

Chapter 7

Non-DDS Applications

GENERAL

In addition to offering DDS operation, the DDS/MR64 can operate as a limited distance modem providing full-duplex serial synchronous data communications at rates of 2.4 to 64 kbps and asynchronous data at 2.4 to 57.6 kbps over privately owned cables. The cable system must consist of ordinary unloaded 4-wire twisted pair.

The maximum distance between units is a function of data rate and wire size (refer to Table 7-1).

Table 7-1. Maximum Operating Distance

Data Rate (bps)	19 Gauge Wire Distance	26 Gauge Wire Distance	dB
64000	57 kft	16 kft	43
56000	61 kft	18 kft	43
19200	77 kft	27 kft	43
9600	90 kft	33 kft	40
4800	116 kft	43 kft	40
2400	150 kft	57 kft	40

INSTALLATION

To install the units, connect the receive pair (T - gray, R - brown) of unit A to the transmit pair (T1 - blue, R1 - orange) of unit B. Likewise, connect the transmit pair of unit A to the receive pair of unit B (Figure 7-1). Refer to Table 3-4 for pin assignments of the modular jack. The T and R designations stand for Tip and Ring, which is simply Telephone Company terminology to distinguish between the two leads of a single pair. For the DDS/MR64, it is important to distinguish between the receive pair and the transmit pair.

TIMING

Set the timing option of one unit to INTERNAL or EXTERNAL and the second unit to DDS. The unit set to INTERNAL or EXTERNAL provides the master timing for the circuit. The timing should be set to EXTERNAL only if it is desired for the DTE connected to that unit to provide the timing using pin 24 of the DTE connector.

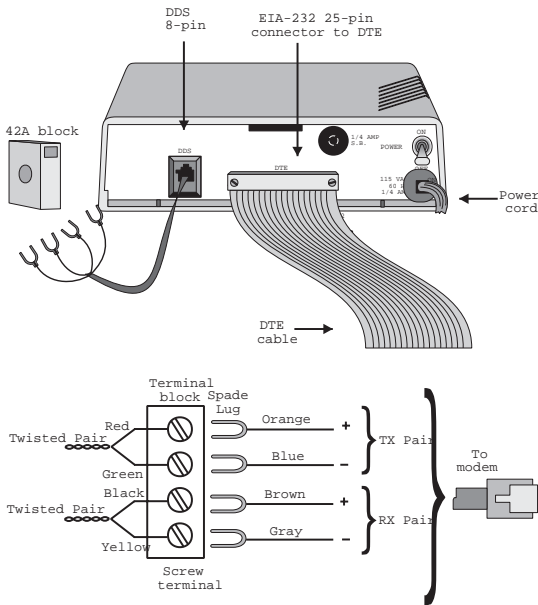


Figure 7-1
Connection as Limited Distance Modem

OPTIONS

Set the remaining options as described in Chapter 4 of this manual.

TESTS

The master unit should not be put into RT, LL, or in a loopback using RL from the remote unit. To do so will cause the circuit to lose its timing reference and errors will be created. To test the circuit, put the unit with DDS timing into any desired loopback mode and send test patterns from the master unit.

