

When you have problems transmitting data with your modem (garbled data, intermittent errors, and so on), check to see that:

- * The phone connection is clean and noise-free.
- * No one is talking on the telephone line.
- * The phone and all extensions are on the hook.
- * The operation speed is correct for the modem you are using and the modem with which you are communicating.

If you still cannot transmit data, disconnect your modem to see if the phone line is operating correctly. If it is, the trouble is probably in your modem. Take it to your local Radio Shack store for further testing and/or repair.

Also, the telephone company can change its lines and/or equipment. If these changes affect your modem or its connection, the phone company notifies you in writing so that you can take steps to ensure uninterrupted service.

Diagnostics:

Your modem has built-in diagnostic capabilities. Test patterns for the analog loopback can be generated by either the modem or the computer. You use the test commands (&T) outlined in "Modem Test Commands" to perform these test. The modem does not respond to an incoming call while in the diagnostic mode. For further information on the testing mode, refer to Faxback Doc. # 4877.

Lightning:

Your modem has protection circuits, which meet or exceed FCC requirements, to reduce the risk of damage from surges in telephone and power line currents. However, lightning striking near or on these lines can damage the modem. A strong enough power surge can not only damage your modem, but may also damage your computer because the modem is internally connected to your computer's circuits.

Lightning damage is uncommon. However, if this concerns you or if you live in an area with frequent and/or severe electrical storms, we suggest that you unplug your electronic equipment during the storms. Alternatively, surge protectors exist for both power lines and modem lines.

If the other modem answer, but doesn't connect....

Your modem normally tries to establish an error-correction/data compression connection, but some older modems may balk at such a connection. To solve this problem, use an alternate "dial prefix".

The normal dial prefix is ATDT. Sending ATDT345-6789 to the modem tells it to dial that number and connect with the remote modem. Your modem will try to negotiate speed and an error/correction/data-compression protocol (V.42 bis, MNP etc.) with the other modem. Some modems/software you call may NOT like this. If you are having trouble connecting with another modem, you can use a dialing prefix that disables error correction and data-compression.

COMMAND STRING	DESIRED MODEM- TO-MODEM SPEED	NEGOTIATE PROTOCOL?
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AT&Q5NIDT (uses default)	Negotiate	YES
AT&Q6NIDT (try this next)	Negotiate	NO
AT&Q5S37 = 11N0DT (1)	14400 only	YES
AT&Q6S37 = 11N0DT (1)	14400 only	NO
AT&Q5S37 = 10N0DT (2)	12000 only	YES
AT&Q6S37 = 10N0DT (2)	12000 only	NO
AT&Q5S37 = 9N0DT (3)	9600 only	YES
AT&Q6S37 = 9N0DT (3)	9600 only	NO
AT&Q5S37 = 6N0DT	2400 only	YES
AT&Q6S37 = 6N0DT	2400 only	NO
AT&Q5S37 = 5N0DT	1200 only	YES
AT&Q6S37 = 5N0DT	1200 only	NO
AT&Q6S37 = 1N0DT	300 only	NO

NOTE: This character (0) is a zero, not the letter "O".

(1) V.32bis only (2) v.32 Turbo and V.32bis (3) All types of V.32

CONNECT messages / modem speed: S95=44 gives you full result messages, with CONNECT messages reporting computer-to-modem speed. If you need CONNECT to report modem-to-modem (carrier) speed, use S95=45. When operating a BBS, try S95=3 and you will get only the CONNECT (carrier speed) message, with /ARQ for error-correction connections. Always set the "speed" in your program to the highest permissible computer-to-modem speed (see manual) for your particular modem. The modem will handle modem-to-modem speed.

COMMON PROBLEMS

The most common problem encountered when installing an internal modem is configuring the modem's COM port setting correctly. The manual supplies detailed instructions about this, in case you need more help. You may also refer to Faxback Doc. # 5222 for a summary of COM port selection, IRQ selection and jumper settings.

If all else fails, it may be necessary to take your computer, with modem installed, to a Radio Shack Service Center for diagnosis and possible repair.

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