Quick Card

T-BERD 5800 Network Tester
Monitoring DS3 Signals at a Digital Cross Connect panel

This quick card describes how to use the DS3 BERT Dual Monitor test to monitor a DS3 circuit.

Equipment Requirements:
- T-BERD 5800 equipped with the following:
  - BERT software release V27.0 or greater
  - Test options:
    - C5DS3STS1: DS3/STS1 Electrical option
    - C5DUALPORT: Dual Port option
      (required on T-BERD 5800-100G only)
- One or more of the following DS3 cable sets to connect the T-BERD 5800 DS3 Port(s) to the line under test:
  - Two (2) BNC to BNC cables (CB-30662)
  - Two (2) BNC to WECO 440A cables (CB-015837)
  - Two (2) mini BNC to BNC adapters (CB-MINITOBNCQTY1) for T-BERD 5800-100G

Figure 1: Equipment Requirements

The following information is required to complete the test:
- Receiver Input (DSX Mon or Term)
- Framing (C-Bit or M13)

Connect to Line Under Test:
- The T-BERD 5800v2 has BNC connectors for DS3 testing. You may use BNC to BNC or BNC to WECO 440A cables to connect the T-BERD to the DSX-3 Monitor ports.
- The T-BERD 5800-100G has mini BNC connectors for DS3 testing. CB-MINITOBNCQTY1 adapters are required to adapt to a standard BNC connector. You may use BNC to BNC or BNC to WECO cables to connect the adapter to the line under test.

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►DS3►DS3 BERT►Dual Monitor** test.
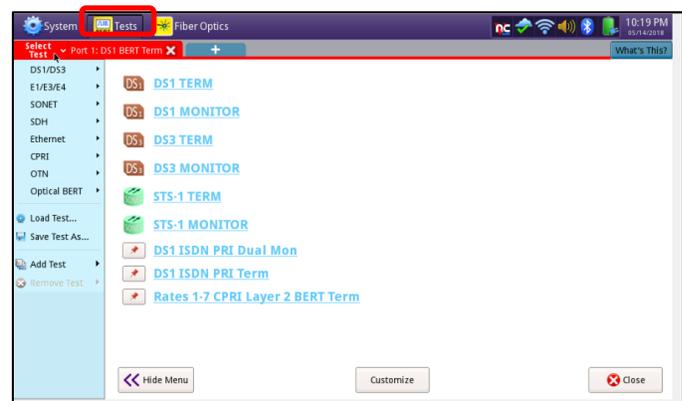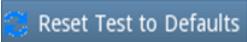

Figure 2: Launch Screen

4. Tap **Tools** to open the **Tools Panel** and select **Reset Test to Defaults**.
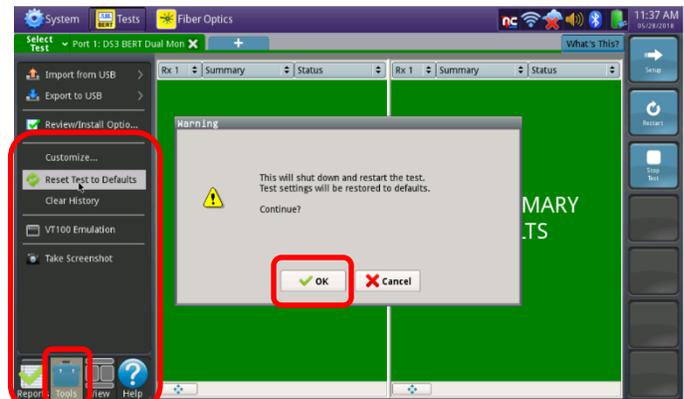
5. Press **OK** to continue.

Figure 3: Tools Panel

6. 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"**
	Rx2 Rx Input	If unknown, select **"DSX Mon"**
Framing	Framing	If unknown, select **"C-Bit"**
Pattern	Pattern Mode	ANSI
	Pattern	Live

7. Press the **Results** Soft Key to view the **Test Results** screen.

8. Using the drop-down menus, select "**Rx 1/Interface/Signal**" for the left results display.

9. Press the **Restart** soft key.

10. 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)** = 44736000 ± 895 Hz
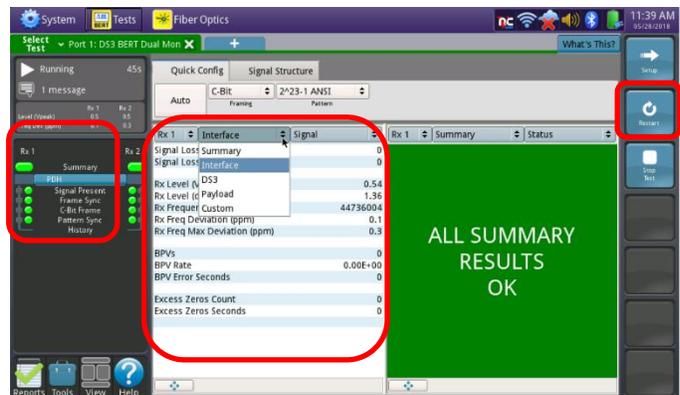   - **BPVs** = 0

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
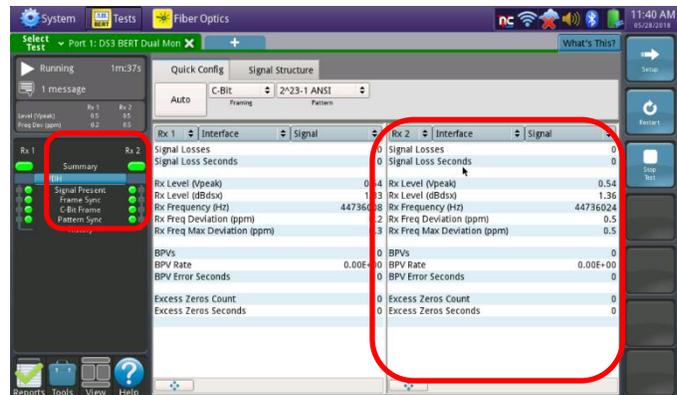   - **Rx 2 Rx Frequency (Hz)** = 44736000 ± 895 Hz
    - **BPVs** = 0

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

Troubleshooting tips:
- If no Signal Present, check cables and verify you are in correct the monitor point. Check the Rx Input settings (DSX Mon or Term)
- If no Frame Sync, check Framing setting (C-Bit or M13).
- If Rx Frequency ≠ 44736000 ± 895 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 other errors present, check the Rx Input setting (DSX Mon or Term)
  If errors persist, perform intrusive testing (BERT) to isolate the issue.