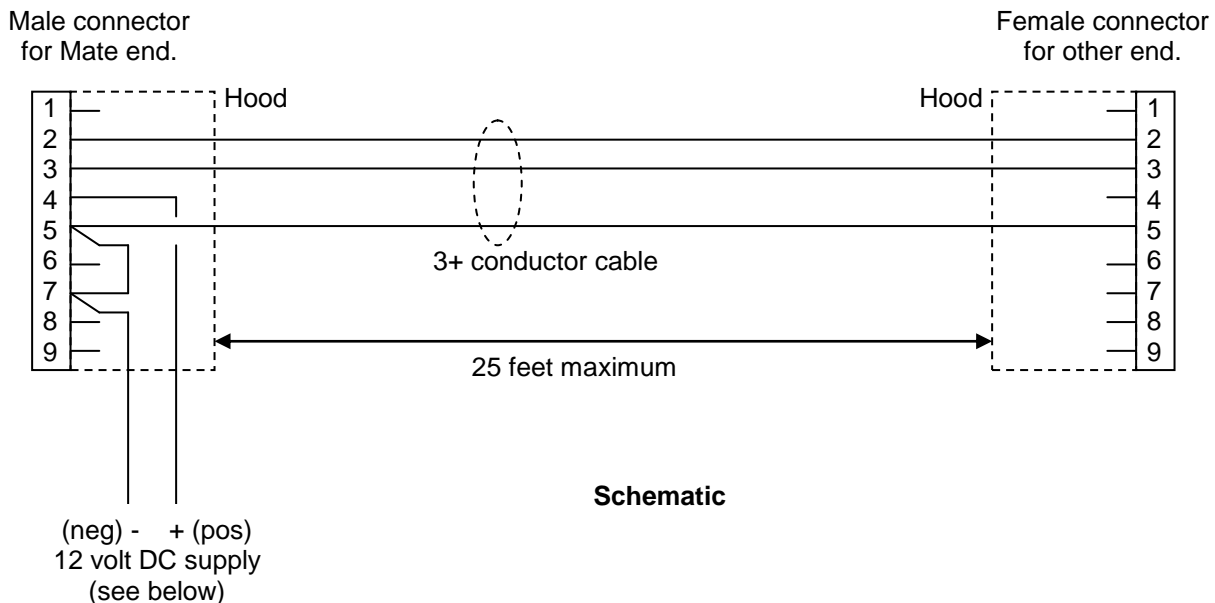


This document describes how to make an adapter for connecting the OutBack Mate's serial port to a low signal power PC RS-232 port. This cable is needed any time that the connected equipment (especially RS-232 media conversion equipment) can not provide the power needed by the Mate to power its serial port. This cable will work for the following applications:

- Connecting a Serial Port-to-USB Converter to the Mate, typically needed for modern laptops that don't have a built-in serial port.
- Connecting a Vlink ESP series Serial Port-to-Ethernet Converter to the Mate.

Recommended Parts List:

- 1 each Male D-sub 9-pin connector, solder style, such as Radio Shack 276-1537.
- 1 each Female D-sub 9-pin connector, solder style, such as Radio Shack 276-1538.
- 2 each D-sub 9-pin connector hoods, such as Radio Shack 276-1539.
- A length of 3 or more conductor cable with 22 to 24 gauge stranded wire, such as Radio Shack 278-365. This will go from the Mate to the connected equipment. Not more than 25 feet should be used.
- A 12 volt DC, 100 milliamp or more, source of power source (see below).



Note: The Mate has an optically coupled serial port that requires power from the connected device in order to send and receive data. The special devices used at the far end typically do not have sufficient power or the right polarity of power to supply the needs of the Mate. Therefore the external 12 volt DC source is required. 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).

One possible source of 12 VDC is the Auxiliary Output of any OutBack inverter or charge controller. 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.

Another possible source of power is a 12VDC wall adapter, such as Radio Shack 273-1773 (if using a Radio Shack Adapt-a-Plug style AC-to-DC Adapter, the 273-1742 adapt-a-plug power leads are also recommended). But beware. If the AC source is the inverter output, it will go away when the inverter is turned off, which will disable the ability for the PC to communicate with the OutBack Mate.