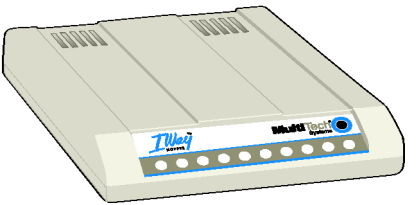
IWay™

ISDN Terminal Adapter



Models MTA128ST & MTA128NT

External ISDN Terminal Adapter

Quick Start Guide

MultiTech® Systems

Quick Start Guide
IWay ISDN Terminal Adapter
MTA128ST, MTA128NT
82050151 Rev. B

Revision	Date	Description
A	7/15/03	InitialRelease
B	8/28/07	UpdateTechnical support contact list.

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Getting Started

This Quick Start will help you install and configure your Terminal Adapter (TA). Before you begin, verify you switch type and TEI with your local ISDN provider and record that information in Before You Start in Chapter 3 of the User Guide.

Before You Start

Safety Warnings

- Never install telephone wiring during a lightning storm.
- Never install a telephone jack in a wet location 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 electrical shock from lightning.
- Do not use the telephone to report a gas leak in the vicinity of the leak.
- Ports that connect to other apparatus are defined as SELV. To ensure conformity with EN 41003, ensure that these ports connect only to the same type of port on the other apparatus.

Network Configuration

The following describes network configuration. Other types of configuration are included in the User Guide.

Network Switch Type

Select the network switch type your ISDN service provider uses at its local central office. You can set the MTA128ST/NT to NET3 (DSS1), VN4, INS64, U.S. NI-1, AT&T 5ESS, or DMS-100. If you don't know the switch type, get the information from your ISDN service provider.

AT command: ***!C0=***

Data TEI

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

AT command: ***!D3=***

Voice TEI

Voice TEI is the TEI assigned to the voice channel. Choices are: Auto TEI, a fixed TEI number, or Disable.

AT command: ****!D3=.***

Data MSN

The Data MSN (multiple subscriber number) allows a caller to specify an individual TA when more than one TA is connected to you network terminator. If you don't assign a value to the MSN, the TA accepts all incoming calls. If you only assign a base address to the MSN, the TA accepts any incoming call with the same base address, regardless of whether a subaddress is included. If you assign a base address and a subaddress to the MSN, the TA only accepts calls that match both the base address and the subaddress. The following examples show the syntax for setting the MSN with and without a subaddress.

AT command: ***!N1=***

MSN with subaddress: 5551000:001 (base address is 5551000; subaddress is 001)

MSN without subaddress: (base address is 5551000)

Voice MSN

Selects calls on the voice channel in the same way the Data MSN selects calls on the data channel.

AT command: ****!N1=***

SPIDs and DNs

The TA must be configured with the Service Profile Identifier (SPID). The SPID is assigned by the local phone company and is for the specific BRI line where the TA is attached. The SPID field is empty prior to configuration.

AT commands: **AT!C6=** and **AT*!C6=**

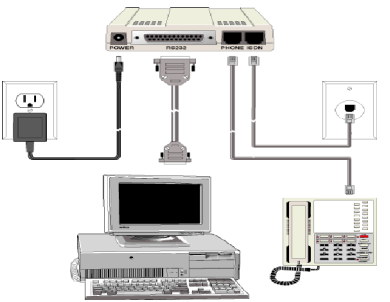
Directory Number (DN) is the phone number another user calls to contact this TA once it is attached to the ISDN.

AT commands: **AT!N1=** and **AT*!N1=**

Note: SPIDs and DNs are used only by the U.S. NI-1, AT&T 5ESS, and DMS-100 switch types.

Connecting Your TA

Turn off your computer. Place the modem in a convenient location, connect it to your computer's serial port, to the phone line, to AC power, and to your phone.



Connect the TA to the AC Power Outlet

Plug the DC power transformer into an AC power outlet or power strip. Plug the DC power transformer into the POWER jack on the TA.

Note: Use only the DC power transformer supplied with the TA. Use of any other transformer voids the warranty and can damage the TA.

Turn on the TA by sliding the power switch to ON and verify operation by observing the LEDs on the front panel. The LEDs first flash in a self-test pattern. Then the LS LED remains on. If the TA does not appear to be working, Refer to Chapter 5 for troubleshooting help.

Connect the TA to Your PC (RS-232 Connection)

Plug one end of the RS-232 serial cable into the RS-232 connector on the modem, and plug the other end into a serial port connector on your computer, such as COM1 or COM2. You supply the RS-232 cable.

Connecting to your ISDN Network Terminator

If you need a longer cable than the one provided with your TA, select a cable that is wired straight through (pin 1 to pin 1; pin 2 to pin 2, etc) with at least the middle four pins connected (pins 3, 4, 5, and 6).

Plug one end of the cable into the ISDN jack on the TA and the other end into the jack on your network terminator (MTA128ST) or U-interface (MTA128NT).

Note: The PHONE jack and ISDN jack are not interchangeable.

(Optional) Connecting to Analog Equipment

You can connect an analog device such as an analog telephone, modem or fax machine to the TA. Simply put the device's module telephone cable into the PHONE Jack (RJ11) on the TA.

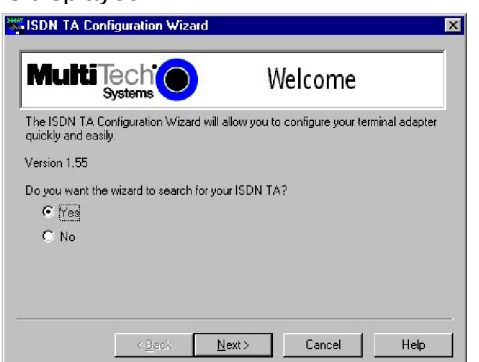
Note: The PHONE jack and the IDSN jack on the TA are not interchangeable.

Configuring your TA

If you use Windows 98/ME/NT, perform the following procedure using the Configuration Utility provided on your system CD. If you are using another operating system, you can configure the TA using the firmware-based configuration utility or AT commands. Procedures for both are described in the User Guide.

Before you begin, verify your switch type and TEI with your local ISDN provider and have that information readily available

1. When installing from CD, insert the MTA1 28ST/NT System CD into your CD ROM drive. When the MTA128ST/NT Terminal Adapter AutoRun screen is displayed, click on the Config Utility icon. Follow the on screen directions to load the Configuration Utility onto your PC.
2. When the Configuration Utility is loaded onto your pc, click **Start>Programs>ISDNTA Config Utility.** The Welcome screen is displayed.

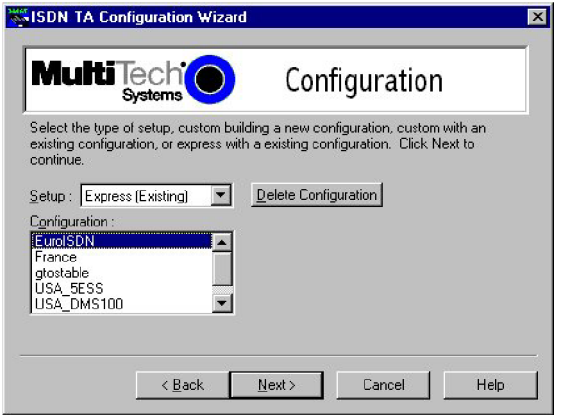


Do you want the wizard to search for your ISDN TA? with the **Yes** option enabled. Click **Next** to continue.

3. Searching for TA screen is displayed with please wait while the configuration utility searches for your ISDN TA(s). This may take up to 20 seconds. Then the Searching for TA screen with Devices have been identified. Please select a device to configure

Click **Next** to continue.

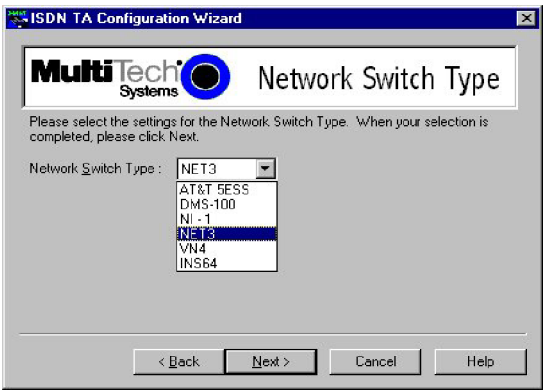
4. The Configuration screen is displayed with Select the type of setup, custom building a new configuration, custom with an existing configuration, or express with an existing configuration.



From the Setup pull down window you can choose Express (Existing), Custom (Existing), or Custom (New). The Express (Existing) opens an existing configuration, allowing you to modify some elements of the configuration. Custom (Existing) opens an existing configuration, allowing you to modify all elements of the configuration. Custom (New) allows you to customize a new configuration.

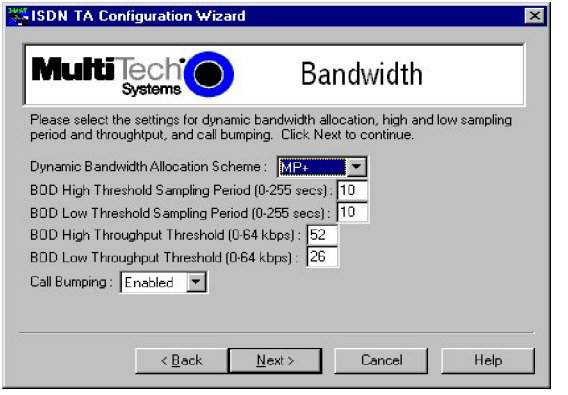
I have chosen Custom (New) for this example.

5. The Network Switch Type screen is displayed with Please select the settings for the Network Switch Type.



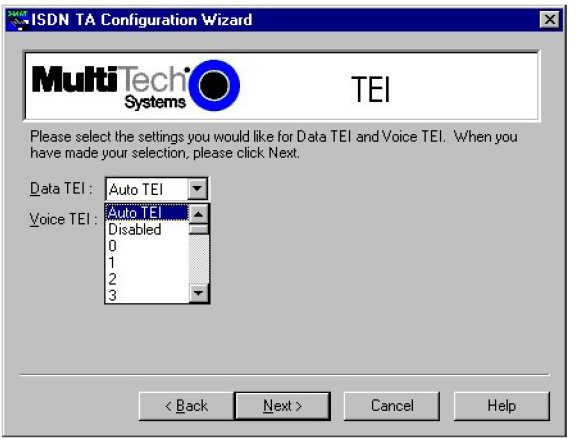
Select the network switch type you listed in the Before You Start section of this chapter.

6. Please select the settings for dynamic bandwidth allocation, high and low sampling period and throughput, and call bumping.



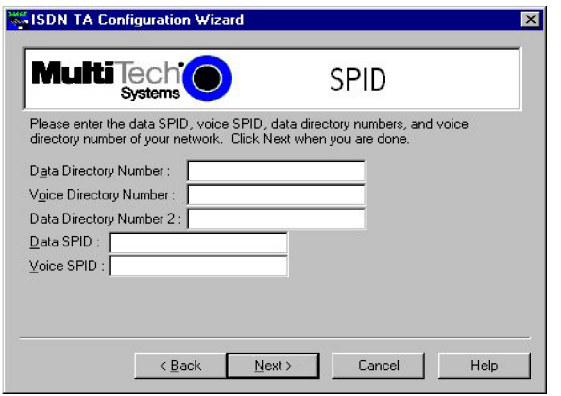
Click **Next** to continue.

7. The TEI (Terminal Endpoint Identifier) screen is displayed with Please select the settings you would like for Data TEI and Voice TEI.



The TEI is a unique number assigned to the TA at subscription time. The TEI is used by the telephone central office (GO) to identify the various TAs connected to the ISDN network. The TEI number can be fixed (range 0 - 63) or dynamic and is assigned automatically at the GO each time the TA connects to the ISDN interface and powers up. Glick Next when you are finished.

8. The SPID (Service Profile Identifier) North America only, is displayed with Please enter the data SPID, voice SPID, data directory numbers, and voice directory number of your network.



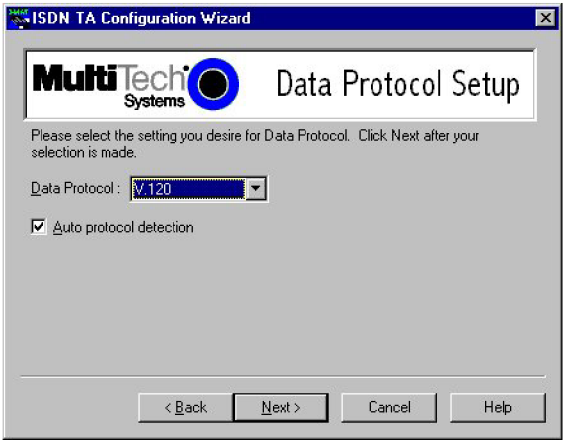
SPID is only used in North America. A SPID is the ISDN network parameter for local terminal identification and tracking. A SPID is assigned by your local ISDN provider when you subscribe, they are in the form of a string of up to 20 characters. A SPID points to a specific location in the provider's central office memory where service and feature parameters are stored.

Click Next when you have entered your SPID information.

9. The Call Control Setup screen is displayed with Please select the settings for call control.

Call Control Setup allows you to set up your terminal adapter and customize how it dials and answers. You can configure persistent DTR dialing, calling line identification, auto answer data calls, and number of rings. You can also set the online inactivity timer as well as the dialing method. Click **Next** when you are done.

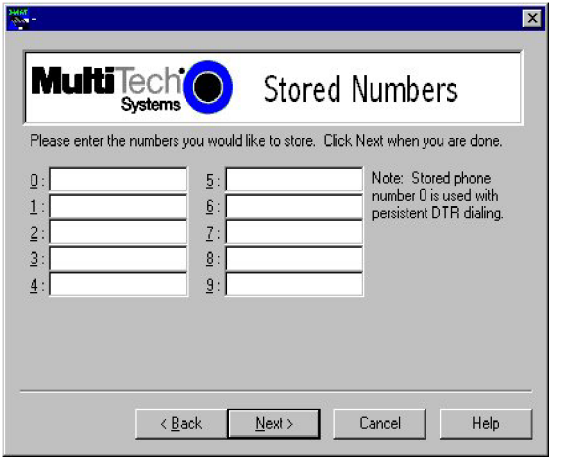
10. The Data Protocol Setup screen is displayed with Please select the setting you desire for the Data Protocol.



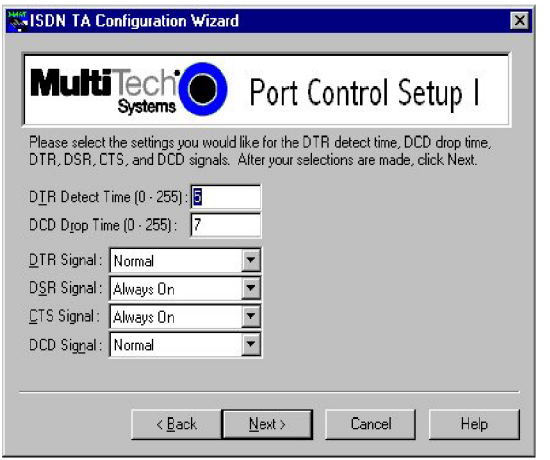
If you would like the TA to detect the data protocol of an incoming data call and automatically change the TA's protocol to match the incoming call, click auto protocol detection check box. Click **Next** to continue.

11. The Stored Numbers screen is displayed with Please enter the numbers you would like to store.

    You can store up to ten phone numbers with up to 25 characters per number. Stored number zero is used if Persistent DTR Dialing is enabled in Call Control Setup screen.

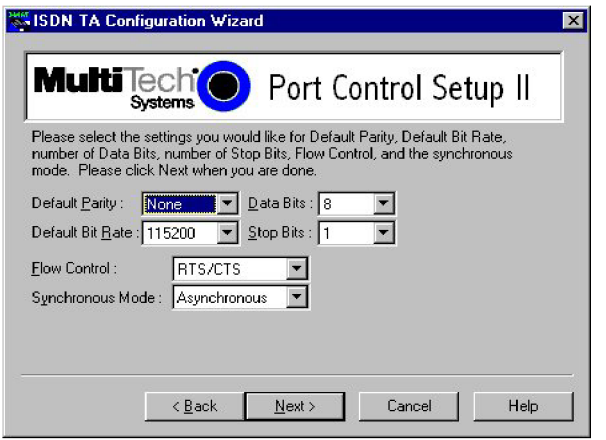


12 .The Port Control Setup 1 screen is displayed with Please select the settings you would like for the DTR detect time, DCD drop time, DTR, DSR, CTS, and DCD signals.



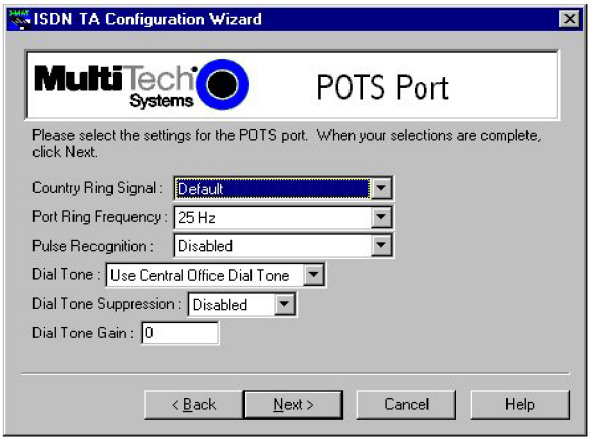
Click Next when you have finished entering your settings.

13. The Port Control Setup II screen is displayed with Please select the settings you would like for the Default Parity, Default Bit Rate, number of Data Bits, number of Stop Bits, Flow Control, and synchronous mode.



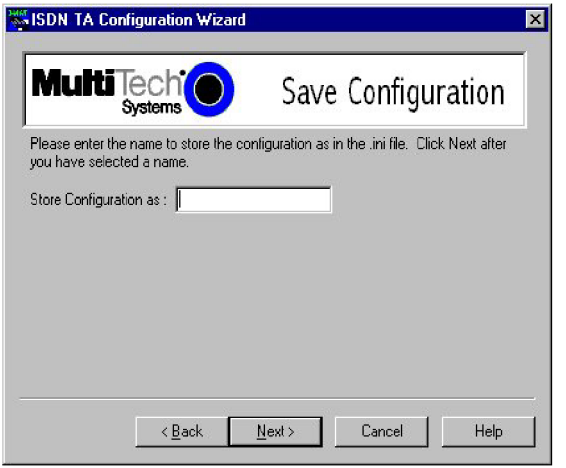
Click **Next** when you are finished.

14. The POTS Port screen is displayed with Please select the settings for the PORTS port.



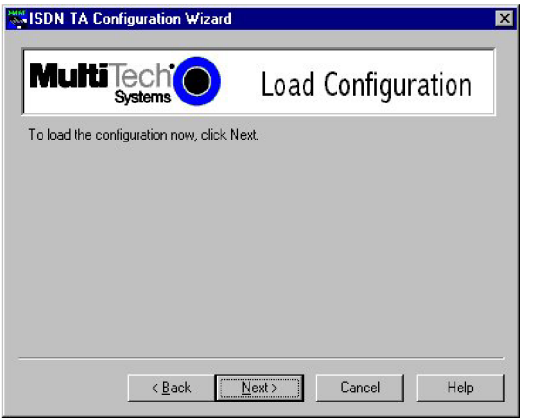
When your selections are complete, click **Next.**

15. The Save Configuration screen is displayed with Please enter the name to store the configuration as in the .ini file.



You can enter any name up to 35 characters or less in the Store Configuration as: window. Click **Next** after you have selected a name.

16. The Load Configuration screen is displayed with To load the configuration now, click **Next.**



17.Your ISDN TA is currently being configured.

When the Finish button becomes active, click **Finish.**

18.The Configured screen is displayed. Click **Finish** to exit the Configuration Utility.

Patents

This device is covered by one or more of the following patents: 6,031,867; 6,012,113; 6,009,082; 5,905,794; 5,864,560; 5,815,567; 5,815,503; 5,812,534; 5,809,068; 5,790,532; 5,764,628; 5,764,627; 5,754,589; 5,724,356; 5,673,268; 5,673,257; 5,644,594; 5,628,030; 5,619,508; 5,617,423; 5,600,649; 5,592,586; 5,577,041; 5,574,725; 5,559,793; 5,546,448; 5,546,395; 5,535,204; 5,500,859; 5,471,470; 5,463,616; 5,453,986; 5,452,289; 5,450,425; D353,598; 5,355,365; 5,309,562; 5,301,274. Other patents pending.