

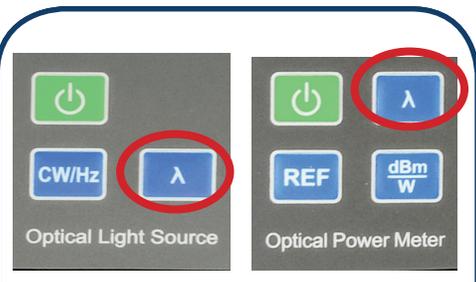
**WARNING: LIGHT SOURCE LASER DOES NOT OPERATE AT VISIBLE WAVELENGTH. LIGHT IS NOT VISIBLE WHEN LASER IS ACTIVE. TO AVOID THE RISK OF EYE DAMAGE, DO NOT LOOK AT LASER WHEN LIGHT SOURCE IS OPERATIONAL.**

Your power meter and light source units will be used to measure loss in dB of the power transmitted 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 single mode 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 single-ended loss testing of fiber optic cables. Double ending requires additional reference cables (part number SSF-REFCBL-MM = multimode or SSF-REFCBL-SM = single mode).

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](http://www.thefoa.org), including fiber optic testing methods and standards.

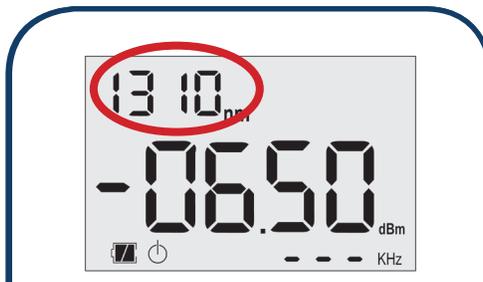
**\*\*AAA (1.5 V) BATTERIES REQUIRED. BATTERIES NOT INCLUDED. INSERT 3 PER UNIT TO OPERATE.\*\***



1. Select correct light source for fiber type being tested (SM = single mode or MM = multimode; labeled above screen on left). Turn on both light source (OLS) and power meter (OPM).

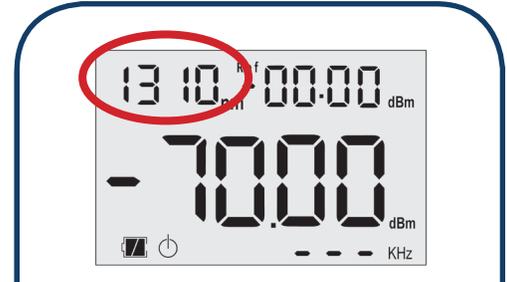
Set both the OPM & OLS units to the desired wavelength by pressing the wavelength button on each unit.

850nm: Typical multimode testing  
1310nm: Typical single mode testing



1A. Wavelength on the OLS is displayed in the upper left corner of the screen. Set to desired value (press wavelength key.)

KHz (lower right) will have a numeric reading or dashed lines when the laser is on. Dashed lines (---) indicate that the laser is in continuous wavelength mode.



1B. Set OPM to same to same wavelength as the OLS unit. Press the wavelength button until desired value appears.

Note: Typically 850nm for multimode testing and 1310nm for single mode.

\*Use appropriate cables. Aqua = multimode. Yellow = single mode.



2. On the OLS press CW button until dashes display in lower right of the screen (see step 1A image).



3. On the OPM, press the “dBm/W” button until dBm is the unit listed to the right of the main screen read-out (see step 1B image).

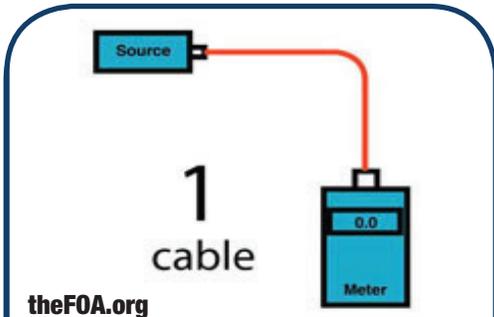


4. Plug REFERENCE cable into OLS. **Note: Do not look into laser while unit is on.**

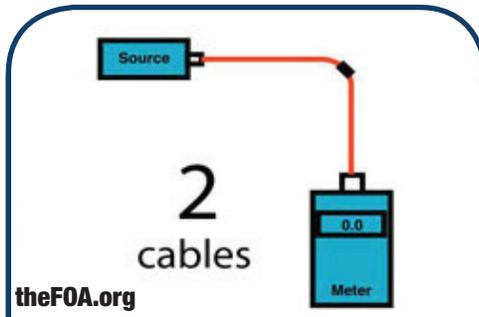
SC testing: plug appropriate multimode or single mode cable into OLS.

LC testing: Attach appropriate SC to LC adapter, then plug MM or SM reference cable into adapter.

Adapter: Beige = multimode  
Blue = single mode



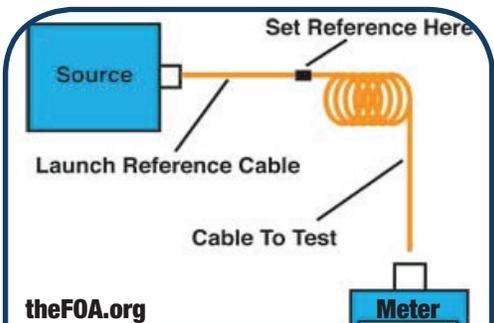
5. For single-ended testing, plug in appropriate SC cable or LC cable with SC to LC adapters (single mode or multimode according to the cable being tested) between OLS and OPM.  
Aqua = multimode. Yellow= single mode



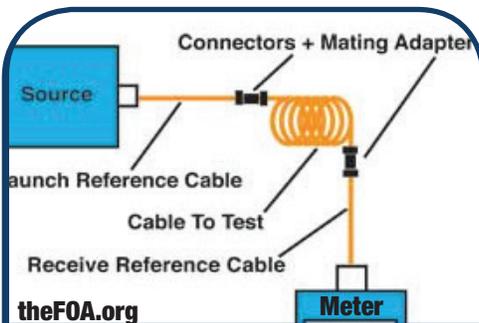
6. For double-ended testing, plug in two appropriate SC cables or two LC cables with adapters, one into OLS and one into OPM, with SC connectors or LC to SC adapters into OPM and OLS ports.<sup>1</sup>  
Link SC or LC ends together with feedthrough adapter.



Once cable(s) are connected between OLS and OPM units, press and hold “REF” button for two seconds. OPM should now read 0dB.



7A. Single-ended Testing:  
Unplug connector from power meter side ONLY. Place feedthrough SC or LC adapter, depending on cable being tested, on connector.  
Connect cable to be tested. The dB value that appears center of screen (see step 7) is the loss value.



7B. Double-ended Testing:  
Unplug connector from SC or LC feedthrough adapter. Place additional SC or LC feedthrough adapter on connector.  
Connect cable to be tested. The dB value that appears center of screen (see step 7) is the loss value.

<sup>1</sup> Double-ended testing is optional and requires additional reference cables. Part Number:  
SSF-REFCBL-MM = Multimode  
SSF-REFCBL-SM = Single Mode

<sup>2</sup> 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.