**Proxy** *Server* **200-Series**

**Internet Access with ISDN**

# ISDN ProxyServer

# Model MTPSR1-202ST

# Quick Start Guide

**Multi**Tech®
Systems

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Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of Member States relating to electromagnetic compatibility;

and

Council Directive 73/23/EEC of 19 February 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits;

both amended by

Council Directive 93/68/EEC of 22 July 1993 on the harmonization of CE marking requirements.

# Quick Start Guide

82076801 Revision B

ISDN ProxyServer (Model No MTPSR1-202ST)

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## Record of Revisions

| Revision | Description |
| --- | --- |
| **A** (1/12/98) | Manual released.  All pages at revision A. |
| **B** (7/7/98) | Manual revised to include version 2.01 software. |

## Patents

This Product is covered by one or more of the following U.S. Patent Numbers: *5.301.274; 5.309.562*; *5.355.365; 5.355.653; 5.452.289; 5.453.986*. Other Patents Pending.

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# Contents

## Introduction

Welcome to Multi-Tech's new ISDN ProxyServer model number
MTPSR1-202ST, a single, secure gateway that provides multiple
LAN users with high performance Internet access. The ISDN
ProxyServer functions as a TCP/IP proxyserver that resides on the
outer edge of your firewall and provides Basic Rate ISDN Service
using its internal 2B+D terminal adapter. The ISDN ProxyServer
features a 10BaseT port for local LAN connection, Command Port
for configuration, and an internal 2B+D ISDN terminal adapter for
64K bps per channel or 128K bps effective bandwidth when
software BONDing (Bandwidth ON Demand) is employed.  System
management is provided through the command port using bundled
Windows® software which provides easy-to-use configuration
menus.
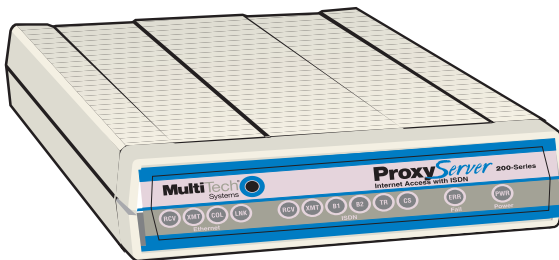


**Figure 1.  ISDN ProxyServer**

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## Related Documentation

The ISDN ProxyServer Quick Start Guide is intended to be used by qualified systems administrators and network managers. This quick start guide provides the necessary information for a qualified person to unpack, cable, load software, and configure the unit for proper operation.

A detailed User Guide is also provided with your ISDN ProxyServer. This user guide provides in-depth information on the features and functionality of Multi-Tech's Proxy Server. The User Guide is provided in diskette form and is also available from our Web site.

A ProxyServer Client Setup User Guide is provided to enable LAN users to configure their Windows 95 PCs to access the Internet through a ProxyServer. This User Guide is also provided on the Manuals diskette and at Multi-Tech's Web site.

The diskette media is produced using Adobe Acrobat for viewing and printing the user guide. To view or print your copy of a user guide, load Adobe Acrobat Reader on your system. Adobe Acrobat Reader can be downloaded from Adobe's Web site at:

http://www.adobe.com/prodindex/acrobat/roadstep.html

Launch the Reader and select the **.pdf** file from the diskette.

Viewing and printing a user guide from The Web also requires that you have the Adobe Acrobat Reader loaded on your system. The ISDN ProxyServer User Guide is also available on Multi-Tech's Web site at:

http://www.multitech.com

From the MTS home page, click **Support | Manuals | ProxyServer** and choose the User Guide for your Model MTPSR1-202ST which will download the **.pdf** file.

## Safety Warnings

1.  Never install telephone wiring during a lightning storm.

2.  Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.

3.  Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.

4.  Use caution when installing or modifying telephone lines.

5.  Avoid using a telephone (other than a cordless type) during an electrical storm.  There may be a remote risk of electrical shock from lightning.

6.  Do not use the telephone to report a gas leak in the vicinity of the leak.

## Unpacking your ProxyServer

Remove all items from the box.
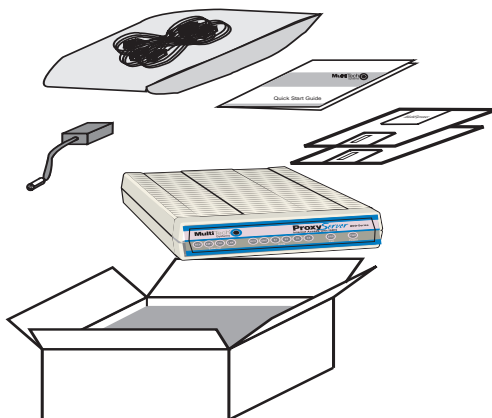


**Figure 2.  Unpacking**

## Cabling your ProxyServer

Cabling your ProxyServer involves making the proper Power, Command Port, Ethernet, and WAN connections. Figure 3 shows the back panel connectors and the associated cable connections. Table 1 details the procedures for connecting the cables to your ProxyServer.
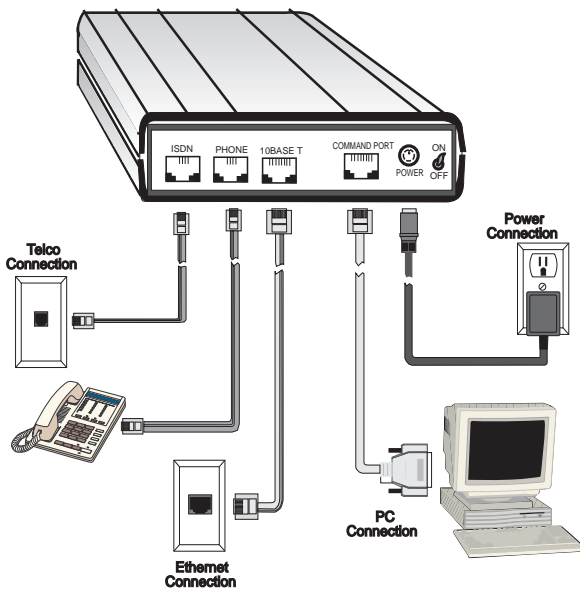


**Figure 3.  Cable Connections**

**Table 1.  Cabling Procedure**

**Step          Procedure**

1    Connect one end of the power supply to a live AC outlet and connect the other end to the ProxyServer as shown in Figure 3.  The power connector is a 6-pin circular DIN connector.

2    Connect the ProxyServer to a PC by using the short RJ45 to DB25 (female) cable provided with your unit.  Plug the RJ45 end of the cable into the Command Port of the ProxyServer and the other end into the RS232 cable from the PC serial port.  See Figure 3.

3    To make the network connection, connect one end of an RJ45 (UTP) cable to the 10 BASE-T connector on the back of the ProxyServer as shown in Figure 3. Connect the other end of the cable to your LAN.

4    Connect one end of an RJ45 cable to the ISDN connector on the back of the unit and connect the other end to the ISDN Telephone Network (Telco wall jack) as shown in Figure 3.

5    Turn on power to the ProxyServer by placing the ON/OFF switch on the back panel to the ON position.

     **Wait for the Fail LED on the ProxyServer to go OFF before proceeding. This may take a couple minutes to go off.**

At this time your ProxyServer is completely cabled.  Proceed to the next section to load your ProxyServer software.

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## Before You Start Loading your Software

Consider the following choices before you configure your Proxy-Server and record your selections on the following pages; then refer to them while loading your software.

## Network Configuration

✓ *Network Switch Type*_____

Select the network switch type your ISDN service provider uses at its local central office. You can set the ProxyServer to NET3 (DSS1), 1TR6, VN4, INS64, NI-1, AT&T 5ESS, or DMS-100. If you do not know the switch type, you can get the information from your ISDN service provider.

✓ *Data TEI*_____

The Data TEI is the TEI that is assigned to the data channel. You can select "Auto TEI," a fixed TEI (from 0 to 63), or "Disabled." A TEI (terminal endpoint identifier) is a number used by the central office switch to uniquely identify each device that is connected to the network. When it uses dynamic TEI assignments (Auto TEI), the central office switch assigns a TEI each time the ProxyServer connects to the network. However, the ISDN service provider may assign a fixed TEI at subscription time, in which case you must configure the ProxyServer with the fixed TEI number. You can also disable the channel, which may be useful when multiple ProxyServers are attached to a network terminator bus.

✓ *Voice TEI*_____

The Voice TEI is the TEI assigned to the voice channel. You have the same choices as for the Voice TEI: "Auto TEI," a fixed TEI number (from 0 to 63), or "Disabled."

✓ *Data SPID*_____

The ProxyServer must be configured with the Service Profile Identifier (SPID).  The data SPID is assigned by the local phone company and is for the specific BRI line to which the ProxyServer will be attached.  The data SPID string can have up to 20 characters.  The data SPID is not used if the switch type is set to NET3.

**Note:** For DMS-100 switches, any ASCII character except the underline (_) character is valid. For NI-1 and AT&T switches, only the digits 0-9 are valid.

✓ *Voice SPID*_____

The voice SPID is assigned by the local phone company and is for the specific BRI line to which the ProxyServer will be attached. The voice SPID string can have up to 20 characters. The data SPID is not used if the switch type is set to NET3.

**Note:** For DMS-100 switches, any ASCII character except the underline (_) character is valid. For NI-1 and AT&T switches, only the digits 0-9 are valid.

✓ *Data Directory Number*_____

The data Directory Number (DN) is a telephone number that is assigned to the ProxyServer at subscription time by the ISDN service provider. The DN is a string of up to 24 characters; valid characters are 0-9, the * character, and the # character.

✓ *Voice Directory Number*_____

The voice Directory Number (DN) is a telephone number that is assigned to the ProxyServer at subscription time by the ISDN service provider. The DN is a string of up to 24 characters; valid characters are 0-9, the * character, and the # character.

## Call Control Parameters

✓ *Persistent DTR Dialing*_____

A high DTR (Data Terminal Ready) signal on the Command port indicates that your computer or terminal is ready to communicate with your ProxyServer. DTR normally goes high when a communication program starts or is ready to dial. Persistent DTR dialing enables the ProxyServer to automatically redial the number stored in memory location 0 whenever DTR is high and the serial port does not have an active call. You may enable or disable this feature.

✓ *Calling Line Identification*_____

Identifies whether the two endpoints of a connection are enabled or disabled. Since RING messages only appear for ISDN data calls, the CLI feature does not define a means of

conveying Calling Party information to the terminal for ISDN voice calls. The CLI information is only included with the first RING message for a given incoming call, and appears as follows:

<div align="center">

RING
FM: 5552000 TO: 5551000

</div>

If the Calling Party Number information is not included in the incoming SETUP message, the RING message appears as follows:

<div align="center">

RING
TO: 5551000

</div>

If the Called Party Number information is not included in the incoming SETUP message, the RING message will appear as follows:

<div align="center">

RING
FM: 5552000

</div>

If neither the Called Party Number, nor the Calling Party Number is included in the incoming SETUP message, the RING message will contain no additional information.

✓ ***Auto Protocol Detection - Always Unchecked (Disabled)***

Identifies that automatic protocol detection is enabled or disabled for an ISDN data call. The default setting is 0, which disables the Auto-Protocol Detection function.

✓ ***Auto Answer Data Calls _____ Rings to Answer____***

Select Auto Answer if you want your ProxyServer to automatically answer all incoming data calls (this option does not affect the analog port). The Rings to Answer number, in the range of 1 to 255, selects the number of rings the ProxyServer waits before answering an incoming call. The default is one ring.

## Data Control

✓ ***Data Protocol_____***

The data protocol, also known as the B-channel protocol and the rate adaption protocol, is the "language" that is spoken over each 64K bps channel between two ISDN devices. The devices on both ends of the ISDN link must use identical data protocols.

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**MLPPP Protocol**

The MLPPP (Multi-Link PPP) protocol provides rates up to 64K bps per channel. This protocol uses both B channels at once, providing an aggregate data transmission speed of 128K bps.

✓ *Dialing Method* _____

Select either the "Enbloc" or the "Overlap" dialing method for use when establishing a data call. Your ISDN service provider determines the dialing method. The en bloc method is used for most ISDN dialing; however, you can select the overlap method if you are working with a private network.

## Loading your Software

The following loading procedure does not provide every screen or option used in the process of installing the ProxyServer software. The assumption is that a technical person with a thorough knowledge of Windows and the software loading process is doing the installation. Additional information on the ProxyServer software is provided in the User Guide.
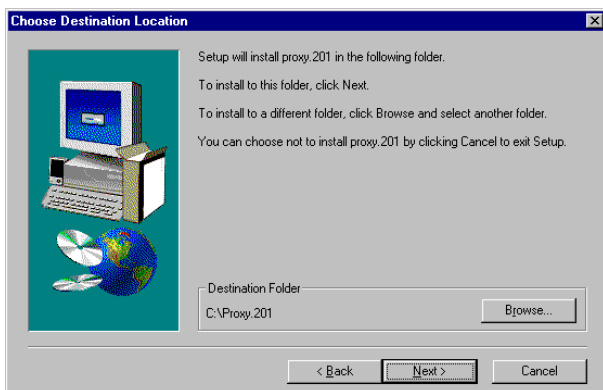
1.  Run Windows on the PC that is connected to the Command Port.

2.  Insert ProxyServer Version 2.01 Disk 1 into the disk drive on the PC that is connected to the ProxyServer.

3.  **Win3.1 users** - access Run by clicking on the File menu in the Program Manager and then clicking on Run. In the Run dialog box, type **a:\setup** or **b:\setup** (depending on the drive letter of your floppy disk drive) in the Command Line field and then click on **OK**.

    **Win95 users** - click on the Start box and then click on Run. In the Run dialog box, click on the down arrow and choose **a:\setup** or **b:\setup** (depending on the drive letter of your floppy disk drive) in the Command Line field and then click on **OK**.
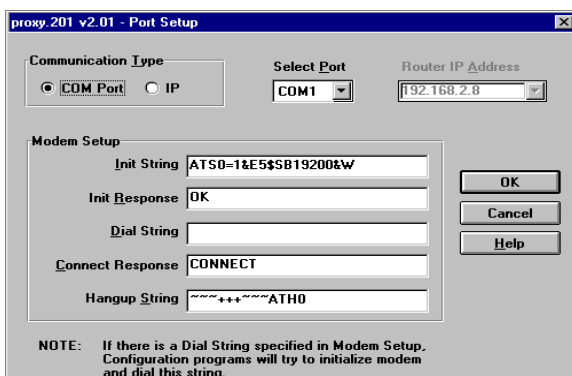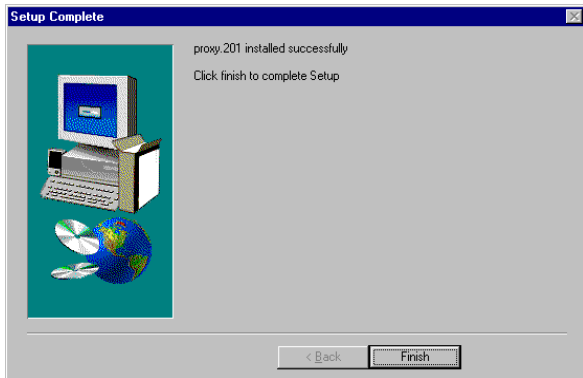


**10**
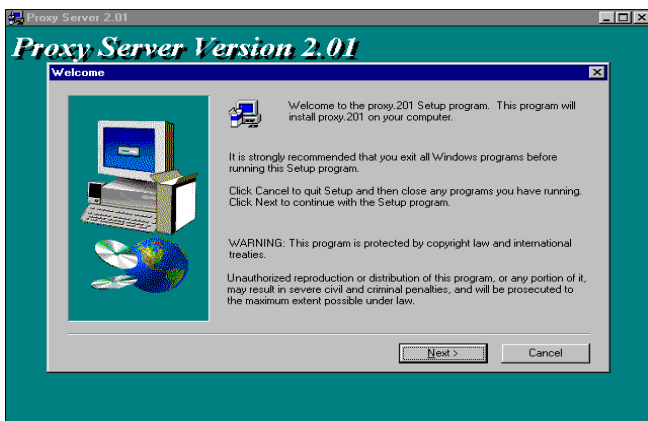
4. Follow the on-screen instructions to install the Proxy-Server software.



5. The following dialog box selects the COM port of your PC that is connected to the Command Port of the ProxyServer. From the **Select Port** list box, click on the down arrow and choose the COM port of your PC.



6. Click on **OK** to continue.

7.  Click on the **Finish** button to continue.

8.  The **"Do you want to download default setup?"** dialog box is displayed.
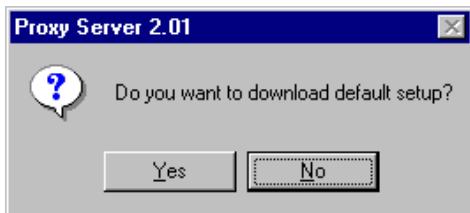


9.  Click on **Yes** to download the default setup. Clicking on the **No** button prevents the defaults from being downloaded to the ProxyServer.
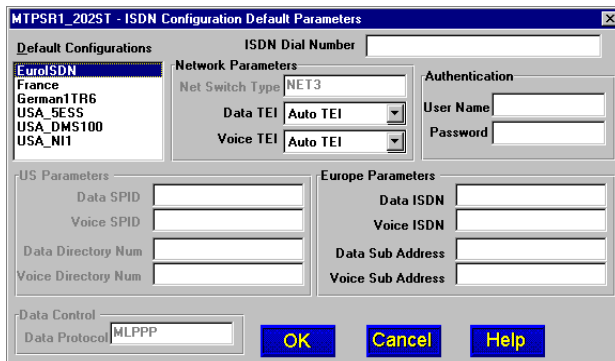
## IP Port Configuration

This dialog allows for the configuration of IP parameters that are generally applicable to IP Proxying on all ports.

10. The default **LAN IP address** has to be changed to your unique LAN address. Change the default IP address, 192.168.0.1, to your unique LAN IP address.

11. If your ISP dynamically assigns the **WAN port IP address**, do nothing and proceed to the next step.

    If a static WAN IP address needs to be assigned, highlight **WAN** in **Port Selection**, then click on the **ISP assigns Dynamic Address** check box to disable the feature, and click on the **IP Address** field and enter your IP WAN address. Also, ensure that the **Net Mask** for your WAN is correct.
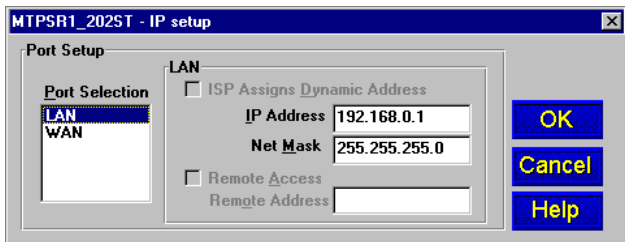


12. Click on the **OK** button.

13. Click on the **Default Configuration** supplied by your local ISDN service provider.  Refer to your entry in Network Switch Type in Before You Start Loading Your Software in this chapter.

14. Click on the **ISDN Dial Number** field and enter the telephone number supplied by your ISDN service provider. The telephone number can be a standard local number or it can include a long distance prefix.

   **Note:** Some ISDN service providers require only that you enter the phone number you call for ISDN service.

15. If the phone number is all your ISDN service provider requires, click on the **OK** button then go to step 25 to continue loading your software. However, if your ISDN service providers requires that you enter additional parameters, continue to step 16.

16. Click on the **Data TEI** field in **Network Parameters**. Refer to your Data TEI entry in the Network Configuration section in Before You Start Loading Your Software.  If the **Data TEI** is different, click on the drop-down list arrow and click on the selection that corresponds to the Data TEI supplied by ISDN service (i.e., Disabled, Auto TEI, or zero to 63).

17. Click on the **Voice TEI** field in **Network Parameters**. Refer to your Voice TEI entry in the Network Configuration section in Before You Start Loading Your Software.  If the **Voice TEI** is different, click on the drop-down list arrow, then click on the selection that matches the Voice TEI supplied by your ISDN service (i.e., Disabled, Auto TEI, or zero to 63).

18. If your ISP or Remote Access Server (RAS) uses Point-to-Point Protocol (ppp), click on the **User Name** field in the **Authentication** group and enter your user name. If SLIP protocol is used by your ISP or RAS, authentication is provided in script form.

19. If your ISP or RAS uses Point-to-Point Protocol (ppp), click on the **Password** field in the **Authentication** group and enter your password.  If SLIP protocol is used by your ISP or RAS, authentication is provided in script form.

20. Depending on your default configuration, the **US Parameters** group or the **Europe Parameters** group will be active.

    If the **US Parameters** are active, enter the **Data SPID** supplied by your local phone company and you re-corded in Before You Start Loading Your Software.

    If the **Europe Parameters** are active, enter the **Data ISDN** number supplied by your local telephone com-pany and you recorded in Before You Start Loading Your Software.

21. If **US Parameters** are active, enter the **Voice SPID**.

    If **Europe Parameters** are active, enter the **Voice ISDN.**

22. If **US Parameters** are active, enter the **Data Directory Num**(ber) supplied by your local telephone company and you recorded.

    If **Europe Parameters** are active, enter the **Data Sub Address** supplied by your local telephone company and you recorded.

23. If **US Parameters** are active, enter the **Voice Directory Num**(ber) supplied by your local telephone company and you recorded.

    If **Europe Parameters** are active, enter the **Voice Sub Address** supplied by your local telephone company and you recorded.

24. Click on the **OK** button to continue loading your software.

25. Turn on power to your ProxyServer and the **Checking ProxyServer** dialog box is displayed.
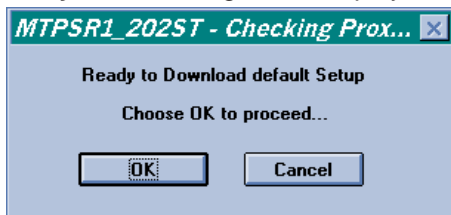


The Setup utility is "Ready to Download default Setup Choose **OK** to proceed."  Click on **OK** to proceed.

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26. The **Writing Setup** dialog box is displayed as the setup configuration is written to the ProxyServer.

**MTPSR1_202ST - Writing Setup** ☒

Date Stamp : May 27, 1998

Size(bytes) : 12925

71 %
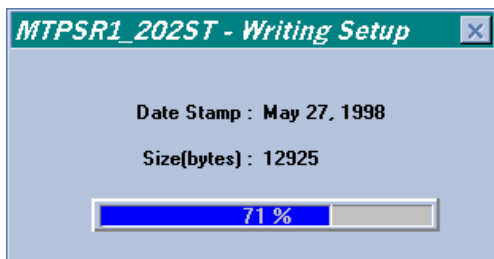
27. Check to ensure that the Fail LED on the ProxyServer is Off after the download is complete and the Proxy-Server is rebooted.

28. **Win3.1 users** - you are returned to your Program Manager where the Proxy Server Program Group and Program Item (Windows icons) have been created.

   **Win95 users** - you are returned to your ProxyServer folder which will be visible on your desktop.

## Limited Warranty

Multi-Tech Systems, Inc. ("MTS") warrants that its products will be free from defects in material or workmanship for a period of two years from the date of purchase, or if proof of purchase is not provided, two years from date of shipment. MTS MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. This warranty does not apply to any products which have been damaged by lightning storms, water, or power surges or which have been neglected, altered, abused, used for a purpose other than the one for which they were manufactured, repaired by the customer or any party without MTS's written authorization, or used in any manner inconsistent with MTS's instructions.

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## Service

Multi-Tech has an excellent staff of technical support personnel available to help you get the most out of your Multi-Tech product. Refer to your ISDN ProxyServer User Guide for Warranty and Service information.

**82076801**

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