RightHand
Engineering LLC *OutBack Mate Adapter*

Because of the design of the OutBack Mate, certain types of serial port devices will not reliably work when plugged into the Mate's RS-232 port. The Mate's serial port is optically isolated to improve protection of circuitry, but this requires that the RS-232 signals to the Mate be of full strength, and be of the right polarity.

PC's that do not have a built-in RS-232 port may require the use of external converters, such as USB-to-Serial, or Ethernet-to-Serial converters. These types of converters frequently do not have signals compatible with the Mate's serial port.

The OutBack Mate Adapter is designed to solve this problem by applying external voltage to the port to allow the use of USB or Ethernet serial adapters.

INSTALLATION

The Mate Adapter should be plugged into the Mate's 9-pin serial port (facing the bottom of the Mate). A standard 9-pin male-to-female serial port extension cable can then be used to plug the PC (or the PC's USB/Ethernet converter) into the Mate Adapter. The Mate Adapter requires a source of 12 Volts DC which is connected to it via the included 5.5 x 2.5 mm pig-tail cable that plugs into the round barrel connector in the front of the Mate Adapter. The pig-tail wire with the white stripe must be connected to the positive (+) end of the 12 Volt DC source, and the wire without the white stripe must be connected to the negative (-) end of the 12 Volt DC source.

White Stripe to POSITIVE (+) 12VDC
No Stripe to NEGATIVE (-)

One possible source of 12 Volts DC is from an unused Aux Output of an OutBack inverter. Even if the battery bank feeding the OutBack equipment is 24 or 48 volts, the Aux Output can supply the needed 12 Volts DC. But the Aux Output must be configured to be the correct polarity, and must be configured to be steady (unchanging). Therefore, it can not be used for any other purpose.

If the Mate is not located near the other OutBack equipment, or you do not have a spare Aux Output at the equipment, then you will need a separate source of 12 Volts DC. The voltage must be at least 12 volts DC but not more than 20 volts DC. Not more than 100 milliamps are required (its OK if the power source has a capacity larger than 100 mA). If you choose to use an AC power adapter as the source of 12 Volts DC, beware that if the power adapter looses AC power, your PC will be unable to communicate with the Mate. If the AC adapter is powered from an OutBack inverter, and you shut the inverter off via your PC, you will not be able to turn the inverter back on from your PC.

CONFIGURATION

The Mate's control panel must be used to enable its PC Com Port. And if you choose to use an Aux Output as a source of 12 Volts DC, the Mate's control panel must also be used to properly configure the Aux Output. The following instructions are valid for V4.1 of the Mate firmware. These instructions may not be valid for other firmware versions.

To enable the Mate's PC Com Port, go to the SETUP menu. Select the MATE menu, Select PG2, Select COMM, Select PC, Select ON. Select BACK, Select BACK, Select PG3, Select MAIN.

To configure an Aux Output to supply steady 12 VDC, Select ADV, hit any button to go past the description, then press INC until the password is 141. Select ENTER. Select FX. Select PG2, Select PG3, Select PORT and choose the inverter number whose Aux Output you wish to use. Select AUX. For "aux output control", select ON. Select DOWN repeatedly until MAIN appears, then select MAIN.

Although charge controllers also have an Aux Output, it may not be possible to configure these to provide a steady 12 VDC output. However, certain models and/or firmware revisions of charge controllers may allow this.