

## Model 7610 SNMP DSU Startup Instructions

Document Number 7610-A2-GN10-30

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### Package Checklist

Verify that your package contains the following:

- A Model 7610 Single Port SNMP DSU
- Startup Instructions* and the *Model 7610 SNMP DSU User's Guide*, Document No. 7610-A2-GB20. The User's Guide is on diskette, and requires a PC with Microsoft Windows to view or print it.
- Power cord with power transformer
- Warranty card
- RJ48S modular cable for U.S. network access (14')

No DTE cables are provided. See *Cables and Equipment You May Need to Order* on page 2.

### Using the Adobe Acrobat Reader

The User's Guide is provided on diskette in Portable Document Format (PDF). It can be browsed or printed using the Adobe Acrobat Reader. The Reader is available at no charge at Adobe's World Wide Web site, <http://www.adobe.com>.

For best viewing, follow these instructions:

1. Maximize the Adobe Acrobat window so that it occupies the full screen.
2. Use the bookmarks along the left side to move around in the guide, and the Index to find specific topics.
3. Once you find the topic you wish to read about, use the View menu to select Page Only and Fit Visible.
4. If you expect to refer to the User's Guide often, use your operating system's file manager to copy the PDF file to your hard disk, then use the Acrobat Reader on the file on hard disk. This makes browsing through the document smoother and faster.

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## Cables and Equipment You May Need to Order

<b>If connecting . . .</b>	<b>Order a . . .</b>
A VT100-compatible terminal to the Terminal port	Standard straight-through EIA-232 cable with DB25 plug connectors on both ends.
An ASCII terminal or printer or UNIX Workstation to the Management port	Standard straight-through EIA-232 cable with DB25 plug connectors on both ends.
A PC to either the: <ul style="list-style-type: none"><li>■ Management port</li><li>■ Terminal port</li></ul>	Standard straight-through EIA-232 cable with a DB25 plug connector on one end and a DB9 socket connector on the other end.
An External Modem to either the: <ul style="list-style-type: none"><li>■ Management port</li><li>■ Terminal port</li></ul>	Standard crossover EIA-232 cable with DB25 plug connectors on both ends.
A Router's AUX port to the Management port	Standard straight-through EIA-232 cable with a DB25 plug connector on one end and a DB25 socket connector on the other end.
A DTE with a V.35 connector to the DTE port	V.35 cable with an MS34 plug connector on one end and an MS34 socket connector on the other end.
A LAN to the Management port via a LAN Adapter	Custom converter with a DB25 plug connector on one end and an 8-pin modular jack on the other end with a custom 8-conductor cable and LAN adapter.

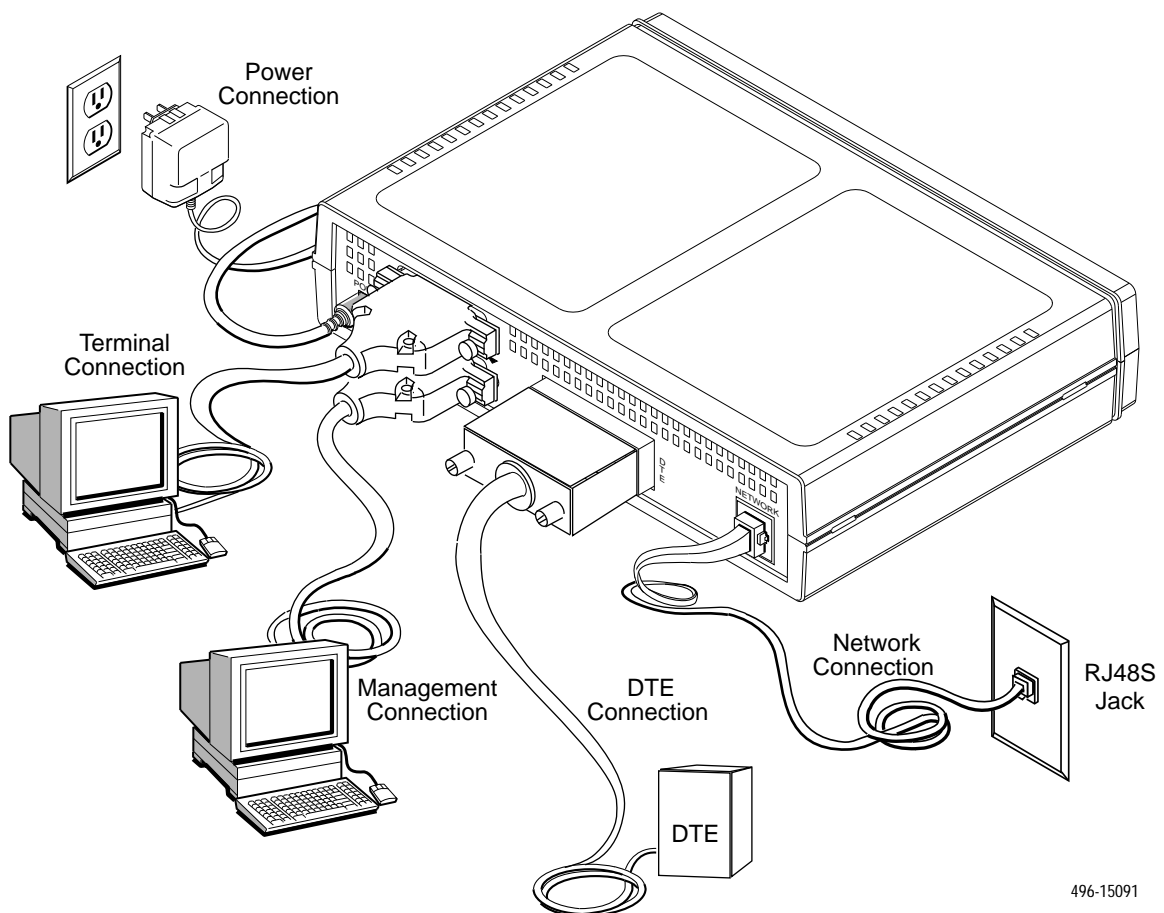
Contact your sales or service representative to order these cables. For details, refer to Appendix E, *Cables and Pin Assignments*, in the User's Guide.

## Site Preparation

Make sure you have:

- A dedicated, grounded ac outlet that is protected by a circuit breaker within 6 feet of the access unit.
- A clean, well-lit, and ventilated site that is free from environmental extremes.
- One to two feet of clearance for cable connections.
- An operable network connection.
- A VT100-compatible asynchronous terminal or a PC running terminal emulation software.

## Installing the DSU



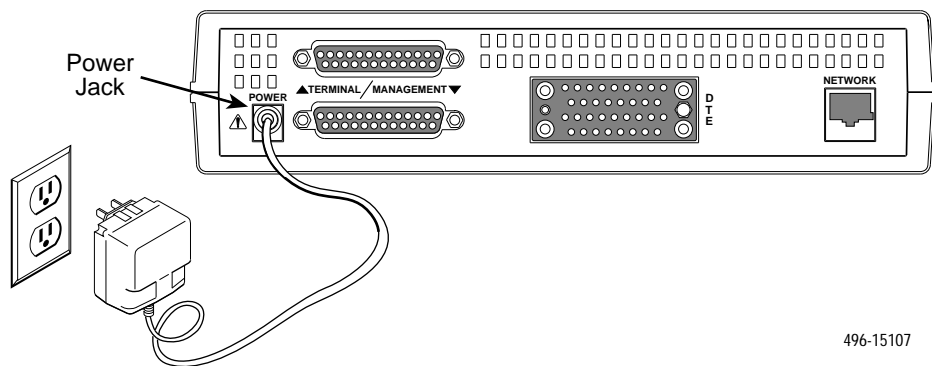
## Installing the Power Cord

### CAUTION:

Use no power supply except the one provided with the DSU. Using the wrong power supply can destroy the DSU.

#### ► Procedure

1. Insert the power plug into the POWER jack.
2. Plug the power transformer into an ac outlet.

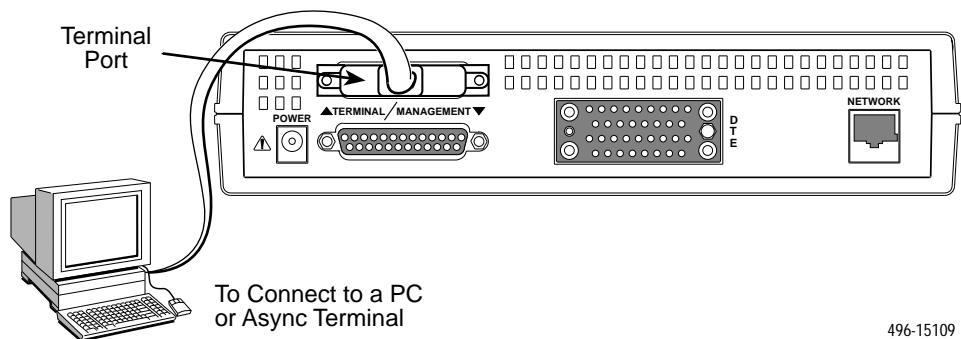


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## Connecting the Terminal Port to an Async Terminal

#### ► Procedure

1. Insert the 25-pin end of the EIA-232 cable into the TERMINAL port.
2. Insert the other end of the cable into the VT100-compatible terminal.
3. Press Return on the keyboard to display the Main Menu.



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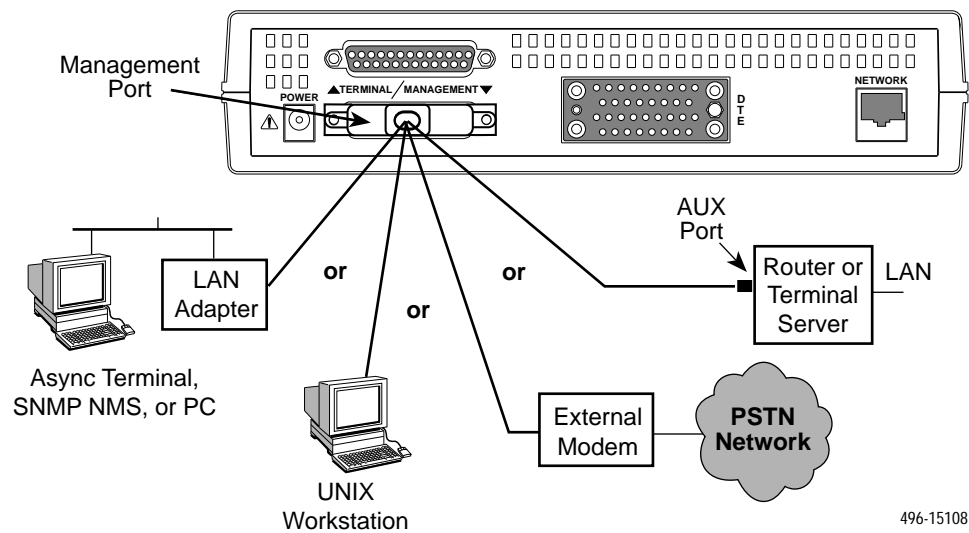
**NOTE:**

Factory defaults for communications parameters on the Terminal port are 9.6 kbps, 8 bits per character, one stop bit, and no parity.

## Connecting to the Management Port

### ► Procedure

1. Insert the 25-pin end of the EIA-232 cable into the MANAGEMENT port.
2. Insert the other end of the cable into the management interface connector. This may be on:
  - A LAN adapter
  - A UNIX workstation
  - An external modem
  - A router or server



**NOTE:**

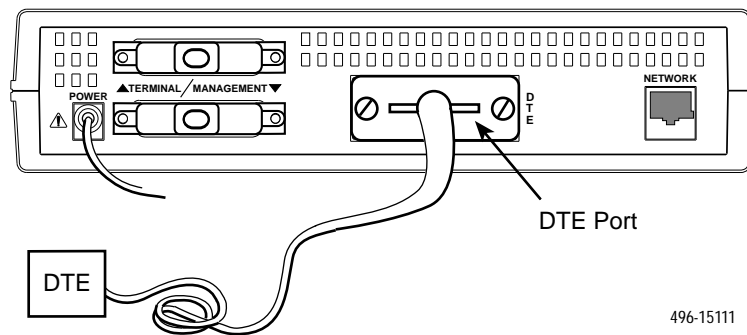
Verifying the connection to a LAN, router, or external modem requires setup and configuration; see Chapter 3, *Configuring the DSU*, in the User's Guide.

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## Connecting to a DTE

### ► Procedure

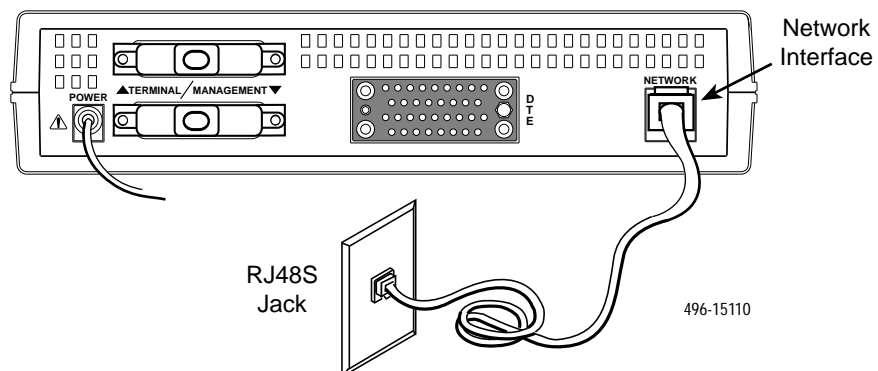
1. Insert one end of the 34-pin V.35 cable into the DTE port.
2. Insert the other end of the V.35 cable into the DTE connector.



## Connecting to the Network

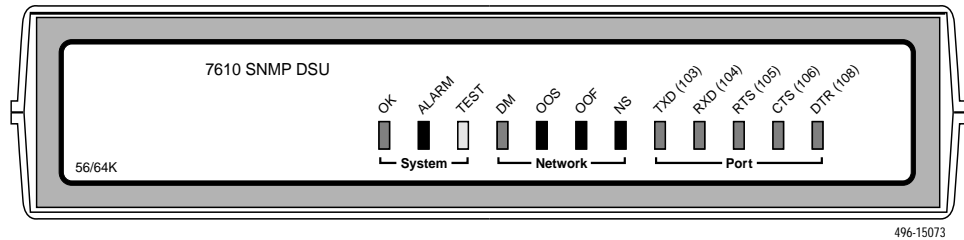
### ► Procedure

1. Insert the 8-pin connector on the RJ48S network cable into the NETWORK jack.
2. Insert the other end of the cable into the RJ48S modular jack.



## Hardware Verification

- Verify that the OK LED is on.
- Verify that the ALARM LED is off.



- Verify that the User Interface Idle screen is displayed on the asynchronous terminal or PC.  
Press the Enter key. Verify that the Main Menu appears.

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main                               Access Level: 1
Device Name:                        Model: 7610

                                MAIN MENU

                                Status
                                Test
                                Configuration
                                Control

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Ctrl-a to access these functions                                Exit
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If your DSU fails to respond as described, refer to Chapter 8, *Troubleshooting*, in the User's Guide.

# Technical Specifications

**Table 1. Model 7610 DSU Technical Specifications (1 of 2)**

<b>Item</b>	<b>Specifications</b>
<b>Housing</b>	
Height (including feet)	2.1 inches (5.3 cm)
Height (without feet)	2.0 inches (5.1 cm)
Width	8.7 inches (22.1 cm)
Depth (case)	6.2 inches (15.7 cm)
Depth (case and connectors)	6.5 inches (16.5 cm)
<b>Weight</b>	1.44 pounds (0.65 kg)
<b>Power</b>	
Normal service voltage range	Input: 120 Vac $\pm$ 12 Vac, 60 Hz $\pm$ 3 Hz 4.9 watts (max.) at 120 Vac
<b>Approvals</b>	
FCC Part 15	Class A digital device
FCC Part 68	Refer to the equipment's label for Registration Number.
Safety Certifications	Refer to the equipment's label for approvals on product.
Industry Canada CS-03	Refer to the equipment's label for Certification Number.
<b>Interface and Connectors</b>	
25-pin D-subminiature connector	EIA-232/ ITU V.24 (ISO 2110) for Terminal and Management Ports
34-pin MS34 connector	ITU V.35 (ISO 2593) for DTE Port
<b>Physical Environment</b>	
Operating Temperature	32° to 122° F (0° to 50° C)
Storage Temperature	-4° to 158° F (-20° to 70° C)
Relative Humidity	5%—95% (noncondensing)
Shock and Vibration	Withstands normal shipping and handling
<b>Heat Dissipation</b>	11.6 Btu/hr. (max.) at 120 Vac
<b>Network Interface</b>	
Data rates	56 kbps and 64 kbps clear channel (CC)
LADS data rates	56 kbps and 64 kbps
Services supported	4-wire service
<b>Terminal Port Data Rates</b>	2.4, 4.8, 9.6, 14.4, 19.2, 28.8, and 38.4 kbps Defaults: 9.6 kbps with 8 bits per character, 1 stop bit, and no parity
<b>Management Port Data Rates</b>	2.4, 4.8, 9.6, 14.4, 19.2, 28.8, and 38.4 kbps

**Table 1. Model 7610 DSU Technical Specifications (2 of 2)**

Item	Specifications
<b>Network Compatibility</b> ANSI T1.410–1992 and AT&T Technical Reference 62310–1993	56 and 64 kbps meeting desired loop loss
<b>IP Connectivity</b>	Up to 20 routes
<b>NMS Compatibility</b>	SNMP Network Manager
<b>MIB II Object Groups Supported</b>	<ul style="list-style-type: none"> <li>■ ICMP group</li> <li>■ Interfaces group:                             <ul style="list-style-type: none"> <li>– DDS network</li> <li>– DTE Data port</li> <li>– Terminal port</li> <li>– Management port</li> </ul> </li> <li>■ IP group</li> <li>■ SNMP group</li> <li>■ System group</li> <li>■ TCP group</li> <li>■ Transmission group:                             <ul style="list-style-type: none"> <li>– DDS network – DDS Enterprise MIB</li> <li>– DTE Data port – RS-232-Like MIB</li> <li>– Terminal port – RS-232-Like MIB</li> <li>– Management port – RS-232-Like MIB</li> </ul> </li> <li>■ UDP group</li> </ul>

**Table 2. Model 7610 DTE Port Clock Rate**

In-Band Management Channel (IMC) Rate	Line Operating Rate	
	56 Kbps	64 Kbps (CC or LADS)
0 (IMC disabled)	56,000 bps	64,000 bps
1,600 bps	54,400 bps	62,400 bps
4,000 bps	52,000 bps	60,000 bps
8,000 bps	48,000 bps	56,000 bps

**Table 3. Model 7610 DSU LADS (Local Area Data Set) Connection Distances**

Data Rate (kbps)	Wire Diameter (AWG)			
	19 Gauge (.0359" or .9122 mm)	22 Gauge (.0253" or .643 mm)	24 Gauge (.0201" or .511 mm)	26 Gauge (.0159" or .404 mm)
56	10.84 mi (17.45 km)	6.4 mi (10.3 km)	4.50 mi (7.24 km)	3.34 mi (5.37 km)
64	10.69 mi (17.2 km)	6.06 mi (9.76 km)	4.47 mi (7.2 km)	3.20 mi (5.15 km)

## Start-up Checklist

The User's Guide contains details regarding the Asynchronous Terminal Interface (ATI). When setting up the ATI:

- Refer to Chapter 1, *About the SNMP DSU*, to determine the management configuration(s) to manage the DSU with one of the user interfaces:
  - Locally through the Terminal port or by NMS connection through the Management port
  - Remotely via Telnet session, through the Management port or the In-Band Management Channel (IMC)
  - Out-of-band, using an external modem through the Terminal port or the Management port
- Set-up the Identity and Call Setup administrative screens. Refer to Chapter 3, *Configuring the DSU*.
- Establish security and Login IDs; refer to Chapter 4, *Security*.
- Decide on an IP addressing scheme. Refer to Chapter 5, *IP Addressing*.
- Determine whether you want ASCII alarms and/or SNMP traps generated. Refer to Chapter 8, *Messages and Troubleshooting*.
- Change configuration option settings. Refer to Appendix A, *Configuration Option Tables*, and Appendix B, *Worksheets*.
- Provide management connectivity with SNMP and enterprise-specific MIBs. Refer to Appendix C, *MIB Descriptions*, and Appendix D, *Standards Compliance for SNMP Traps*.

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## Important Safety Instructions

1. Read and follow all warning notices and instructions marked on the product or included in the manual.
2. Slots and openings in the cabinet are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, these slots and openings must not be blocked or covered.
3. Do not allow anything to rest on the power cord and do not locate the product where persons will walk on the power cord.
4. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous high voltage points or other risks. Refer all servicing to qualified service personnel.
5. General purpose cables are provided with this product. Special cables, which may be required by the regulatory inspection authority for the installation site, are the responsibility of the customer.
6. When installed in the final configuration, the product must comply with the applicable Safety Standards and regulatory requirements of the country in which it is installed. If necessary, consult with the appropriate regulatory agencies and inspection authorities to ensure compliance.
7. A rare phenomenon can create a voltage potential between the earth grounds of two or more buildings. If products installed in separate buildings are **interconnected**, the voltage potential may cause a hazardous condition. Consult a qualified electrical consultant to determine whether or not this phenomenon exists and, if necessary, implement corrective action prior to interconnecting the products.
8. Input power to this product must be provided by one of the following: (1) a UL Listed/CSA certified power source with a Class 2 or Limited Power Source (LPS) output for use in North America, or (2) a certified power source with a Safety Extra Low Voltage (SELV) output for use in the country of installation.
9. In addition, if the equipment is to be used with telecommunications circuits, take the following precautions:
  - Never install telephone wiring during a lightning storm.
  - Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
  - Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
  - Use caution when installing or modifying telephone lines.
  - Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
  - Do not use the telephone to report a gas leak in the vicinity of the leak.

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## Notices

### **⚠ WARNING:**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The authority to operate this equipment is conditioned by the requirements that no modifications will be made to the equipment unless the changes or modifications are expressly approved by Paradyne Corporation.

### **⚠ WARNING:**

**To Users of Digital Apparatus in Canada:**

**This Class A digital apparatus meets all requirements of the Canadian interference-causing equipment regulations.**

**Cet appareil numérique de la classe A respecte toutes les exigences du règlement sur le matériel brouilleur du Canada.**

## Government Requirements

Certain governments require that instructions pertaining to connection to the telephone network be included in the installation and operation manual. Specific instructions are listed in the following sections.

### **Notice to Users of the Telephone Network in the United States**

This equipment complies with Part 68 of the FCC rules. On the bottom of the equipment is a label that contains, among other information, the FCC registration number for this equipment. If requested, please provide this information to your telephone company.

If your DSU causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will be advised of your right to file a complaint with the FCC.

Your telephone company may make changes in facilities, equipment, operations, or procedures that could affect the proper operation of your equipment. If so, you will be given advance notice so as to give you an opportunity to maintain uninterrupted service.

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No repairs may be performed by the user. Should you experience difficulty with this equipment, refer to *Warranty, Sales, and Service Information*.

For Digital Data Service (DDS) installations, inform the local telephone company of the appropriate facility interface code for the service you desire.

DDS Facility	
Interface Code	Data Rate (kbps)
04DU5-56	56
04DU5-64	64

The DDS Service Order Number is 6.0Y. The jack configuration required is RJ48S. Refer to *Technical Specifications*.

After the telephone company has installed the requested service and jack, you can connect the DSU with the cable provided. An FCC-compliant telephone cord and modular plug are provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack that is Part 68 compliant.

## Canada

### Notice to Users of the Canadian Telephone Network

The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

#### **CAUTION:**

**Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.**

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The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

If your equipment is in need of repair, refer to the procedures described in the next section.

## Warranty, Sales, and Service Information

Contact your sales or service representative directly for any help needed. For additional information concerning warranty, service, repair, installation, documentation, or training, use one of the following methods:

- **Via the Internet:** Visit the Paradyne World Wide Web site at <http://www.paradyne.com>
- **Via Telephone:** Call the automated call system to receive current information via fax or to speak with a company representative.
  - Within the U.S.A., call 1-800-870-2221
  - International, call 727-530-2340



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