120 Belmont Drive
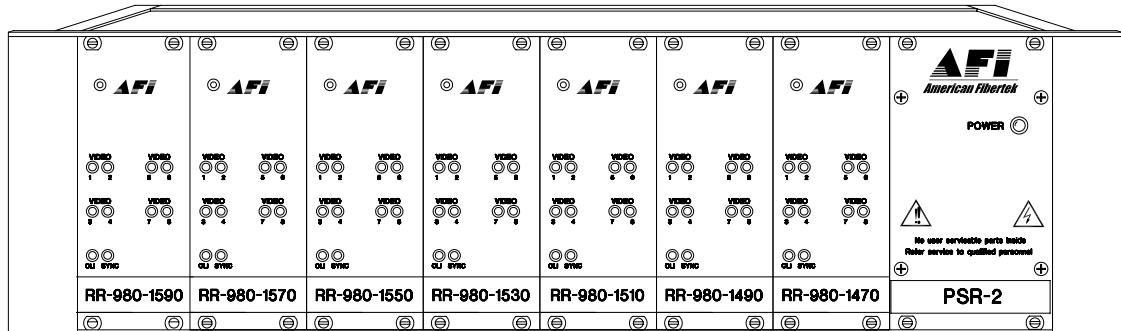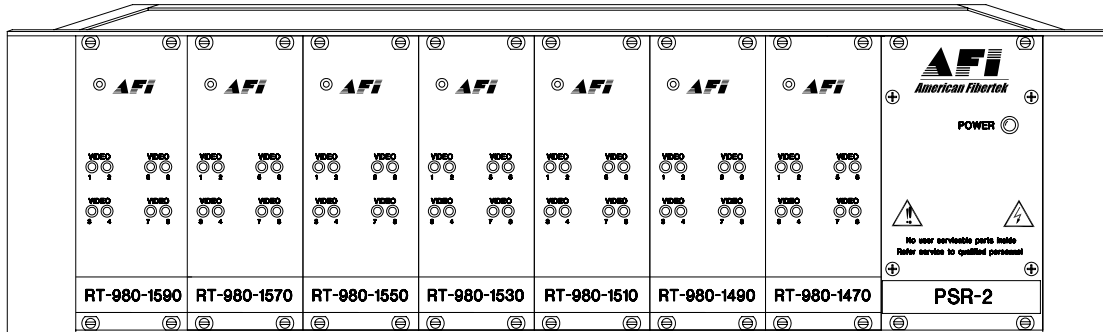**Somerset, NJ 08873-1204**

Phone: 732.302.0660 Fax: 732.302.0667

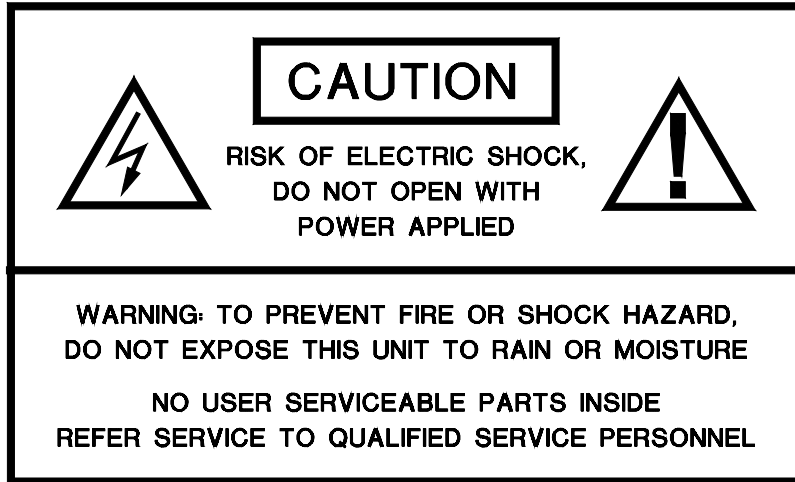Instruction Manual

RT-95600SL
RR-95600SL
Fifty-Six Channel Video Multiplexer

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+---------------------------------------------------+
|   /\          +-----------------+          /\      |
|  /  \         |     CAUTION     |         /  \     |
| / /\ \        +-----------------+        /  ! \    |
|/ /  \ \      RISK OF ELECTRIC SHOCK,    / ___  \   |
|  lightning    DO NOT OPEN WITH                     |
|               POWER APPLIED                        |
+---------------------------------------------------+
|                                                   |
|   WARNING: TO PREVENT FIRE OR SHOCK HAZARD,       |
|   DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE     |
|                                                   |
|        NO USER SERVICEABLE PARTS INSIDE           |
|   REFER SERVICE TO QUALIFIED SERVICE PERSONNEL    |
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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.

Table of Contents

INSTALLATION AND OPERATION INSTRUCTIONS

INTRODUCTION
Thank you for purchasing your American Fibertek Series 95600SL singlemode fifty-six 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 95600SL Series units operate as a transmitter / receiver pair for the digital transmission of fifty-six simultaneous NTSC or PAL video signals over one singlemode fiber optic cable.

The RT-95600SL transmitter accepts up to fifty-six video inputs in seven groups containing eight videos each. The eight videos from each group are multiplexed into a high speed serial data stream. 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 seven using wavelengths 1510nm through 1590nm respectively. A Course Wave Division Multiplexer (CWDM) combines these seven wavelengths onto a single optical output port for connection to the fiber transmission system. Correspondingly, the RR-95600SL receiver converts the optical signal to fifty-six independent video output.

The 95600SL Series product is designed to operate over an optical loss budget range of 0dB to 21dB on 9um singlemode fiber. Refer to the product specification sheet for additional performance data.
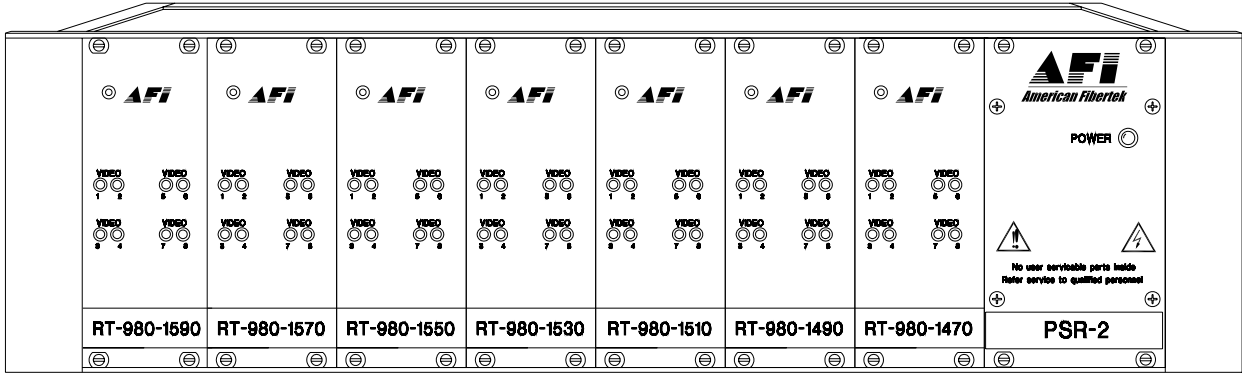

RT-95600SL COMPONENTS
The RT-95600SL consists of the following components:

1) RT-980-1470	1) RT-980-1530	1) RT-980-1590	1) SR-20
1) RT-980-1490	1) RT-980-1550	7) PCSC/UPC-0.3	1) PSR-2
1) RT-980-1510	1) RT-980-1570	1) MTX-CWDM-8	

The individual 980 series video rack cards that make up the RT-95600SL are combined in a rack mount configuration using the SR-20 subrack. Please refer to the instruction manuals for the SR-20 and the PSR-2 for information on the installation of the subrack with its power supply. The individual 980 series rack cards can slide into any of the open slots in the SR-20 subrack, however, the recommended configuration is shown below. This configuration starts with the lowest wavelength card, the RT-980-1470, next to the PSR-2 power supply and ends with the highest wavelength card, the RT-980-1590, at the left side of the rack. Following this configuration allows the fiber port on the back of the 980 series card to best line up with its associated port 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 seven video rack cards used in the RT-95600SL is labeled MTX-CWDM-8. It should be mounted directly below its corresponding SR-20 subrack with a ½ RU space between the two components. To maximize the performance and life of the system, installing a fan above the SR-20 subrack is recommended to pull air up across the RT-95600SL components.

Please use the drawing on the next page as a reference of this configuration.
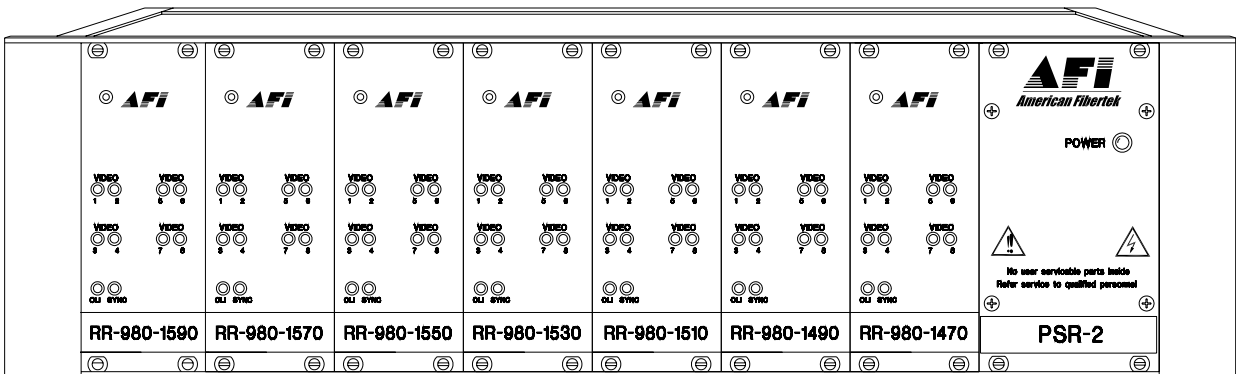
RT-95600SL

RR-95600SL COMPONENTS
The RR-95600SL consists of the following components:

1) RR-980-1470	1) RR-980-1530	1) RR-980-1590	1) SR-20
1) RR-980-1490	1) RR-980-1550	7) PCSC/UPC-0.3	1) PSR-2
1) RR-980-1510	1) RR-980-1570	1) MRX-CWDM-8	

The individual 980 series video rack cards that make up the RR-95600SL are installed in a manner similar to the RT-95600SL (see drawing below). The Multi-Channel Digital Video CWDM that optically demultiplexes the six video rack cards used in the RR-95600SL is labeled MRX-CWDM-8. Mounting procedures and recommendations should follow those used for the RT-95600SL.


RR-95600SL

POWER SOURCE
Power to the 980 series rack cards is supplied by the subrack. Please refer to the SR-20 and PSR-2 instructions for further details.

POWER CONNECTIONS
Power is supplied to the individual 980 series units 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.

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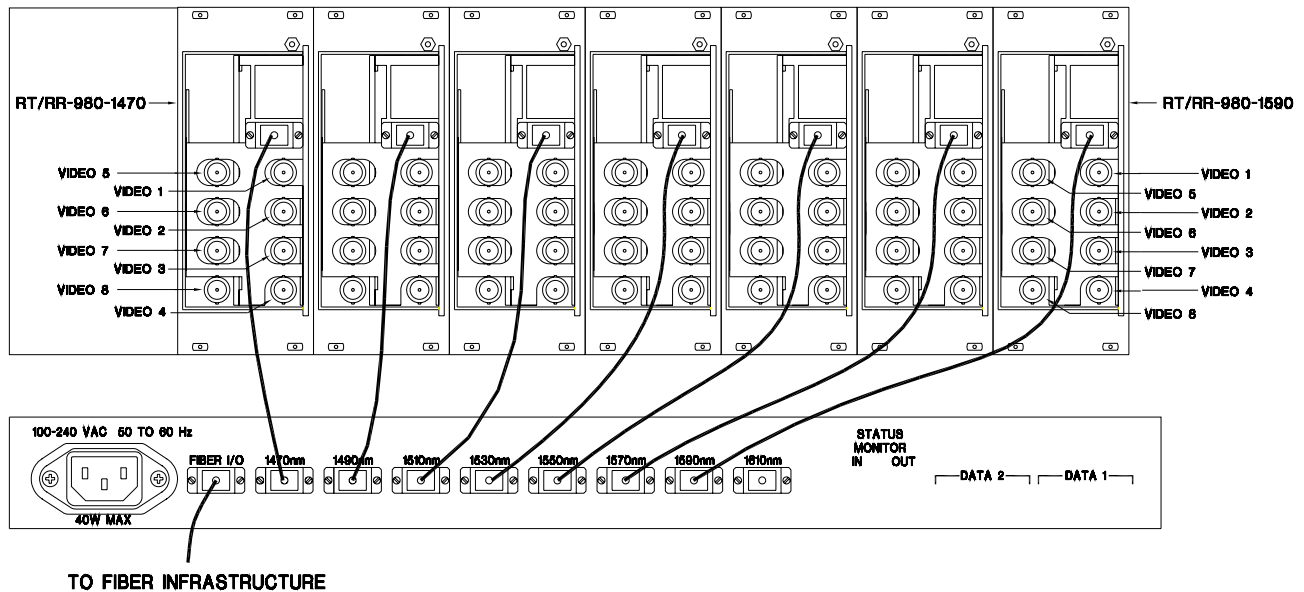

VIDEO INPUT / OUTPUT CONNECTIONS
Video input and output connections are located on the rear of the 980 series units. A BNC connector is provided for each channel. The video inputs are connected to an appropriate 75Ω baseband video source such as a camera or a video recorder output. The 75Ω video outputs 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-95600SL will be mirrored as a video output at the RR-95600SL. For example, the Channel 2 video input on the RT-980-1490 will become the Channel 2 video output on the RR-980-1490 after traveling across the fiber infrastructure.

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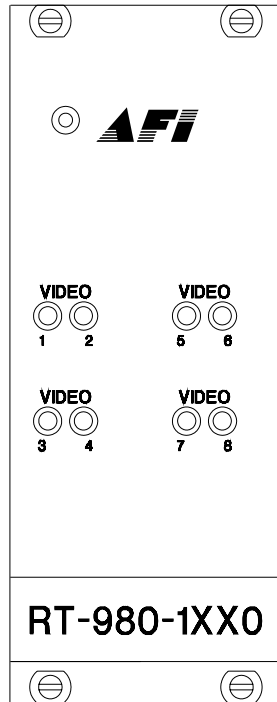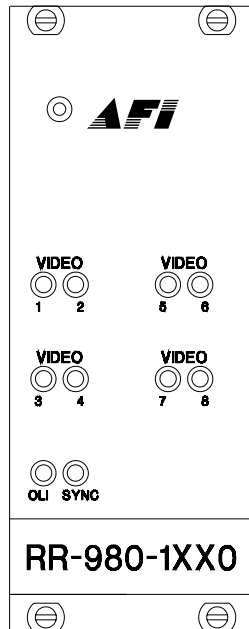

VIDEO 1 THROUGH VIDEO 8
A bi-color LED indicator is provided for the each of the eight video inputs to the RT-980 series transmitters. Video status associated with each of these LED's is summarized below.

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

RR-980 SERIES STATUS INDICATORS
Each of the RR-980 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-980 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-980 series unit from video channels one through eight of its corresponding RT-980 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

SYNC
A bi-color LED indicator is provided to monitor the proper serialization of the electrical video data stream through the RR-980 series unit. Each group of eight videos has its own SYNC indicator. Sync status associated with this LED is summarized below.

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

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This unit complies with 21 CFR
1040.10 and 1040.11
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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.   Phone: (877) 234-7200
120 Belmont Drive   Phone: (732) 302-0660
Somerset, NJ 08873   FAX (732) 302-0667
                          E-mail: techinfo@americanfibertek.com