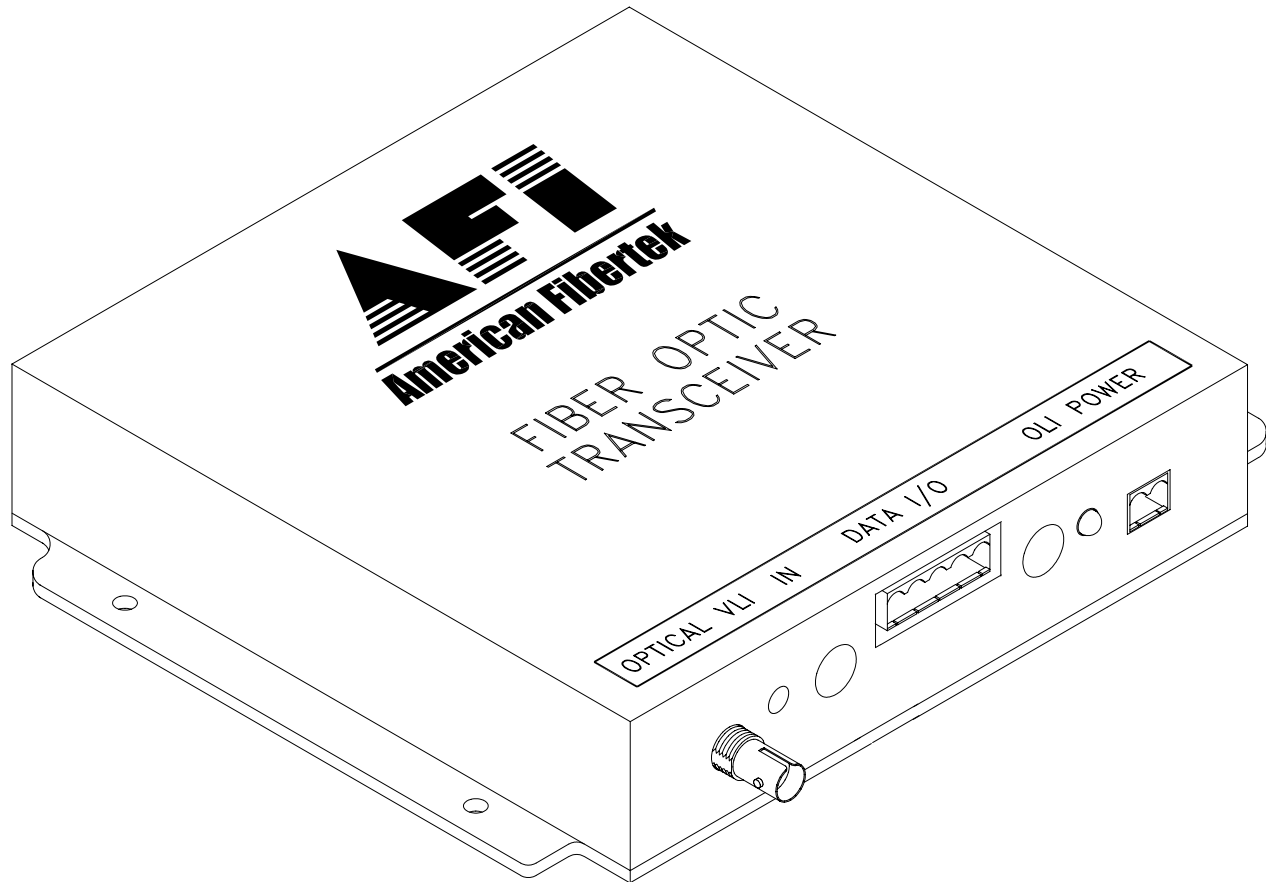


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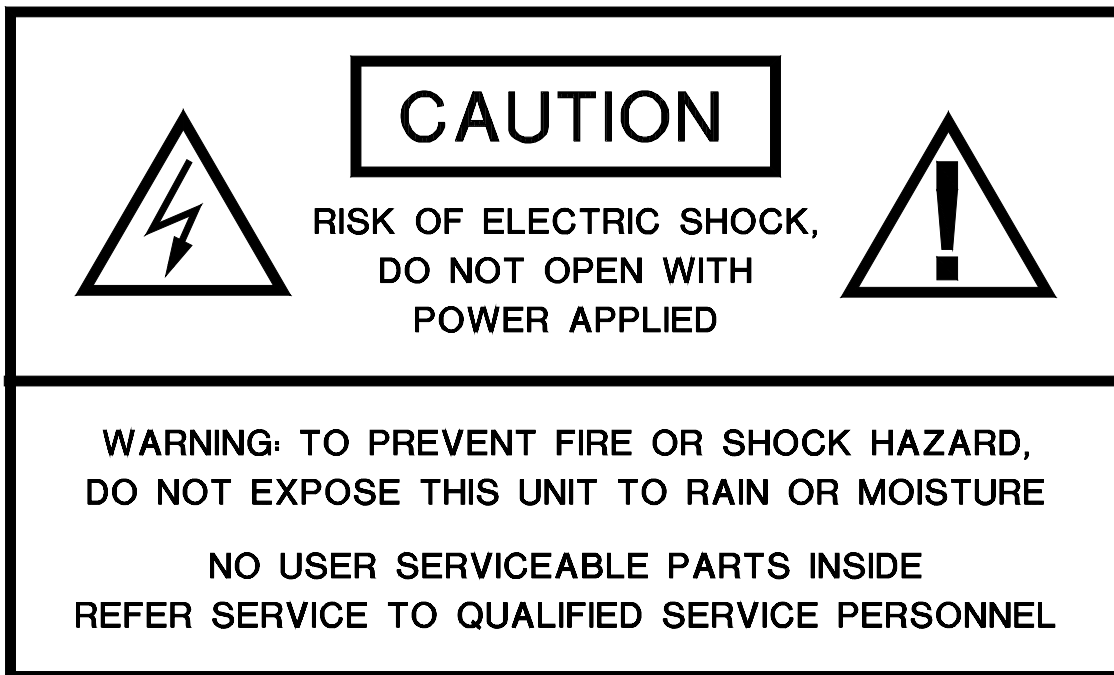
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Instruction Manual

MT-0800 Bi-directional 4-Wire Audio



INSTALLATION AND OPERATION INSTRUCTIONS

INTRODUCTION

Thank you for purchasing your American Fibertek MT-0800 multimode bi-directional audio transceiver. Please take a few minutes to read these installation instructions in order to obtain the maximum performance from this product.

FUNCTIONAL DESCRIPTION

The MT-0800 operates as half of a transceiver pair for the transmission of one channel of bi-directional 4 wire audio. It is designed to operate with the MR-0800 or RR-0800 audio transceiver over a single multimode fiber optic cable.

The MT-0800 converts an audio input into an optical output using a 1300 nm wavelength source. The MT-0800 also converts an optical input signal returning on the same fiber into a single audio output using an 850 nm wavelength detector. The 0800 Series product is designed to operate over an optical loss budget range of 0 to 12 dB. The MT-0800 operates on 50 um or 62.5 um multimode fiber. Refer to the data sheets for detailed performance specifications.

This unit is contained in a compact and rugged aluminum housing with internal dc voltage regulation. The detachable terminal blocks and LED indicator provide for easy installation and monitoring of optical and ac power.

The MT-0800 is designed for mounting as a modular stand alone unit. For a rack mounted version please see the RT-0800.

INSTALLATION

THIS INSTALLATION SHOULD BE MADE BY A QUALIFIED SERVICE PERSON AND SHOULD CONFORM TO THE NATIONAL ELECTRICAL CODE, ANSI/NFPA 70 AND LOCAL CODES.

Mount the unit to a secure surface using #8 (3mm) hardware in four places. See the drawing on the next page for mounting dimensions. Be sure to allow sufficient room for the required minimum bend radius of the fiber cable used.

POWER SOURCE

THIS PRODUCT SHALL BE POWERED BY A LISTED CLASS 2 POWER SUPPLY ONLY.

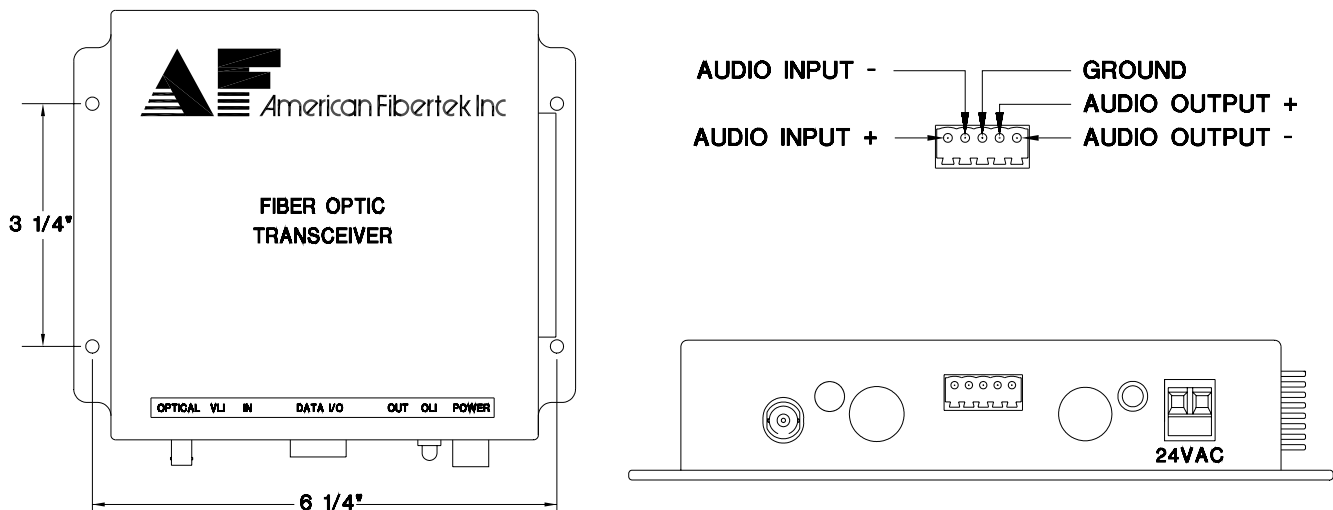
This unit requires an isolated 24VAC power source for proper operation. In the USA and in Canada an American Fibertek PS-24 is supplied with this unit. ANSI/NFPA 70 Class 2 wiring is recommended.

POWER CONNECTION

Power is supplied to the unit via a two pin terminal connector on the side of the unit. See label on unit for proper location of input power.

FIBER CONNECTION

The fiber optic connection is made via a ST connector located on the side of the unit.



BALANCED AUDIO INPUT / OUTPUT CONNECTIONS

The audio input and output connections are made via a five pin terminal block on the side of the unit. The balanced audio is directly connected to the plus and minus terminals. The shield or earth wire is connected to the ground terminal. See the drawing above for proper orientation of the audio input and output wires. Please note that Audio In on the MT-0800 becomes Audio Out on the MR-0800 or RR-0800 after going across the fiber. The reverse flow follows the same orientation. For optimum performance the audio wires should be the shortest length practical.

UNBALANCED AUDIO INPUT CONNECTIONS

The audio input connections are made via a five pin terminal block on the side of the unit. To connect an unbalanced signal to the input, the audio signal is connected to the plus input. The shield or ground wire is connected to both the minus and the ground terminals. When used in the unbalanced configuration, there will be a loss of -6dB at the output of the corresponding fiber transceiver. See the drawing above for proper orientation of the audio input wires. Please note that Audio In on the MT-0800 becomes Audio Out on the MR-0800 or RR-0800 after going across the fiber. For optimum performance the audio wires should be the shortest length practical.

UNBALANCED AUDIO OUTPUT CONNECTIONS

The audio output connections are made via a five pin terminal connector on the side of the unit. To obtain an unbalanced output signal, only the audio out plus terminal and the ground terminal are used. The audio out minus terminal is not connected. When used in the unbalanced configuration, there will be a loss of -6dB relative to the audio signal input at the corresponding fiber transceiver. See the drawing above for proper orientation of the audio output wires. Please note that Audio Out on the MT-0800 originated as Audio In on the MR-0800 or RR-0800 before going across the fiber. For optimum performance the audio wires should be the shortest length practical.

AUDIO INPUT/ OUTPUT LEVELS

The ideal audio input level is 0dBm₆₀₀. (This is 1mW across the 600 Ohm input impedance.) On a voltage basis, this is equal to 0dBV or 2.19 Vp-p. Higher input levels will cause increased distortion. Up to +3dBm, the distortion will increase a small amount. Above this level the distortion will increase rapidly. Lower input signal levels will reduce the signal to noise ratio. In either balanced or unbalanced configuration, the input impedance is 600 Ohms.

The audio output signal appears on both the plus and minus terminals of this unit. Half of the signal appears on each output terminal. The two outputs are 180° out of phase. The balanced output impedance is 600 Ohms while the unbalanced output impedance is 300 Ohms. The output signal level will be half of the input level (-6dB) in an unbalanced configuration.

MT-0800 STATUS INDICATOR

The MT-0800 provides the following LED status indicator to aid in installation and troubleshooting:

OLI

A bi-color LED indicator monitors the optical input power of the audio signal that is being received at the MT-0800 from the MR-0800 or the RR-0800. Internal DC power and optical input status associated with this LED are summarized below.

Optical Level Indicator	DC Power Status	Optical Status
Green	On	Proper Optical Input Power Present
Red	On	Optical Input Not Detected
Off	Off	Check Power Supply

LIFETIME WARRANTY INFORMATION

American Fibertek, Inc warrants that at the time of delivery the products delivered will be free of defects in materials and workmanship. Defective products will be repaired or replaced at the exclusive option of American Fibertek. A Return Material Authorization (RMA) number is required to send the products back in case of return. All returns must be shipped prepaid. This warranty is void if the products have been tampered with. This warranty shall be construed in accordance with New Jersey law and the courts of New Jersey shall have exclusive jurisdiction over this contract. **EXCEPT FOR THE FOREGOING WARRANTY, THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, EXPRESSED OR IMPLIED, WHICH EXTENDS BEYOND THE WARRANTY SET FORTH IN THIS AGREEMENT.** In any event, American Fibertek will not be responsible or liable for contingent, consequential, or incidental damages. No agreement or understanding, expressed or implied, except as set forth in this warranty, will be binding upon American Fibertek unless in writing, signed by a duly authorized officer of American Fibertek.

SERVICE INFORMATION

There are no user serviceable parts inside the unit.

In the event that service is required to this unit, please direct all inquiries to:

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120 Belmont Drive
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