

Quick Card

T-BERD[®]/MTS-5800 Network Tester

Ethernet RFC 6349 TrueSpeed[™] Test - Remote Unit

This document outlines how to configure a remote (far-end) T-BERD/MTS 5800 instrument for an RFC 6349 TrueSpeed test to be executed from another T-BERD/MTS 5800 unit. The local (near-end) T-BERD/MTS 5800 setup is covered in a separate Quick Card.

Equipment Requirements:

- T-BERD/MTS-5800 equipped with the following:
 - BERT software release V26.1 or greater
 - Test options:
 - C510M1GE for 10 Megabit to 1 Gigabit Ethernet
 - C510GELAN for 10 Gigabit Ethernet
 - C5LSLAYER4 for TrueSpeed testing at 1G
 - C510GLAYER4 for TrueSpeed testing at 10G
 - SFP or SFP+ optical transceiver to match the line under test
- Jumper Cables to match the line under test
- Fiber optic inspection microscope (VIAVI P5000i or FiberChek Probe)
- Fiber optic cleaning supplies



Figure 1: Equipment Requirements

The following information is required to complete the test:

- Physical Interface (10/100/1000BASE-T, 1000BASE-SX, 1000BASE-LX, 10GBASE-LR, etc.)
- VLAN ID, if VLAN tagging is used
- Source IP Address, Subnet mask, and Default Gateway for the remote T-BERD/MTS

Fiber Inspection Guidelines:

Inspect and clean (if necessary) both sides of every fiber optic connection being used (bulkhead connectors, patch cords, and SFP port) prior to reconnection for each test. Using the P5000i or FiberChek Probe:

- Focus fiber on the screen. If dirty, clean the connector.
- If it appears clean, run inspection test.
- If it fails, clean fiber and re-run inspection test. Repeat until it passes.
- To inspect SFP ports with the **P5000i**, insert the probe tip into the SFP port, move the focus wheel all the way to one end, and slowly move the focus wheel to the other end.
- To inspect SFP ports with the **FiberChek Probe**, manually focus with middle toggle switch or pull the trigger to auto-focus.
- If a fiber stub (a darker circle on a lighter background as shown in Figure 2) is detected, follow standard inspection and cleaning procedures. If you are unable to focus on a fiber end face, do not clean the port. The SFP uses a lens that cannot be cleaned.

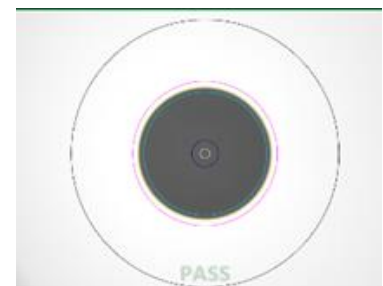


Figure 2: Image of Clean Fiber

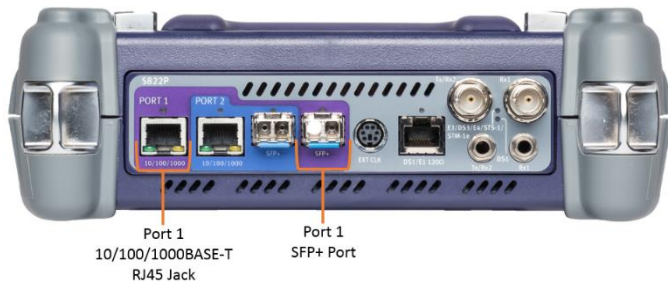


Figure 3: T-BERD/MTS 5800v2 Dual Port mainframe

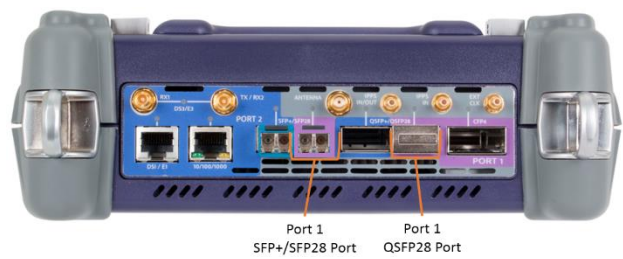


Figure 4: T-BERD/MTS 5800-100G mainframe

Connect to Port Under Test:

1. For copper 10/100/1000BASE-T interface testing with the T-BERD/MTS 5800v2, connect the Port 1 10/100/1000 RJ-45 jack to the port under test using CAT 5E or better cable.
2. For copper 10/100/1000BASE-T interface testing with the T-BERD/MTS 5800-100G, insert a copper SFP into the Port 1 SFP+/SFP28 slot and connect to the port under test using CAT 5E or better cable.
3. For optical interfaces:
 - Inspect and, if necessary, clean all SFPs, fibers, and bulkheads, as described on page 1.
 - Insert desired SFP or SFP+ into the Port 1 slot on the top of T-BERD/MTS.
 - Connect the SFP or SFP+ to the port under test using a Single Mode or Multimode jumper cable compatible with the interface under test.

Launch Test:

1. Press the Power button  to turn on the test set.

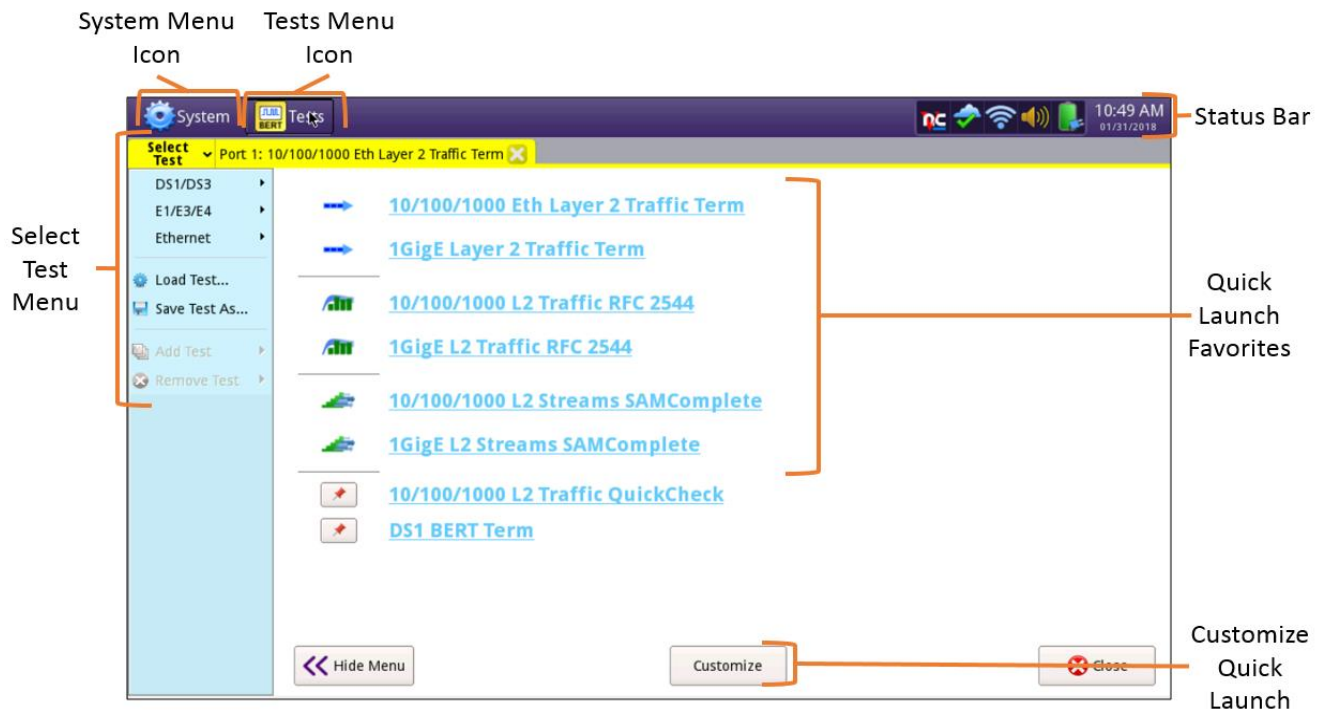

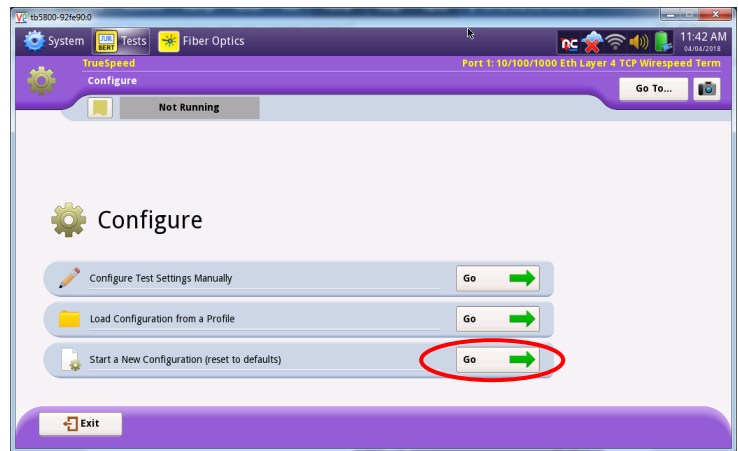


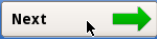
Figure 5: Startup screen

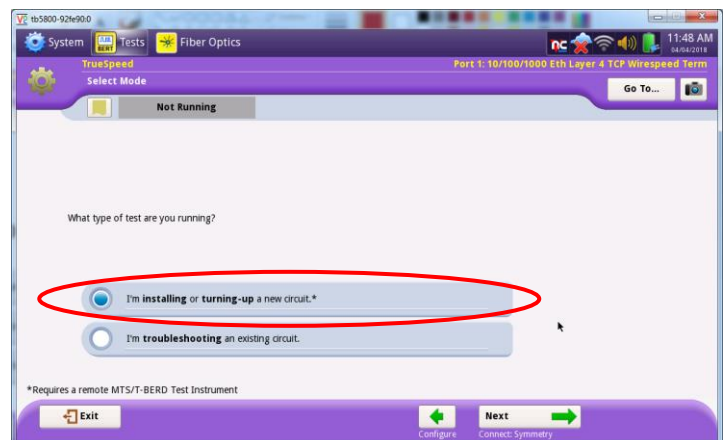
- Using the **Select Test** menu, **Quick Launch** menu, or **Job Manager**, launch an **Ethernet, RFC 6349 TrueSpeed, Terminate** test on port 1 for the desired physical interface. For example:
Ethernet ▶ 10/100/1000 ▶ RFC 6349 TrueSpeed ▶ P1 Terminate

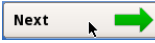
- Tap the  button next to **“Start a New Configuration (reset to defaults).”**

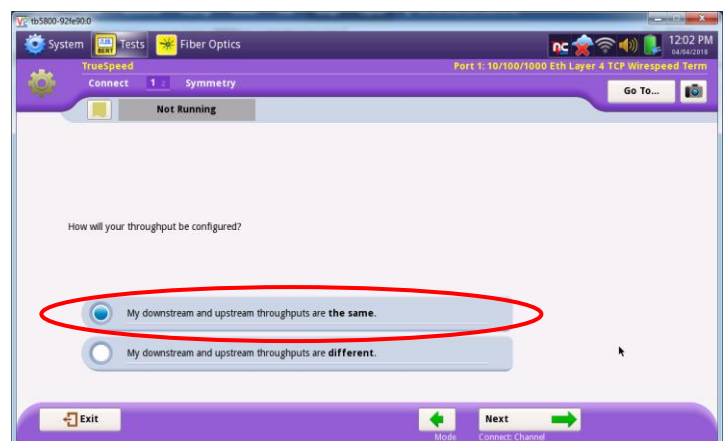


Configure Remote Unit for Test:

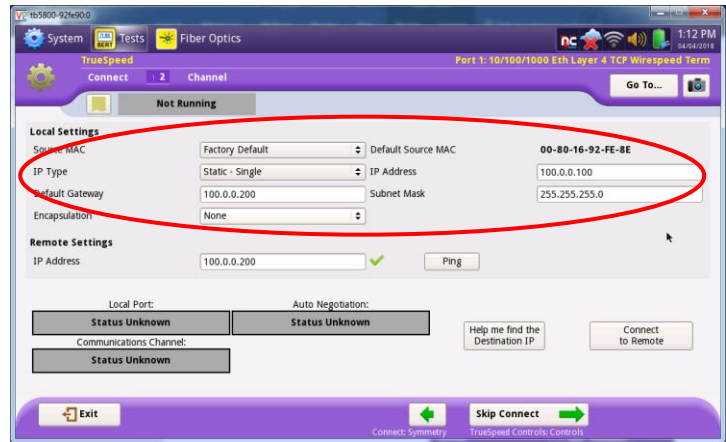
- Select **I am installing or turning-up a new circuit** and tap the  button to advance to the **Symmetry** screen.





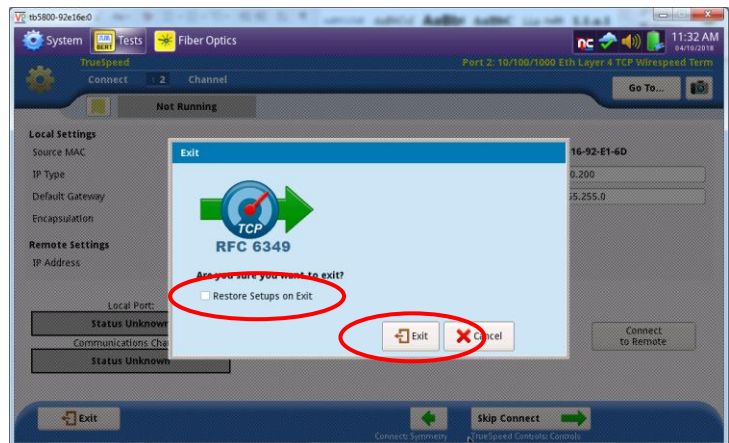
- Select **My downstream and upstream throughputs are the same** and tap the  button to advance to the **Connect to Remote Instrument** screen.



3. Use the **Local Settings** configuration section to fill in the remote (far-end) T-BERD/MTS IP address, Subnet Mask and Default Gateway. If VLAN tagging is used, set the **Encapsulation** option to **VLAN** and provide the appropriate VLAN ID. Leave the **Remote Settings** section set to defaults.



4. Tap the  button, ensure that the **Restore Setups on Exit** option is **not checked** and tap the  button again.



5. Check the **Sync Acquired** and **Link Active** LEDs to ensure the unit is connected to the network under test. The remote (far-end) T-BERD unit is now ready for RFC 6349 TrueSpeed test to be executed from a local (near-end) T-BERD/MTS 5800 unit.

