Your power meter and light source units will be used to measure loss in dB of the power coupled into the cable by the light source versus power measured on the receiver end by the power meter. Loss testing is done at wavelengths for the fiber in use, typically 850nm for multimode and optionally at 1300nm, while singlemode is tested at 1310nm and optionally 1550nm. The measured loss can be compared to the estimated loss for the link or “loss budget.”

This testing kit combined with the included reference cables allows for both for single-ended loss testing and double-ended loss testing of fiber optic cables.

For set-up, allowable loss, link budget calculations, etc., the Fiber Optic Association (FOA) is a great resource for testing guidelines. FOA power testing instructions are included with your kit and should be reviewed prior to using this equipment. Information on the two noted tests above can be found via the FOA at www.thefoa.org, including fiber optic testing methods and standards.

1. Turn on both light source (OLS) and power meter (OPM).
   Set both the OPM & OLS to the desired wavelength by pressing the wavelength button on each unit.

2. On the OLS press CW button until 0Hz displays in upper right of the screen (see step 1A image).
   *Typical testing configuration for most cables

3. On the OPM, press the “UNITS” button until upper right portion of screen is blank and dBM is listed to the right of the main screen read-out (see step 1B image).

4. Plug REFERENCE cable into the appropriately labeled port on the OLS. SC testing: single-ended testing/1 cable.
   LC testing: double-ended testing/2 cables.
   Aqua = multimode. Yellow = single mode.
5. For SC type single-ended testing, plug in appropriate SC to SC cable (single mode or multimode according to the cable being tested) between OLS and OPM. Aqua = multimode. Yellow= single mode.

6. For LC type double-ended testing, plug in two appropriate SC to LC cables, one into OLS and one into OPM, with SC connectors into OPM and OLS ports. Link LC ends together with LC adapter.

7. Reference OPM. Once cable(s) are connected between OLS and OPM units, quick press “REF” button. OPM should now read 0dB.


*Performing Step 7 removes the power loss of the “reference” cables so that the dB loss reading of the installed cables will not include the loss of the reference cable(s) utilized.

Refer to the included FOA instructions “Guide to Fiber Optics & Premises Cabling” to perform A>B and B<A testing to properly diagnose high loss connector terminations. For accurate testing, frequent cleaning of all connector faces being placed under test, maintaining minimal bends and movement of reference cables, and resetting of power meter reference throughout the course of testing are recommended.