Your modem can run several advanced self tests using the &T command to
perform these tests. Under normal use, you should never need to use these
functions. But you might be instructed by a technician to run one of these
tests if you have difficulty accessing another computer by modem.

The following chart summarizes the available tests:

Command	Function
&T0	Stops test in progress.
&T1	Start Local Analog Loopback Test.
&T3	Start Local Digital Loopback.
&T4	Enable Remote Digital Loopback Request.
&T5	Disable Remote Digital Loopback Request.
&T6*	Start Remote Digital Loopback Test.
&T7*	Start Remote Digital Loopback Test with automatic test pattern generation/checking.
&T8*	Start Local Analog Loopback Test with automatic test pattern generation/checking.

* Not available at 300 baud.

Test Timer:

Register S18 controls how many seconds any test runs. You can set this
register to any value from 0 to 255. If you set the value to 0 (default),
your modem performs the test until you manually halt the test with the
&T0 command.

To change the setting, enter AT S18=n <ENTER> where n=1-255.

&T0: Halt Test:

AT &T0 <ENTER> halts any test in progress. If your modem is running a remote
test with another modem, or if it is running an analog loopback test, you
must first enter the escape (+++) to enter the command mode. Examples of
using &T0 are included with each test.

&T1: Local Analog Loopback Test:

The local analog loopback test is the first test you should run if you think
your modem is not operating correctly. This test checks your computer's
communications port and your modem. This does not send information over the
phone line, so you do not need to dial another computer first.

To perform the test:

1. In your modem's command mode, type: AT &T1 <ENTER>
2. Now type. Everything you type should appear on the screen.
3. If you have not set the test timer, to end the test, enter: +++

Your modem responds with: OK

Then type: AT &T0 <ENTER>

Your modem again responds: OK

The test stops.

Otherwise, the test stops automatically after the timer elapses.

If what you typed appeared on the screen, you know that your modem and your computer are communicating with each other properly.

If there is a problem:

1. Before performing this test, unplug the phone line.
2. If you do not see anything on your computer screen or if you see incorrect characters when you type, be sure you have set your communications software to the correct port (default com 2) and speed (1200 or 2400 baud).
3. If you still have problems, contact your local Radio Shack store for further assistance or repair.

&T3: Remote Digital Loopback Test:

This tests a remote modem. You use this test with modems that do not themselves have a digital loopback test feature. This command makes your modem loopback (echo) everything it receives from a remote modem. You must be communicating with the other system when you start this test.

To run this test:

1. Escape to the command mode by typing +++
2. To start the test, type: AT &T3 <ENTER>
3. Now, everything the other computer sends loops back without ever displaying on your computer's screen.
4. If you have not set the test timer, stop the test by typing:
   AT &T0 <ENTER>.

Otherwise, your modem stops the test automatically when the test timer elapses.

Since this tests the remote modem, the person at that modem must determine whether their modem is operating, and take appropriate action.

&T4: Enable Remote Digital Loopback:

This commands your modem to respond to a request for a remote digital loopback test (&T6 or &T7 from the other modem). This feature is enabled by default, so you need only enter this command if you have disabled the feature with the &T5 command.

&T5: Disable Remote Digital Loopback:

This commands your modem to ignore any request for a remote digital loopback test.

&T6: Request Remote Digital Loopback:

This commands your modem to request a remote digital loopback test from the remote modem. You must be communicating with another system to use this

command, and the other system's modem must support remote digital loopback tests and have its remote digital loopback test enabled (&T4).

To perform this test:

1. Escape to the command mode by typing: +++

Your modem responds with: OK

2. To start the test, type: AT &T6 <ENTER>

If the remote modem does not support this test, or if the remote modem has this feature disabled, your modem responds with: ERROR

Otherwise, the test is underway.

3. Type anything. As you type, the characters are sent to the remote modem, then the loop back to your system. So, everything you type should appear on your computer.
4. If you have not set the test timer, to stop the test type: +++

Your modem responds with: OK

Then type: AT &T0 <ENTER>

The test stops.

If what you typed appears on your screen exactly as you typed it, your computer, your modem, the telephone line, and the remote modem are all working properly.

If there is a problem:

1. Be sure you have dialed and connected to the remote system.
2. Pick up an extension phone and confirm that you can hear the tones indicating a connection.
3. If the message does not come through, or if it comes back garbled, you might be having telephone line problems. Or, you mgiht not have your communications program set to the correct baud rate.
4. If you cannot resolve the problem, contact your local Radio Shack store for assistance or service.

&T7: Request Remote Digital Loopback Test with Pattern Generation/Checking:

This test is like the &T6 command, but your modem automatically generates a test pattern and compares what it receives with what it sends, so you do not have to type a test message.

To run this test:

1. Connect to a remote system, then escape to the command mode by typing: +++

Your modem responds with: OK

2. To start the test, type: AT &T7 <ENTER>
3. If you have not set the test timer, to end the test type: AT &T0 <ENTER>

Otherwise, wait for the test timer to expire.

If everything is operating correctly, your modem responds with: 000 OK

If your modem responds with a number other than 000, this indicates how many errors your modem detected during the test. For example, 023 indicates your modem detected 23 errors. 255 indicates your modem detected 255 or more errors.

It is normal for you to occasionally get errors. If the number of errors is excessive, you might have connected through a noisy telephone line. If the number of errors is consistently high with different systems, you might have a problem with your modem.

&T8: Local Analog Loopback Test with Pattern Generation/Checking:

This commands your modem to test its internal functions. If automatically loops information through itself, and keeps track of any errors.

You should not have dialed another system when you run this test.

To run the test:

1. In your modem's command mode, type: AT &T <ENTER>

2. If you have not set the test timer, to stop the test type: AT &T0 <ENTER>

Otherwise, the test stops when the test timer expires.

Your modem responds with: 000 OK

If your modem responds with a number other than 000, this indicates how many errors your modem detected during the test. For example, 023 indicates your modem detected 23 errors. 255 indicates your modem detected 255 or more errors.

You might get occasional errors with this test, but they should not occur consistently. If you receive many errors on more than one occasion, contact your local Radio Shack store for assistance or service.

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