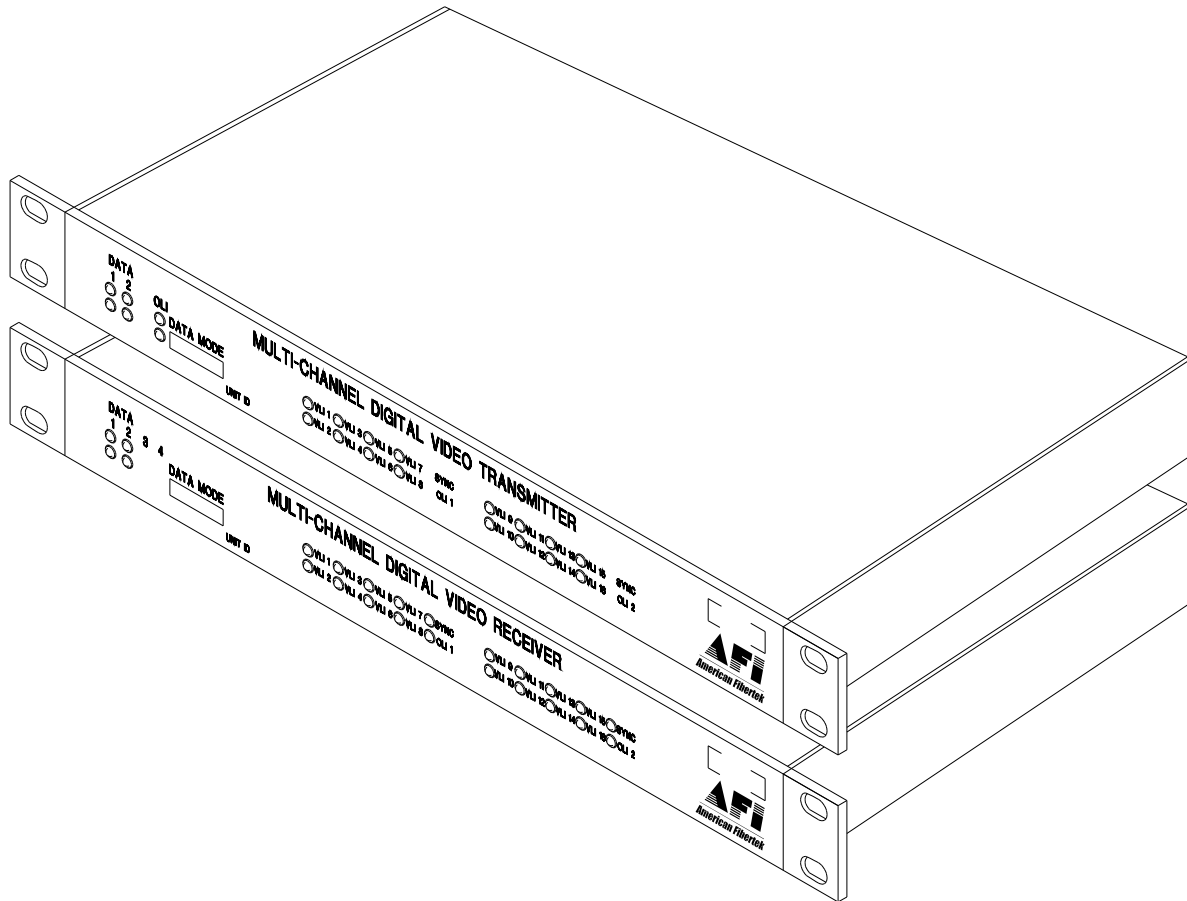


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Instruction Manual

MRT-91600C

MRR-91600C

Sixteen Channel Video Multiplexer

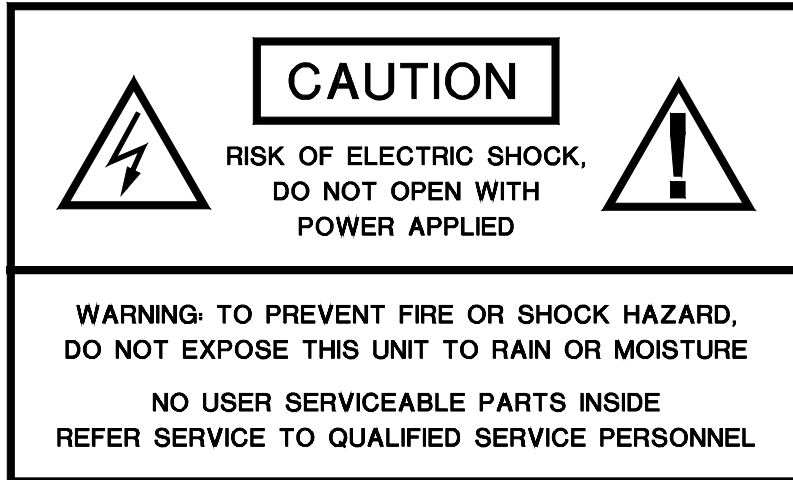


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INSTALLATION AND OPERATION INSTRUCTIONS

INTRODUCTION

Thank you for purchasing your American Fibertek Series 91600C multimode sixteen channel video multiplexer. Please take a few minutes to read these installation instructions in order to obtain the maximum performance from this product.

FUNCTIONAL DESCRIPTION

The 91600C Series units operate as a transmitter / receiver pair for the digital transmission of sixteen simultaneous NTSC or PAL video signals over one multimode fiber optic cable.

The MRT-91600C transmitter accepts up to sixteen video inputs in two groups containing eight videos and multiplexes each group into a high speed serial data stream. The first group's serial data stream, modulates a laser at 1310nm wavelength. The second group's serial data stream modulates a laser at 1550nm. A Wave Division Multiplexer (WDM) combines these two wavelengths, onto a single optical output port for connection to the fiber transmission system. Correspondingly, the MRR-91600C receiver converts the optical signal to sixteen independent video output signals. The 91600C Series product is designed to operate over an optical loss budget range of 0dB to 10dB on 62.5um multimode fiber over a maximum distance of 1 Km. Refer to the product specification sheet for additional performance data.

The individual units may be configured for rack mounting or wall mounting depending upon the installation of the included mounting hardware. Nominal dimensions of the MRT-91600C and MRR-9100C are 1 ¾ inches high by 17 inches wide by 11 ½ inches deep. When mounting hardware is included, overall width increases to 19 inches wide.

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.

To install the MRT-91600C or MRR-91600C it is first necessary to mount the rack flanges to the unit.

For rack mounting the ears are installed on the sides of the unit with the surfaces that have oval holes flush with the front of the unit as in Figure 1. Mount the ears with the #10 flathead screws provided. To mount in the rack cabinet, use mounting screws that are appropriate for the rack cabinet being used. When mounting the MRT-91600C or MRR-91600C in a rack configuration, it is recommended that sufficient airflow is available through the unit. This can be achieved by leaving a 1RU slot above the unit open for air movement and by leaving open space along the sides of the unit.

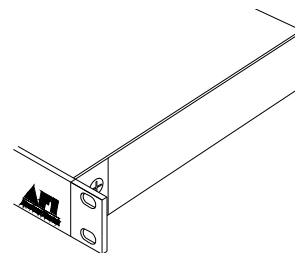


Figure 1. Rack Mount Configuration

For mounting the unit flush to a wall or other rigid surface, the ears may be installed on the sides with the oval holes flush with the bottom of the unit as in Figure 2. Mount the ears with the #10 flathead screws provided. Mount the unit to a rigid surface using #10 (5mm) screws.

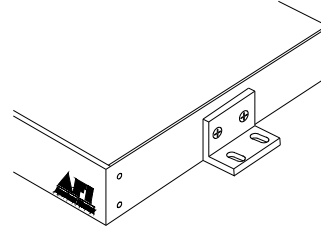


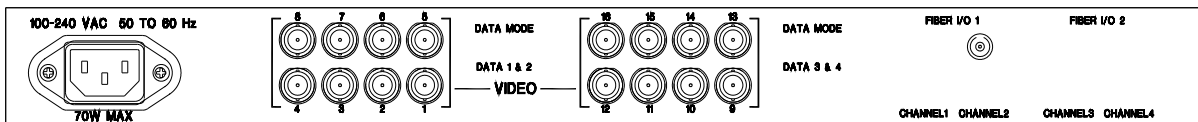
Figure 2. Wall Mount Configuration

POWER SOURCE

The internal power supply accepts universal line voltage. Any mains supply from 100 to 240 VAC, 50 to 60 Hz, may be used without modification or adjustment. A universal power connector is provided on the rear of the unit to facilitate connection to the power mains.

POWER CONNECTION

A three conductor power line cord is supplied in the US, UK, and Europe. The “ground” conductor is directly connected to the chassis.



FIBER CONNECTION

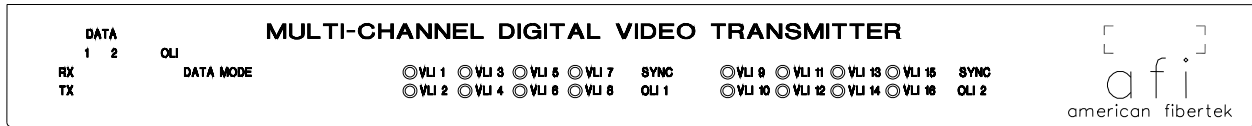
The fiber optic connection is made via a ST connector located at the back of the unit. Be sure to allow sufficient room for the required minimum bend radius of the fiber cable used.

VIDEO INPUT / OUTPUT CONNECTIONS

Video input and output connections are located on the rear of the unit. A BNC connector is provided for each channel. The video inputs are connected to an appropriate 75Ω baseband video source such as a camera or a video recorder output. The 75Ω video outputs can be looped through typical baseband video inputs of switchers, recorders and other equipment as required. For proper operation, the outputs must be terminated with 75Ω. For optimum performance the video cables should be the shortest length of coax practical.

MRT-91600C STATUS INDICATORS

The MRT-91600C transmitter provides the following front panel LED status indicators to aid in installation and troubleshooting:



VLI 1 THROUGH VLI 16

A bi-color LED indicator is provided for each of the sixteen video inputs to the MRT-91600C. Video status associated with each of these LED's is summarized below.

Video Presence LED	Video Status
Green	Proper Input Video Present
Red	Input Video Not Detected

MRR-91600C STATUS INDICATORS

The MRR-91600C receiver provides the following front panel LED status indicators to aid in installation and troubleshooting:



VLI 1 THROUGH VLI 16

A bi-color LED indicator is provided for each of the sixteen video outputs of the MRR-91600C. Video status associated with each of these LEDs is summarized below.

Video Presence LED	Video Status
Green	Proper Output Video Present
Red	Output Video Not Detected

SYNC

A bi-color LED indicator is provided to monitor the proper serialization of the electrical video data stream through the MRR-91600C. A SYNC indicator for videos one through eight is located above the OLI 1 indicator. A SYNC indicator for videos nine through sixteen is located above the OLI 2 indicator. Sync status associated with these LEDs is summarized below.

Sync LED	Sync Status
Green	Proper Data Stream Serialization Present
Red	Data Stream Serialization Not Detected

OLI 1

A bi-color LED indicator monitors the power of the optical input power signal that is being received at the MRR-91600C from video channels one through eight of the MRR-91600C. AC power and optical input power status associated with this LED are summarized below.

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

OLI 2

A bi-color LED indicator monitors the power of the optical input signal that is being received at the MRR-91600C from video channels nine through sixteen of the MRR-91600C. AC power and optical input status associated with this LED are summarized below.

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

**This unit complies with 21 CFR
1040.10 and 1040.11**

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:

American Fibertek, Inc.
120 Belmont Drive
Somerset, NJ 08873

Phone: (877) 234-7200
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