Fiber OWL 4 Test Kits
Certification Testing
Quick Reference Guide

For part numbers:
KIT-FO4-D2st
KIT-FO4-D2sc

Thank you for your purchase of this OWL certification test kit. Included in this kit is a Fiber OWL 4 optical power meter and a Dual OWL multimode fiber optic light source. This quick reference guide will assist you in setting up your test kit for a standards-based certification test.

NOTICE TO NEW USERS:

All personnel testing optical fibers should be adequately trained in the field of fiber optics before using any fiber optic test equipment.

If the user is not completely familiar with testing fiber optics, they should seek competent training. Such training can be acquired from a variety of sources, such as local hands-on training classes.

Valuable information about fiber optic testing can also be gathered from reading printed literature carefully or by thoroughly reading supplied operations manuals.

Fiber optic testers vary from other types of test equipment due to issues such as:

1) standards-based testing
2) proper fiber optic test procedures (FOTPs)
3) "zeroing" or referencing of power levels
4) determining the correct link budget to pass or fail by

Complete understanding of each of these issues is critical for performing proper fiber optic tests.

BEFORE YOU TEST

Prior to performing a certification test, there are a few things you need to know about your link:

- *Fiber Type*
- *Fiber Length*
- *Number of Connections (i.e. patch panels)*
- *Number of Splices*
- *Fiber Cabling Standard*
- *Connector Type*

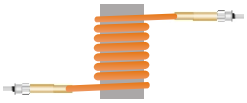


FIGURE 1
Mandrel Wrap

It is also important to understand the definition of a fiber optic link as it pertains to the Fiber OWL 4. A link is a group of fibers that have the same characteristics, and follow the same pathway from one end to the other.

REQUIRED ACCESSORIES

- (2) multimode patch cords
- (1) mandrel (see Figure 1)
  0.7" outside diameter for 62.5/125 μm fibers
  0.9" outside diameter for 50/125 μm fibers

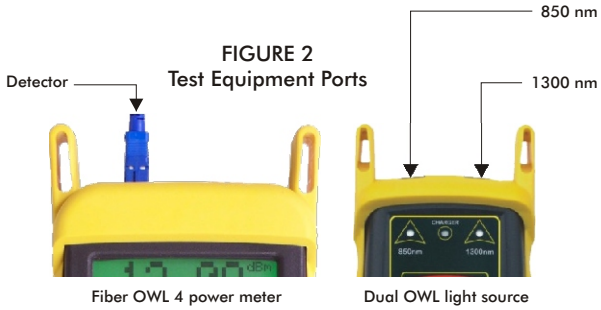
Additional accessories may also be necessary depending upon your test equipment or link configuration:

- mating sleeves (a.k.a fiber optic adapters) - necessary when the ends of the fiber link are not installed into patch panels

EQUIPMENT PORTS

Figure 2 shows the ports used during this procedure. These ports may vary depending upon the model of equipment.

FIGURE 2
Test Equipment Ports



STEP 1-VERIFY PROPER OPERATION OF THE EQUIPMENT

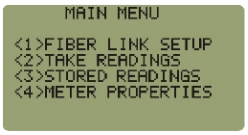
- Connect the power meter and light source together as shown in Figure 3.
- Power on the light source and set it to the proper wavelength.
- Power on the Fiber OWL 4 and select CERTIFICATION METER. Press <2> for the MAIN MENU, then press <2> to take readings. Press <F1> to confirm. Press <F3> until the wavelength matches the light source wavelength. The power reading should be around -20.00 dBm.
- Once proper operation has been verified, remove the patch cord from both units and set it aside. This patch cord will be used on the power meter side of the test.
- Connect the second patch cord to the power meter and light source shown in Figure 4, and verify the power readings.
- Leaving the units connected together as shown in Figure 4, continue on to the next step.

FIGURE 3
Verifying Proper Operation of the Equipment

FIGURE 4
Verifying Second Patch Cord

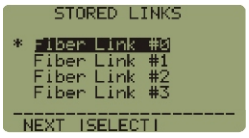
STEP 2-RUN LINK WIZARD

- Press <MENU> to enter the MAIN MENU.
- Press <1>FIBER LINK SETUP.



- Press <1>LINK WIZARD.

- From the STORED LINKS menu, press <F2> to SELECT the link.

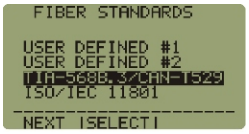


► Change the LINK NAME. This name should be descriptive of the link under test. Press <DONE> when you are finished entering the link name.

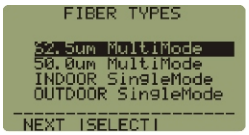
► Change the LINK DATE. Use the format *MM/DD/YY*. Press <DONE> when you are finished entering the current date. Press <DONE> again to continue.

It is important to set the current date in order to ensure that the correct date appears on the certification reports.

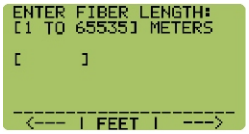
► Press <F1> to scroll through the list of cabling standards. Press <F2> when the appropriate standard is chosen.



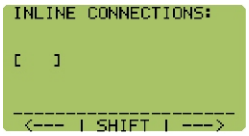
► Press <F1> to scroll through the list of fiber types. Press <F2> when the appropriate type is chosen.



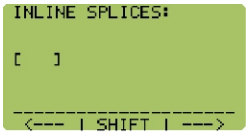
► Enter the fiber length in meters. Press <DONE> to continue.



► Enter the number of connections (i.e. patch panels), and press <DONE> to continue.

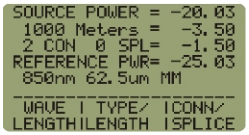


► Enter the number of splices, and press <DONE> to continue.



► Make sure that the meter and light source are connected together as shown in Figure 4, and that they are set to the wavelength shown on the display. Press <F1> to set the reference for the first wavelength.

► From the reference review screen, press <F1> to continue on with the second wavelength. If you are asked to store the reference, answer YES. When you are prompted for the second wavelength, set the light source to the second wavelength, and press <F1> to continue. Press <DONE> from the reference review screen for the second wavelength, and press <F1> to set the second wavelength reference.



► Press <F1> to begin taking readings.

STEP 3-TAKE READINGS

- Disconnect the patch cord from the Fiber OWL 4 and take the units to opposite ends of the link.

⚠ Do NOT disconnect the patch cord from the light source.

- Connect the units to the first fiber to test as shown in Figure 5.

- Press <F2> to store the data point. If this is the first data point in the link, you may be prompted to enter a new label.

- Press <F3> to save the data point.

- Disconnect the patch cords from the patch panels and move them to the next fiber in the link. Continue storing data as shown above until all fibers in the link are stored.

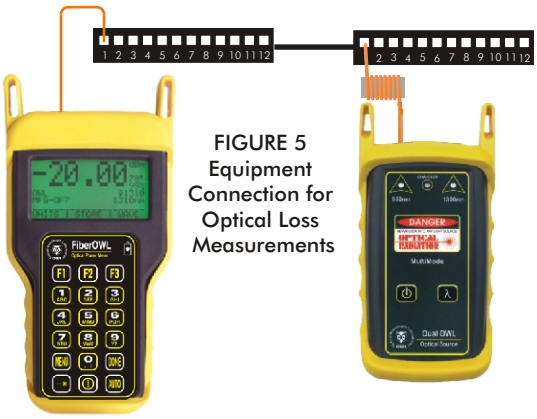


FIGURE 5
Equipment Connection for Optical Loss Measurements

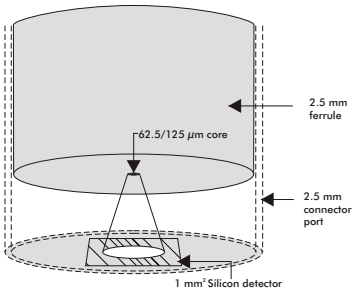
UNIVERSAL PORT

The Fiber OWL 4 contains a universal connector port which allows for coupling to fiber optic connectors that use a 2.5mm ferrule (e.g. ST, SC, FC, etc.).

What gives this port its flexibility is that only the 2.5mm ferrule is inserted into the port. Since there is no latching mechanism to speak of, most 2.5mm ferrule connectors can connect to this port .

It is designed so that the cone of acceptance falls completely onto the detector, regardless of how the connector may turn, twist, or wiggle in the port. Because of this, you can be assured that the connection will always produce an accurate reading.

Please call 262-473-0643 with any questions you may have about our fiber optic test products.



OWL - the wise choice in fiber optic test!