



Courier V.Everything with V.34

Addendum

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New Features!

The Courier High Speed Modems manual makes reference to the **Courier V.34 Fax** and **Courier Dual Standard V.34 Fax** modems. We've converted all our Couriers to Dual Standard—that means that now all Couriers support the High Speed Technology (HST) type of modulation.

In addition, we've changed the name to **Courier V. Everything with V.34**. As you use the manual, keep in mind that your V. Everything modem has all the features of both modems, and more!

A number of other enhancements have been made to the Courier V. Everything with V.34 since the user's manual was last revised. Here is a list of the changes:

- Extended warranty
- 33.6 Kbps capability
- Caller ID support
- Distinctive ring support
- Carrier loss redial
- No HST cellular
- ATI3 Screen
- Plug and Play support
- Windows 95 operation

Extended Warranty

We've increased the warranty period for the Courier to 5 years!

33.6 Kbps Capability

Your Courier V. Everything modem contains new software that provides the capability for two new connection rates: 31.2 Kbps and 33.6 Kbps. The new software also improves throughput as a result of advanced design, larger block sizes, and selective reject.

Higher Connection Rates

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

In the past, if an error occurred during the reception of a series of data frames, the entire series was resent. Selective reject allows your modem to request that only the faulty frame be resent. This reduces the number of retransmitted frames, improving overall throughput, especially over noisy lines.

Attaining Speeds Above 28.8 Kbps

V.34 connections at 21.6, 24, 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.

Ask friends and business associates who use U.S. Robotics modems to upgrade to the new V.34 software. Upgrades are free to anyone who owns a U.S. Robotics Courier V.34 or V.FC modem. The software is available on our BBS; instructions for performing software upgrades are included in the Courier's manual.

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*, document 530. The Fax on Demand number is (800) 762-6163.

New Result Codes

The following new verbal connect messages and numeric result codes are included. The new result codes may not be recognized by older communications software. Even so, your connection rates will not be affected.

| Verbal | Numeric |
|-----------------------|---------|
| CONNECT 31200 | 151 |
| CONNECT 31200/ARQ | 152 |
| CONNECT 31200/V34 | 153 |
| CONNECT 31200/ARQ/V34 | 154 |
| CONNECT 33600 | 155 |
| CONNECT 33600/ARQ | 156 |
| CONNECT 33600/V34 | 157 |
| CONNECT 33600/ARQ/V34 | 158 |

New Inquiry Displays

The ATi6 diagnostic screen has an extended protocol field which displays the actual block and window sizes, and indicates when selective reject has been negotiated. The headings of all inquiry screens reflect the new name, Courier V.Everything.

New Commands

Fixed Connection Rate

The &N command for fixing connection rates has been extended to support the two new speeds, adding &N15 (31.2 Kbps) and &N16 (33.6 Kbps).

Disabling 31.2 and 33.6 Speeds

31.2 and 33.6 Kbps may be disabled by issuing the following AT command:

AT S56.5=1

Disabling Selective Reject

Selective reject can be disabled by issuing the following command:

AT S51.6=1

New Synchronous Speeds

Fixed synchronous mode can also operate at 31.2 and 33.6 Kbps under V.34 with the new software upgrade. The maximum synchronous rate under V.25bis is 19.2 Kbps. Keep in mind that line quality affects synchronous speeds as well.

Controlling the V.8 Call Indicate Tone

The V.8 protocol speeds call negotiation and specifies a call indicate tone. Providing the call indicate tone is optional. For compatibility, we ship the Courier with the call indicate tone disabled. To enable the call indicate tone, send the following AT command:

AT S54.6=0

If you enable the V.8 call indicate tone, expect to hear a sound like a fast ringing signal while the call is being connected.

Caller ID

Caller ID is a service provided by local telephone companies. When you subscribe to caller ID, your phone company begins providing you real-time information about incoming calls.

The caller ID signal includes the date and time of the call, the phone number of the calling device, and, optionally, the name of the calling party. The signal is sent between the first and second rings and must be decoded and displayed by a device connected to your phone line. The Courier has the ability to decode and display the caller ID information.

Service Types

You can subscribe to Basic or Extended caller ID service. *Basic* service offers you the date and time of the call and the calling party's telephone number. *Extended* service provides the billing name associated with the calling party's telephone number in addition to the Basic service information.

The information the Courier actually receives depends on the service type to which you've subscribed, the information that the calling party's telephone company provides, and whether the equipment in between supports caller ID. At minimum, you will always receive the date and time that a call arrived.

If a call arrives without a caller ID signal, the Courier will send OUT OF AREA in place of the phone number and name. If the caller ID information has been blocked by the user at the other end, the Courier will send PRIVATE in place of the phone number and name.

Applications of Caller ID Technology

You can use caller ID to screen calls, keep a record of calls, or prevent unauthorized access to your network. Third-party database and telephony applications such as security, call logging, and black-listing applications exploit the caller ID information provided by the Courier.

How the Courier Handles Caller ID

When the Courier receives the caller ID signal, it stores the information in memory. You can access the information at any time by sending **ATI15 <Enter>**.

```
ati15
USRobotics Courier V.Everything CID Status...

80 1E 01 08 31 30 31 35 32 30 33 38 02 0A 37 30
38 35 35 35 30 30 30 31 07 0C 55 2E 53 2E 52 4F
42 4F 54 49 43 53 22

DATE = 1015
TIME = 2038
NMBER = 7085550001
NAME = U.S.ROBOTICS

OK
```

Using the **#CID** command (described below), you can have the Courier send the information to your computer between the first and second RING messages. The caller ID information is displayed only once.

```
RING

DATE = 1015
TIME = 2038
NMBER = 7085550001
NAME = U.S.ROBOTICS

RING

RING
```

The information remains in memory until either you reset the Courier or until the Courier receives another valid caller ID signal.

Auto-Answer and Caller ID

S0=1 tells the Courier to answer on the first ring. Because caller ID information is transmitted between the first and second rings, if you have set **S0=1**, the Courier will not receive the caller ID signal.

NOTE: To be sure that the Courier receives the caller ID signal when auto-answer is enabled, set **S0=2** or higher.

Presentation Formats

The Courier sends the caller ID information to your computer either formatted or unformatted. *Formatted* presentation is a translation of the caller ID signal into ASCII text. *Unformatted* presentation is a hexadecimal representation of the caller ID signal.

Formatted

```
RING

DATE = 1015
TIME = 2038
NMBER = 7085550001
NAME = U.S.ROBOTICS

RING

RING
```

Unformatted

```
RING

801E01083130313532303338020A37303835353530303031070C552E532E524F424F5449435322

RING

RING
```

Commands

#CID=*n*

| <i>n</i> | Caller ID Action |
|----------|---|
| 0 | Disable Caller ID detection and reporting |
| 1 | Enable Caller ID with formatted output |
| 2 | Enable Caller ID with unformatted output |
| 3 | Enable Caller ID with formatted output and name suppressed |
| 4 | Enable Caller ID but do not transmit the information to your computer—retain it in the Courier's memory |
| #CID? | Display the current caller ID setting. |
| #CID=? | Display the Caller ID actions that are available |

Example: **AT#CID=1 <Enter>**

The default setting is 0, caller ID detection and reporting disabled.

#\$

Displays a help screen for the octothorpe (#) command.

Example: **AT#\$ <Enter>**

I15

Displays the latest caller ID information. The caller ID information remains until either the Courier is reset or until the Courier receives another valid caller ID signal.

The ATI15 screen presents both unformatted and formatted caller ID data.

References

For more information about Calling Number Delivery (CND), refer to Bellcore documents TR-TSY-000030 and TR-TSY-000031. To obtain Bellcore documents, contact:

Bellcore Customer Service
60 New England Avenue, Room 1B252
Piscataway, NJ 08834-4196
(201) 699-5800

Distinctive Ring

Distinctive ring is a service provided by local telephone companies that permits the assignment of multiple phone numbers to one line. Each phone number is associated with a different ring pattern, and devices that recognize distinctive ring, like the Courier, can be set to answer only on certain incoming ring patterns.

For example, a fax machine, answering machine, telephone, and modem could all share the same line. Each device would have its own phone number and respond only to calls intended for that number.

There are four ring patterns in common use:

| Ring | Description |
|------|---|
| A | 1.2 to 2.0 seconds on, 4.0 seconds off. |
| B | 0.8 second on, 0.4 second off, 0.8 second on, 4.0 seconds off. |
| C | 0.4 second on, 0.2 second off, 0.4 second on, 0.2 second off, 0.8 second on, 4.0 seconds off. |
| D | 0.3 second on, 0.2 second off, 1.0 second on, 0.2 second off, 0.3 second on, 4.0 seconds off. |

A graphical depiction of each ring pattern follows.

| | |
|---|---|
| A |  |
| B |  |
| C |  |
| D |  |

Command

S70

| bit | value | Distinctive Ring Recognition |
|-----|-------|------------------------------|
| 0 | 1 | Enable recognition of Ring A |
| 1 | 2 | Enable recognition of Ring B |
| 2 | 4 | Enable recognition of Ring C |
| 3 | 8 | Enable recognition of Ring D |
| 4 | 16 | Reserved |
| 5 | 32 | Reserved |
| 6 | 64 | Reserved |
| 7 | 128 | Reserved |

Example: **ATS70.0=1.3=1 <Enter>**

This command enables the recognition of ring types A and D only. When a call comes in with a ring type A or D, the Courier will send the result code "RING A" or "RING D," respectively. The Courier will ignore other ring types. Another way to send the same command is

ATS70=9 <Enter>. Refer to page B-15 of the Courier User's Manual for details about setting S-Registers.

If S70 is set to 0 (the default) the Courier detects ring types A and B, sending the result code "RING" for either ring type. This function is identical to that of other U.S. Robotics modems that do not support distinctive ring.

If only one ring type is enabled, the Courier will recognize only the enabled ring type and ignore all others. It will send the result code "RING" only when it detects the ring type that's enabled.

If more than one ring type is enabled, the Courier will recognize only the enabled ring types and ignore the others. When a call arrives, the Courier will send its ring type in the result code, for example, "RING C."

New Result Codes

| Verbal | Numeric |
|--------|---------|
| RING A | 170 |
| RING B | 171 |
| RING C | 172 |
| RING D | 173 |

Redial on Loss of Carrier

Carrier is a signal maintained between two modems while they are on line. 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).

Application Example

This feature is useful for dialed-line connections that operate unattended. A potential application is for e-mail exchange in a corporate network. Couriers at each site may dial each other one at a time at night to exchange e-mail. If connections are lost during file transfers, carrier loss redial enables the modems to redial and complete transfers without manual intervention.

Commands

S44

Defines the number of seconds between the loss of carrier and the attempt to re-establish the connection. Also defines the interval between dialing attempts in the event that the first attempt is not successful. When carrier loss redial is enabled, the Courier will make 10 attempts to reconnect.

Example: **ATS44=20 <Enter>** sets a 20-second interval.

S69

| bit | value | Carrier Loss Redial Function |
|-----|-------|---|
| 0 | 1 | Disable Plug and Play signaling (external only) |
| 1 | 2 | Enable redial on loss of carrier |

The default value is S69=0, carrier loss redial disabled (and Plug and Play enabled, external Couriers only).

To enable carrier loss redial, send **ATS69.1=1 <Enter>**

Withdrawal of HST Cellular Support

The user's manual discusses HST Cellular in Appendix G. We have, however, discontinued support of HST Cellular.

ATI3 Screen

When you send **ATI3** <Enter>, the Courier now responds with a “banner,” or product title. Previous Couriers displayed either the duration of the last call or the current time, depending on the setting of ATK.

Set the clock using the ATI3/ATK command, as described on page C-6 of the Courier User’s Manual. The time information that used to be in the ATI3 screen is in the ATI6 screen.

Plug and Play

External Courier

The software for the external Courier has been developed to support Plug and Play (as defined by Microsoft/Hayes Plug and Play External COM Device Specification, Version 1.00). When you connect the Courier to a computer that uses a Plug and Play operating system, such as Windows 95, the computer will automatically detect and configure itself to support the Courier (depending on whether an INF file has been installed – see *Windows 95 Operation*).

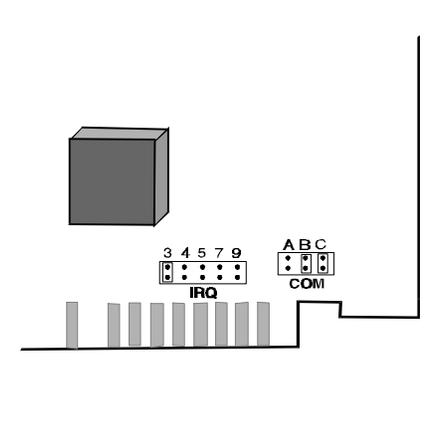
To disable the Courier's Plug and Play signaling ability, send the following command:

ATS69.0=1 <Enter>

Internal Courier

The internal 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.

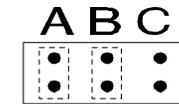
NOTE: Providing Plug and Play support for internal Couriers required a change to the hardware. If this addendum is provided with a new Courier, it has Plug and Play support. If you are simply upgrading the code, your Courier will not have Plug and Play support.



Location of the Jumpers.

Plug and Play Jumper Settings

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.

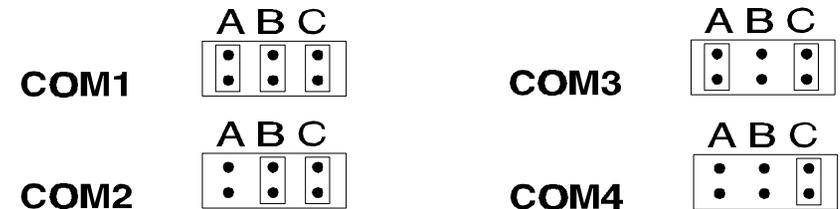


Setting the Jumpers for Plug and Play.

Other COM and IRQ Settings

To set the IRQ, place the jumper over the pins that correspond to the IRQ for the Courier: 3, 4, 5, 7, or 9.

To set the COM port for the Courier to use (1, 2, 3, or 4), position the jumpers in one of the following ways:



Setting the COM Port Jumpers.

Windows 95 Operation

Windows 95 needs an INF file to properly identify your Courier. If you are upgrading an existing Courier, the INF file is included among the files you downloaded from the U.S. Robotics BBS or ftp site. If you have a new Courier, the INF file is available from our BBS and our ftp site.

Getting the INF File

If your Courier isn't already installed, install it as described in the Courier User's Manual. When you power on your computer with the modem installed, as Windows 95 loads, it presents a New Hardware Found panel.

Select the Windows Default Driver. Then start a communications software package 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

Go to an MS-DOS Prompt and copy the MDMUSRCR.INF file to the **Windows\inf** directory. 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

Click **Start | Settings | Control Panel** and then double-click **Modems**. Remove the Standard Modem. Then click **Add**. At the Install New Modem panel, click **Next**. Windows 95 will auto-detect your Courier and install the appropriate support.