

Quick Card

T-BERD 5800 Network Tester

Monitoring DS1 Signals at a Digital Cross Connect panel

This quick card describes how to use the DS1 BERT Dual Monitor test to monitor a DS1 circuit.

Equipment Requirements:

- T-BERD 5800 equipped with the following:
 - BERT software release V27.0 or greater
 - Test options:
 - C5E1DS1: E1/DS1 Electrical option
 - C5DUALPORT: Dual Port option (required on T-BERD 5800-100G only)
- One of the following T1 Cable sets to connect the T-BERD 5800 DS1 Port(s) to line under test:
 - Two (2) Bantam to Bantam cables (CB-10615)
 - Dual Bantam to RJ-48C cable (CB-41645)



Figure 1: Equipment Requirements



The following information is required to complete the test:

- T1 Line Code (B8ZS or AMI)
- T1 Framing (ESF or D4)
- Receiver Input (DSX Mon or Bridge)

Connect to Line Under Test:

- The T-BERD 5800v2 has both RJ-48C and bantam ports for T1 testing. You may use Bantam to Bantam or Dual Bantam to RJ-48C cables to connect the T-BERD to the DSX-1 Monitor ports.
- The T-BERD 5800-100G has an RJ-48C port for T1 testing. A Dual Bantam to RJ-48C cable should be used to connect the T-BERD to the DSX-1 monitor ports.

Launch and Configure Test:

1. Press the Power button  to turn on the test set.
2. Press the **Test** icon  at the top of the screen.
3. Using the **Select Test** menu, **Quick Launch** menu, or **Job Manager**, launch the **DS1/DS3 ► DS1 ► DS1 BERT ► Dual Monitor** test.

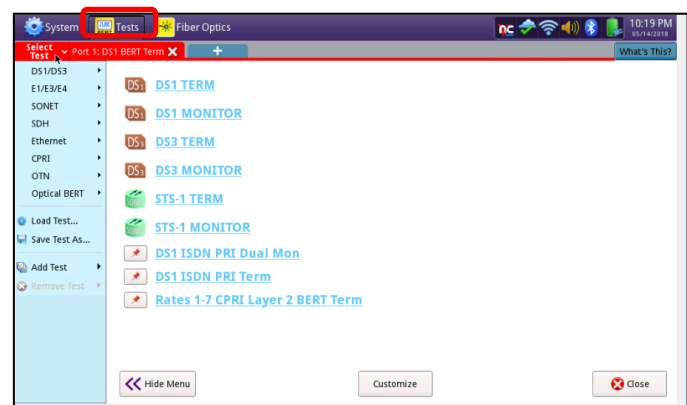





Figure 2: Launch Screen

- Tap  to open the **Tools Panel** and select .
- Press  to continue.

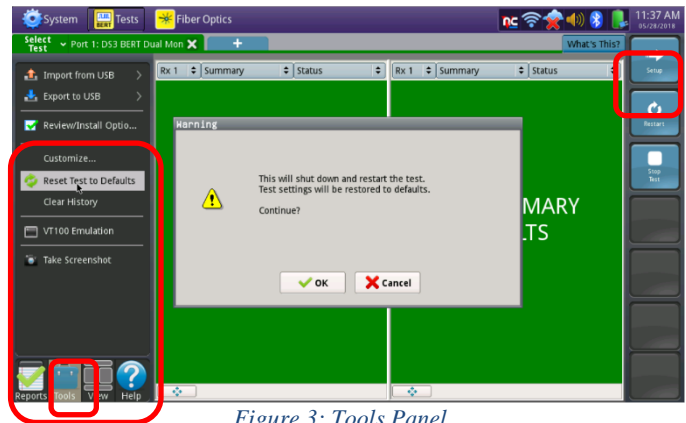





Figure 3: Tools Panel

- Press the **Setup** Soft Key  on the top right side of the screen. Select the indicated folders and configure your test as follows. Leave all other values at default, unless specified in the work order.

Folder	Option	Value(s)
Interface	Rx1 Rx Input	If unknown, select "DSX Mon"
	Rx1 Line Code	If unknown, select "B8ZS"
	Rx2 Rx Input	If unknown, select "DSX Mon"
	Rx2 Line Code	If unknown, select "B8ZS"
Framing	Framing	If unknown, select "ESF"
Pattern	Pattern Mode	ANSI
	Pattern	Live

- Press the **Results** Soft Key  to view the **Test Results** screen.
- Using the drop-down menus, select "Rx 1/Interface/Signal" for the left results display.
- Press the **Restart** soft key .

- Verify the following:
 - Rx 1 Summary LED is green
 - Rx 1 Signal Present LED is green
 - Rx 1 Frame Sync LED is green
 - Rx 1 RX Frequency (Hz) = 1544000 ± 50 Hz
 - BPVs = 0

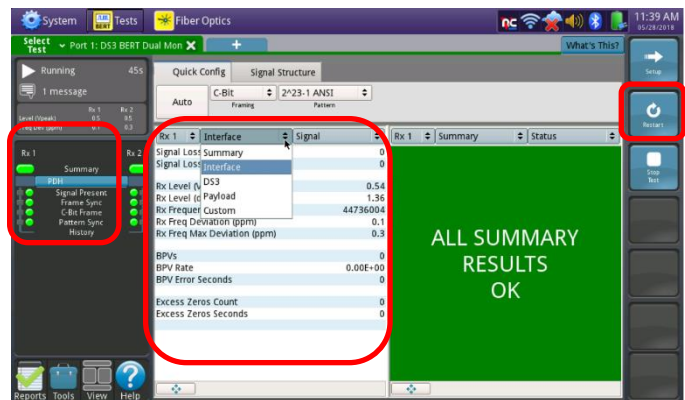


Figure 4: Test Results Screen, Rx1/Interface/Signal

11. Using the drop-down menus, select “Rx 2/Interface/Signal” for the right results display.

12. Verify the following:

- Rx 2 Summary LED is green
- Rx 2 Signal Present LED is green
- Rx 2 Frame Sync LED is green
- Rx 2 Rx Frequency (Hz) = 1544000 ± 50 Hz
- BPVs = 0
- Rx 2 Frame Slips = 0

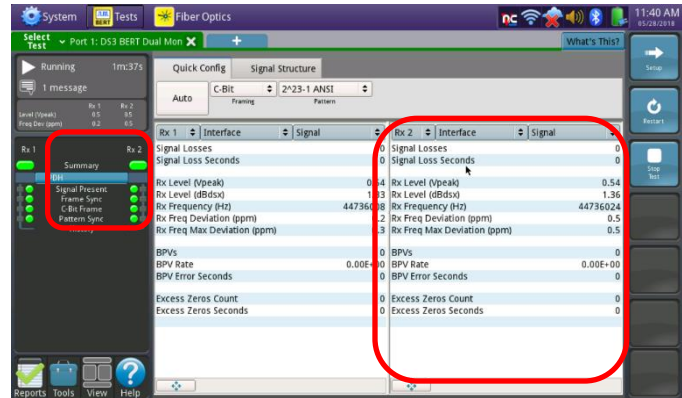


Figure 5: Test Results Screen, Rx2/Interface/Signal

Troubleshooting tips:

- If no Signal Present, check cables and verify you are in correct monitor point. Check the Rx Input settings (DSX Mon or Bridge)
- If no Frame Sync, check Framing setting (ESF or D4).
- If Rx Frequency $\neq 1544000 \pm 50$ Hz, there is no clock on the circuit.
- If BPVs present, there is an issue with either the signal level (Rx input settings, bad cable, etc.) or a circuit problem between the test set and the last intelligent piece of equipment that is transmitting the signal to the test set.
- If CRC Errors, Framing Errors, or other errors present, check the Rx Input setting (DSX Mon or Bridge) If errors persist, perform intrusive testing (BERT) to isolate the issue.