



SPECIFICATIONS:

Transmission Mode: Asynchronous, full-duplex

Transmission Line: 2-wire unconditioned telephone line (one twisted pair) point-to-point

Data Rates: Up to 38,400 bps

Transmission Level: 0 dBm

Transmission Controls: DSR and DCD turn on immediately after the terminal raises DTR; CTS turns on immediately after the terminal raises RTS.

Transmission Range: Up to 4.4 miles (7 km) on 24 AWG wire.

Terminal Interface: EIA RS-232C/CCITT V.24, integral 25-pin connector, choice of male or female.

Telephone Line Interface: 2-screw terminal block with cable strain relief inside plastic cover.

Power: None required, uses ultra-low power from the EIA RS-232C/CCITT V.24 data and control signals.

ME738A-M/F

INTRODUCTION:

The non-powered Short Haul Modem-2-Wire (SHM-NPR for short) connects asynchronous terminals to computers for local data distribution. What makes this model unique is its ability to operate in full-duplex mode over a *single* pair of wires. In many cases, you should be able to use the 2-wire telephone line already installed in your building.

You can plug the SHM-NPR directly into the back of your terminal--there's no need for an extra cable. (Be sure to specify a male or female DB25 connector when you order).

You don't need any power supply for the SHM-NPR, either. It's innovative circuitry takes ultra-low power from the standard RS-232 data and control lines. Even if only the Transmit Data (Pin 2), Receive Data (Pin 3), and Signal Ground (Pin 7) lines are connected, the SHM-NPR will still work. Control signals are not required.

In compliance with RS-232C and V.24 standards, the SHM-NPR generates both positive and negative signals--no matter what the state of Transmit Data, which can be constantly high or constantly low.

The table to the right shows the transmission ranges you can expect with the SHM-NPR 2-Wire. The figures are only approximate; the conditions in your own installation will determine how far you can actually transmit.

APPLICATIONS:

Two async computers, or an async computer and a terminal, communicate over a two-wire telephone line through a pair of SHM-NPR's. The SHM-NPR is wired as a DCE device (Pin 2 input, Pin 3 output): It normally connects directly to a DTE device. (DEC equipment is usually set up this way.) But if the terminal would normally connect directly to the computer (or modem) with a *straight-through* cable (as is true of most Hewlett-Packard systems), you'll need a crossover cable between the SHM-NPR and the computer or modem.

DIAGNOSTICS:

When the SHM-NPR is not connected to another SHM-NPR, it automatically switches to analog loopback mode. If you have the SHM-NPR connected directly to a terminal, any characters you send should be echoed back to your screen. If they aren't, something is wrong.

If two SHM-NPR's are connected and you're still getting data echoed back, the problem is in the two-wire line between them. Check the connections and the cables.

Wire Gauge			
19-AWG	22-AWG	24-AWG	RG-62 COAX
1.4 mi (2.3 km)	.8 mi (1.4 km)	.6 mi (1 km)	1 mile (1.6 km)

