



Using the ADTRAN Express 3000 with Windows® 95/98 Dial-Up Networking

Introduction

This Technical Support Note will enable anyone to integrate an ADTRAN Express 3000 with Windows 95/98 Dial-up Networking.

Before You Begin

- This Technical Support Note assumes that you have already installed the .inf file and have installed the Express support into Windows 95/98. See KB Article # 1549 for more details.
- Your PC hardware also affects your throughput. If the COM port connected to the Express has a 16550 UART chip, the Express will perform at baud rates of 19.2 up to 115.2 kbps. However, if the COM port connected to the Express has a 16650 UART chip, the Express will perform at baud rates up to 230.4 kbps. You will need to purchase an add-on card with the 16650 UART chipset.

Express 3000 Setup

If installing an Express 3000 for the first time, use the ADTRAN Express Configuration software to automatically set up your Service Profile Identifier (SPID) number(s) and switch type.

Note: You must enter your correct area code and phone numbers for auto-SPID to perform correctly.

Configure Dial-Up Networking

To make a particular call type, it may be necessary to enter one of the factory settings into the **Extra Settings** dialog box under modem properties. To access this dialog box do the following:

1. Double-click on the **Modems** icon () in **Control Panel**.
2. Highlight the **ADTRAN Express 3000 Plug and Play** entry on the **General** tab as in **Figure 1**.

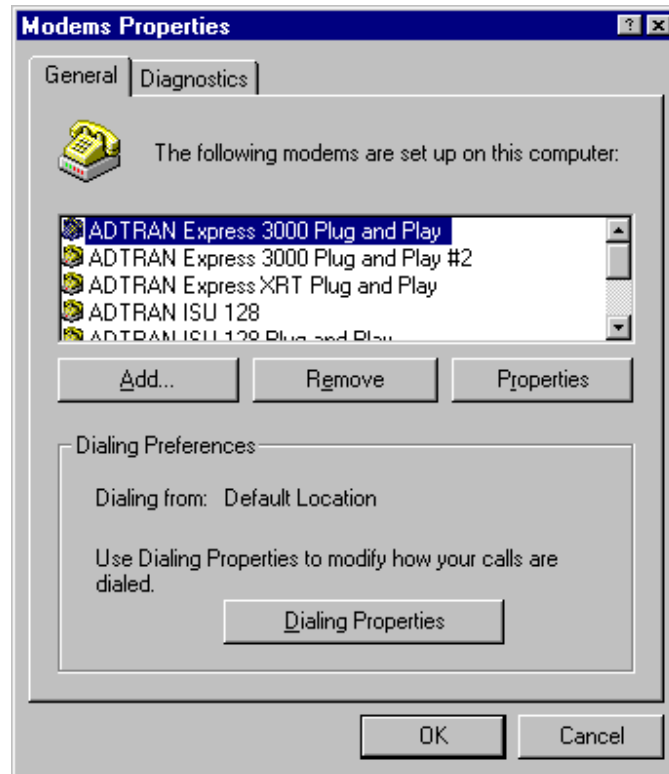


Figure 1: The Modem Properties Dialog Box

3. Click on the **Properties** button.
4. Click on the **Connection** tab; then click on the **Advanced...** button as shown in **Figure 2**.

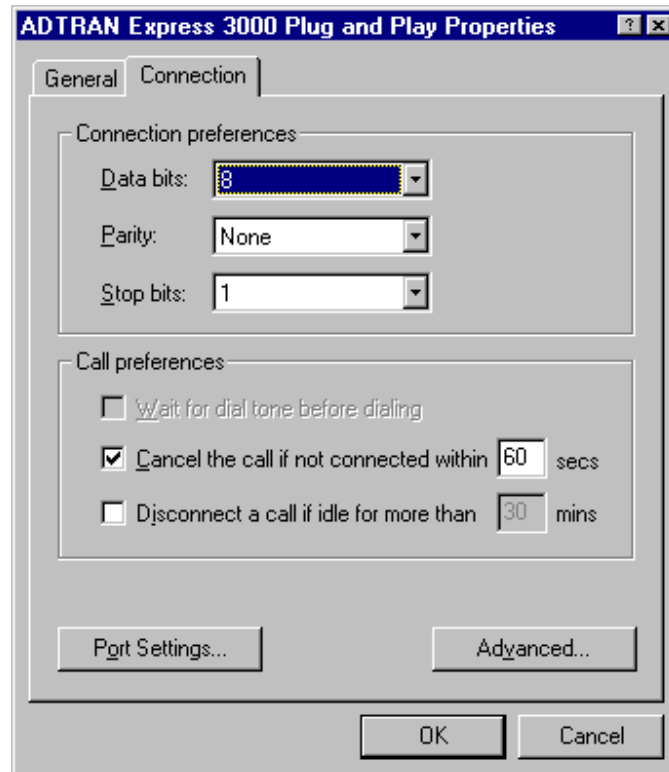


Figure 2: Connection Properties

5. Enter the initialization string (see below) into the **Extra Settings** text box. See **Figure 3**.

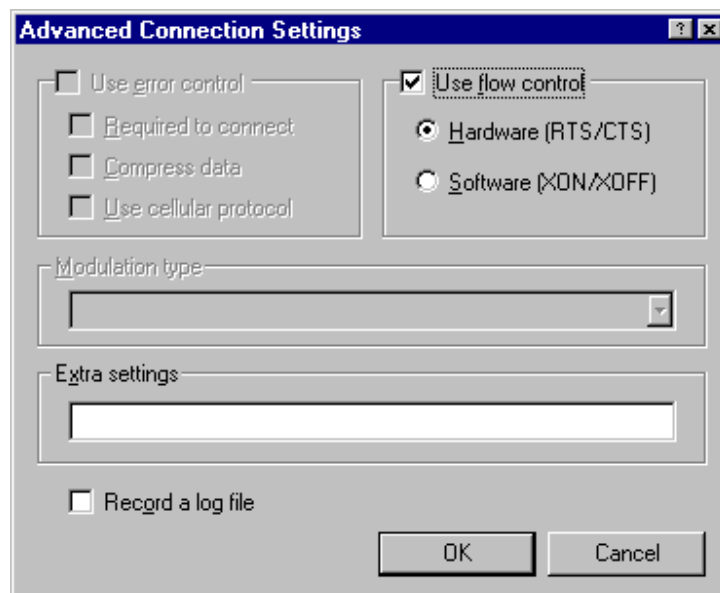


Figure 3: Advanced Connection Settings

6. Click the **OK** button and then click the next **OK** button.

7. Finally, click the **Close** button.

Initialization Strings

For maximum system flexibility, much of the Express setup is built into the initialization string sent by Windows 95/98. The Express 3000 can be set to perform many different combinations of call types and protocols.

Protocol and Purpose	Initialization String
Multilink PPP (MP) Use these strings when using Dial-Up Networking 1.2 or below. This protocol is commonly used to dial into an Internet service provider (ISP) at 128 kbps using both B channels of your ISDN line. This protocol also allows for bandwidth on demand. If you have an incoming or outgoing call on POTS port one, the unit will automatically drop to 64 kbps when the POTS line goes off hook and resume when the POTS goes on hook. Several different strings are listed because of the different ways your Internet Service Provider may be set up. You need to try each of these strings until your connection works.	AT\$S54=12S27=1S53=3S118=32S13=1 AT\$S54=12S27=1S53=3S118=40S13=1
Multilink PPP (MP) Use these strings when using Windows NT, Windows 98, or Windows 95 using Dial-Up Networking 1.3 or above. This protocol is commonly used to dial into an Internet service provider (ISP) at 128 kbps using both B channels of your ISDN line. This protocol also allows for bandwidth on demand. If you have an incoming or outgoing call on POTS port one, the unit will automatically drop to 64 kbps when the POTS line goes off hook and resume when the POTS goes on hook. Several different strings are listed because of the different ways your Internet Service Provider may be set up. You need to try each of these strings until your connection works.	AT\$S54=12S27=1S53=3S118=8S129=0S148=0S13=1 AT\$S54=12S27=1S53=3S118=8S129=1S148=0S13=1
Single link PPP is commonly used to dial into an Internet service provider (ISP) at 64 kbps using one B channel of your ISDN line.	AT\$S54=12S27=0S53=3S13=1

V.120 is for some connections to the Internet using 1 channel only. This protocol is usually used for remote access applications, such as when an employee is working from home.	ATS54=6S53=3S13=1
BONDING mode 1 is for 2 channel connections between two ADTRAN devices. It is usually used for software applications like pcAnywhere or EMED's Multiview program. This is an asynchronous call type that combines both B channels to form one logical 115.4 kbps data connection. This is also typically used for work at home applications. Unlike MP, BONDING mode 1 does not support bandwidth on demand.	ATS54=2S53=3S13=1
Data over Voice is for 1 channel connections to the Internet. Two different strings are listed because of the different ways your Internet Service Provider may be set up. You need to try both of these strings to see which one works for you.	ATS54=12S27=0S53=1S26=1S13=1 ATS54=12S27=0S53=0S26=1S13=1
Data over Voice is for 2 channel connections to the Internet. Two different strings are listed because of the different ways your Internet Service Provider may be set up. You need to try both of these strings to see which one works for you.	ATS54=12S27=1S53=1S26=1S13=1 ATS54=12S27=1S53=0S26=1S13=1

Note: To obtain 56K channel connections, you need to change the S53=3 command to S53=2.

Note: Some service providers require ATS54=12S27=1S53=0S26=1 to provide Data over Voice connections.

Note: Users trying to connect to CompuServe should try the following string: ATS54=6S53=2. You may also need the following connection properties: 7 Data Bits, Even Parity, and 1 Stop Bit.

Note: Users of Windows 95 with Dial Up Networking 1.2 or below can upgrade their software via Microsoft's Web site. (<http://support.microsoft.com/support/kb/articles/Q191/4/94.ASP>)

Note: The parts of the initialization string can be found in the **AT Commands and S Registers** section of the Express 3000 User Manual (KB Article # 2319).

Your system is now set to configure the Express to the protocol of your choice when using a Windows 95/98 dial-up networking session.

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