

USER MANUAL

MODEL 3/9 HDX **Multi-Drop Data Monitoring Tap**



PE PATTON
Electronics Co.



*An ISO-9001
Certified Company*

Part #07M3/9HDX-A
Doc. #100071UA
Revised 6/8/98

SALES OFFICE
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(301) 975-1007
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1.0 WARRANTY INFORMATION

Patton Electronics warrants all Model 3/9 HDX components to be free from defects, and will—at our option—repair or replace the product should it fail within one year from the first date of shipment.

This warranty is limited to defects in workmanship or materials, and does not cover customer damage, abuse or unauthorized modification. If this product fails or does not perform as warranted, your sole recourse shall be repair or replacement as described above. Under no condition shall **Patton Electronics** be liable for any damages incurred by the use of this product. These damages include, but are not limited to, the following: lost profits, lost savings and incidental or consequential damages arising from the use of or inability to use this product. **Patton Electronics** specifically disclaims all other warranties, expressed or implied, and the installation or use of this product shall be deemed an acceptance of these terms by the user.

1.1 CE NOTICE

The CE symbol on your Patton Electronics equipment indicates that it is in compliance with the Electromagnetic Compatibility (EMC) directive and the Low Voltage Directive (LVD) of the Union European (EU). A Certificate of Compliance is available by contacting Patton Technical Support.

1.2 SERVICE

All warranty and non-warranty repairs must be returned freight prepaid and insured to Patton Electronics. All returns must have a Return Materials Authorization number on the outside of the shipping container. This number may be obtained from Patton Electronics Technical Service at

tel: **(301) 975-1007**
email: **support@patton.com**
www: **http://www.patton.com**

NOTE: *Packages received without an RMA number will not be accepted.*

Patton Electronics' technical staff is also available to answer any questions that might arise concerning the installation or use of your Model 3/9 HDX. Technical Service hours: **8AM to 5PM EST, Monday through Friday.**

2.0 GENERAL INFORMATION

Thank you for your purchase of this Patton Electronics product. If any questions or problems arise during installation or use of this product, please do not hesitate to contact Patton Electronics Technical Support at (301) 975-1007.

2.1 FEATURES

- Allows EIA-574/RS-232 Data Monitoring
- Monitoring Equipment Attaches to DB-9 Tap Connector
- Tap Connector Side OR Gate allows monitoring of TD and RD Lines in a Half-Duplex Environment
- Supports data rates up to 115,200 bps
- EMC Compliance: FCC Part 15, Class A and Directive 89/336/EEC using Standard: EN55022 for ITE

2.2 DESCRIPTION

The Model 3/9 HDX Multi-Drop Data Monitoring Tap allows you to monitor data line activity in half-duplex applications without tying up valuable oscilloscopes or protocol analyzers. Use it to tap into industrial control or other multi-point polling applications. All you need is a terminal running monitoring software.

Two of Model 3/9 HDX's three DB-9 connectors are wired *straight-through* with all 9 pins. The Tap connector's OR gate circuitry combines TD or RD on to a single line to allow monitoring of both signals. Available in all gender combinations, Model 3/9 HDX is a must for a network technician's toolbox.

3.0 INSTALLATION

The Model 3/9 HDX requires no configuration prior to, or subsequent to, installation: It is strictly "plug and play". This section tells how to install the Model 3/9 HDX in a half-duplex application.

3.1 CONNECTING THE INTERFACE PORTS

Model 3/9 HDX is designed to plug directly between DTE and DCE devices with a monitoring device connected to the DB-9 "Tap" connector.

In a typical data acquisition (DAQ) or process control half-duplex* application, (see Figure 1, below) only one device communicates on the data bus at a time. By connecting a monitor to the "Tap" side of Model 3/9 HDX, you can independently monitor both directions (TD and RD - pins 3 and 2, respectively) of the data bus without interrupting data flow.

***NOTE:** Model 3/9 HDX will not work in full-duplex applications.

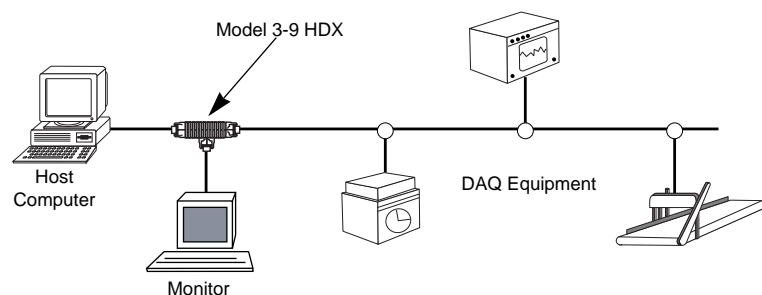


Figure 1. Typical Application of Model 3/9 HDX in Half Duplex Environment

Follow the instructions below to make install the 3/9 HDX.

1. Disconnect the cable from the master device. Verify all DB-9 pin connections. **NOTE:** Pins 3 and 2 are connected through an OR gate to the tap connector. All other pins are wired *straight-through* (See Appendix B for Pin Assignments).
2. Connect the master device into the "A" port of Model 3/9 HDX.
3. Connect the bus cable into the "B" port of Model 3/9 HDX.
4. Connect the monitoring equipment to the DB-9 tap connector.
5. Resume operations while monitoring data and control signal activity.

APPENDIX A SPECIFICATIONS

Data Rates: Up to 115,200 bps

Transmission Format: Asynchronous or synchronous

Transmission Mode: Half duplex

Interface: EIA-574

Connectors: DB9 Male or Female on all ports (All Configurations Available: MF-F, MF-M, MM-F, MM-M, FF-F, FF-M)

Power: Derived from RS-232 data and control signals, no AC power or batteries required

Temperature Range: 0-50°C (32-122°F)

Humidity: Up to 95% non-condensing

APPENDIX B
EIA-574 PIN CONFIGURATIONS

| DIRECTION | STANDARD "DCE" CONFIGURATION | DIRECTION |
|------------------------------|---|---|
| To DTE From DCE To DTE | <div><div><div></div><div></div><div></div><div></div><div></div></div><div><div>1- (CD) Data Carrier Detect</div><div>2- (RD) Receive Data</div><div>3- (TD) Transmit Data</div><div>4- (DTR)Data Terminal Ready</div><div>5- (SG) Signal Ground</div></div></div> <div>Data Set Ready (DSR) - 6 Request To Send (RTS) - 7 Clear to Send (CTS) - 8</div> | To DTE To DTE From DTE From DTE - |

APPENDIX C
BLOCK DIAGRAM

