

1.4 Getting Help

Our Customer Service Group is available in North America from 7:30 a.m. to 8:00 p.m. (Eastern Standard Time), Monday to Friday.

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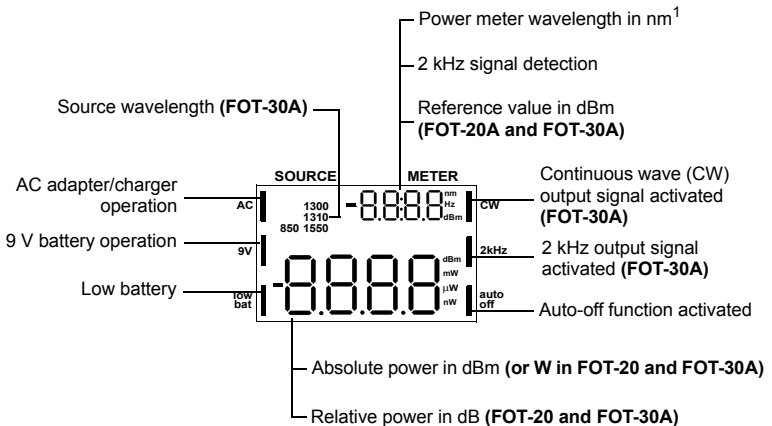
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2 GENERAL DESCRIPTION

The FOT measures optical power (FOT-10A, FOT-20A, and FOT-30A) and loss (FOT-20A and FOT-30A) at 5 precalibrated wavelengths in multimode and singlemode fibers. A 2 kHz signal detection feature is also included for fiber identification. The FOT-30A can be configured with a single- or dual-wavelength LED or laser source.

The FOT is powered by the 9 V alkaline battery or the AC adapter/charger.

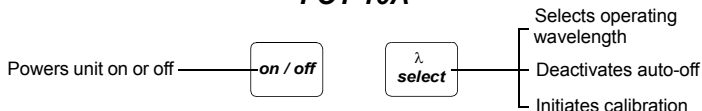
2.1 Display



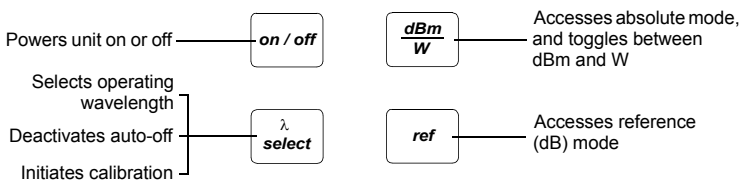
1. Pre-calibrated wavelengths depend on detector type (Si: 650, 780, 820, 850, and 910 nm; Ge/GeX: 780, 850, 1300, 1310, and 1550 nm).

2.2 Keypad

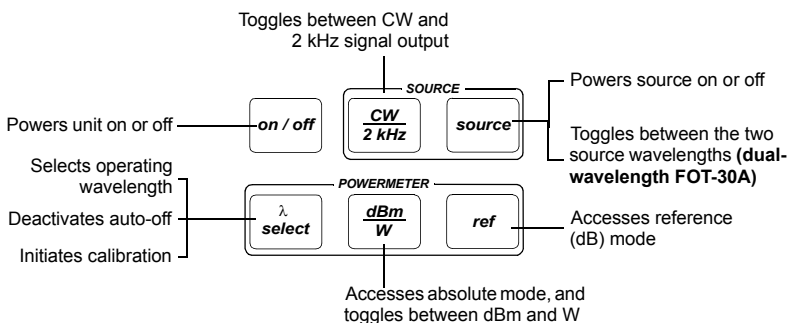
FOT-10A



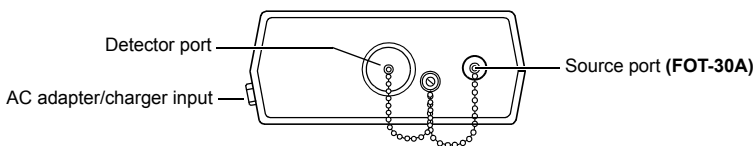
FOT-20A



FOT-30A



2.3 Connectors



Note: Two source ports can be provided on a dual-wavelength FOT-30A (option).

3 OPERATION

3.1 Deactivating the Auto-Off Function

Note: At power-up, the FOT automatically performs a self-test before the measurement mode is displayed.

When the FOT is battery powered, it is automatically in auto-off mode (unit powers off after 10 minutes of inactivity). To deactivate the auto-off function,

1. Power off the FOT.
2. Press and hold λ **select**.
3. Press **on/off**, holding λ **select** until the unit enters measurement mode. The auto-off marker should not be displayed.

Note: To reactivate the auto-off function, power on the unit with the AC adapter-charger plugged in, then unplug the adapter. The auto-off marker should be displayed.

3.2 Calibration

For optimum performance, the FOT should be calibrated before each test session as follows:

1. Ensure that the detector port is capped.
2. Power on the FOT.
3. Press and hold λ **select** until **CAL** is displayed. The running lines on the display indicate the calibration is in progress. After calibration, a dashed line is displayed.

Note: If **Err 1** is displayed, the calibration failed due to incident light on the detector. Tighten detector cap, press any key to cancel the error message, then repeat the calibration process.

3.3 Fiber Identification

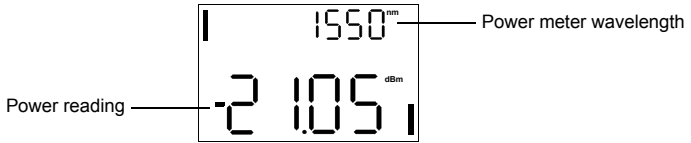
To identify a fiber carrying a 2 kHz test signal,

1. Install the 2 kHz detection adapter on the detector port.
2. Place the fiber in the groove of the 2 kHz detection adapter and gently push down the fiber. If the fiber carries a 2 kHz optical signal, the FOT beeps 2 seconds, and **2000 Hz** is displayed.

3.4 Measuring Absolute Power

To measure absolute power,

1. If necessary, calibrate the FOT.
2. Install the appropriate connector adapter on the detector port, and connect the fiber under test.
3. Press λ **select** to match the FOT and source wavelengths.



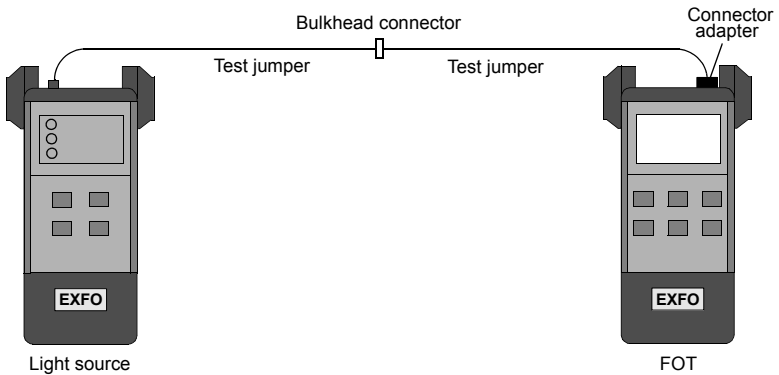
If the received signal is too low to be measured, a dashed line is displayed. If the received signal is too high to be measured, the display flashes.

3.5 Reference Procedure (FOT-20A and FOT-30A)

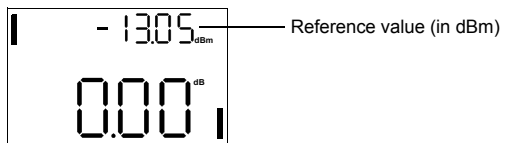
When the FOT is in reference mode, the reference value is subtracted from the power received so that the value displayed only refers to the loss created by the fiber under test.

To store a reference value,

1. If necessary, calibrate the FOT.
2. Connect the light source to the FOT as shown below.



3. Power on the light source and activate the first wavelength.
4. Press **dBm/W** to select absolute mode.
5. Press **λ select** to match the FOT and source wavelengths.
6. Press **ref** to access reference mode.



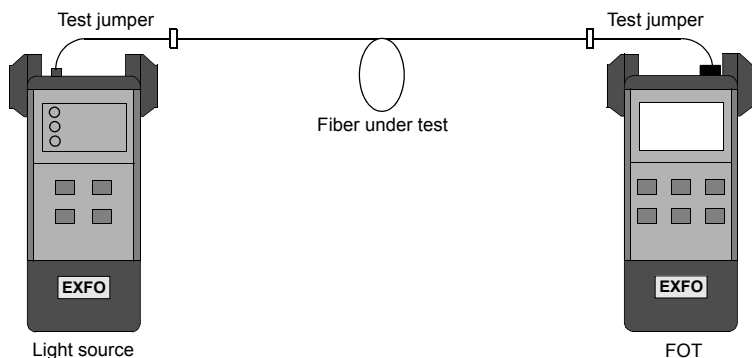
7. Press and hold **ref** until the display reads **0.00 dB** and the new reference value appears in small digits.

The reference value just stored applies only to measurements taken at the current wavelength. If you are using a dual-wavelength source, select the second wavelength and repeat steps 4 to 7.

3.6 Loss Testing (FOT-20A and FOT-30A)

To perform loss testing,

1. Reference the FOT to the light source.
2. Power off the source unit.
3. Connect the reference test jumpers to the fiber under test as shown below.



4. Power on the light source and activate the first wavelength.
5. Press **dBm/W** to select absolute mode.
6. Press λ **select** to match the FOT and source wavelengths.
7. Press **ref** to access reference mode. The actual insertion loss of the fiber under test is displayed.
8. To test at a second wavelength, select a wavelength on the source unit, and repeat steps 5 to 7.

3.7 Source Operation (FOT-30A)

3.7.1 Turning the Source On or Off

1. Turn the source on by pressing and holding **source** until the source wavelength and the **2kHz** or **CW** marker are displayed.
2. Press **CW/2 kHz** to toggle between continuous and modulated signal output.
3. Turn the source off by pressing and holding **source** until the source wavelength and the **2kHz** or **CW** marker disappear.

3.7.2 Selecting the Source Wavelength

If your FOT-30A features a dual-wavelength source, press **source** to toggle between the two wavelengths.

3.7.3 WaveWise Feature

The *WaveWise* feature allows accurate wavelength matching between two FOT-30As, one used as a source and the other as a power meter while testing power and loss. It requires no user-intervention. The source incoming wavelength is automatically detected by the destination power meter.