

Quick Card

MP-60 and MP-80 USB Optical Power Meter Measuring Optical Insertion Loss on the T-BERD/MTS-5800

The following procedure outlines how to use the T-BERD/MTS-5800 equipped with an MP-60 or MP-80 external USB Optical Power Meter to measure Optical Insertion Loss (OIL). Prior to measuring OIL, the Power Meter must be referenced to an Optical Light Source (OLS). This procedure explains how to Reference the Power Meter to a Light Source and how to measure OIL using the T-BERD/MTS-5800 and MP-60 or MP-80. Refer to your OLS documentation for instructions to operate the Light Source.

Equipment Requirements:

- T-BERD 5800 with Fiber Optics Software Release V16.22 or greater
- MP-60 or MP-80 USB Optical Power Meter
- Fiber optic cleaning and inspection tools
- Patch Cord (Reference Cable) with connectors matching the Power Meter and Fiber Under Test (FUT)
- Optical Coupler to connect Jumper Cable to the FUT



The following information is required to complete the test:

- Type of Fiber (Multimode or Single Mode)
- Type of Connectors (SC UPC, SC APC, LC UPC, etc.)
- Wavelength of signal(s) to measure

Referencing the Power Meter to the Light Source:

1. Insert the MP-60 or MP-80 Optical Power Meter (OPM) into a USB port on the side of the T-BERD/MTS-5800.
2. Inspect and clean fiber end face of the Reference Cable.
3. Insert the Reference Cable into the Patch Cord Input on the OPM.
4. Inspect and clean the other fiber end face of the Reference Cable.
5. Inspect and clean the fiber end face of the OLS Reference Cable.
6. Connect the OPM Reference Cable to the OLS Reference Cable via the coupler.

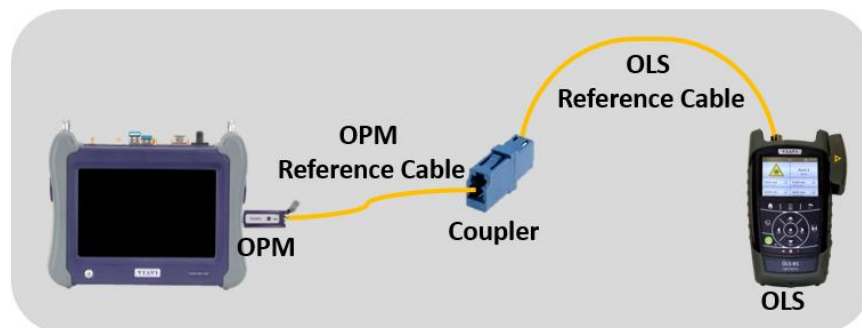


Figure 1: Connecting the OPM and OLS for Reference

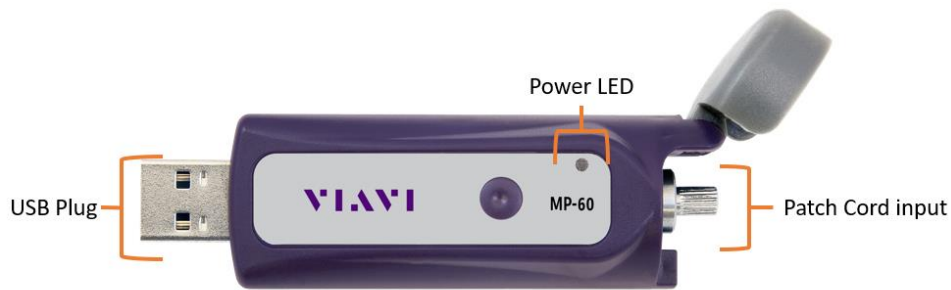


Figure 2: MP-60 USB Power Meter

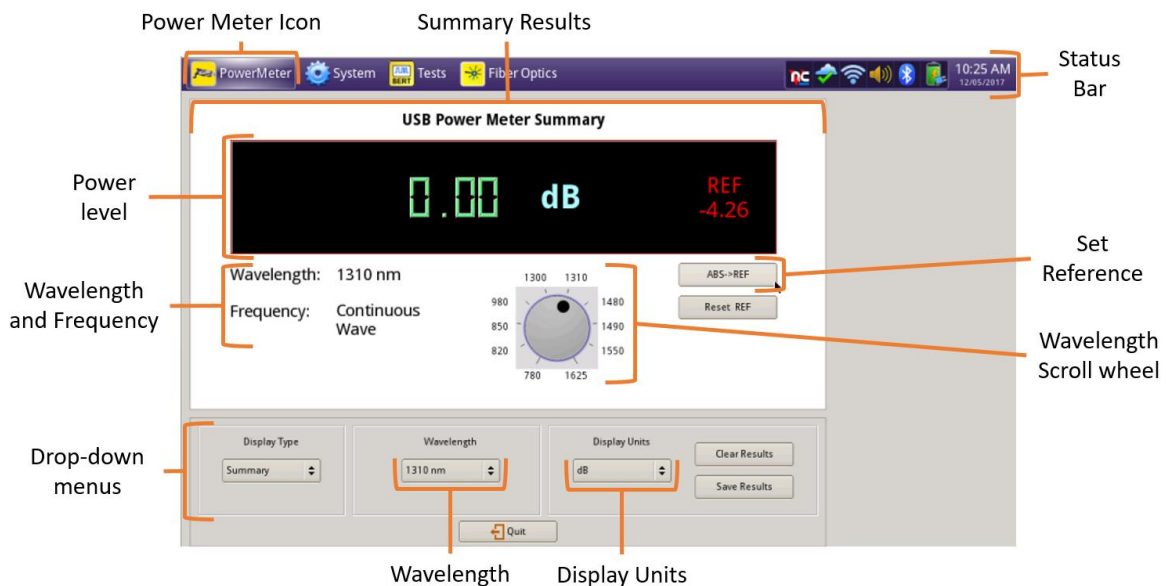


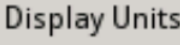
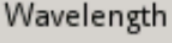
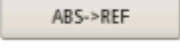


Figure 3: T-BERD/MTS-5800 Power Meter Summary View

7.  Press the Power button to turn on the T-BERD/MTS-5800.
8.  Tap the **PowerMeter** icon in the Status Bar at the top of the T-BERD/MTS 5800.
9.  Tap the **Display Units** drop-down menu and set units to **dB**.
10.  Tap the **Wavelength** drop-down menu or scroll wheel to select the wavelength.
11.  Confirm that the OLS laser is **on** and tap the **ABS->REF** button to reference the relative power level to 0.00dB.
12. Repeat steps 10 and 11 for all wavelengths to be tested.
13. Disconnect the OPM Reference Cable from the coupler. Do not disconnect the Reference Cable from the Patch Cord Input port or disconnect the OPM from the Laptop until all OIL testing is complete. If the OLP is powered off or the fiber is disconnected from the OLP, you must reference the OLP and OLS again.

Measuring Insertion Loss:

If you are performing an Optical Insertion Loss test and the Power Meter has been referenced to an OLS, the Reference Cable should already be connected to the MP-60 or MP-80 and the T-BERD/MTS-5800 should be powered on and in the FiberChek PRO Power Meter Results view.

1. If the interface to the Fiber under Test (FUT) is a patch cord, connect the patch cord to an optical coupler with the same connector type.
2. Inspect and clean the FUT connected to the coupler or OPP.
3. Inspect and clean the fiber end face of the Launch Cable.
4. Connect the Reference Cable to the coupler or OPP leading to the light source.

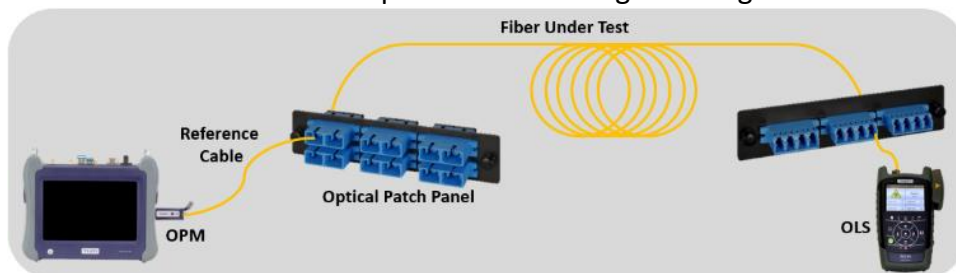


Figure 4: Connecting the OPM to an OPP

5. Tap the **Wavelength** drop-down menu or scroll wheel to select the wavelength.
6. View the Relative Power Level (dB) in the **USB Power Meter Summary**.

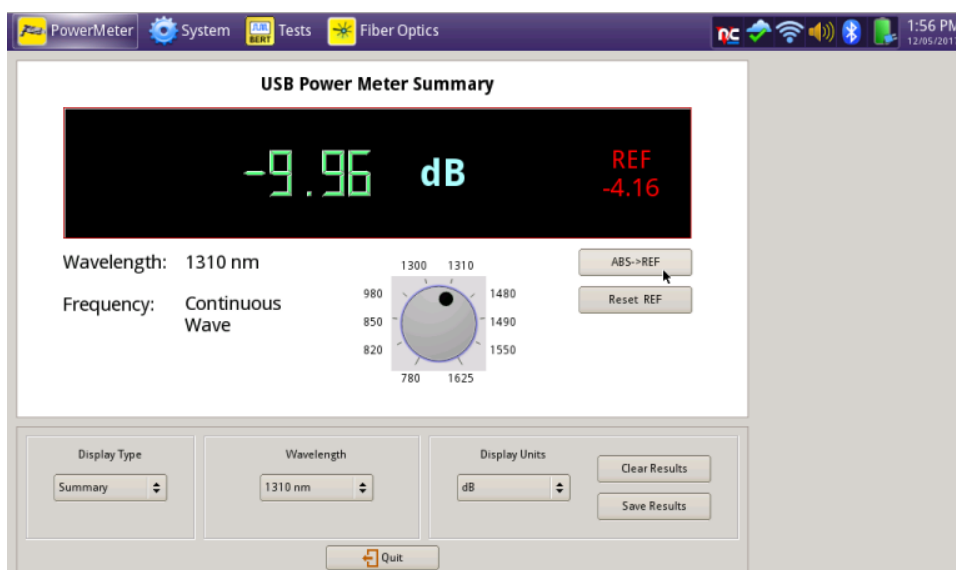


Figure 5: Optical Insertion Loss Results

7. Repeat steps 5 and 6 for all wavelengths to be tested.
8. Disconnect the Reference Cable from the FUT. Do not disconnect the Reference Cable from the OLP or power off the T-BERD until all testing is complete. If the Fiber is disconnected, you must reference the Power Meter again.
9. Repeat steps 1 through 8 for all Fibers to be tested.