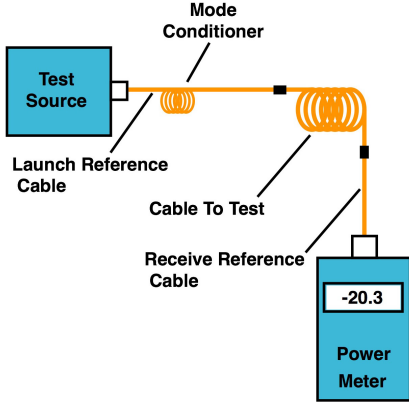


## Mode Conditioning for Testing Multimode Fiber Optic Cables

<p>Mode conditioning multimode (MM) fiber optic cables for insertion loss is required for testing per most standards. Mode conditioning will result in more consistent test conditions which will provide more accurate test results. For 50/125 fibers it will meet Encircled Flux (EF) standards for mode conditioning.</p>	<p style="text-align: center;">Test Diagram</p> 
<p>Equipment Needed To Perform This Test</p> <ol style="list-style-type: none"> <li>1. Test source appropriate for the fiber being tested: Multimode, 850 nm LED, may be EF compliant</li> <li>2. Optical power meter calibrated at the same wavelengths as the source output.</li> <li>3. Launch and receive reference cables of MM fiber the same size as the cable plant and have connectors compatible to those on the cable plant. <i>Bend insensitive fibers will not work with a mandrel wrap.</i></li> <li>4. Mating adapters compatible to connectors</li> <li>5. Cleaning supplies</li> <li>6. Mode conditioner.</li> </ol>	
<p>Mode Conditioners</p> <ol style="list-style-type: none"> <li>1. EF complaint test source - requires no mode conditioner</li> <li>2. Mandrel wrap – see reference for specifications</li> <li>3. EF mode conditioner launch cable or adapter</li> </ol>	
<p>Procedure</p> <ol style="list-style-type: none"> <li>1. To make loss tests per FOA-1 or FO-2 set 0dB reference with methods below</li> <li>2. If using EF source, attach launch cable and set 0dB reference.</li> <li>3. If using non-EF source with mandrel wrap, attach launch cable, wind cable around mandrel and set 0dB reference. You may test mode conditioning using HOML test (see reference)</li> <li>4. If using non-EF source with EF mode conditioner, attach launch cable with mode conditioner and set 0dB reference.</li> <li>5. Make loss tests per FOA-1 or FO-2.</li> </ol>	
<p>Documentation</p> <p>When testing, record the date of the test, operator, test equipment used, reference method, cable and fiber identification, test wavelength and measured loss.</p> <p>See FOA Guide Reference (QR Code) for more details.</p>	