



Niobrara SD034 Adapter

The Niobrara SD034 adapter is used to connect any NR&D Smart Cable such as the SC50D or SC406 to the 9-pin serial port of a personal computer. This adapter is easily configurable to work with any type of personal computer and must be configured before use.

Configuration:

Two different pinouts are used for the 9-pin serial port of personal computers; pins 2 and 3 are reversed between the two types. These will be referred to as **Type A** and **Type B** for clarity. Determine which type is used by the computer to be connected to the SD034. The computer's manual, or the manual for the computer's I/O or serial board should list the pinout of the serial port; it will match the first two columns of one of the diagrams below. The column labeled DB9 indicates the pinout of the computer's serial port. The center column is the pin function (note the reversal of pins 2 and 3); and the column labeled DB25 indicates the pinout of the 25-pin (DB25) end of the SD034.

DB9		DB25
1	DCD	8
2	TX	2
3	RX	3
4	DTR	20
5	SG	7
6	DSR	6
7	RTS	4
8	CTS	5
9	RI	22

Type A

DB9		DB25
1	DCD	8
2	RX	3
3	TX	2
4	DTR	20
5	SG	7
6	DSR	6
7	RTS	4
8	CTS	5
9	RI	22

Type B

If the pinout of the port is unavailable, the type can be determined by using the following procedure:

Power up the computer. Place the black probe of a voltmeter on pin 5 (signal ground) of the serial port connector and place the other probe on pin 2 of the same connector. Record the measured voltage. With the black probe still on pin 5, move the other probe to pin 3. Record this voltage.

TX voltage lies between -15V and -5V.

RX voltage lies between -3V and +3V.

Therefore, if the measured voltage is more negative at pin 2, the serial port is **Type A**. If pin 3 is the more negative voltage, the serial port is **Type B**.

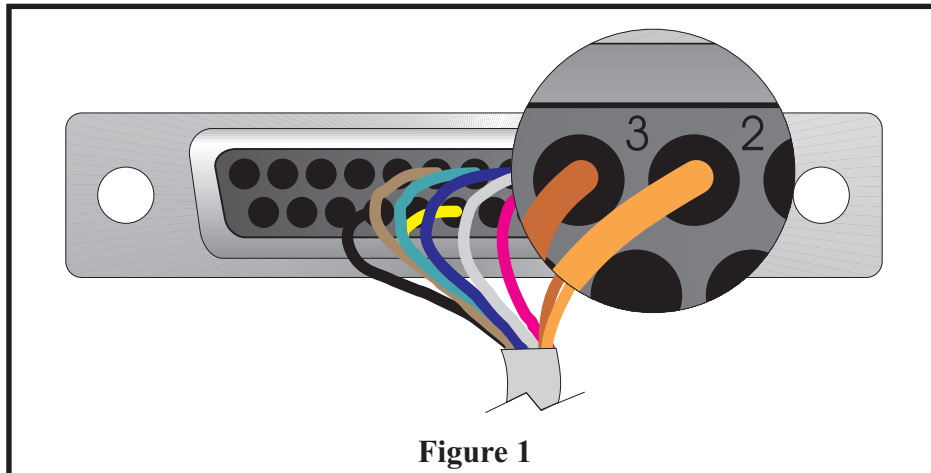
Wiring the Adapter (see Figure 1):

1. Loosen, but do not remove, the two threaded spacers on the connector face of the 25-pin DB25 backshell. Remove the two screws and nuts holding this backshell together and take both backshell halves off the connector.
2. **Type A:** Insert the pin on the end of the red wire into the connector opening labeled 3 and push it in until it is the same height as the other pins on the connector face. Insert the orange wire pin into position 2 in the same manner.

Type B: Insert the pin on the end of the orange wire into the connector opening labeled 3 and push it in until it is the same height as the other pins on the connector face. Insert the red wire pin into position 2 in the same manner.

Note: To remove a pin, carefully press its tip with a small blunt instrument (such as the flat end of the knurled backshell screw) in the opposite direction of insertion. No special extraction tools are required.

3. Reassemble the backshell around the connector and attach it with the screws and nuts. Tighten the threaded spacer on each knurled screw.



Installation:

Connect the 25-pin DB25 end of the adapter to the 25-pin end of the Niobrara Smart Cable and tighten the jackscrews of the cable end. Connect the 9-pin DB9 end of the adapter to a serial port (COM1: or COM2:) of the personal computer.