TECHNICAL DATA

LDM-1 SPECIFICATIONS

Physical
Length: 8.6"
Width: 5.3"
Height: 1.9"
Weight: 22 oz.

Environmental
Storage
Temperature: -20ºF to 180ºF
Humidity: 0% to 95% non-condensing
Operating
Temperature: -4ºF to 158ºF
Humidity: 0% to 95% non-condensing

Mounting
Shelf or desktop

Construction
Housing
Fully enclosed, anodized aluminum
Removable cover allows access to inside
Externally accessible LEDs and connectors
Electrical
Single, conformal coated, PCB inside housing

Power
Voltage
24 Vac, from MICRO-AIDE supplied wall mount transformer
Consumption
2.5 W, typical
Isolation
Rcv and Xmt channels are fully isolated from power and DTE

Connectors
DB-25 Female
Configured as DCE
See Figure 7 on page 31
Power
Round male connector
6-Conductor Female
Pin 1: 24 Vac
Pin 2: 24 Vac
Pin 3: Xmt+
Pin 4: Xmt-
Pin 5: Rcv+
Pin 6: Rcv-

LED Indicators
Power: Red
Carrier Detect: Green
Test 2: Red
Test 1: Red
Clear to Send: Amber
Request to Send: Amber
Receive Data: Red
Transmit Data: Red

Controls
External
Pushbutton Switch: selects operating mode
Equalization Switch (SW3): dual switch assembly, 4 settings to compensate for cable attenuation
Internal
DIP Switch (SW2): Selects CTS-to-RTS delay of 8, 16, 32 or 64 msec.
Jumper AX1: Enables Rcv channel termination of 150 Ohm
Jumper AX2: Enables Xmt channel termination of 150 Ohm
Jumper AX3: Enables Xmt channel busy detector
Jumper AX5: Connects DTE signal ground to protective ground

Operating Modes
Normal
Full duplex over 4-wire network
Test 2 LED: Off
Test 1 LED: Off
Test Mode A
Analog test with digital loop back
Test 2 LED: On
Test 1 LED: Off
Test Mode B
Analog loop back with DTE data
Test 2 LED: Off
Test 1 LED: On
Test Mode C
Analog loop back with test data
Test 2 LED: On
Test 1 LED: On

Data Characteristics
Format
Fully transparent to all data
Baud Rate
75 to 19,200

Network Configurations
Point-to-Point
Capacity: 2 modems total
Refer to Table 6 on page 31 for range specifications
Multi-Drop
Capacity: 8 modems total (1 master, 1 to 7 slave modems)
No transmission range de-rating with additional slave modems
Refer to Table 6 on page 31 for range specifications

Line Requirements
Type: 4-wire
Gauge: 19 to 24 AWG

Receiver
Dynamic Range
-40 dBm to 0dBm
Termination Impedance
Enabled: 150 Ohm
Disabled: >40K Ohm
Isolation
Fully isolated from power and DTE interface

Transmitter
Output Level
approximately 0dBm into 150 Ohm, .4Vp-p
Source Impedance
Enabled: 150 Ohm
Disabled: >40K Ohm
Carrier Detection
If enabled, checks for absence of signal on Xmt channel before asserting CTS
Isolation
Fully isolated from power and DTE interface

LDM-16 SPECIFICATIONS

Physical
Length: 19.0"
Width: 10.5"
Height: 5.4"
Weight: 20 lbs. with 8 LDM-1 plug-in PCBs

Mounting
Mounts into std. 19" equipment rack

Power
Voltage: 120 Vac, 60 Hz
Consumption: 40 W with 8 LDM-1 plug-in PCBs

MICRO-AIDE reserves the right to make changes, at its sole discretion, to any specification listed herein.

TRANSMISSION RANGE SPECIFICATIONS

The specifications listed in Table 5 apply to both point-to-point and multi-drop network configurations limited to no more than eight modems. The transmission distances listed refer to the cable length measured from the near-end (master) modem to far-end (slave) modem.

Baud Rate (bps)	19 AWG	22 AWG (miles)	24 AWG
2400	30	16	12
4800	25	13	10
9600	20	11	8
19,200	13	8	6

Table 5 - Cable Length vs. Baud Rate and Cable Diameter

RECOMMENDED EQUALIZATIONS SETTINGS

The Equalization settings listed in Table 6 are for approximation purposes only. The optimum setting will vary from network to network. The transmission distances listed refer to the cable length measured from the near-end (master) modem to far-end (slave) modem.

Baud Rate	19 AWG					22 AWG					24 AWG				
	0	6	13	19	25+	0	3	6	10	13+	0	2	4	6	8+
2400	1	2	2	3	4	1	2	2	3	4	1	2	2	3	4
4800	1	2	2	3	4	1	2	2	3	4	1	2	2	3	4
9600	1	2	2	4	-	1	2	2	4	-	1	2	2	4	4
19,000	1	2	2	-	-	1	2	2	-	-	1	2	2	4	-

Table 6 - Equalization Settings vs. Cable Length and Baud Rates

DB-25 CONNECTOR WIRING

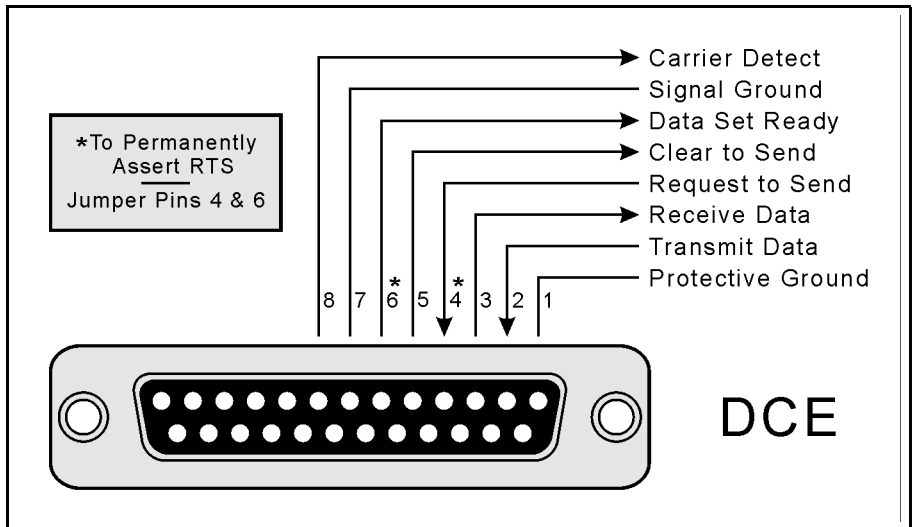The LDM-1 includes a DB-25 female connector. It provides the RS-232 interface to the DTE. The connector is wired as illustrated in Figure 7.

Figure 7 - DB-25 Pin Assignments