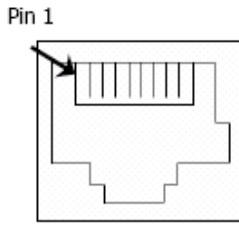**Modtronix Engineering**

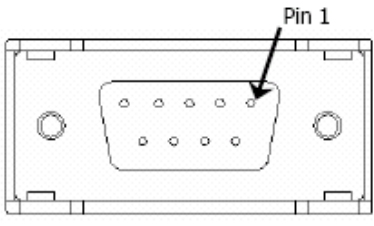*Modular Electronic Solutions*

ADP45D9F Adapter

This adapter enables a Modtronix device with a RJ-45 RS232 Communications port to be connected to the RS232 communications port (D-Sub 9 pin male connector) of a DTE device, like a PC for example. Simply connect the one end of a standard straight RJ-45 cable (network cable) to the RJ-45 port of the Modtronix device, and the other end to this adapter. The Female DB-9 (D-Sub 9 pin female connector) connector on this adapter is then connected to the DTE device's Male DB-9 connector.

All Modtronix devices with RS232 DB-9 Male connectors are DTE devices. A PC is also a DTE device. This adapter can be used to connect a Modtronix device with RJ-45 RS232 Communication port to a PC.
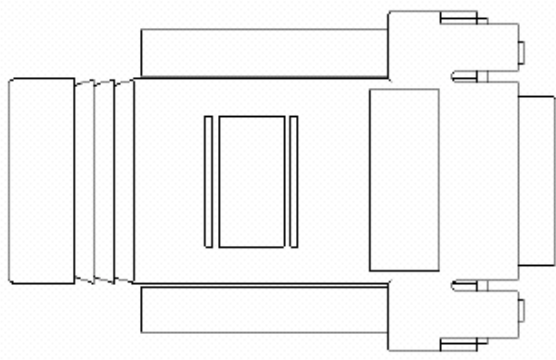
RJ-45	Signal	Direction	Signal	DB-9
1	N.C.			
2	RTS	→	CTS	8
3	GND	↔	GND	5
4	Tx	→	Rx	2
5	Rx	←	Tx	3
6	N.C.			
7	CTS	←	RTS	7
8	N.C.			
			DTR	4
			DCD	1
			DSR	6

These pins are not connected on the RJ-45 Connector. They are reserved for DTR, DSR and DCD functions!

Female RJ-45 8-pin

Female DB-9

Cable Adapter not to scale

Wiring Diagram

The following picture shows the wiring diagram of the cable. Pins 1, 6 and 8 on the RJ-45 connector are not connected. Pin 9 on the DB-9 connector is not connected.
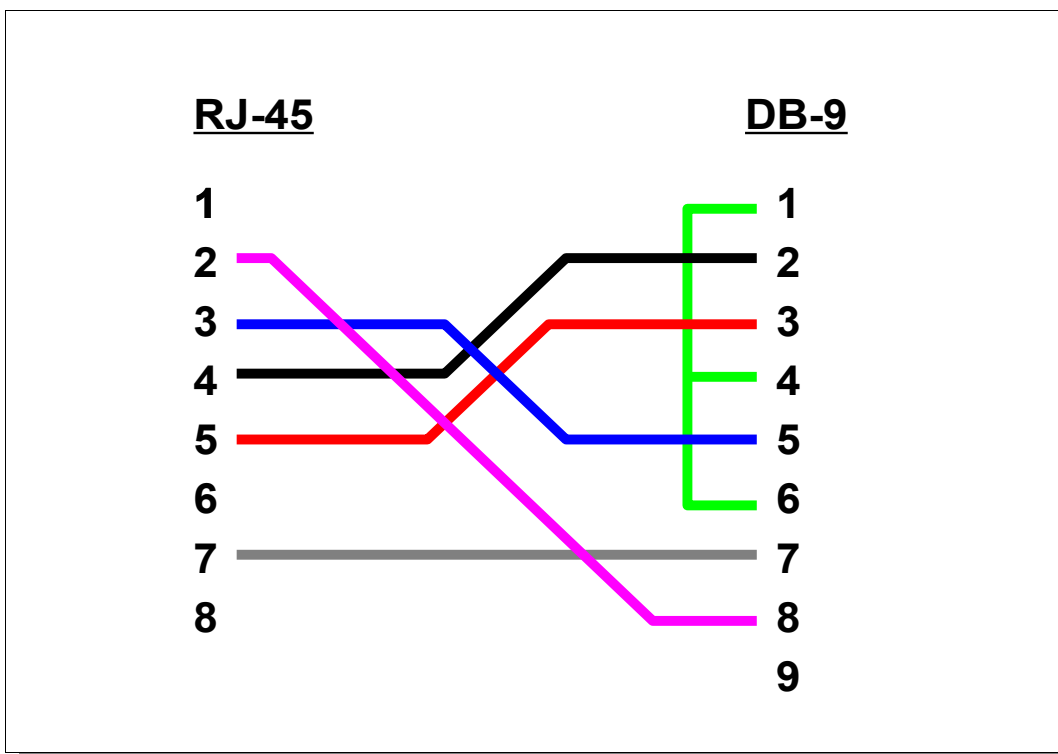
RS-232-E

This section provided information on the RS-232-E standard. It might **not be relevant** for many applications!

RS-232-E was defined in 1991, and defines RTS as "Request To Send", and CTS as "Ready To Receive", allowing bidirectional communication.

Some older equipment require hardware handshaking signals on the DTR, DSR and DCD signals of the RS-232 communications port. Modtronix devices with 5 signal RS-232 Communication Ports do not have these signals, seeing that they are hardly ever used any more. To allow these Modtronix devices to be able to connect with RS-232 devices that require DTR, DSR and DCD signals, pins 1, 4 and 6 on the DB-9 connector are linked. These are the DTR, DSR and DCD signals. This means that if the RS-232 device sets DTR (4), it will receive back a DSR (6) and DCD (1) signal – looped back from itself.