

Chapter 5

Diagnostics

TEST FEATURES

By selecting various tests available through the front panel options, you can send test signals or patterns to check the operation of components in the network. During any test, TM is on constant for locally initiated tests and blinks for remotely initiated tests.

 **Note**

To attempt to clear TEST PATTERN ERRORS message from the LCD, press YES or NO. If the error message is not replaced with TEST PATTERN OK, then errors are still being received.

To stop the test, press HOME, then respond to the question EXIT TEST? by pressing YES.

Remote Terminal Loopback RT

This test causes the local DDS/MR64 to loop back a remotely generated test signal to check the remote unit (Figure 5-1). If the signal returns unchanged, the remote unit and the DDS network are OK.

A bilateral loopback test lets the local DTE loop a signal through the DTE interface. This tests the DTE transmit and receive circuits.

Local Line Loopback LL

This test checks the transmit and receive logic components in one loop circuit and the transmit and receive line components in another loop circuit (Figure 5-2). The DDS/MR64 loops a signal from the DTE through the logic components and back to the DTE. If the signal does not change, the logic components are OK.

At the same time, the DDS/MR64 loops a signal through the transmit and receive line components. If the signal does not change, the line components are OK.

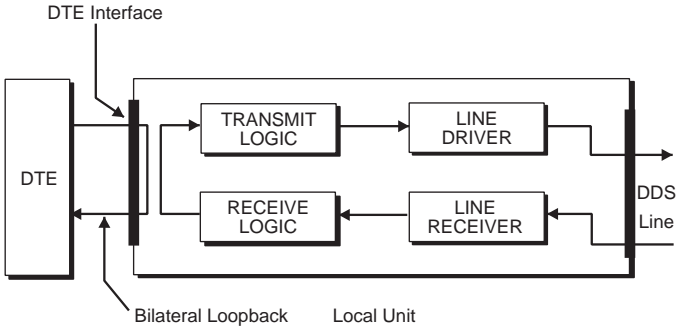


Figure 5-1
Remote Terminal Loopback (RT)

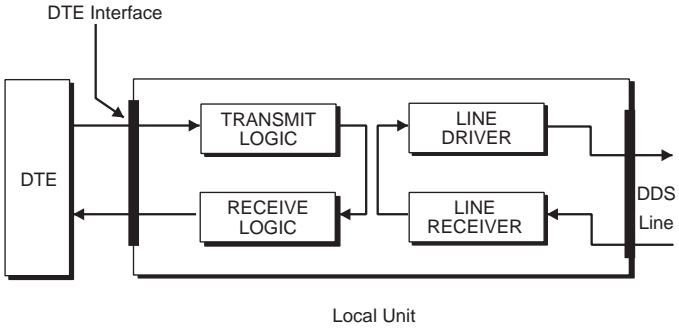


Figure 5-2
Local Line Loopback (LL)

Local Line Loopback with Test Pattern **LL/TP**

This test is similar to the LL test except that the data sent through the local logic circuits is a test pattern originated by the DDS/MR64 (Figure 5-3). The LL/TP returned signal is scanned in a similar way to the LL test.

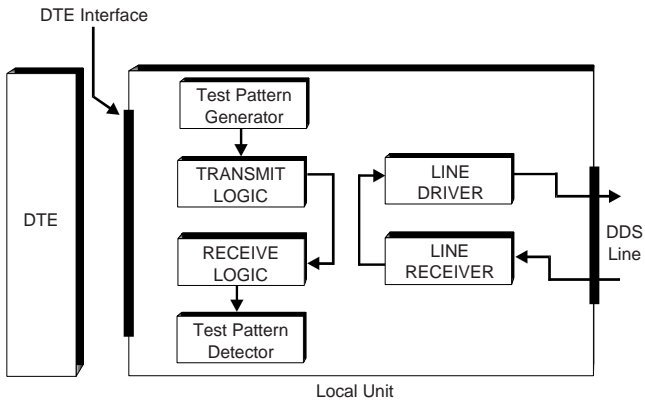


Figure 5-3
Local Line Loopback with Test Pattern (LL/TP)

Remote Loopback **RL**

This test checks the local DDS/MR64, DDS network, and remote unit (Figure 5-4). The local DDS/MR64 sends a signal to the remote unit causing it to go to the RT configuration. The local DTE can then transmit data which will be looped back at the remote unit and received by the local DTE. If the signal returns unchanged, the local DDS/MR64, DDS network, and remote unit is functional.

The remote unit must be a Motorola CSU/DSU or any CSU/DSU that complies with CCITT V.54 for remote loopback or is compatible with U.S. Sprint-AT&T procedure to function.

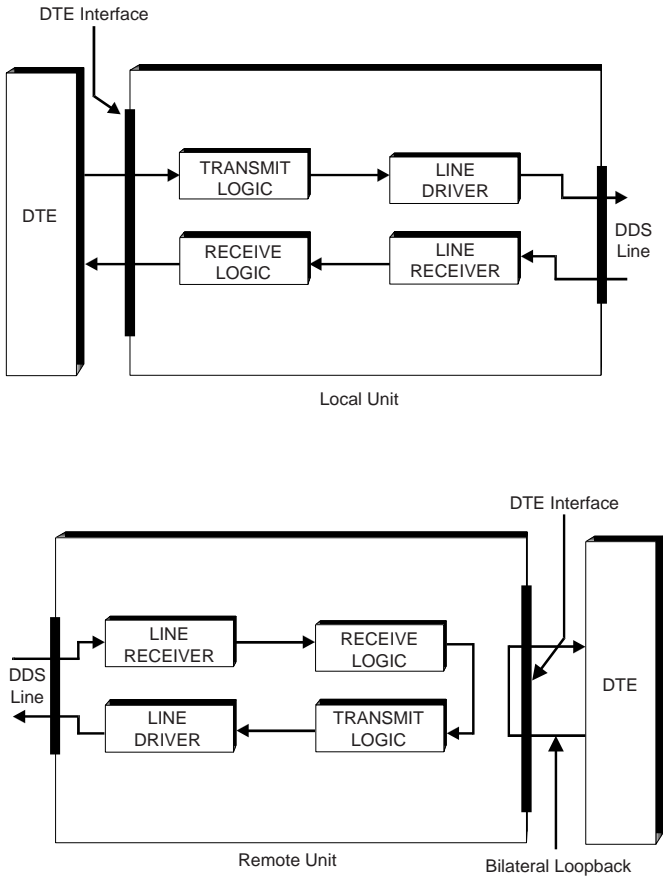


Figure 5-4
Remote Loopback (RL)

Remote Loopback with Test Pattern **RL/TP**

This test is similar to the RL test except that the data sent across the line is a test pattern sent from the local DDS/MR64 and looped back through the remote DDS/MR64 (Figure 5-5).

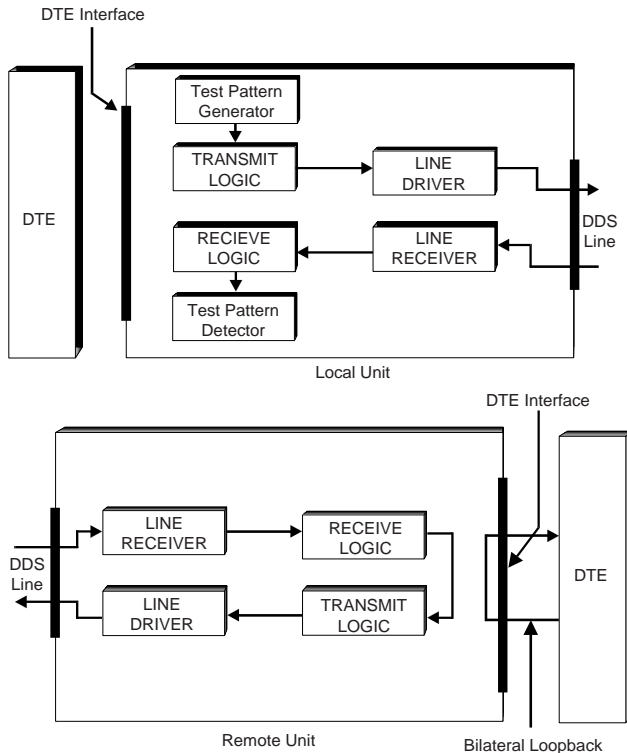


Figure 5-5
Remote Loopback with Test Pattern (RL/TP)



Note

Pressing **NO** when **REMOTE LOOPBACK UNRECEIVED** is showing on the LCD causes the **EXIT TEST?** question to display.

Test Pattern TP

TP tests the local and remote units plus the DDS network (Figure 5-6). TP causes the DDS/MR64 to generate and transmit a 511 bit test pattern over the DDS network to the remote unit.

The remote unit must either loop back the test pattern or generate its own test pattern to the local DDS/MR64 for error checking.

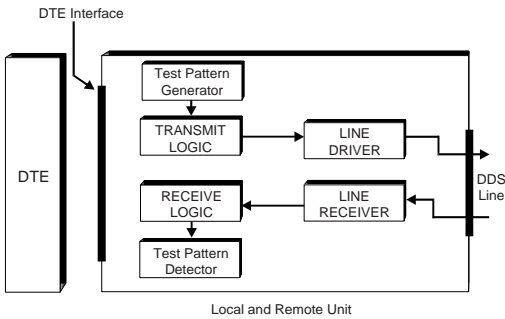


Figure 5-6
Test Pattern (TP)