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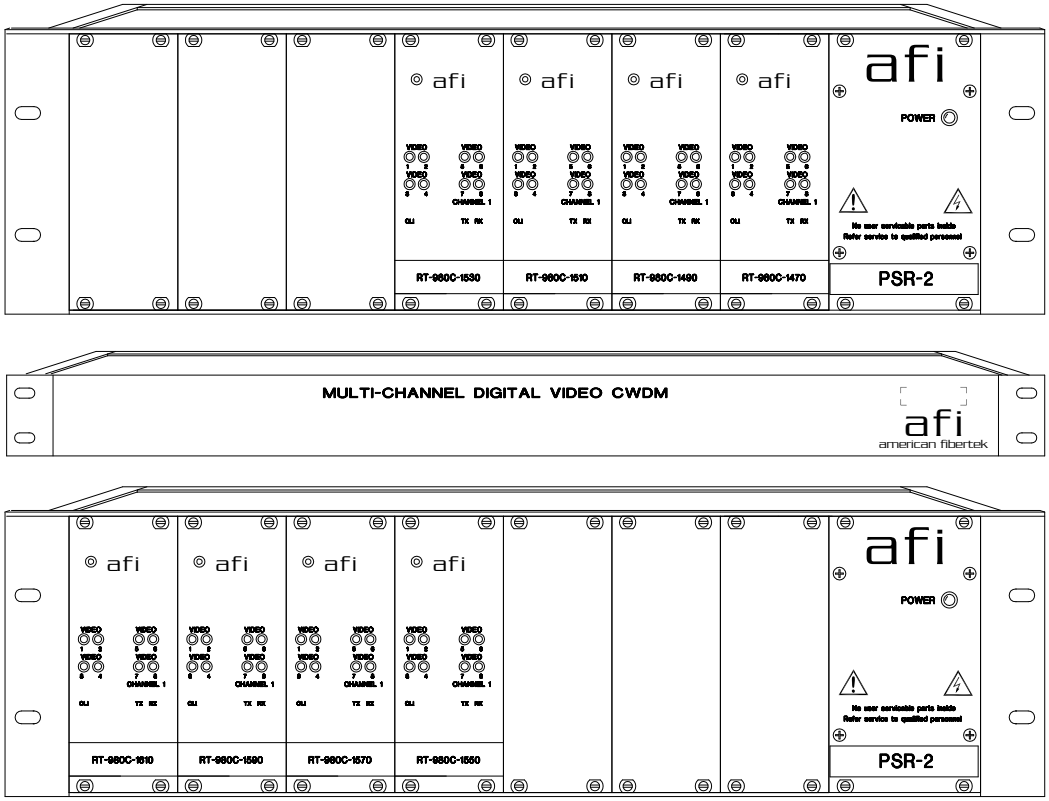
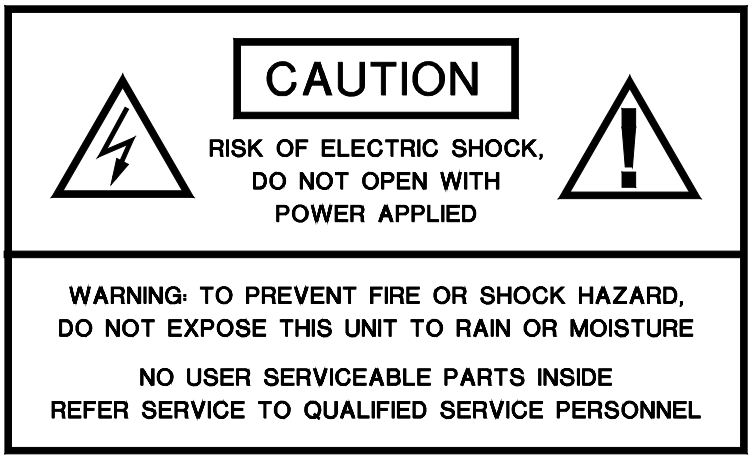


Instruction Manual

RT-96400C-SL
RR-96400C-SL
Sixty Four Channel Video Multiplexer

10/31/2012 JPK



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INSTALLATION AND OPERATION INSTRUCTIONS

INTRODUCTION

Thank you for purchasing your American Fibertek Series 96400C-SL singlemode sixty-four 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 96400C-SL Series units operate as a transmitter / receiver pair for the digital transmission of forty-eight simultaneous NTSC or PAL video signals over one single-mode fiber optic cable.

The RT-96400C-SL transmitter accepts up to sixty-four video inputs in eight groups containing eight videos each and multiplexes each. The first group's serial data stream modulates a laser at 1470nm wavelength. The second group's serial data stream modulates a laser at 1490nm wavelength. This pattern is repeated for group's three through eight using wavelengths 1510nm through 1610nm respectively. A Course Wave Division Multiplexer (CWDM) combines these eight wavelengths onto single optical output port for connection to the fiber transmission system. Correspondingly, the RR-96400C-SL receiver converts the optical signal to sixty-four independent video outputs.

The 96400C-SL Series product is designed to operate over an optical loss budget range of 0dB to 21dB on 9um single-mode fiber. Refer to the product specification sheet for additional performance data.

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.

RT-96400C-SL COMPONENTS

The RT-96400C-SL consists of the following components:

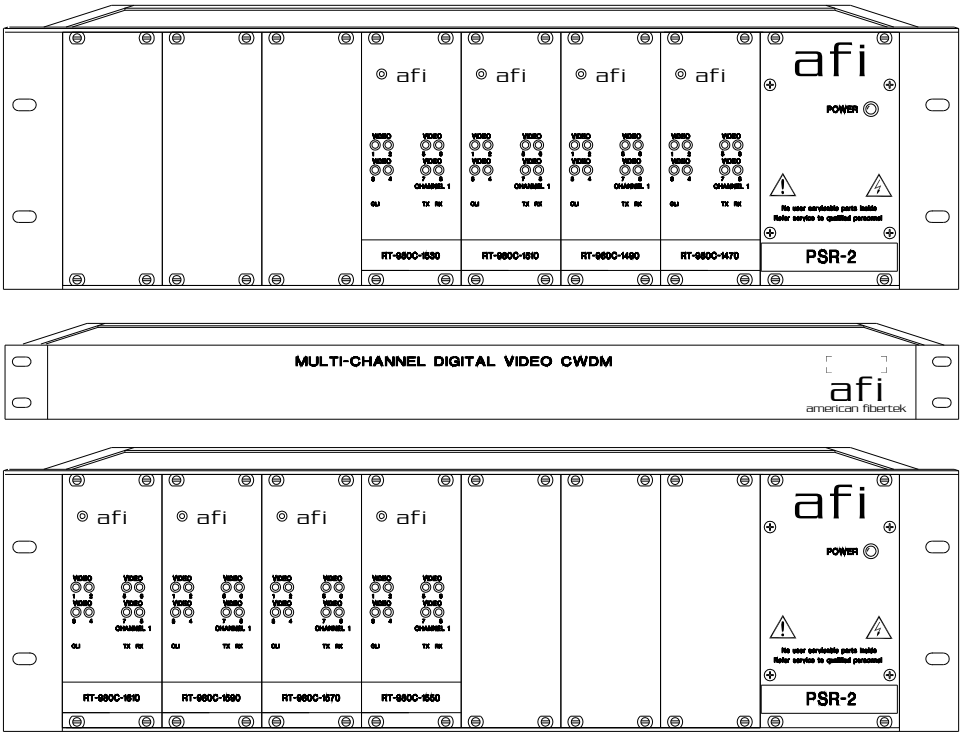
1) RT-980C-1470	1) RT-980C-1530	1) RT-980C-1530	2) SR-20 2)PSR-2
1) RT-980C-1490	1) RT-980C-1550	1) RT-980C-1530	8) PCSC/UPC-0.4
1) RT-980C-1510	1) RT-980C-1570	1) MTX-CWDM-8	6) BPS-2

The individual 980C-XXXX series video rack cards that make up the RT-96400C-SL are combined in a rack mount configuration using the SR-20 sub-rack. Please refer to the instruction manuals for the SR-20 and the PSR-2 for information on the installation of the sub-rack with its power supply.

The individual 980C-XXXX series rack cards can slide into any of the open slots in the SR-20 sub-rack, however, the recommended configuration is shown below. The lowest wavelength video card, the RT-980C-1470 is installed on the right side of the sub-rack next to the power supply. The RT-980C-1490 is installed next to the RT-980C-1470 and so on as shown below. Following this configuration allows the fiber ports on the back of the 980C series cards to best line up with its associated ports on the CWDM unit. Use a small screwdriver to push and lock the ¼ turn fasteners into place.

The Multi-Channel Digital Video CWDM that optically multiplexes the six video rack cards used in the RT-96400C-SL is labeled MTX-CWDM-8. It should be mounted in-between the corresponding SR-20 subracks with a ½ RU space between the three components. To maximize the performance and life of the system, installing a fan above the upper SR-20 subrack is recommended to pull air up across the RT-96400C-SL components.

There are 6 blank slots on the sub-rack which can support a redundant power supply (using the SR-20H, PSR-2H), data or any other AFI product.

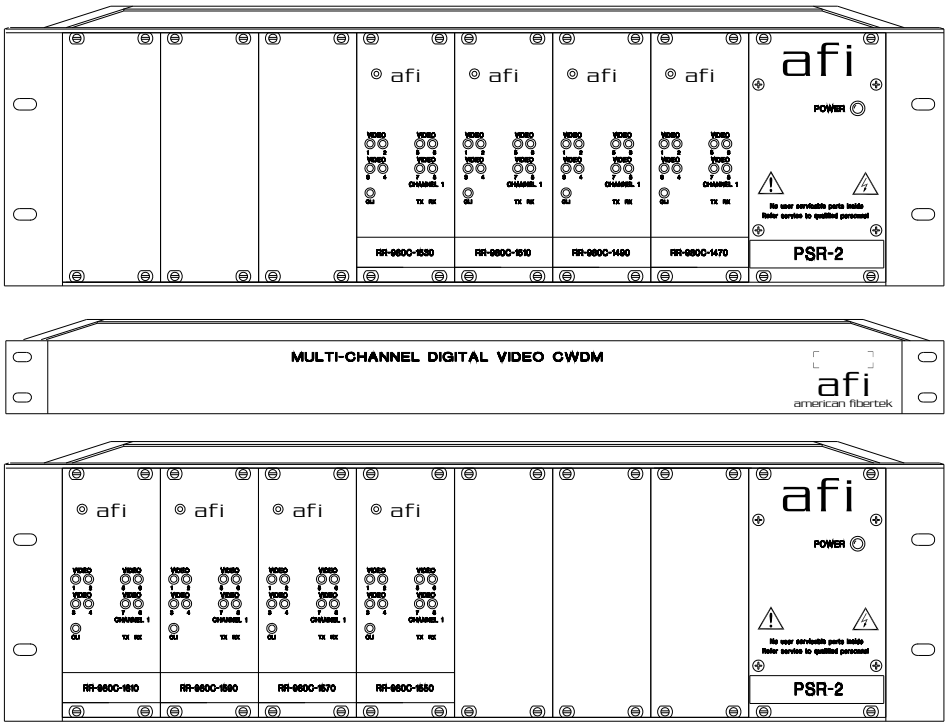


RR-96400C-SL COMPONENTS

The RR-96400C-SL consists of the following components:

1) RR-980C-1470	1) RR-980C-1530	1) RR-980C-1590	2) SR-20 2) PSR/2
1) RR-980C-1490	1) RR-980C-1550	1) RR-980C-1610	8) PCSC/UPC-0.4
1) RR-980C-1510	1) RR-980C-1570	1) MRX-CWDM-8	6) BPS-2

The individual 980C-xxxx series video rack cards and that make up the RR-96400C-SL are installed in a manner similar to the RT-96400C-SL (see drawing below). The Multi-Channel Digital Video CWDM that optically demultiplexes the eight video rack cards used in the RR-96400C-SL is labeled MRX-CWDM-8. Mounting procedures and recommendations should follow those used for the RT-96400C-SL.



POWER SOURCE

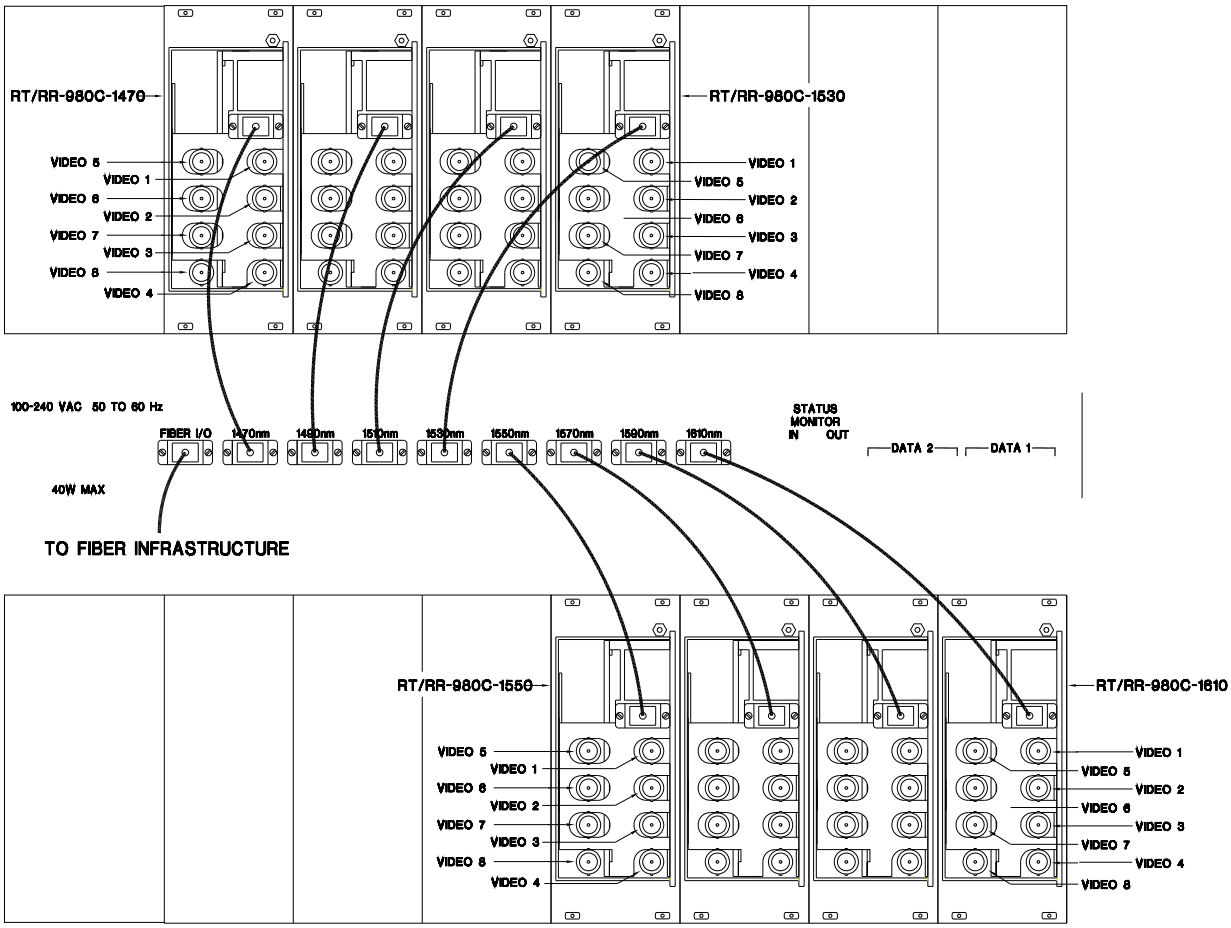
Power to the 980C-xxxx series rack cards is supplied by the sub-rack. Please refer to the SR-20 and PSR-2 instructions for further details.

POWER CONNECTION

Power is supplied to the individual 980C-xxxx series via a four finger backplane connector. The individual components can be inserted into the subrack or removed from the subrack with power applied to the backplane. Please refer to the SR-20 and PSR-2 instructions for details.

RT-96400C-SL, RR-96400C-CL FIBER CONNECTIONS

The fiber optic connection to the user's infrastructure is made via a SC connector located at the back of the CDWM unit next to the power input. Be sure to allow sufficient room for the required minimum bend radius of the fiber cable used. SC patchcords are supplied for the intra-fiber connections between the CWDM and each of the 980C-XXXX series units. The wavelength listed for each port on the CWDM must correlate with the wavelength listed on the 980C-XXXX series unit to which that port is attached.



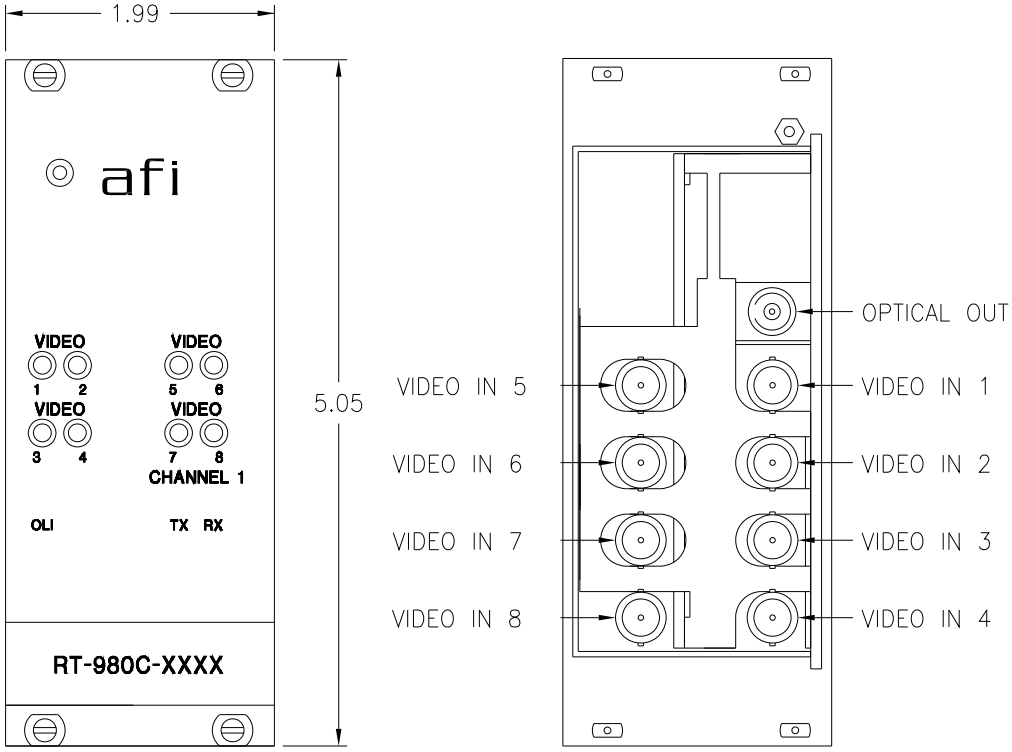
VIDEO INPUT / OUTPUT CONNECTIONS

Video input and output connections are located on the rear of the 980C-xxxx series units. 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.

The location of a video input to the RT-96400C-SL will be mirrored as a video output at the RR-96400C-SL. For example, the Channel 2 video input on the RT-980C-1550 will become the Channel 2 video output on the RR-980C-1550 after traveling across the fiber infrastructure.

RT-980C-XXXX SERIES STATUS INDICATORS

Each of the RT-980C-XXXX series transmitters provides the following front panel LED status indicators to aid in installation and troubleshooting:



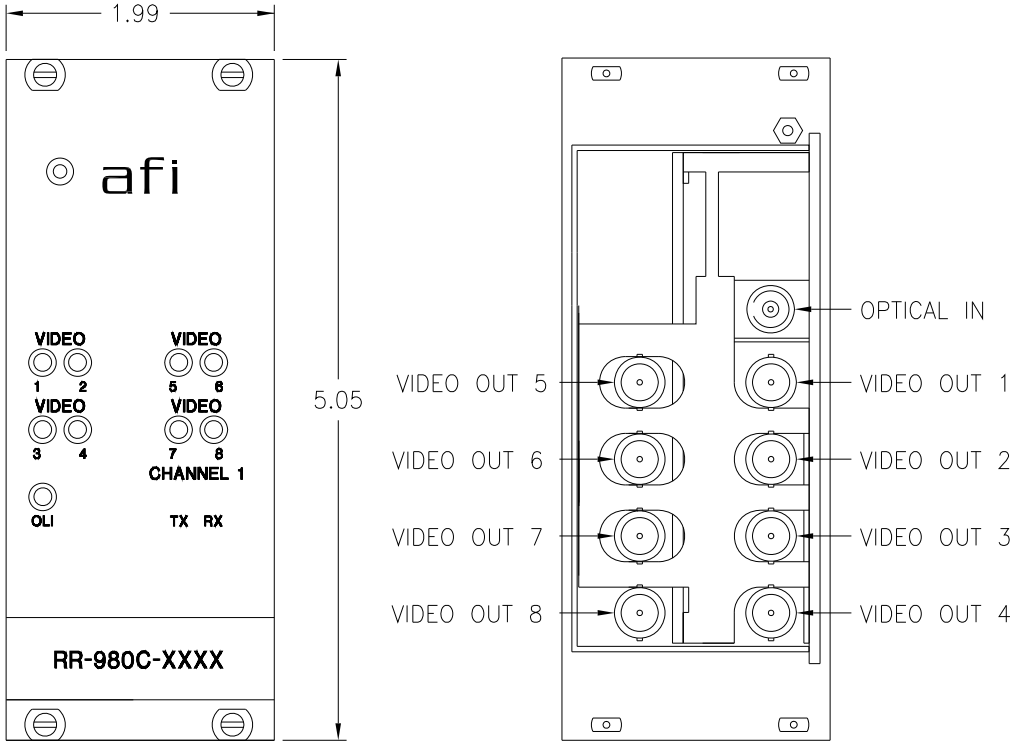
VIDEO 1 THROUGH VIDEO 8

A bi-color LED indicator is provided for the each of the eight video inputs to the RT-980C-XXXX series transmitters. 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

RR-980C-XXXX SERIES STATUS INDICATORS

Each of the RR-980C-XXXX series receivers provides the following front panel LED status indicators to aid in installation and troubleshooting:



VIDEO 1 THROUGH VIDEO 8

A bi-color LED indicator is provided for the each of the eight video outputs from the RR-980C-XXXX series receivers. Video status associated with each of these LED's is summarized below.

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

OLI

A bi-color LED indicator monitors the power of the optical input signal that is being received at the RR-980C-XXXX series unit from video channels one through eight of its corresponding RT-980C-XXXX series unit. 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
Phone: (732) 302-0660
FAX (732) 302-0667

E-mail: techinfo@americanfibertek.com