U.S.Robotics®

The Intelligent Choice in Information Access

Courier V.Everything Internal Modem:
Getting Started

FINAL

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Table of Contents

About This Manual

This manual explains how to set up and start using your *Courier V.Everything Internal Modem.*

Refer to the *Command Reference* manual, also included with the Courier, for detailed information about using advanced features.

We Welcome Your Suggestions

We've made every effort to provide you with useful, accurate information. If you have any comments or suggestions about these materials, please let us know.

Voicemail: **(847) 933-5200**

E-mail: **sysdocs@usr.com**

<div align="right">

Chapter 1
The Courier

</div>

The *Courier V.Everything Internal Modem* makes any IBM-compatible computer with an Industry Standard Architecture (ISA) or Extended Industry Standard Architecture (EISA) expansion bus capable of exchanging data with modems or fax machines over standard, analog telephone lines at speeds of up to 33.6 Kbps.

Using the Courier

The most common uses of the Courier modem are accessing the Internet or online services, accessing corporate networks remotely, calling bulletin board systems (BBSs), and for sending or receiving facsimiles or files.

Using the Courier always requires some kind of communications software. The software required differs depending on what you're trying to do.

Accessing the Internet

To access the Internet, you need to set up an account with an Internet service provider in your area. Often, Internet service providers supply you with the software you'll need. In other cases, support for Internet access is built in to your computer's operating system, as is the case with Windows 95.

The software needed to access the Internet is called a TCP/IP protocol stack. Your TCP/IP protocol stack must provide a dialing application that is capable of sending data over a serial line using the Point-to-Point protocol (PPP) or the Serial Line Internet Protocol (SLIP).

Calling Online Services

Each online service, such as America Online or CompuServe, provides its own customized communications software package. A couple of these packages are included with the Courier. These packages do the dialing and guide you through the steps of registration.

Accessing Corporate Networks Remotely

Dialing in to a remote network requires remote access software. When you dial in to a network, the software makes your remote computer appear to the network as locally attached. You can then use your network just as you would if you were there: send mail, print files, and access LAN drives.

A remote access package is included with the Courier.

Calling Bulletin Board Systems (BBSs)

Calling a BBS requires communications software that does terminal emulation. The software should also support common, standard file transfer protocols, such as YMODEM and ZMODEM.

A communications software package is included with the Courier.

Sending Facsimiles or Files

Most communications software packages support file transfers and many support fax operations. You can use fax-capable software to call fax machines or other fax modems and send facsimiles.

Courier Controls and Connectors

This section shows the DIP switches and connectors on the Courier and indicates where to find more information about each.

To Telephone
SEE PAGE 2-12

To Wall Jack
SEE PAGE 2-12

DIP Switches
SEE PAGE 2-8

Jumpers
SEE PAGES 2-4 & 2-7
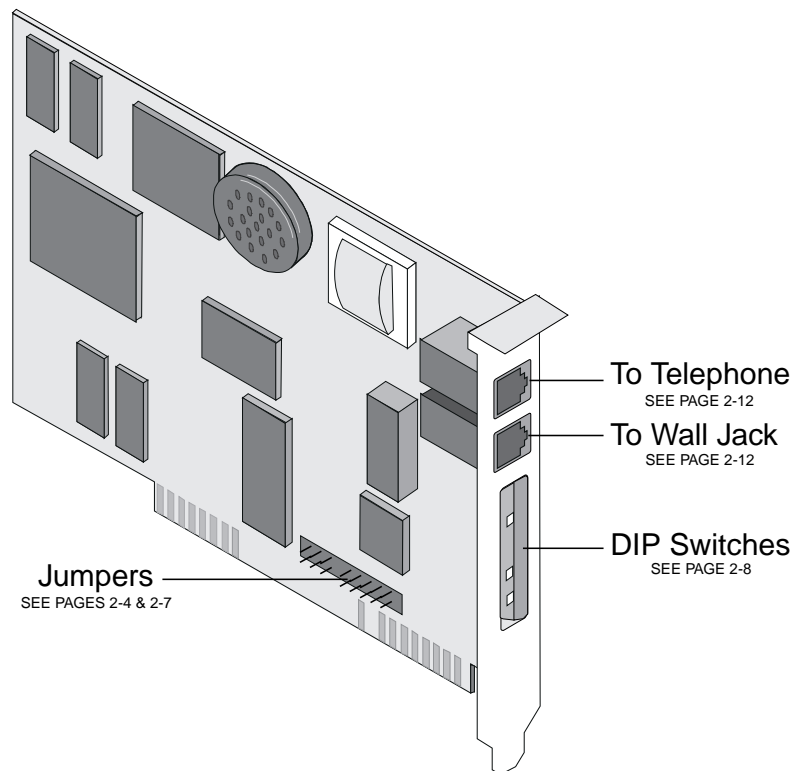
Figure 1-1. The Courier V.Everything Modem.

Features

33.6 Kbps Connectivity

The Courier contains software that enables 31.2 and 33.6 Kbps connection rates, as well as improves throughput at lower speeds. While line conditions may not always allow for 33.6 Kbps connections, the new software makes it more likely that your Courier will achieve and maintain 28.8 Kbps connections. It can add up to 4800 bps to the average V.34 connection rate.

Selective Reject

Selective Reject is an optional part of the ITU V.42 (LAPM) specification. This feature improves performance on noisy lines by reducing the amount of overhead incurred when the protocol must resend data due to errors.

When selective reject is active, only the frame that contained the error is resent, instead of the frame plus all of the following unacknowledged frames. You can disable selective reject by changing a setting in S-Register 51 (see Appendix A, *Alphabetic Command Summary*, in the Courier Modems Command Reference manual).

Attaining Speeds Above 28.8 Kbps

V.34 connections at 21.6, 24.0, and 26.4 Kbps are common. To get connections of 28.8, 31.2, and 33.6 Kbps, line quality must be *pristine* end-to-end. In addition, 31.2 and 33.6 Kbps connection rates are possible only when the device to which you are connecting also runs software that supports speeds above 28.8 Kbps.

If you are curious about the role that line quality plays in attaining and maintaining high-speed connections, and want to learn what you can do to improve connections, request the following document from our Fax on Demand service: *Phone Line Quality and High Speed Connections*. The Fax on Demand number is (800) 762-6163.

V.Everything

The Courier provides full support of the V.34 standard, V.Fast Class, V.32 *terbo*, and many other modulation schemes, spanning the range of speeds between 33.6 Kbps and 300 bps. We call this unique combination of abilities **V.Everything.** See the *Compatibility* section in Appendix B, *Technical Specifications*, for details.

Flash ROM Upgradability

Courier modems are software-upgradable using XMODEM file transfers, allowing you quick, easy access to updates of the Courier's technology. See Chapter 17, *Upgrading the Courier's Software*, in the *Courier Modems Command Reference* manual.

Dial Security

The Courier's dial security functionality is part of its operating software, which allows you to control access at a modem-to-modem level instead of using software that runs on the host computer.

With Dial Security, you can prevent unauthorized access to a system through the use of password prompting and dialback. Refer to Chapter 9, *Dial Security*, in the *Courier Modems Command Reference* manual.

Remote Configuration and Diagnostics

You can remotely configure and test the Courier. If you are a network administrator supporting remote users, this feature can save you time and money. Refer to Chapter 8, *Remote Access*, in the *Courier Modems Command Reference* manual.

Adaptive Speed Leveling (ASL)

Couriers monitor line conditions while connected, and fall back to the next lower speed—for example, 19.2K, then 16.8K in V.32 *terbo* mode—if conditions are poor. Couriers also detect improved line conditions and shift upward to the next higher speed. Transmit and receive channels adapt independently, each detecting and adjusting to line conditions.

Calls to and from Modems and Fax Machines

When used with fax-capable communications software, the Courier auto-detects and responds to calls from modems and Group III fax machines using EIA-standard Class 1 or 2.0 fax software.

Testing

ITU-T V.54 loopback testing is available. The Courier can perform analog, digital, and remote digital loopback tests. See Chapter 15, *Testing*, in the *Courier Modems Command Reference* manual.

Caller ID Support

The Courier can interpret and display caller ID information. See the Caller ID section in Chapter 3, *Dialing, Answering, and Hanging Up*, in the *Courier Modems Command Reference* manual.

Distinctive Ring Support

The Courier can be set to recognize and respond to any of four distinctive ring patterns. See the Distinctive Ring section in Chapter 3, *Dialing, Answering, and Hanging Up* in the *Courier Modems Command Reference* manual.

Carrier Loss Redial

If you enable the carrier loss redial feature, the Courier will automatically redial the last number it dialed if carrier is lost (for example, if there is trouble on the line or if the remote modem hangs up). This feature is useful for dialed-line connections that operate unattended. See Chapter 3, *Dialing, Answering, and Hanging Up*, in the *Courier Modems Command Reference* manual.

Plug and Play Support

When you install the Courier in a computer that uses a Plug and Play operating system, such as Windows 95 or OS/2 Warp, the computer will automatically detect and configure itself to the support the Courier.

Dedicated- and Leased-Line Support

The Courier does not need to be connected to the public switched telephone network. You can connect a standard telephone cable between the Courier and another modem and make connections without even dialing. You can also connect the Courier to a line that you lease from the telephone company. See Chapter 12, *Dedicated/Leased Line and Synchronous Applications*, in the *Courier Modems Command Reference.*

Chapter 2
Installing the Courier

What You Need

You must have these before you start:

An IBM-Compatible Computer

Your computer must have an ISA or EISA expansion bus and an available expansion slot. Check your computer's user's manual to be sure.

An Analog Telephone Line

The Courier requires a standard, analog telephone line. **Do not connect the Courier to a digital telephone line!** Digital lines are commonly used in office buildings and hotels. If you are unsure whether your line is analog or digital, ask a network administrator or your local telephone company.

Communications Software

You must configure and run a communications software package in order to make the Courier work. All Couriers are shipped with a DOS/Windows communications software package for your use.
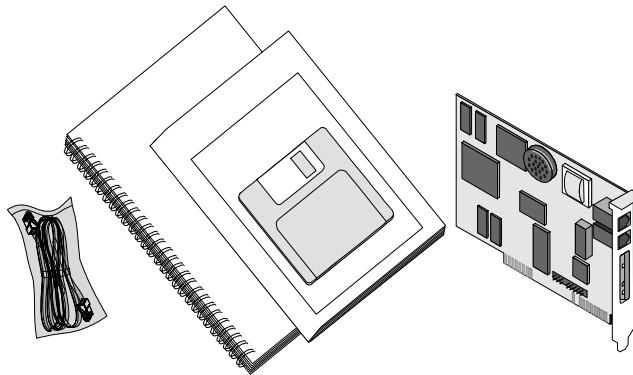
Tools

A screwdriver that is appropriate for the screws in your PC.

Package Contents

♦ The Courier
♦ Phone cable
♦ Quick reference card
♦ Customer support services card
♦ DOS/Windows communications software package
♦ A *Command Reference* manual and this *Getting Started* manual.

Figure 2-1. Contents of the Courier Package.

Important!

The Courier emulates a *serial interface card* with a 16550 UART. Like serial interface cards, it must be assigned a unique communications (**COM**) port number and a unique interrupt request (**IRQ**) number.

If you are using a computer with a Plug and Play compliant BIOS and operating system, if you set the Courier's jumpers to Plug and Play, your computer's operating system will take care of the COM and IRQ settings for you.

Setting the COM port and IRQ yourself requires a detailed knowledge of the settings of the other adapter cards in your

computer. If other adapter cards are set to use the same COM port or IRQ, conflicts may occur that could result in data loss or lock ups.

First, determine whether your computer has a Plug and Play ISA bus. Check your computer's documentation to be sure. Keep these points about Plug and Play in mind:

♦ Your computer's Basic Input/Output System (BIOS) must support Plug and Play, and

♦ Your computer's operating system must support Plug & Play (examples of those that do: OS/2 Warp, Windows 95, Windows NT), or your computer's manufacturer must supply you with Plug and Play software.

If your computer has a Plug and Play ISA bus, BIOS, and operating system, follow the steps in *Plug and Play Setup*. If not, follow the steps in *Standard Setup*.

Plug and Play Setup

The Courier is Plug and Play capable, but is shipped with settings for COM2 and IRQ3. To prepare the Courier for installation in a computer with a Plug and Play operating system, locate the jumpers at the bottom corner of the card.
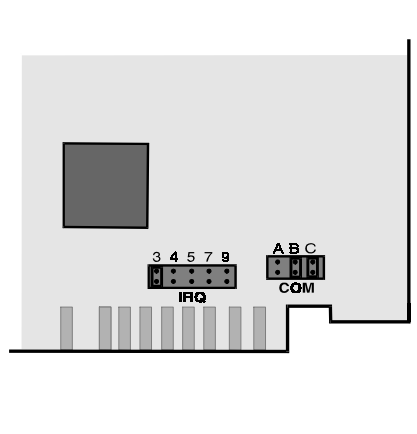
Figure 2-2. Location of the Jumpers.

1   **Remove** the jumper from **C**. The positions of all other jumpers, including the IRQ jumpers, are irrelevant while Plug and Play is selected, and are ignored.

Figure 2-3. Setting the Jumpers for Plug and Play.

2   Go to *Setting the DIP Switches* on page 2-8.

Standard Setup

If your computer can run Windows applications, follow the steps below to determine how to set up the Courier.

If your computer can't run Windows applications, see Chapter 3, *Communicating with the Courier.*

1 Before attempting to insert the Courier card in your computer, power ON your computer and start Windows.

2 Insert the **QuickLink II** diskette into drive A (or B).

3 From the Program Manager group's menu bar, select **File** and then **Run...**

4 Type **a:\comtest** (or **b:\comtest**, depending on the drive into which you inserted the diskette).
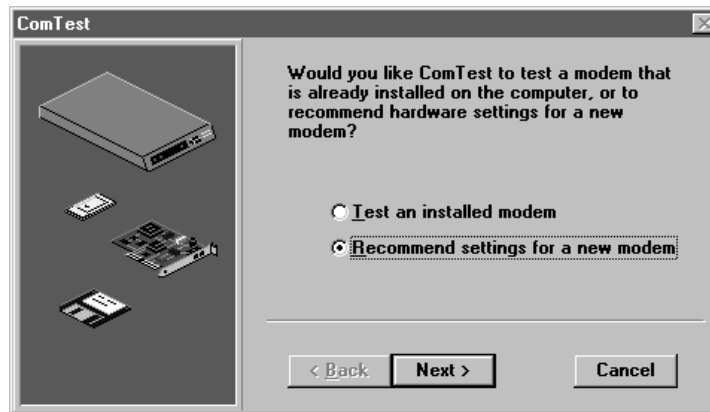
5 Select **Recommend settings for a new modem** and then select **Next** >.

6 Select **Internal modem** and then select **Next** >.

7 Write down the COM port and IRQ that ComTest recommends, and then select **Next** >.

COM _____

IRQ _____

8 If ComTest gives you the choice, select **Write to SYSTEM.INI** and then select **Next** >, and then **Finish.**

9 Eject the **QuickLink II** diskette, exit Windows, and then power OFF your computer.

10 If ComTest recommends settings that are different from the Courier's defaults of **COM2** and **IRQ3**, set the Courier to use the COM port and IRQ settings that ComTest recommends:

    a Look at the Courier's jumper settings:
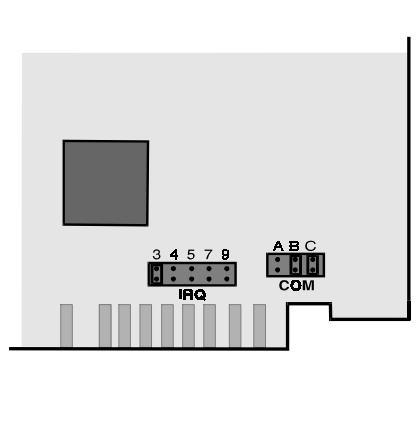
Figure 2-4.   Location of the Jumpers.

b　To change the IRQ setting, place the jumper over the pins that correspond to the IRQ for the Courier: 3, 4, 5, 7, or 9.
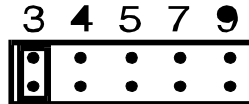
Figure 2-5. Setting the IRQ Jumpers.

c　To change the COM port setting, (1, 2, 3, or 4), position the jumpers in one of the following ways:

Figure 2-6. Setting the COM Port Jumpers.

d　Continue with *Setting the DIP Switches.*
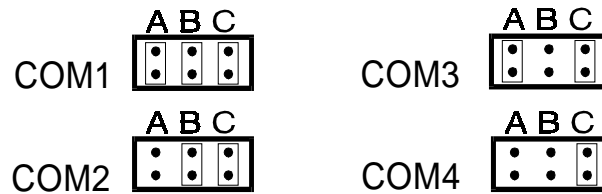
Setting the DIP Switches

The DIP (Dual In-line Package) switches are located on the bracket of the Courier. The default settings are suitable for most applications, but review this section to be sure they suit yours.
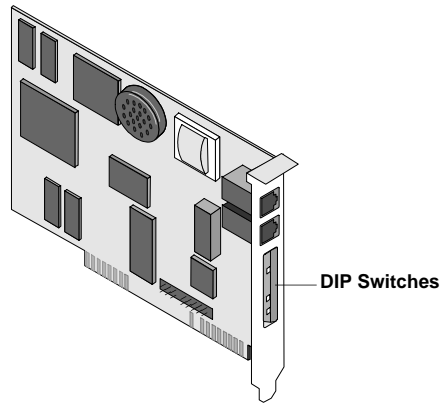
DIP Switches

Table 2-1. DIP Switch Settings.

DIP Switch	Factory Setting	Setting	Effect	For More Info[1]
1	OFF	OFF ON	DTR normal Ignore DTR	Ch 6
2	OFF	OFF ON	Verbal result codes Numeric result codes	Ch 5
3	ON	OFF ON	Suppress result codes Display result codes	Ch 5
4	OFF	OFF ON	Echo offline commands Don't echo offline commands	Ch 2
5	ON	OFF ON	Auto-answer Don't auto-answer	Ch 3
6	OFF	OFF ON	Normal Carrier Detect Carrier Detect always on	Ch 6
7	OFF	OFF ON	Display all result codes Display result codes only when originating calls	Ch 5

[1] For more information, refer to the indicated chapter in the *Courier Modems Command Reference.*

DIP Switch	Factory Setting	Setting	Effect	For More Info[2]
8	ON	OFF	Ignore AT commands (dumb mode)	Ch 1
		ON	Act on AT commands (smart mode)	
9	OFF	OFF	Disconnect on +++	Ch 2
		ON	Don't disconnect on +++	
10	OFF	OFF	Load the configuration that is stored in non-volatile memory (NVRAM)*	Ch 4
		ON	Load the &F0 configuration from read-only memory (ROM)*	

> **IMPORTANT:** When you power ON or reset the Courier, the DIP switch settings override the settings you may have made previously using AT commands.

If you change the DIP switch settings while the Courier is powered ON, you can avoid powering the Courier off to make the new settings take effect. Just send the Courier the ATZ command.

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[2] For more information, refer to the indicated chapter in the *Courier Modems Command Reference.*

Installing the Courier

NOTE: The illustrations in this section may not match the appearance of your computer. For more detail, refer to your computer's user's manual.

1 Switch off the computer's power and unplug the computer's power cord.
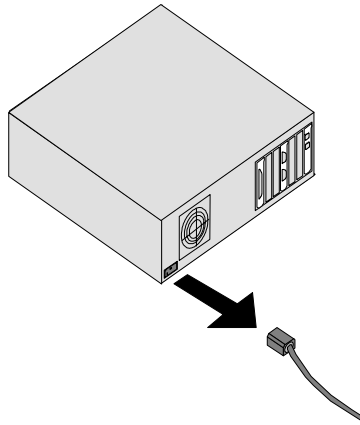
2 Remove the screws that hold on the computer's cover and then slide the cover off.
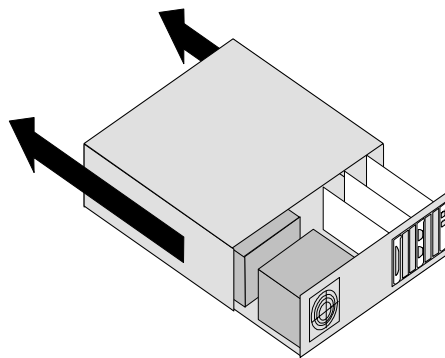
3 Find an empty slot that provides enough room to install the Courier.

Remove the screw that holds on the slot cover and then remove the slot cover. Save the screw!
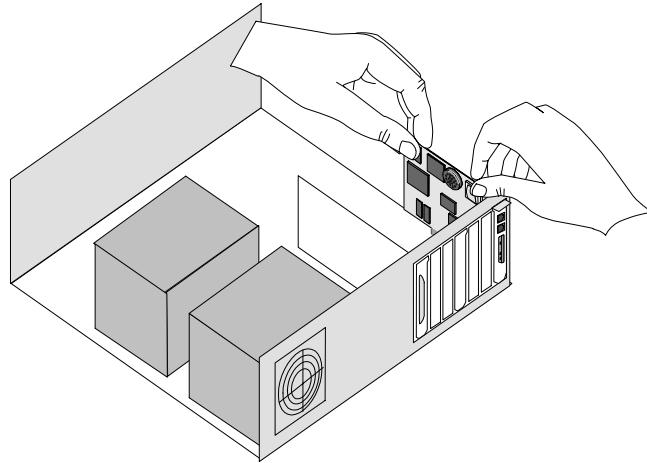
4 Insert the Courier into the slot and press down on the top edge of the Courier until it is seated firmly.

5 Using the screw you saved in step 3, secure the Courier in your computer.

6 Replace the cover of your computer and tighten its screws.

Connecting the Cables

1 Connect one end of the phone cable to the wall jack and the other end to the Courier port labeled JACK.

2 If you have a telephone that you'd like to connect to the Courier, plug its cable into the Courier port labeled PHONE.

3 Continue with Chapter 3, *Communicating with the Courier.*

Chapter 3
Communicating with the Courier

The methods of verifying communication with the Courier vary depending on the operating system your computer uses.

Windows 95	DOS
Windows 3.x	OS/2
Windows NT	Linux

This chapter provides advice about how to get many popular operating systems to communicate with the Courier. The last section, *Testing the Courier*, explains how to verify that your Courier and software are working together correctly.

Windows 95

The first time you start Windows 95 after you've installed the Courier, Windows 95 will auto-detect the Courier.

Windows 95 has built-in support for Couriers, but since the Courier has been updated since the release of Windows 95, you need to supply Windows 95 with an updated INF file so it can properly identify your Courier. The latest INF file is always available from our BBS and our ftp site.

Getting the INF File

1 Power on your computer with the modem installed. As Windows 95 loads, it presents a **New Hardware Found** panel. Select Standard Modem.

2 Start a communications software package (such as HyperTerminal, which is included with Windows 95) and dial the U.S. Robotics BBS at **(847) 982-5092**.

Go to **File directories**, then **5) U.S. Robotics Courier**. Download the **MDMUSRCR.INF** file.

Or, **ftp://ftp.usr.com/SYS/PCB/dl05** and get **MDMUSRCR.INF**.

Installing the INF File

1 Go to an MS-DOS Prompt:

```
Microsoft® Windows 95
        ©Copyright Microsoft Corp 1981-1995
c:\WINDOWS>
```

2 Change to the directory in which you put the INF file; for example, the TEMP directory.

```
C:\WINDOWS>cd\temp
```

Windows responds:

```
C:\TEMP>
```

3 Enter the following command:

```
C:\TEMP>copy mdmusrcr.inf \windows\inf
```

Windows responds:

```
1 file(s) copied
```

Be aware that the \inf directory is hidden, and even though it may not appear, it is there.

Making Windows 95 Auto-Detect Your Courier

1 Click **Start** | **Settings** | **Control Panel** and then double-click **Modems**. Remove the Standard Modem.

2 Then click **Add**.

3 At the Install New Modem panel, click **Next**.

Windows 95 will auto-detect your Courier and install the appropriate support.

Finding Out Which COM Port Windows 95 Assigned (Plug and Play Only)

If you set the Courier to Plug and Play when you installed it, you need to know which COM port your system has chosen for the Courier, especially if you plan to use communications software created for Windows 3.x.

1 From **Start** | **Control Panel** | **Modems**, select the Courier and then select Properties.
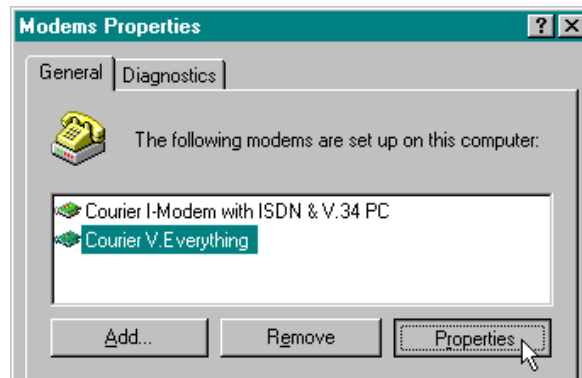
2 Note the COM port that Windows 95 has chosen for the Courier.
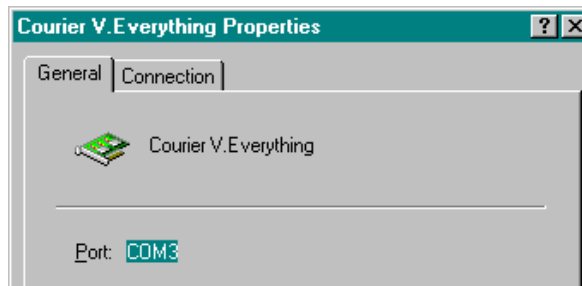
Windows 95 Dial-Up Networking: Internet Access

This section explains how to set up the Courier for accessing the Internet using Windows 95 Dial-Up Networking. You can also use Dial-Up Networking for accessing remote LANs.

Make sure Dial-Up Networking is installed.

1 Click **Start** | **Settings** | **Control Panel**.

2 From the Control Panel, double-click on **Network**.

If a Dial-Up Adapter is listed, go to step 5. If not, continue with step 3.

3 Go back to the Control Panel and double-click on **Add/Remove Programs**.

4 Click the **Windows Setup** tab. Then double-click on **Communications**. Click on **Dial-Up Networking** to check the box. Click OK, then OK.

Insert your Windows 95 Setup diskette or CD-ROM when you are prompted, and Windows 95 will install Dial-Up Networking.

Add Dial-Up TCP/IP Support.

5 Click **Start** | **Settings** | **Control Panel**.

6 From the Control Panel, double-click on **Network**.

If TCP/IP -> Dial-Up Adapter is listed, go to step 8. If not, continue with step 7.

7 Select **Add…** | **Protocol** | **Microsoft** | **TCP/IP** | **OK**.

Insert your Windows 95 Setup diskette or CD-ROM when you are prompted, and Windows 95 will install TCP/IP protocol support.

Customize the TCP/IP Settings.

8 Click **Start** | **Settings** | **Control Panel**.

9 From the Control Panel, double-click on **Network**.

10 Select **TCP/IP** -> **Dial-Up Adapter** | **Properties…** Click on the **DNS Configuration** tab. Select **Enable DNS**.

Type in your **Host:** and **Domain:** names, which are provided to you by your Internet service provider. Type your DNS server's IP address or addresses (also provided by your Internet service provider) in the blank, and then click **Add** | **OK** | **OK**.
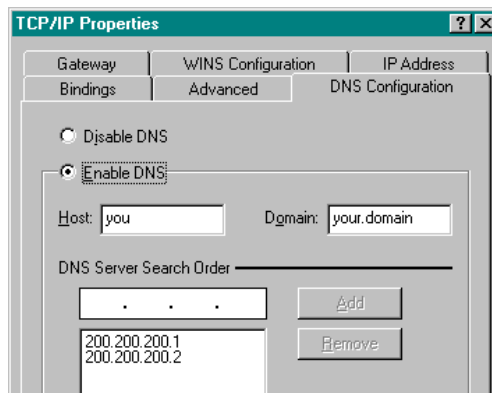
Set Up a Connection to Your Internet Service Provider.

11 Click **Start** | **Programs** | **Accessories** | **Dial-Up Networking**.

12 Double-click **Make New Connection**.

Type a name for the connection, then click **Next** >. Type a phone number for the connection, then click **Next** >. You should see a message indicating that a new connection was created successfully. Click **Finish**.

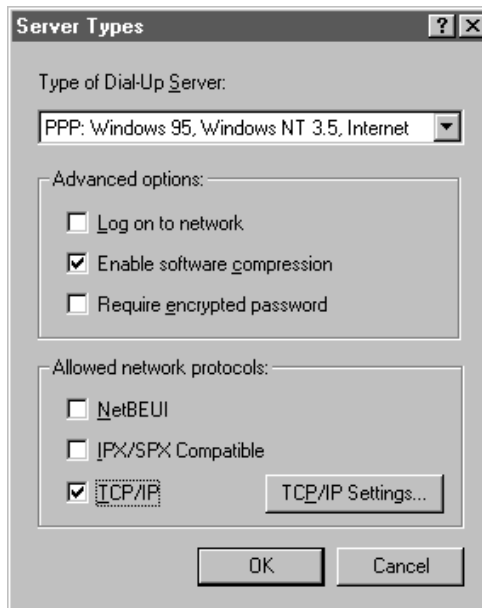**13** From the Dial-Up Networking window, put the cursor over your new icon and click the right mouse button. Select **Properties** from the menu that appears.

14 Click Server Type…, and then deselect Log on to Network, NetBEUI, and IPX/SPX Compatible.

```
┌─ Server Types ─────────────────────── ? ✕ ┐
│                                            │
│  Type of Dial-Up Server:                   │
│  ┌──────────────────────────────────────┐  │
│  │ PPP: Windows 95, Windows NT 3.5, Internet ▼│
│  └──────────────────────────────────────┘  │
│  ┌─ Advanced options: ─────────────────┐  │
│  │  ☐ Log on to network                 │  │
│  │  ☑ Enable software compression       │  │
│  │  ☐ Require encrypted password        │  │
│  └──────────────────────────────────────┘  │
│  ┌─ Allowed network protocols: ────────┐  │
│  │  ☐ NetBEUI                           │  │
│  │  ☐ IPX/SPX Compatible                │  │
│  │  ☑ TCP/IP      ┌──────────────────┐  │  │
│  │                │ TCP/IP Settings...│  │  │
│  │                └──────────────────┘  │  │
│  └──────────────────────────────────────┘  │
│         ┌────────┐    ┌────────┐            │
│         │   OK   │    │ Cancel │            │
│         └────────┘    └────────┘            │
└────────────────────────────────────────────┘
```

15 Select OK, then OK.

Double-click on your new connection icon to connect!

Windows 3.x

First, try testing the Courier by following the steps below. Use any communications software package for this test. For example, Windows includes Terminal, a minimally equipped communications program. Because Terminal supports serial port rates of up to only 19200, Quick Link II Fax is used in this example.

1 Install and then start Quick Link.

2 Click **Setup | Line Settings…** Make the following settings.

If you are using a computer with a serial port that cannot support high speeds, choose 19200. Then click **OK**.
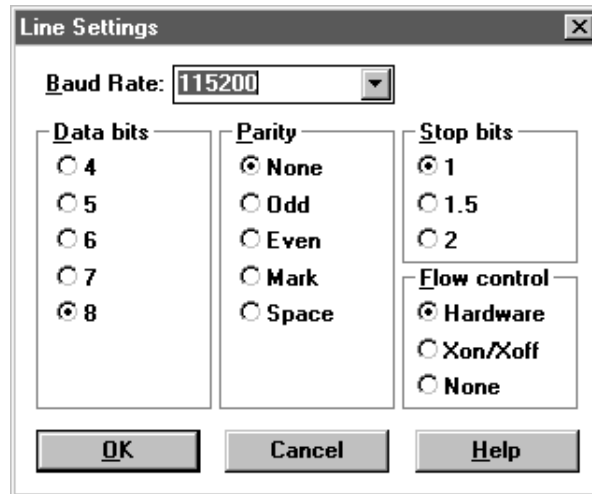
3 Click **Setup | Modem Setup…** Select the COM Port that the Courier is using (the one you set using the jumpers in Chapter 2). Click **OK**.

4 In the terminal window, type **AT <Enter>**. The Courier should respond **OK**.

If you don't get an OK response, refer to Chapter 16, *Troubleshooting,* in the *Courier Modems Command Reference* manual.

5 Dial the U.S. Robotics BBS at (847) 982-5092. For example, **ATDT18479825092 <Enter>** dials the U.S. Robotics BBS as a long-distance call.

> **NOTE:** If you need to dial 9 to get an outside line, dial as in this example: **ATDT9,18479825092 <Enter>**. If you want to disable call waiting for this call, in most areas, dial *70 before you dial the phone number, for example, **ATDT*70,18479825092 <Enter>**.

The following screens are what you should see when you dial the BBS.

```
atdt9825092
CONNECT 31200/ARQ/V34/LAPM/V42BIS
CONNECT 31200/ARQ/V34/LAPM/V42BIS
CONNECT 115200 / 02-27-96 (12:52:21)
(Error Correcting Modem Detected)

USR Support BBS - ComServer 486
PCBoard (R) v15.22/100 - Node 11

Testing your system capability...

Do you want graphics (Enter)=yes? (         )
```

Figure 3-1. Connecting...

Figure 3-2. Success!

For other Windows software packages, see Chapter 4, *Setups for Common Windows Software Packages.*

For instructions about how to set up your Windows communications software package, call our fax-on-demand service (at 800-762-6163 or 847-676-1598) or our BBS (at 847-982-5092). Request document 10000 for a list of our technical support documents.

Windows NT

Determining COM Port, IRQ, and I/O Address Settings

Use WinMSD to determine which COM ports, IRQs, and I/O base addresses are free.

Bear in mind that you can change the settings in **Control Panel | Ports | Advanced** only if you have logged in to NT as administrator.

As a Client

If you want only to dial out using the Courier, Windows NT works very much like Windows 3.x. Windows NT ships with a built-in Terminal program that can support speeds of up to 115.2 Kbps.

Additionally, Windows NT includes a Remote Access Dialer, but it is not installed by default.

You can install Quick Link II in Windows NT but you may experience problems with fax operations.

As a Server

Here's how to set up Windows NT Remote Access Service (RAS) to recognize the Courier. First, you must install RAS, which is included with Windows NT, but is not installed by default.

Start Windows Terminal to verify that NT can communicate with the Courier. Select the COM port to which the Courier is

connected. You should be able to send **AT <Enter>** and get an **OK** response.

From the Control Panel, double-click **Network**. The Network Settings window appears. Scroll down the list of Installed Network Software and select **Remote Access Service.**
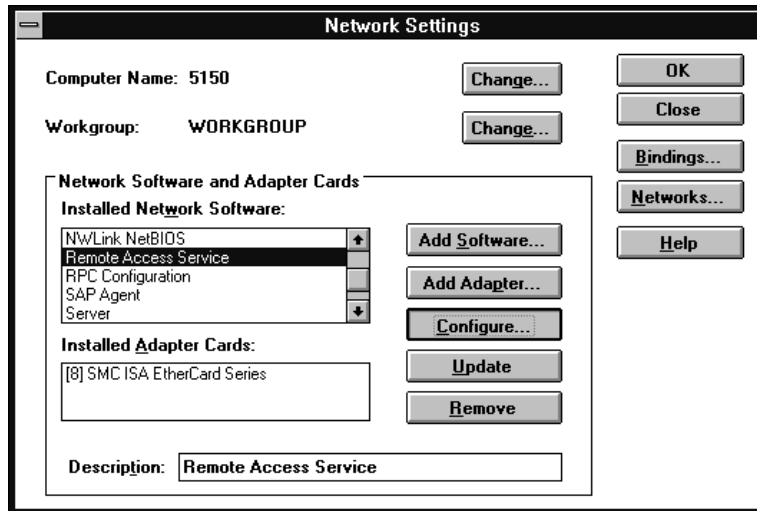
Click **Configure…** The Remote Access Setup windows appears. Click **Add…**
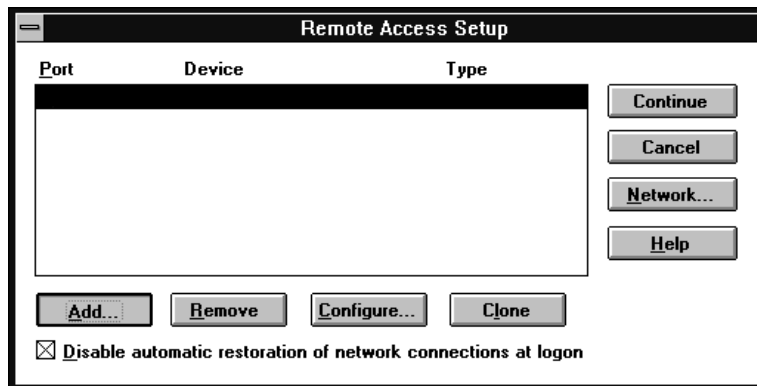
Select the port to which the Courier is connected.

Add Port

Port: COM2 ▾   OK
                    Cancel
                    Help

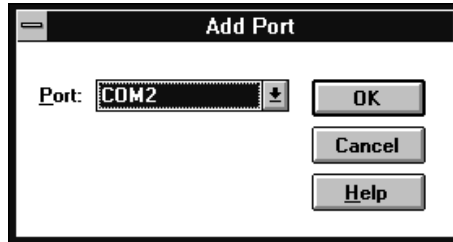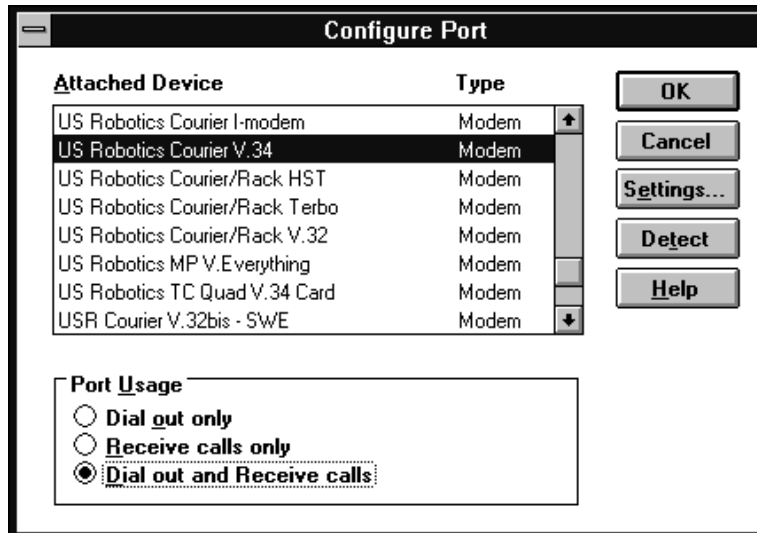When you click **OK**, Remote Access setup asks you if you would like it to try to detect the modem connected to the port. Click **Cancel** to select the Courier from a list.

Configure Port

Attached Device	Type	
US Robotics Courier I-modem	Modem	OK
US Robotics Courier V.34	Modem	Cancel
US Robotics Courier/Rack HST	Modem	
US Robotics Courier/Rack Terbo	Modem	Settings...
US Robotics Courier/Rack V.32	Modem	
US Robotics MP V.Everything	Modem	Detect
US Robotics TC Quad V.34 Card	Modem	
USR Courier V.32bis - SWE	Modem	Help

Port Usage
○ Dial out only
○ Receive calls only
● Dial out and Receive calls

Select **US Robotics Courier V.34**, and then click OK and exit from Network setup. When you're prompted to restart NT, click **Don't Restart Now**. Then, from Program Manager, click **File | Shutdown**. When NT shuts down, power your computer off and then on again.

Now RAS knows about the serial port and the Courier that is attached. Next, you need to set up user accounts and access privileges; those tasks are beyond the scope of this manual.

DOS

Because there is no communication capability built in to DOS, you must install and run a third-party communications software package to operate the Courier.

You must choose the COM port, IRQ, and the I/O address within the communications application that you are using. These are the standard I/O address and IRQ settings for each COM port:

COM Port	I/O Address	IRQ
COM1	03F8	IRQ4
COM2	02F8	IRQ3
COM3	03E8	IRQ4
COM4	02E8	IRQ3

The Quick Link II diskette, which is included in the package with the Courier, contains a DOS version of the software as well as a Windows version.

For instructions about how to set up your DOS communications software package, call our fax-on-demand service (at 800-762-6163 or 847-676-1598) or our BBS (at 847-982-5092). Request document 10000 for a list of our technical support documents.

OS/2

Remember that you can use WinOS2 to run Windows communications software packages.

To get the best performance, however, you should replace the standard OS/2 serial port drivers COM.SYS and VCOM.SYS with SIO.SYS and VSIO.SYS. You can get the enhanced drivers from our BBS at 847-982-5092. Check file area 18, *OS/2 Support, Utilities, etc* for SIO153.ZIP.

These are the standard I/O address and IRQ settings for each COM port:

COM Port	I/O Address	IRQ
COM1	03F8	IRQ4
COM2	02F8	IRQ3
COM3	03E8	IRQ4
COM4	02E8	IRQ3

Nonstandard COM/IRQ settings are done by adding switches (command line parameters) to the COM.SYS (or SIO.SYS) line in CONFIG.SYS. For example, the following line selects COM3 and IRQ5:

```
\OS2\BOOT\COM.SYS /i5/c3
```

For help with OS/2 Warp installations, download the file WARPIN.ZIP from BBS file area 18, *OS/2 Support, Utilities, etc.*

For instructions about how to set up your OS/2 communications software package, call our fax-on-demand service (at 800-762-6163 or 847-676-1598) or our BBS (at 847-982-5092). Request document 10000 for a list of our technical support documents.

Linux

If you are using the Courier for dial-in only, set DIP switch 4 ON and leave the other switches in their default positions. You may need to set DIP switch 1 ON if your computer does not send a Data Terminal Ready (DTR) signal.

If you are using the Courier for dial-in and dial-out, set DIP switches 3, 4, 7, and 8 ON and leave the other switches in their default positions. You may need to set DIP switch 1 ON if your computer does not send a Data Terminal Ready (DTR) signal.

These are the standard port names and settings:

Outgoing Calls	Incoming Calls	Port	IRQ	I/O Address
/dev/cua0	/dev/ttyS0	COM1	4	03F8
/dev/cua1	/dev/ttyS1	COM2	3	02F8
/dev/cua2	/dev/ttyS2	COM3	4	03E8
/dev/cua3	/dev/ttyS3	COM4	3	02E8

Use the setserial command to tell Linux about any nonstandard COM/IRQ combinations that you may have set using the Couriers jumpers. Setserial also selects serial port speed and I/O port address.

Linux has a built-in communications software package called minicom. By default, minicom is located in the usr/bin directory.

For instructions about how to set up your Linux communications software package, call our fax-on-demand service (at 800-762-6163 or 847-676-1598) or our BBS (at 847-982-5092). Request document 10000 for a list of our technical support documents.

Chapter 4
Setups for Common Windows
Software Packages

If you are running one of the following software packages, follow the steps given to configure it for use with the Courier.

America Online v2.0   Prodigy
NetManage Chameleon v4.5   Trumpet Winsock
pcAnywhere v2.0 for Windows   WinCIM (for CompuServe)
ProComm Plus v2.0 for   WinFax Pro 4.0
        Windows

These instructions are valid as of the printing of this manual and may not apply to future releases of the software packages.

If you need further help, or help with a software package that is not listed here, try our fax-on-demand service (at 800-762-6163 or 847-676-1598) or our BBS (at 847-982-5092). Request document 10000 for a list of our technical support documents.

America Online 2.0

1 From the **America Online** - **Welcome** window, choose **Setup**.

2 From the **Network & Modem Setup** window, select **Setup Modem**.

3 From the **Modem Selection and Customization** window, select the COM port that the Courier is using, and choose **USRobotics Courier HST Dual Std/PC FAX w/ASL (v2.0)** as your modem. Then select **Edit Commands**.

4   The following window will appear. Change the **Setup Modem String** to match the string in the figure below.

USRobotics Courier HST Dual Std/PC FAX w/ASL [v2.0]	
Setup Modem String:	AT&F1^M
Restore Modem String:	+?
Dial Prefix:	ATD
Dial Suffix:	^M
Disconnect String:	ATH^M
Escape String:	~~~+++~~~
Reset String:	ATZ^M

OK   Cancel

5   Select **OK**, then **OK**, then **OK**.

NetManage Chameleon 4.5

You should know in advance which Internet service provider (for example, PSINet or NETCOM) you will be using. NetManage provides a number of configuration templates for many popular Internet service providers. The settings recommended here are the Courier-specific ones only.

1   Click **Setup** | **Communications** | **Port**. Two settings will be specific to your setup:

Baud Rate: 57600 bps is recommended, but only if you have a *16550 UART*. The UART is a computer chip that controls the transmission and reception of signals through your computer's serial port. Check your computer's manual to be sure - slower UARTs, like 16450 or 8250, will limit speeds to 19200 bps.

Connector: Select the COM port to which the Courier is attached.

2 Click **Setup | Communications | Modem**. Select U.S. Robotics Courier Dual Standard.

pcAnywhere 2.0 for Windows

1 From the **Smart Setup** window, go to the **Your Modem** area and select **USRobotics Courier HST Dual Standard**.
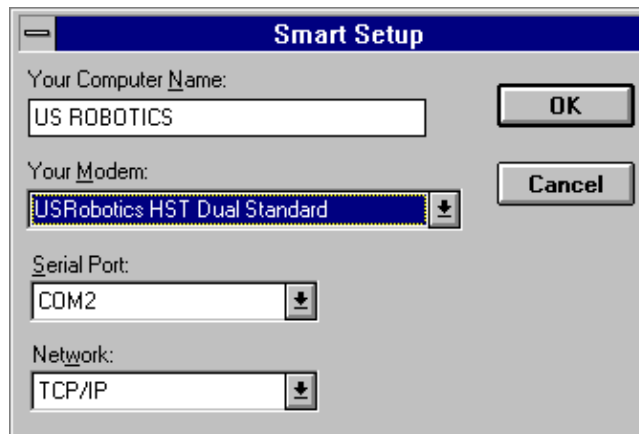
2 Select the serial port and the protocol running on the network into which you'll be dialing, and then select **OK**.

ProComm Plus 2.0 for Windows

1 Double-click on the PROCOMM PLUS icon.

2 Select **Setup**, and then **Setup...**.

3 Select **Data Modem/Connection**, and then **Connection Setup** as shown in the following window:
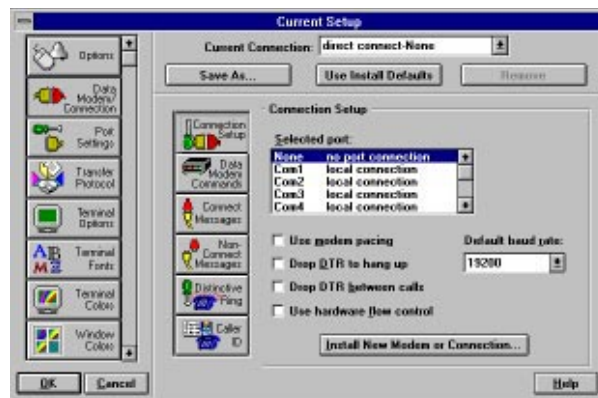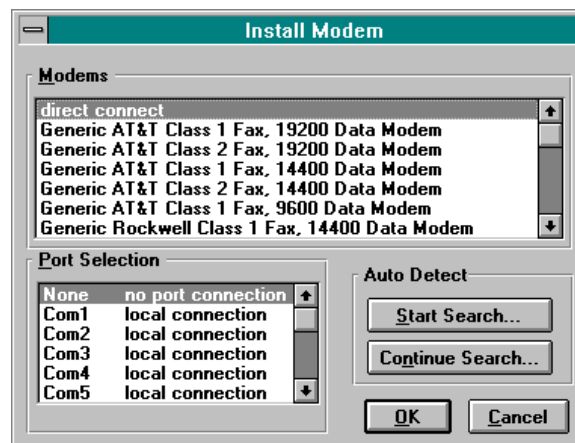

4 Select **Install New Modem or Connection**. Under AutoDetect, select **Start Search**.

5 After the search is complete, go to the **Modems** list and select **US Robotics Dual Standard 28800**, and then select **OK**.

Prodigy

1 Start Prodigy.

2 From the **Prodigy SIGN**-**ON** window, select **Comm Options Setup.**

3 From the **Set Up** window, select a **Modem Speed** of **9600 bps** and select the Communications Port that the Courier is using; then select **OK**.

Set-Up		
Primary Phone Number		
1 708 555 5555	**Modem Speed (bps)**	**OK**
	2400	**Cancel**
	9600	
Network Symbol: Q	14400	**Help**
Alternate Phone Number		
	Modem Speed (bps)	Please Note:
	2400	Not all modem
	9600	speeds available
Network Symbol: Q	14400	in all areas.

Communications Port
○ COM 1   ○ COM 3
◉ COM 2   ○ COM 4

Phone Type
◉ Tone   ○ Pulse

Dialing Options for this session
◉ Dial with my Primary Number
○ Dial with my Alternate Number
○ Dial the PRODIGY Phone Directory
Note: Alternate number may not be available when primary is working.

☒ Save settings for future sessions.

Trumpet Winsock

1 From Windows, double-click the **Trumpet Winsock** icon. Select **Dialler**, and then **Edit Scripts**.

2 Open the **LOGIN.CMD** file. Change these lines:

output AT&F1\13
input 10 OK\n
output atdt<phone number to dial>

3 Exit and save the changes you made.

4 **From File | Setup,** under **SLIP Port,** enter the COM port number that the Courier is using, its Baud Rate, and check Hardware Handshake.

You're now ready to call your Internet service provider. Select **Dialler | Login**.

Win CIM (CompuServe)

1 From Windows **Main**, double-click on **Control Panel**. From **Control Panel**, double-click on **Ports**. Set the COM port that the Courier is using to **19200** baud rate and **Hardware** flow control.

2 Start the WinCIM program, and select Special and then Session Settings. Make sure that you choose the COM port that the Courier is using and set the baud rate to 19200.

3 From the **Special** pull-down menu, select **Modem Control Strings**. Your modem type should be **Current** and **Initialize** should show this string:

AT&F&B1&H1&R2&A3&K3X4^M

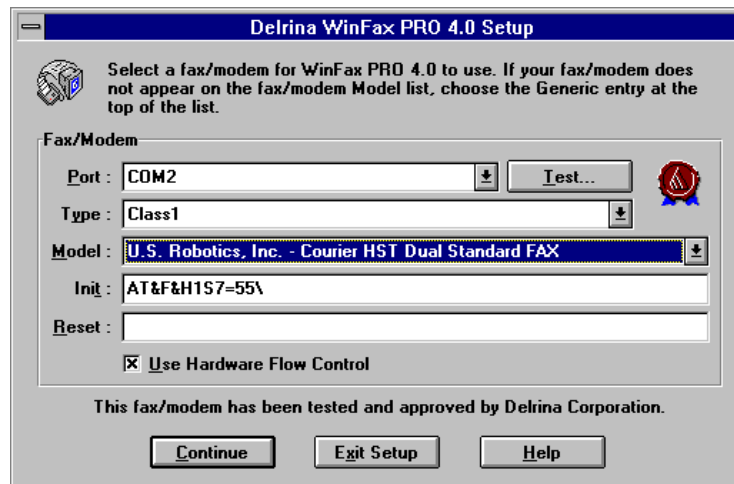**Reset** should show **&F**, **Connect** should show **CONNECT**, and **Suffix** should show **^M**.

WinFax PRO 4.0

1 During installation, you are asked the following question:
Do you want Setup to test COM ports for a fax device?
Select **Yes**.

2 When the following screen appears, choose as the Model
U. S. Robotics, Inc Courier Dual Standard FAX, and then
select **Continue.**

Appendix A
Technical Specifications

Standards Compatibility

The Courier uses multiple standard data communications protocols and is also compatible with many nonstandard schemes.

> **NOTE:** The International Telecommunication Union (ITU-T) was formerly the International Telegraph and Telephone Consultative Committee (CCITT).

Modulation

ITU-T V.34	33.6∕31.2∕28.8∕26.4∕24∕21.6∕19.2∕16.8∕14.4∕12 Kbps; 9600∕7200∕4800 bps asynchronous Trellis Coded Modulation (TCM)
V.FC	28.8∕26.4∕24∕21.6∕19.2∕16.8∕14.4 Kbps asynchronous Trellis Coded Modulation (TCM)
V.32 *terbo*	21.6∕19.2∕16.8∕14.4∕12 Kbps; 9600∕7200 bps asynchronous Trellis Coded Modulation (TCM); 4800 bps asynchronous Quadrature Amplitude Modulation (QAM)
HST	16.8∕14.4∕12 Kbps; 9600∕7200 bps asynchronous, asymmetrical, 450 bps back channel with automatic handshake adjustment to 300 bps Trellis Coded Modulation (TCM) and Quadrature Amplitude Modulation (QAM); 4800 bps asynchronous, asymmetrical, 450 bps back channel with automatic

	handshake adjustment to 300 bps Quadrature Amplitude Modulation (QAM).
ITU-T V.32*bis*	14.4/12 Kbps; 9600/7200 bps asynchronous Trellis Coded Modulation (TCM); 4800 bps asynchronous Quadrature Amplitude Modulation (QAM)
ITU-T V.32	9600 bps asynchronous, Trellis Coded Modulation (TCM); 4800 bps asynchronous, Quadrature Amplitude Modulation (QAM)
ITU-T V.22*bis*	2400 bps asynchronous, Quadrature Amplitude Modulation (QAM)
Bell 212A	1200 bps (also V.22) asynchronous, Differential Phase Shift Keying (DPSK)
ITU-T V.23	1200 bps asymmetrical with 75 bps back channel with Frequency Shift Keying (FSK), used by some U.K. and European phone systems.
Bell 103	300 bps (ITU-T V.21 optional) asynchronous, Frequency Shift Keying (FSK)

Error Control, Data Compression, Testing, and Dialing

ITU-T V.42	LAPM error control, 1200 bps and higher
MNP	Levels 2, 3, and 4 error control; level 5 data compression, 1200 bps and higher
HST	Asymmetrical mode, at 16.8/14.4/12 Kbps; 9600/7200/4800 bps, 450/300 bps back channel
ITU-T V.42*bis*	Data compression, 1200 bps and higher
ITU-T V.54	Digital and remote digital loopback testing
ITU-T V.25*bis*	Dialing and answering methods for automatic calling and/or answering equipment.

Fax

The Courier provides Group III-compatibility when controlled by Class 1 or Class 2.0 fax software. In addition, the Courier adheres to the following standards:

TIA/EIA-578	Service Class 1 Asynchronous Facsimile DCE Control Standard

TIA/EIA-592	Service Class 2.0 Asynchronous Facsimile DCE Control Standard
ITU-T V.17	14.4/12 Kbps
ITU-T V.29	9600/7200 bps
ITU-T V.27*ter*	4800/2400 bps
ITU-T V.21	300 bps

Additional Specifications

Supported serial port rates	115200, 57600, 38400, 19200, 9600, 4800, 2400, 1200, 300 bps
Adaptive Speed Leveling (ASL)	21600, 19200, 16800, 14400, 12000, 9600, 7200, 4800 bps
Communications channel	Full- or half-duplex on 2-wire phone lines; demand-driven high-speed turnaround in HST mode; symmetrical speeds in V.32 *bis*
Data format	Binary, serial; defaults to 8-bit word length, no parity, and 1 stop bit.

Word Length	Parity (1 Bit)	Stop Bits
7	Even, Odd, Mark, Space	1
7	None	2
8	None	1

Flow Control Buffers	Variable sizes
Command Buffer	56 characters, excluding the AT prefix, Carriage Return and spaces
Test Options	Remote digital loopback, digital loopback, test pattern, and dial test
Failed Call Timeout	60 second default, programmable 2-255 sec

Answer Tone Timeout	60 seconds
Answer Tone Detector	2080-2120 Hz
Loss of Carrier (Disconnect Timer)	0.7 second default, programmable 0.2-25.5 sec.
Equalization	Adaptive
Receive Sensitivity	- 43 dBm $\pm$ 2 dBm
Transmit Level	- 9 dBm maximum
Transmitter Frequency Tolerance	.01%
Certification	FCC Part 15, Class B Domestic; IC (Canada) CS-03, UL listed
Ringer Equivalence	0.4b

Appendix B
Warranty and Notices

Limited Warranty

U.S. Robotics Access Corp. warrants to the original consumer or other end user purchaser that this product is free from defects in materials or workmanship for a period of five years from the date of purchase. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or similar model) at our option, without charge for either parts or labor. This warranty shall not apply if the product is modified, tampered with, misused, or subjected to abnormal working conditions.

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PUR-CHASER. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE, AND U.S. ROBOTICS SHALL IN NO EVENT BE LIABLE TO PURCHASER FOR INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND OR CHARACTER.

Some states do not allow the exclusion or limitation of incidental or consequential damages or allow limitations on how long an implied warranty lasts, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights. You may also have other rights that vary from state to state.

Should you encounter problems in operating this device, first follow the instructions in Chapter 16, *Troubleshooting*, of the *Courier Modems Command Reference* manual. The chapter contains solutions to operating problems as well as procedures to follow if there is an apparent Courier malfunction.

Service/Support

To obtain service under this warranty, contact U.S. Robotics Corporate ⁄ Systems Support as described below. Be sure to have the product's serial number handy if you call, or send copies if you are contacting us by mail.

Contacting U.S. Robotics

Check the Corporate ⁄ Systems Customer Support card that came with your Courier for information about how to contact us.

If the support representative determines that you should send your equipment to USR for service, you will be given a Service Repair Order (SRO) number to help us keep track of your warranty request. Once you have received your SRO number, take or mail the product, postage prepaid, to U.S. Robotics at the address on page 16-8 in the *Courier Modems Command Reference*. Include proof of the date of purchase.

> **IMPORTANT:** If you ship your unit, pack it securely, be sure your SRO number is visible on the outside of the package, and ship it charges prepaid and insured.

Notices

FCC Registration

FCC15: CJE-0269
FCC 68: CJEUSA-73130-FA-E

Connecting to the Telephone Company's Lines

The telephone company may request the telephone number(s) to which the Courier is connected and the FCC information printed above.

If the Courier is malfunctioning, it may affect the telephone lines. In this case, disconnect the Courier until the source of the difficulty is traced.

FCC Notice: Radio and Television Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

IC (Industry Canada)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the radio interference regulations of Industry Canada (formerly Canadian Department of Communications).

Le présent appareil numérique n'émet pas de bruits radio-électriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par Industrie Canada (antérieurement le ministère des Communications du Canada).

The Industry Canada (formerly DOC) label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The department does not guarantee the equipment will operate to a user's satisfaction.

Before installing this equipment, make sure you are permitted to connect it to the facilities of the local telecommunications company. You must also install the equipment using an acceptable method of connection. In some cases, you may also extend the company's inside wiring for single line individual service by means of a certified connector assembly (telephone extension cord). You should be aware, however, that compliance with the above conditions may not prevent degradation of service in some situations.

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

For your own protection, make sure 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.

WARNING: Do not attempt to make such connections yourself; contact the appropriate electric inspection authority or electrician.

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