WARRANTY

All fiber optic transmission systems, products and accessories manufactured by Liteway, Inc. and it's subsidiaries are fully tested prior to shipment and are warranted against defective materials and workmanship for a period of five full years from the date of the original shipment. Should a problem occur, a Return Material Authorization Number (RMA) must be obtained from Liteway Inc. at (516) 931-2800 and the item returned to Liteway, Inc. 166 Haverford Road, Hicksville, NY 11801, USA, prepaid. Liteway Inc. will then, at its option repair or replace the defective item.

Liteway, Inc. maximum liability under this warranty is limited to the cost of the defective item only. No contingent liabilities of any kind are either assumed or implied.

Any items returned to Liteway, Inc. that have been misused, abused, damaged, modified, connected or adjusted in any way contrary to the instructions furnished by Liteway, Inc. or repaired by unauthorized personnel will not be covered by this warranty. Any non-warranty repairs required will be quoted at the current rate for such services.

Important Notices

CAUTION ! AVOID DIRECT EXPOSURE TO BEAM.
All -7,-8, and -9 Models use laser diodes. These solid-state laser diodes are located in the optical ports of these units. Laser diodes produce invisible radiation that may be harmful to human eyes. Never look directly into the optical port of any fiber optic unit designed to operate with single-mode optical fiber.

NOT FOR LIFE SUPPORT SYSTEMS
Liteway, Inc. does not authorize or warrant any of its products or accessories for use in critical life support systems or applications of any kind.

OPERATING INSTRUCTIONS

Fiber Optic Video & Audio

Transmission System

Model VAT-1001, VAR-1001

The VAT/VAR-1001 system consists of the VAT-1001 transmitter and VAR-1001 receiver and will transmit high quality baseband video in accordance with NTSC, PAL and SECAM specifications as well as two line level audio channels over a single optical fiber.

Technical Specifications

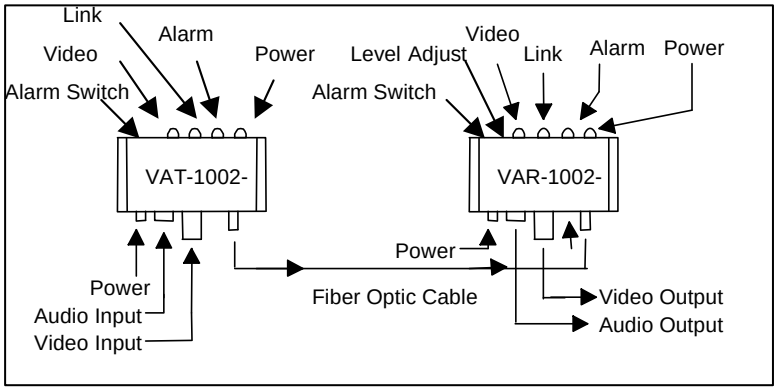
Video Bandwidth	8 MHz
Video In / Out	1 volt peak to peak , 75 Ohms, BNC
In / Out Signal Level	1 volt peak to peak
Signal / Noise Ratio	60 dB/min
Differential Gain	3% max
Differential Phase	3º max
Audio Bandwidth	15 Khz
Audio In / Out	1V RMS, 600 Ohms, (5 Pin terminal block)
Optical Output	-16 dBm typical
Optical Loss Budget	0 – 13 dB
Operating Wavelength	850 (-1), 1300 (-3,-7), 1550 (-9)
Fibers Accommodated	1 multimode fiber, ST connector (-1,-3), or 1 single-mode fiber, FC/PC connector (-7,-9)
Temperature Range	-35º to +75ºC
Power Requirements	11-24 VAC/DC @150 mA (3 pin term. block)
Physical Size (mm)	5.0"(127)L x 1.0" (25.4)W x 3.0"(7)D

All specifications measured with 1Km of 62.5u multimode fiber.
All specifications are subject to change without prior notice.

Litelink®
Fiber Optic Transmission Systems
www.LiteLink.com
USA 516-931-2800

Installation Instructions

The diagram below shows the typical installation of the VAT-1001 and VAR-1001 fiber optic video/audio transmission units. Both should be connected as shown and a video signal applied to the transmitter. To compensate for the unique fiber optic losses of your installation there is a level adjustment on the VAR-1001. The receiver video Level adjustment should then be set for a 1 Volt pp video output signal, or for an acceptable picture. The range of the receiver level control is adequate to allow the full 0-13dB optical path loss range to be accommodated. The audio channels do not require any adjustments.



Indicator Lights

Indicator	Lights when
Pwr	Proper power is present.
Alrm	The loss of video alarm is activated and there is no video present
Vat	Internal circuitry is OK.
Var	A fiber optic link is present
Video	A Video signal is being transmitted or received.

Power Terminal Block Connections

Pin	Function
1	Alarm output for use with optional Alarm Sensing Unit ALM-1000. No other connections should be made to this terminal
2	+11 to 24 DC or AC Volts input
3	AC or DC return (Common to Housing)

Be certain to check all connections, settings and voltages before applying power

106117 Rev G

Audio Removable Terminal Block Connections

Pin	Function
1	Signal Channel 1 +
2	Signal Channel 1 --
3	Ground (common to housing)
4	Signal Channel 2 --
5	Signal Channel 2 +

The audio input and output are transformer coupled and may be used in either a balanced or an unbalanced configuration.

Balanced input or output:

Connect audio to Pin 1 and 2. (4 & 5 for channel 2)
Pin 3 is then used as a shield or unconnected.

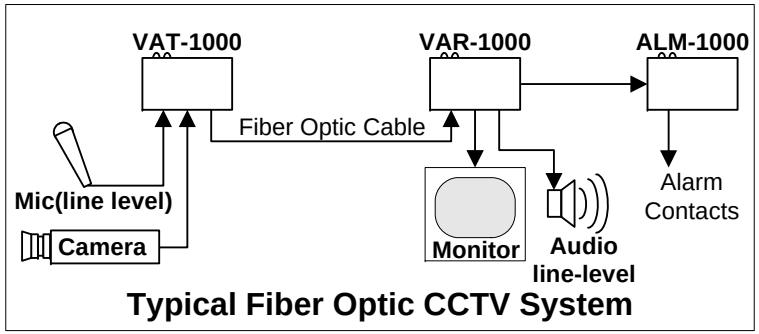
Unbalanced input or output:

Connect audio signal to Pin 1 (5 for channel 2).
Connect audio return (and/or shield) to Pin 2 (4 for channel 2).
Connect jump Pin 2 (4 for channel 2) to Pin 3 (ground).

In both cases be certain that the audio input level does not exceed 1-Volt RMS (3 volts peak-to-peak) or distortion and/or clipping will occur.

Alarm Switch

The **Alarm** is used to turn the video alarm function on and off. This is utilized when the Alarm sensing unit, ALM-1000 is being utilized.



Typical Fiber Optic CCTV System

Note that when there is a loss of signal carrier, usually due to broken fiber or excessive optical path loss, the Alarm indicator will light and the Link indicator will go off. The alarm switch cannot disable the function of the indicator lights.