

Dialing and Answering with the AT Commands Set:

This chapter describes your modem's command and communications modes and the necessary guidelines needed to manually send commands to your modem. To send commands to your modem, you must be running a communications program.

Switching from the Communications to the Command Mode

Escape code

The escape code is the character sequence sent to your modem to switch it from the communications mode to the command mode. When switching modes, the modem does not disconnect from the phone line; It merely suspends the transfer of information.

Wait at least 1 second without typing a character. Then type "+++" (without the quotation marks.) Wait at least 1 second for the modem to acknowledge. Your modem acknowledges by sending OK (or 0, if you turn off word result codes).

The reason for the 1 second before and after wait sending the escape code is to prevent accidentally switching modes. If you type anything within 1 second (the escape code guard time) of the escape code, your modem ignores the escape code.

You can change the default values of the escape code and the escape code guard time. The escape code is a single character you enter three times, surrounded by a designated period of time.

Registers S2 and S12 hold the values for the escape code and guard time, respectively. To change the default values, type "ATS2=X" or "ATS12=Y" where "X" is the ASCII code for the character you want for the escape code and "Y" represents the desired guard time in 1/50 second increments.

Command Syntax:

This section describes the various elements that make up all modem commands.

Attention:

All commands must begin with the letters AT (short for "Attention") and your modem uses these letters to automatically set the baud rate and the parity. You can enter AT and all other commands in either upper or lower case.

Line Length Limits:

You can type one or more commands after the AT. Your modem performs the commands in the order given. The number of commands you can give at one time is limited by the line length, which cannot exceed 33 characters. Your modem does not count control characters and spaces, but it does count punctuation marks such as dashes or commas. <ENTER> denotes a carriage return. This ends the command; your modem does not process the command until it sees the <ENTER>.

Line Editing:

After you enter a command (before you press <ENTER>) you can edit the command using the backspace key to delete the last character you entered.

Note: If you backspace over a space, your modem ignores the space and erases the next character. In this case, your computer does not display the command properly.

Parameters:

Most commands consist of a single letter followed by a single-digit parameter, or option. If you do not follow the command with a parameter, the modem assumes a parameter of 0.

Example Command:

The following are two examples of valid modem commands.

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AT X4 V1 DT (408) 555-3438 <ENTER>
ATX4V1DT4085553438 <ENTER>
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Note that you do not need to enter any spaces. But, spaces make the command easier to read (although, as noted above, harder to edit).

Command Results:

After you enter the command <ENTER>, your modem executes the command line and returns a result code after every operation. Your modem can express this result code as a word or a number. Also, you can select which result codes your modem uses, and even turn result codes on and off. The V, X, and Q commands control these options, and are discussed in further detail in the fax/modem manual.

The ten result codes and their meanings are given in the chart below.

Number	Word	Description
0	OK	The modem successfully processed the command(s)
1	CONNECT	The modem detected a carrier at 300 baud
2	RING	The phone is ringing.
3	NO CARRIER	Carrier not detected within time limit, or carrier lost
4	ERROR	The modem could not process the command line (entry error)
5	CONNECT 1200	The modem detected a carrier at 1200 baud
6	NO DIALTONE	The modem could not detect a dial tone
7	BUSY	Modem detected a busy signal
8	NO ANSWER	Modem never detected a busy signal or carrier
9	Not Used	
10	CONNECT 2400	The modem detected a carrier at 2400 baud.

Transmission Speed:

When you type AT to get your modem's attention, your modem sets itself to the speed you have selected using your communications program. When you connect to another computer either by dialing or auto-answer, your modem connects at

the other computer's highest speed not greater than the attention speed and sends you a CONNECT result code. Then, your modem adjusts its operation to the other computer's speed (if different from the attention speed).

If the connect speed differs from the speed you set in your communications program, you do not need to change your communications program's speed. The characters display on your screen at the slower rate, automatically.

For example, if you set your communications software to operate at 2400 baud, type AT DT 555-3434 <ENTER>. If the system you dial answers at 1200 baud, you see the message CONNECT 1200. Communications then proceeds as normal, but at the slower speed.

The connect result codes are:

CONNECT	(110 or 300 baud connection)
CONNECT 1200	(1200 baud connection)
CONNECT 2400	(2400 baud connection)

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