BTB allows your Palm to connect to RS-422 or RS-485 devices. RS-485 is an enhanced version of the RS-422 standard, allowing multiple drivers and receivers on a two-wire system. The P485BTB allows the Palm to connect to an RS-485/ RS-422 device, making it a convenient hand held terminal for RS-485 networks and devices.

Power

The P485BTB can be powered with batteries or external power supply (sold separately). The P485BTB requires 2 AAA batteries (not included) to provide power for the converter. For your convenience an optional external +12VDC power supply may be used. Simply attach it to the terminal blocks and plug it in. The Model 485PS2 may be used to power the P485BTB if battery power is not used.

Note: The Battery Power On/Off switch on the P485BTB is only used for conserving battery life. When using an external power supply the Battery Power On/Off switch is non-functional.

Switches

In addition to the Battery On/Off switch described above, there is a 2-position dipswitch on the top of the converter. The position of these switches determines whether the signals on the terminal blocks are RS-422 or RS-485. The following description determines how your P485BTB will be configured. The "ON" position is labeled in small text on the dipswitch itself. This text is viewable without having to open the hood of the P485BTB.

RS-422 Mode = Both switches in the "Off" position
RS-485 Mode = Both switches in the "On" position

When the RS-422/RS-485 switch is in the "RS-485" position, the P485BTB uses an automatic method to control the RS-485 driver. This means that the RS-485 driver is enabled with each high bit transmitted. This eliminates the need for special software to control the driver. When the RS-422/RS-485 switch is in the "RS-422" position the transmitter is constantly enabled.

The Echo On/Off switch controls the RS-485 receiver. When the switch is set to the "Off" position the receiver is constantly enabled. When this switch is in the "On" position the receiver is enabled only when the RS-485 driver is disabled for use in 2-wire mode to prevent the transmitted data from echoing back on the RS-232 side.

Connections

Three different versions are supplied to connect to the different Palm Models:

<u>PB&B Palm Model:</u>	<u>Connection:</u>
P485BTB	Use your Palm M100 cable
P485BTB1	Palm V cable included
P485BTB2	Palm III, VII, TRGPro cable included

The RS-485 port uses terminal blocks for easy field wiring. TD A(-), TD B(+), RD A(-), RD B(+) and Signal Ground lines are supported. Figure 2 shows how to interconnect two RS-485 devices using two wires. Figure 1 shows how to interconnect two RS-422 devices using four wires. Terminating resistors are optional. Terminating resistors (120 Ohm) are added external to the P485BTB converter when termination resistors need to be used. See Figures 1 and 2 (Rt) to see how these termination resistors are installed. The use of terminating resistors is NOT recommended when operating the P485BTB on battery power as battery life is greatly reduced. They should be used only on long length runs with high baud rates. See B&B's RS422/RS485 Application Note (available on our website (www.bb-elec.com) for help in using resistors with the P485BTB.

International Headquarters:

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Figure 2: Typical RS-485 Two-Wire Setup

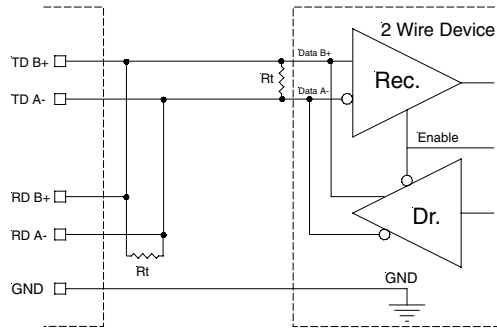
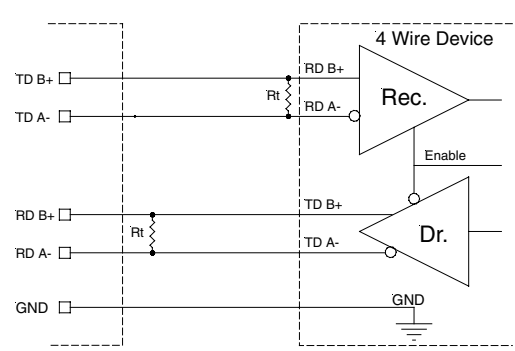


Figure 1: Typical RS-422/485 Four-Wire Setup



Specifications

Dimensions: 3.6 x 2.6 x 1.1 in (9.0 x 6.5 x 2.8 cm)
 Temperature Range: 0 to 70°C (32 to 158°F)
 Humidity Range: 0 to 95% non-condensing
 Supply Voltage: 2 AAA batteries (not included)
 External power: 9 to 18 VDC @ 50 mA
 Battery Life: Two AAA batteries supply 7 hours of operation (fully loaded)
 Data Rates: Up to 115.2 kbps
 Connections: Palm connector - DB9 male
 RS-422/RS-485 - terminal blocks

DECLARATION OF CONFORMITY

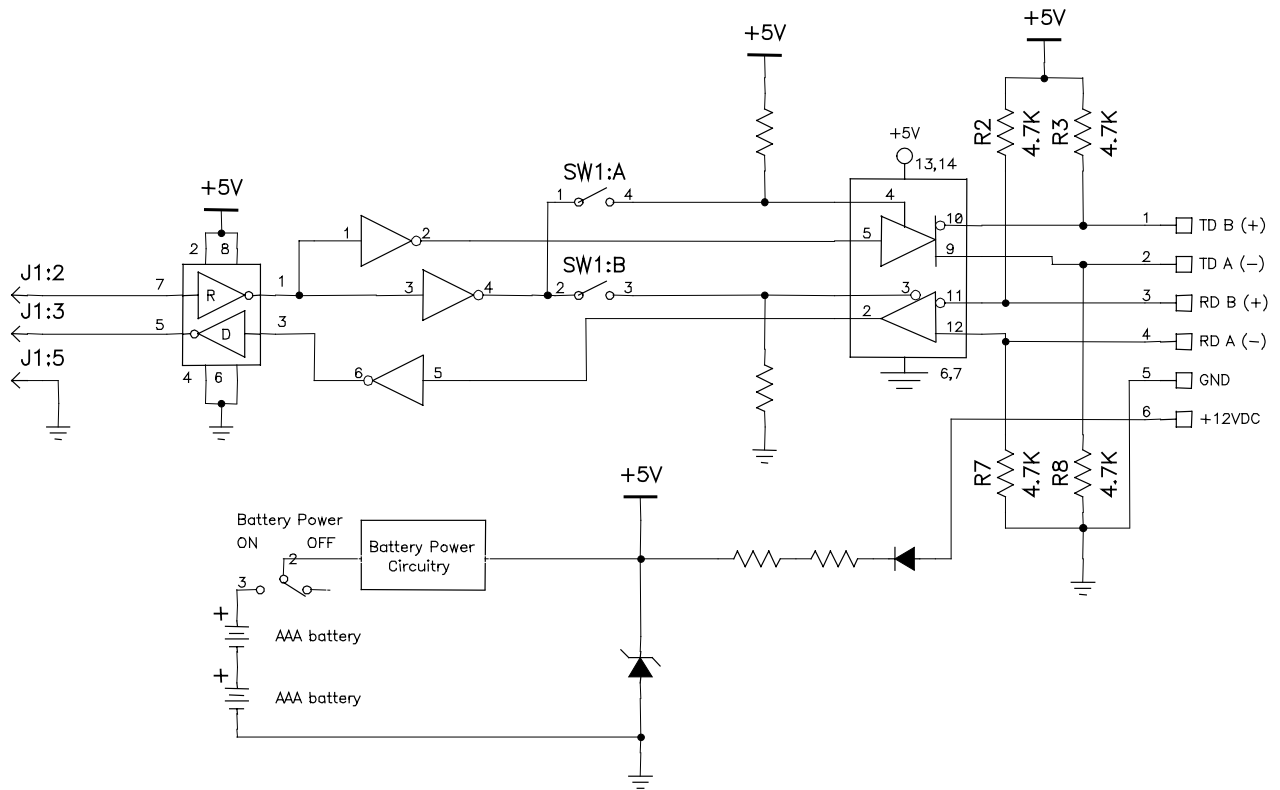
Manufacturer's Name:	B&B Electronics Manufacturing Company
Manufacturer's Address:	P.O. Box 1040 707 Dayton Road Ottawa, IL 61350 USA P485BTB
Model Number:	P485BTB
Description:	RS-232 to RS-422/485 Converter
Type:	Light industrial ITE equipment
Application of Council Directive:	89/336/EEC
Standards:	EN 50082-1 EN 61000 (-4-2, -4-3, -4-4, -4-6)

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P485BTB Functional Schematic



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