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)

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.
4. Tap \(\text{Tools}\) to open the \textbf{Tools Panel} and select \(\text{Reset Test to Defaults}\).

5. Press \(\checkmark\text{OK}\) to continue.

6. Press the \textbf{Setup Soft Key} \(\text{Setup Soft Key}\) 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.

<table>
<thead>
<tr>
<th>Folder</th>
<th>Option</th>
<th>Value(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td>Rx1 Rx Input</td>
<td>If unknown, select “DSX Mon”</td>
</tr>
<tr>
<td></td>
<td>Rx1 Line Code</td>
<td>If unknown, select “B8ZS”</td>
</tr>
<tr>
<td></td>
<td>Rx2 Rx Input</td>
<td>If unknown, select “DSX Mon”</td>
</tr>
<tr>
<td></td>
<td>Rx2 Line Code</td>
<td>If unknown, select “B8ZS”</td>
</tr>
<tr>
<td>Framing</td>
<td>Framing</td>
<td>If unknown, select “ESF”</td>
</tr>
<tr>
<td>Pattern</td>
<td>Pattern Mode</td>
<td>ANSI</td>
</tr>
<tr>
<td></td>
<td>Pattern</td>
<td>Live</td>
</tr>
</tbody>
</table>

7. Press the \textbf{Results Soft Key} \(\text{Results Soft Key}\) to view the \textbf{Test Results} screen.

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

9. Press the \textbf{Restart soft key} \(\text{Restart soft key}\).

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) = 1544000 ± 50 Hz
    - BPVs = 0
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

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 ≠ 1544000 ± 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.