

Your modem can run several advanced selftests. You use the &T command to perform these tests. Under normal use, you should never need to use these functions. But, you might be instructed 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	Stop any test in progress.
&T1	Start Local Analog Loopback Test.
&T3	Start Remote Digital Loopback, Locally.
&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.

Note: 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]

Enable Test Mode

Before you use the &Tn commands, you should enter the command:

AT &Q0 {ENTER}

to enable the test mode. You can enter the &Q and &Tn commands on the same line = and once &Q has been used, it remains in effect until you turn off the modem.

&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 code (+++) to enter the command mode. Examples of using &T0 are included with each test described on the following pages.

&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 COM port and your modem. This does not send information over the phone line, so do not dial and connect to another computer.

1. In your modem's command mode, type:

AT &T1 [ENTER]

2. Now type. Everything you type should appear on the screen exactly as you enter it.
3. If you have not set the test timer, stop the test by typing:

+++

Your modem responds with:

OK

Then, type:

AT &T0 [ENTER]

Your modem again responds:

OK

The test stops.

Otherwise, the test stops after the timer elapses.

If what you type appears on the screen, your modem and computer are communicating properly.

If there is a problem:

- * Be sure you have not connected to a computer service. if necessary unplug the phone line.
- * If you do not see anything on your computer screen or if you see incorrect characters, be sure you have set your software to the correct port (default COM 2).

- * If you still have problems, contact your local Radio Shack store for further assistance.

`&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 properly, 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.

With this feature enabled, your modem begins to loopback all information sent to it from a remote modem, when that modem requests a digital loopback test.

`&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 been 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 they loop back to your system. So everything you type should appear on your computer.
4. If you have not set the test timer, stop the test by typing:

+++

Your modem responds with:

OK

Then, type:

AT &TO [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:

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

&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, stop the test by typing:

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 errors 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.

<code>&T8 Local Analog Loopback Test with Pattern Generation/Checking</code>
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This commands your modem to test its internal functions. It 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:

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AT &T8 [ENTER]
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2. If you have not set the test timer, stop the test by typing:

```
AT &T0 [ENTER]
```

Otherwise, the test stops when the test timer expires.

Your modem responds with:

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000
```

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OK
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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.

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