

Total Control System Application Guide

PPP Dial-in / IP Network / PRI NETServer / Quad Modems



Part No. 1.024.1847-00 Version Number 1.0



Total Control System Application Guide

Point-to-Point Protocol (PPP) Dial-in Access To an Internet Protocol (IP) Network Over Primary Rate Interface (PRI) Lines: NETServer and Quad Modems



http://www.3com.com/

Part No. 1.024.1847-00

3Com Corporation 5400 Bayfront Plaza Santa Clara, California 95052-8145

Copyright © 1999, 3Com Corporation. All rights reserved. No part of this documentation may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without written permission from 3Com Corporation.

3Com Corporation reserves the right to revise this documentation and to make changes in content from time to time without obligation on the part of 3Com Corporation to provide notification of such revision or change.

3Com Corporation provides this documentation without warranty of any kind, either implied or expressed, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. 3Com may make improvements or changes in the product(s) and/or the program(s) described in this documentation at any time.

UNITED STATES GOVERNMENT LEGENDS:

If you are a United States government agency, then this documentation and the software described herein are provided to you subject to the following:

United States Government Legend: All technical data and computer software is commercial in nature and developed solely at private expense. Software is delivered as Commercial Computer Software as defined in DFARS 252.227-7014 (June 1995) or as a commercial item as defined in FAR 2.101(a) and as such is provided with only such rights as are provided in 3Com's standard commercial license for the Software. Technical data is provided with limited rights only as provided in DFAR 252.227-7015 (Nov 1995) or FAR 52.227-14 (June 1987), whichever is applicable. You agree not to remove or deface any portion of any legend provided on any licensed program or documentation contained in, or delivered to you in conjunction with, this User Guide.

Unless otherwise indicated, 3Com registered trademarks are registered in the United States and may or may not be registered in other countries.

YEAR 2000 INFORMATION:

For information on Year 2000 compliance and 3Com products, visit the 3Com Year 2000 web page:

http://www.3Com.com/products/yr2000.html

CONTENTS

CONFIGURATION INSTRUCTIONS 1

Chassis Configuration 2 Preparing the System to Be Managed 3 Communicating with the Console Interface 3 Configuring the NMC 4 Configuring the NETServer 5 Preparing the Management Workstation 7 Getting and Installing Total Control Manager and NETServer Manager 7 Installing Total Control Manager 8 Installing NETServer Manager 8 Inventorying the Chassis 8 Updating the Firmware 9 Configuring the NETServer Card 11 Configuring Global Settings 12 Configuring Ports 14 Configuring RADIUS [Optional] 15 Adding users to NETServer 15 Configuring the Dual PRI Card 17 Configuring the Quad Modem Cards 20 Making a Test Call 21

CONFIGURATION INSTRUCTIONS

This document explains how to configure the Total Control remote access server to allow dial-in PPP clients access to an IP network. It assumes that the Total Control server is connected to the public switched telephone network (PSTN) by an ISDN primary rate interface (PRI) line.

The following diagram and tables show the components of this application.

PSTN PRI Dial-In Clients	Ethernet For Control Remote Access Server
Clients	Analog modem or ISDN
WAN protocols	IP over PPP
WAN connection	ISDN PRI
LAN protocols	IP over Ethernet
Cards / Software	Software/Firmware Version
Dual PRI NAC & Dual T1 NIC	3.0.2
Quad Modem NACs	5.10.9 (ss), 5.9.9 (ds)
NETServer/PRI NAC & Ethernet NIC	3.7.24
NMC & Ethernet NIC	5.4.1 (386/4; 486/4), 5.5.2 (486/16)
Total Control Manager/SNMP for Windows	5.5.1
NETServer Manager for Windows	3.4.2

Chassis Configuration

In this application, the Total Control chassis contains the following network application cards (NACs), which are loaded from the front, and network interface cards (NICs), which are loaded from the back.

Cards	Functions
Dual PRI NAC & Dual T1 NIC	Terminates the PRI line and passes analog calls to modems in the Quad Modem cards; digital calls directly to the NETServer
Quad Modem NACs	Terminates modem connections from dial-in clients and communicates with NETServer
NETServer NAC & Ethernet NIC	Routes data between dial-in clients and an Ethernet network
NMC & Ethernet NIC	Handles SNMP management and software updates on behalf of the other cards and components of the Total Control system



Front view of the Total Control chassis in this application



Back view of the Total Control chassis in this application

Preparing the System to Be Managed

This section explains how to make a local serial connection to the NMC and then the NETServer and set IP parameters. This enables you to manage the chassis remotely using an SNMP-based management application, such as Total Control Manager.

Communicating with the Console Interface

- **1** Connect the DB-25 end of the cable shown in the following diagram to a serial port of your computer.
- **2** Connect the RJ-45 end of the cable shown in the following diagram to the console port of the NMC's Ethernet NIC. The console port is the topmost port of the NIC.



Pinouts for the serial cable [8-pin RJ-45 jack, DB-25 (male), DB-25 (female) with adapter]

- **3** On your computer, start any communications application that is capable of sending commands to your computer's serial port. An example is HyperTerminal for Windows.
- **4** Configure your communications application to use the COM port to which the serial cable is connected, plus the following settings:

Settings for serial communication with the NMC's console port

Port speed	9600 bps (default)
Terminal type	VT100
Data bits	8
Parity	None
Stop bits	1
Flow control	None

5 Press **<Enter>** several times, until the NMC's console interface appears. Then continue with *Configuring the NMC*.



If garbled messages appear on the screen, try changing the serial port speed from 9600 to 57600, 38400, or 19200 bps.

Configuring the NMC Follow this procedure to configure the NMC.

1 Set IP parameters for the NMC.

```
Main Menu
 1 Configuration
    1 Local LAN IP Address
       1 LAN IP Address
         Enter New LAN IP Address:
            x.x.x.48 <Enter>
       2 LAN IP Subnet Mask
         Enter New LAN IP Subnet Mask:
            255.255.255.x <Enter>
         <Esc>
    3 Local Gateway IP Address
       Enter New Gateway IP Address:
         x.x.x.62 <Enter>
    5 Local SNMP Community Strings
       1 SNMP Read-Only (Public) Community String
         Enter New SNMP Read-Only (Public) Community Stri:
            your_read-only_access_password <Enter>
       2 SNMP Read-Write (Private) Community String
         Enter New SNMP Read-Write (Private) Community St
            your_read-write_access_password <Enter>
    <Esc>
```

2 Save the configuration.

```
Configuration
9 Save Configuration To Non-Volatile Memory
<Esc>
```

```
3 Reset the NMC.
```

```
Main Menu
2 Command
1 Reset
Enter (Y) to Reset NMC:
y <Enter>
```

Configuring the NETServer

Follow this procedure to configure the NETServer.

1 Unplug the serial cable from the NMC's Ethernet NIC and connect it to the topmost serial port in the NETServer's Ethernet NIC. Use the same communications program with the same settings.



If garbled messages appear on the screen, try changing the serial port speed from 9600 to 57600, 38400, or 19200 bps.

2 Log in to the NETServer.

```
NETServer Console login: !root
Password: <Enter>
Command>
```

3 Set IP parameters.

```
Command> set net0 address x.x.x49
Local (net0) address changed from 192.77.203.194 to x.x.
Command> set net0 netmask 255.255.255.0
net0 netmask changed from 255.255.255.192 to 255.255.255.
Command> set gateway x.x.x.62
Gateway changed from 0.0.00 to x.x.x.62, metric = 1
```

6

4 Save the configuration.

```
Command> save all
Defragmenting flash filesystem...
Saving global configuration
[...]
MPIP Clients Table Saved
Commiting configuration to FLASH.
Command>
```

5 Reboot the NETServer.

```
Command> reboot
Rebooting NETServer Card....
Command>
```

Preparing the Management Workstation

At a workstation, install Total Control Manager and NETServer Manager (if they are not already installed). Connect to the same IP network as the chassis. Ping the chassis from the workstation to make sure you can reach it. If not, solve your IP-connectivity problem before continuing.

These are the code versions for the software and firmware used in this application. All except NETServer Manager are part of Total Control system release 3.1.1.

Software versions in this application

Program	Code version
Total Control Manager/SNMP for Windows	5.5.1
NETServer Manager for Windows	3.4.2

 Table 1
 Firmware versions used in this example

Card	Code version
NETServer/PRI for Ethernet	3.7.24
Quad V.34 Modem NAC, single-sided	5.10.9
Quad V.34 Modem NAC, dual-sided	5.9.9
Dual PRI NAC	3.0.2
NMC, 386 MHz / 4 MB RAM; 486 MHz / 4 MB RAM	5.4.1
NMC, 486 MHz / 16 MB RAM	5.5.2



NETServer hardware revision must be 5.0.0 or higher to run 3.7.24 code.

If Total Control Manager is already installed, start it, then from the **Help** menu, click **About Total Control Manager**. The software version should read 5.5.1.

Getting and Installing Total Control Manager and NETServer Manager You can get both Total Control Manager and NETServer Manager from the TOTALservice web site, if you are a contract customer. Refer to http://totalservice.3com.com/ for details.

To find the software, first log in to TOTALservice. Go to **Latest Code**. Total Control Manager is in the **Total Control Hub** section and NETServer Manager is in the **NETServer 8/16** section.

Installing Total Control Manager

- **1** Unzip the file into a temporary directory. Four subdirectories are created:
 - \accounti (Accounting Server)
 - \alarms (Alarm Server)
 - \tcm (Total Control Manager)
 - \view (View)
- Run Setup from the \tcm directory. Total Control Manager installs itself.

Installing NETServer Manager

- **1** Unzip the file into a temporary directory.
- 2 Run **Setup**. Be sure that NETServer Manager installs within the \usrsuite directory (where Total Control Manager is installed).

Inventorying the Chassis

Inventory the chassis to determine the firmware versions of all the cards. If they are not current, get and install new firmware.

- **1** Start Total Control Manager.
- 2 From the File menu, click New...

lew - Device ID	×
Device Name:	TotallyControlled
Target Host:	x.x.x.48
Device Type: WAN HUB	AutoDiscovery
- SNMP Commu	nity Strings
Read Only:	public
Read+Write:	private
Notepad	
<u>0</u> K	Cancel Option >>

- **3** Enter a name for the chassis (this name is used for identification purposes within Total Control Manager) the IP address you assigned to the NMC, and SNMP community strings (passwords), if you entered them. Click **OK**.
- **4** When the chassis appears, from the **Configure** menu, click **Inventory**.
- 5 Select the chassis from the list, then click **OK**. The inventory appears.

Inve	ntory	y 🗙				Inver	itory						×
-		P			_	_				-			
		Slot #	Description	Serial Number	▲			Hardware version	DRAM (KB)	Flash RAM (KB)	DIP Switches	Software version	
	4						4						
	5	1	3COM PRI-T1/E1 NAC	BCG53F2I			5	2.0.0	4096	1024	00000000000000100	3.0.2	
	6	2	3COM Quad V.34 Digital-Analog Modem NAC	B3G6B5X3			6	2.0.0	0	0	0000000110000100	5.10.9	
	7	3	3COM Quad V.34 Digital-Analog Modem NAC	B8R68JEZ			7	2.0.0	0	0	0000000110001000	5.10.9	
	8	4	3COM Quad V.34 Digital-Analog Modem NAC	B8R68JEB			8	2.0.0	0	0	0000000110001000	5.10.9	
	9	5	3COM Quad V.34 Digital-Analog Modem NAC	B8R68JFG			9	2.0.0	0	0	0000000110001000	5.10.9	
	10	6	3COM Quad V.34 Digital-Analog Modem NAC	B1G656BN			10	2.0.0	0	0	0000000110001000	5.9.9	
	11	7	3COM Quad V.34 Digital-Analog Modem NAC	B1G656B1			11	2.0.0	0	0	0000000110001000	5.9.9	
	12	16	3COM ISDN NETServer NAC	BA27TPFX			12	7.0.0	16384	4096	000000000000000000000000000000000000000	3.7.24	
	13	17	3COM Network Management Card with clock	BB0780IP			13	6.0	4096	8192	000000000000000000000000000000000000000	5.4.1	
	14	1	3COM Dual T1 NIC				14		4096	1024	000000000000000000000000000000000000000		
	15	16	3COM High Speed Ethernet (with V.35) NIC				15		16384	4096	000000000000000000000000000000000000000		
	16	17	3COM Ethernet NIC	2222222			16	??	0	0	000000000000000000000000000000000000000		
	17						17						
	18						18						
	19						19						
	.10								4				
	•			•			<u> </u>					,	
	Devices Save Print Copy Exit Help Devices Save Print Copy Exit Help												

6 Scroll to the far right and find the Software Version column. Compare the versions against those in Table 1. Then click **Exit**.

If you need new firmware, you can get it from the TOTALservice web site (if you are a contract customer). Refer to **http://totalservice.3com.com/** for details. To find the firmware, log in to TOTALservice. Go to **Latest Code** for the **Total Control Hub**.

Updating the Firmware from the TOTALservice web site is in compressed ZIP files. **Firmware**

- 1 Unzip the SDL and NAC files to the \usrsuite\sdl directory.
- 2 From the **Configure** menu, click **Software Download**. Total Control Manager associates the files with the correct cards.

		j		
Selection	Slot	NAC/DMF File	SDL File	Status
1	1 · T1 PRI	e:\usrsuite\sdl\dp0300	e:\usrsuite\sdl\dp0100	
~	2 - QADV34	e:\usrsuite\sdl\qr05100	e:\usrsuite\sdl\qr03030	
V	3 - QADV34	e:\usrsuite\sdl\qr05100	e:\usrsuite\sdl\qr03030	
V	4 - QADV34	e:\usrsuite\sdl\qr05100	e:\usrsuite\sdl\qr03030	
V	5 - QADV34	e:\usrsuite\sdl\qr05100	e:\usrsuite\sdl\qr03030	
V	6 - QDV34	e:\usrsuite\sdl\qf05090	e:\usrsuite\sdl\qf03020	
V	7 · QDV34	e:\usrsuite\sdl\qr05100	e:\usrsuite\sdl\qr03030	
1	8 - QADV34	e:\usrsuite\sdl\qf05090	e:\usrsuite\sdl\qf03020	
~	9 - QADV34	e:\usrsuite\sdl\qf05090	e:\usrsuite\sdl\qf03020	
	10 - Empty Slot			
	11 - Empty Slot			
	12 - Empty Slot			
	13 - Empty Slot			
	14 - Empty Slot			
	15 - Empty Slot			
1	16 - ISDN-GWC	e:\usrsuite\sdl\li030724	e:\usrsuite\sdl\li03042*	
, =	17 · NMC CLK	e:\usrsuite\sdl\nm0504		
•				•

- **3** Select the cards you want to update, then click **Start**.
- **4** When the box in the upper left reads *Software download completed*, click **Done**.



Software download is complete. Continue with Configuring the NETServer Card.

.....

Configuring the NETServer Card

Use this procedure to set up dial-in ports and users in the NETServer card.

1 Select the NETServer (indicated as ISDN-GWC in the far left of the window).



- 2 From the Configure menu, click Programmed Settings.
- **3** From the **Parameter Group** list, select **NETServer Configuration**.

NETServer Manager launches.



4 Log in to the NETServer. Type the IP address of the NETServer. If you set a password previously, type it. Select **Remember NETServer** Address.

The window that appears displays the current status of the NETServer. Perform all configuration using the Tables menu.

Configuring Global Settings

1 From the **Tables** menu, click **Global**. The Global Configuration window appears.

Glo	bal Configuration
	General Name Service Defaults Advanced PPTP Hosts MPIP Servers
	System Name: NS1 Telnet Access Port: 23
	Assigned Address: x.x.x.50 Reported Address: 0.0.0.0
	Sys Loghost: 0.0.0.0 Max B Channels: 60
	Sys Loghost2: 0.0.0
	🔽 !Root Access 🗖 Random Hosts 👘 Proxy ARP 🦷 SLIP In Modem
	🗆 ICMP Logging 🔽 Connect Message 🛛 Net BIOS 🛛 🔽 PPP In Modem
	I PAP
	<u>5ave</u> <u>Fassword</u> <u>Fxit</u> <u>H</u> elb

- **2** Fill in the following fields:
 - In the System Name field, type the name of the NETServer as it will be used for DNS.
 - In the Assigned Address field, type the first address in the pool of addresses to assign to dial-in users.
- 3 Click PPP in Modem.
- 4 Click the Name Service tab.

Glo	bal Configuration General Nam	e Service Defaults Advanced PPTP Hosts MPIP Servers	×
	⊂ NIS	Name Server: x.x.20.2 Name Server2: x.x.20.3 Name Server3: 0.0.0.0 Domain Name: x.com	
		<u>Save</u> <u>Password</u> <u>Exit</u> <u>H</u> elp	

- **5** Choose the type of name service to use. DNS is used in this example.
- **6** Fill in the following fields:
 - In the Name Server field, type the IP address of your primary name server.
 - In the Name Server2 field, type the IP address of your secondary name server [optional].
 - In the Domain Name field, type the NETServer's domain name (for this to work, you must also register your host with a DNS server).
- 7 Click the **Defaults** tab.

Global Configuration		×
General Name Service	Defaults Advanced PP1	TP Hosts MPIP Servers
Default IP Gateway	Default IPX Gateway	Default Routing:
Name: x.x.x.62	Name: 0:00000000000	None
Metric: 1	Metric: 0	
Hosts		
Primary: 0.0.0.0	Alternate 3: 0.0.0.0	Alternate 6: 0.0.0.0
Alternate 1: 0.0.0.0	Alternate 4: 0.0.0.0	Alternate 7: 0.0.0.0
Alternate 2: 0.0.0.0	Alternate 5: 0.0.0.0	Alternate 8: 0.0.0.0
Save	Password Exit	Help

- Select a Default Routing option: None, Broadcast, Broadcast & Listen, or Listen.
- Default IP Gateway should already be entered.
- 8 Click Save. A success message appears. Click OK, then click Exit.

Configuring Ports

1 From the **Tables** menu, click **Ports**.

Ports Configuration - >	.x.x.49	×
Port Number		
Port 0	Port Type	Configure Port
Port 1		
Port 2	🔽 User Login	
Port 3		Serial Port Parameters
Port 4	Host Device	
Port 6	Normal Access	
Port 7	Network Access	
Port 8	Dial In 💌	Init String
Port 9		None
Port 10		
Port 11 Port 12		
	Enable Modem	
Save	Copy Reset	Exit Help
	<u></u>	<u></u>

- Port 0 is the serial console port on the NETServer's Ethernet NIC.
- Ports 1–4 are statically assigned to slot 1, which is being occupied by the Dual PRI NAC. Skip them.
- Port 5 (the first port in slot 2) is the first modem port, assuming that there is a Quad Modem card in slot 2.
- 2 Select Port 5, then select Port Type: User Login, Network Access: Dial In, and Enable Modem.
- 3 Click Save, then Save Selected Port 5, and then OK. A success message appears. Click OK.
- 4 Click Reset, then Reset Selected Port 5, and then OK.
- **5** Copy Port 5's configuration to the rest of the ports:
 - a Click Copy. A Copy Ports window appears.
 - **b** Select **Port 5** in the Copy From section.
 - c Select **Port 6** in the Copy To section, hold [Shift], scroll down to Port 64 and then click **Port 64**.

- d Click Copy. A success message appears. Click OK, and then click Exit.
- 6 Select Save, then Save All, and then OK. When the message *Port* save completed appears, click OK.
- 7 Select **Reset**, then **Reset All Ports**, and then **OK**. A success message appears. Click **OK**, and then click **Exit**.

Configuring RADIUS [Optional] NETServer can either manage its own user lists or act as a RADIUS client to your RADIUS server. As a RADIUS client, when NETServer receives a call, it prompts the user for a username and password. If the user data is not in NETServer's database, it passes the user data to the RADIUS server, which it knows by the IP address you enter in this section.

- 1 From the Tables menu, click RADIUS.
- **2** Under Primary Server Address, type the IP address of your primary RADIUS security server.
- **3** Under Alternate Server Address, type the IP address of your alternate RADIUS security server [optional].
- **4** Click **RADIUS Secret**. Type in the secret, then type it again to verify it. Click **OK**.
- 5 Click the **Accounting** tab.
- **6** Under Primary Server Address, type the IP address of your primary RADIUS accounting server.
- **7** Under Alternate Server Address, type the IP address of your alternate RADIUS accounting server [optional].
- 8 Click **RADIUS Secret**. Type in the secret, then type it again to verify it. Click **OK**.
- 9 Click Save. A success message appears. Click OK, and then click Exit.

Adding users to
NETServerEven if you are using RADIUS for authentication, add a user to the
NETServer for test purposes.

- 1 From the Tables menu, click Users.
- 2 Click New.

Network User Parameters			×
Name: <mark>jim</mark> Password	Туре:	© User Login © Network	© Normal © Dialback
IP Address © Assigned: © Negotiated:		Input Filter: None Output Filter: None	
C Specified 255.255.254		Netmask: 255.2	255.255.255
Location: None PPP Async Map: 0		MTU: 1500	Compression
<u>O</u> K <u>C</u> ancel PI	PTP Hos	s <u>D</u> efault	<u>H</u> elp

- **3** In the Network User Parameters dialog:
 - **a** Type a user name.
 - **b** Click **Password**. Enter a password for the user. Verify the password. Click **OK**.
 - c For Type, select Network; IP Address: Assigned; Routing: Listen; Protocol: PPP/IP; Subnet Mask: 255.255.255.255 (with this subnet mask NETServer figures out the correct one itself); VJ Compression
 - d Click OK. A success message appears, click OK.
- 4 Add additional users as needed. Click Exit when finished.
- **5** From the **File** menu, click **Save to FLASH**. A success message appears, and asks if you want to save the configuration to disk. Click **Yes**.
- 6 From the File menu, click **Reboot NETServer**. An *Are you sure?* message appears. Click **Yes**.



NETServer configuration is complete. Continue with Configuring the Dual PRI Card.

Configuring the Dual PRI Card

1 Connect a PRI line to the SPAN 1 jack. Use a straight-through cable with an RJ-48C (RJ-45) 8-pin modular jack with the following pinout:



If the physical layer connection is good, the Alarm light [red] goes off and the CD light [green] goes on.

2 From Total Control Manager, click the *LEDs* (when you click one, the others are also selected) for the span you want to configure.



- **3** From the **Configure** menu, click **Programmed Settings**.
- 4 Select the PRI Trunk Settings parameter group.

PRI Card Programmed Settings			X
Selected Objects: <	\$1C1>; \$	•	Load From.
Framing Mode Line Coding Options Response to Remote Loopback Jitter Attenuation Transmitter Attenuation Primary Switch Type Set Idle Byte Pattern Call Proceeding/Connect on ALERTING Response on SETUP Overlap RX Mode	S1C1 ds1ESF b8zs respond attenJitterOnRcvr dB0 priSwDMS100 127 on off disable		Current Group
د [•	<u>D</u> K C <u>a</u> ncel <u>H</u> elp

- **5** Double-click each parameter to change. Set Framing Mode: usually **ESF**, Line Coding Options: usually **B8ZS**, Primary Switch Type Set (depends on the switch from which your PRI line originates; here, it's Nortel DMS-100).
- 6 Click Set, then click OK.
- 7 Click the *face* of the T1/PRI card (not the LEDs).



8 From the **Configure** menu, click **Programmed Settings**.

.....

PRI Card Programmed Settings		×
Selected Objects: <	1CD»;	Load From
Line A Timing Source Line B Timing Source Internal Timing Source ISDN-GW Slot Analog Modem Calls Modem call routing method Set DSD Out of Service upon NAC INFO Message Timeout DNIS Length Select PCM Companding	high mediumHigh notAllowed 16 enable fixedAssignment enable 12 15 ulaw	<u>G</u> et <u>S</u> et <u>P</u> rint <u>C</u> opy <u>V</u> iew By Row <u>D</u> efault
٩	×	<u>Q</u> K C <u>a</u> ncel <u>H</u> elp

9 Select the **PRI Configuration** parameter group.

- **10** Make the following settings:
 - ISDN-GW Slot: 16 (the number of the NETServer's slot)
 - Analog modem calls: Enabled
- **11** Click **Set**, then click **OK**.
- **12** Select the body of the PRI card, then, from the **Configure** menu, click **Actions/Commands**.
- 13 Under Command to execute, select Software, then Save to NVRAM.
- 14 Select **Execute** to save the configuration.
- 15 Under Command to execute, select Software Reset.
- **16** Select **Execute** to reset the PRI card. Then select **Close**.



Dual PRI card configuration is complete. Continue with Configuring the Quad Modem Cards.

Configuring the Quad Modem Cards

1 Click the top LED of the one of the Quad Modems, then press and hold [Ctrl], then click each top LED of the other Quad Modem cards.

QADV34				
Run/Fail				
Modem1				- 3
Modem2				
Modem3				
Modem4				

- 2 From the Configure menu, click Programmed Settings.
- 3 Under Parameter Group, select Line Interface Options.

Line Interface Source (%Dn)	priT dm 📃 🔻	nic
	nic	
•	t1Tdm	
	prildm	

- **4** Under **Line Interface Source**, change each to **priTdm**. Click **Set**, then click **OK**.
- **5** Select the top LED of each card.
- 6 From the **Configure** menu, click **Actions/Commands**.
- 7 Under Command to execute, select Software, then Save to NVRAM.
- 8 Select **Execute** to save the configuration.
- 9 Under Command to execute, select Software Reset.
- 10 Select **Execute** to reset the Quad Modem card. Then select **Close**.

The system is now configured to accept calls.

Making a Test Call	Th us	is section explains how to make a test call from a Windows 95 PC ing Dial-Up Networking.
	1	From the Start menu, click Programs , then click Accessories , then click Dial-Up Networking .
	2	Double-click Make New Connection.
	3	Type a name for the new connection and select a modem to use for the call.
	4	For the Telephone number , type the number assigned to the PRI line. Click Next , then click Finish .
	5	Right-click on the icon for your new connection. From the menu that appears, click Properties .
	6	Click the Server Types tab. Deselect everything except Enable software compression and TCP/IP. Click OK.
	7	Double-click your new connection icon. Type the username and password of the account you created on the NETServer. Then click Connect .
	Th	e modem should answer.
	8	From the Windows Start menu, click Run .
	9	In the Open field, type ping , then press [Enter]. A PING dialog appears.
	10	Type the IP address of the NETServer, then press [Enter].
	Yc	ou should see <i>Reply from</i> messages.
	Th	e configuration is verified.



3Com Corporation 5400 Bayfront Plaze P.O. Box 58145 Santa Clara, CA 95052-8145

© 1999 3Com Corporation All rights reserved Printed in the U.S.A.

p/n 1.024.1847-00