GE
Security

**Two-Channel FM Video Multiplexers
Models S703V and S7703V**

installation instructions

imagination at work

FIGURE 1: SYSTEM DIAGRAM

2 Video Channels → **S703VT** - - - - → one optical fiber → **S703VR** → 2 Video Channels
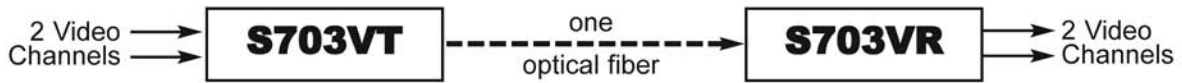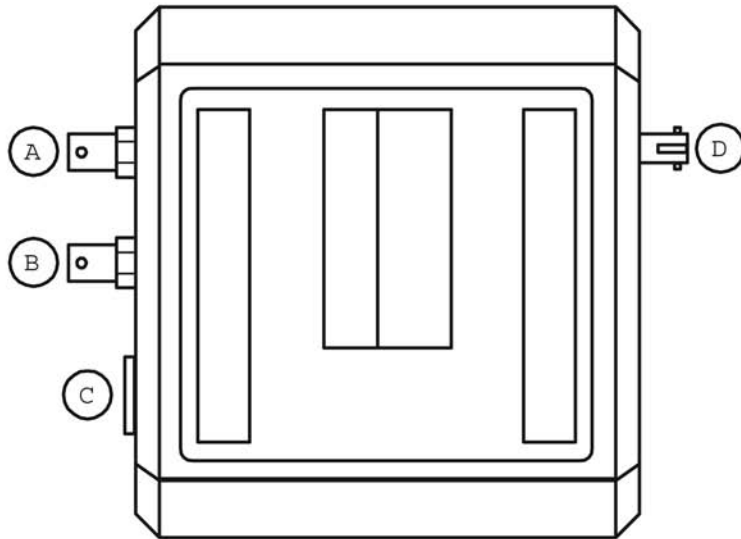
FIGURE 2: STANDALONE TRANSMITTER

FIGURE 2 KEY
A: Video In 1
B: Video In 2
C: Power Connector
D: Optical Connector

TABLE 1: POWER CONNECTION, STANDALONE TRANSMITTER

PIN	CONNECTION
1	DC +
2	N/C
3	N/C
4	GROUND

FIGURE 3 : MOUNTING PLATE

Mounting plate attaches to selected surface with four suitable screws. Standalone modules are mounted by sliding it onto the plate's hooks until firmly seated. The module can be easily removed and remounted.

MOUNTING HOLES #6 FLAT HEAD 4 PL

.87   1.50

3.00   2.62

3.25
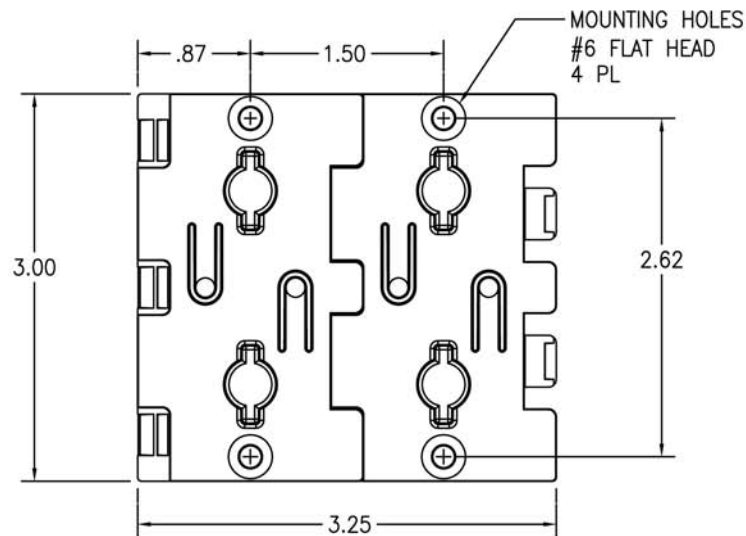
GENERAL

This manual is a guide to the installation and operation of the S703V and S7703V series fiber optic two-channel video multiplexer systems. Please read the entire manual before installing the equipment.

These two-channel video multiplexers offer simultaneous transmission of two full-frame video signals (color or monochrome). The S703V units use multimode fiber while the S7703V units operate over single-mode fiber. Figure 1 shows a diagram of the system.

Note: The series numbers S703VT and S703VR will be used to describe all models of transmitters and receivers unless noted otherwise.

A complete system consists of a transmitter, S703VT, and a receiver, S703VR. Units are designed for standalone operation or for installation in Fiber Options' 515R1 or 517R1 Card Cages or 501R miniature enclosures. The S703VT transmitter has two video inputs and one fiber output. The S703VR receiver unit has one fiber input and two video outputs.

Unpacking the Unit

In the event that anything is missing from the following list, contact your authorized Fiber Options dealer or representative.

S703VT Transmitter or S703VR Receiver
(S7703VT or S7703VR)
Instruction manual

Save the original packing materials in case it becomes necessary to return the unit.

1 INSTALLATION

1.1 INSTALLATION CONSIDERATIONS

This fiber-optic link is supplied in two forms, as a standalone module and as a rack card. Units should be installed in dry locations protected from extremes of temperature and humidity.

1.2 Standalone Modules

Care should be taken in selecting a mounting location with a surface suitable for mounting the module. There should be sufficient space for making the various cable, electrical, and fiber connections.

CAUTION: GE Security *recommends that you do not mount the equipment directly to sheetrock (gypsum panels) or other similar material.*

Receiver: Standalone receivers consist of a rack card in a 501R Enclosure. Refer to Figure 5. Use four No. 6 screws (3-mm screws) and attach it to a suitable mounting surface.

1.3 Rack-Mount Cards

Normally, rack cards are installed in one of Fiber Options' 19-inch (483-mm) EIA standard card-cage racks, either the 515R1 or the 517R1. They may also be installed in one of the standalone rack-card enclosures, the 501R. 502R, or 503R. The standalone receiver is supplied in a 501R enclosure.

CAUTION: Although the cards are hot-swappable, GE Security *recommends that the power switch on the rack power supply is turned OFF and that the rack power supply is disconnected from any power source during installation.*

501R, 502R, and 503R standalone enclosures are provided with mounting holes for four No. 6 screws (3-mm screws). The type of screw chosen must be suitable for the surface on which the module is to be mounted.

1.3.1 Alarm Jumper

Rack cards are supplied with an alarm function that goes active if the optical signal input to the receiver fails. The alarm is always indicated on the front panel of the card by a red Level/Loss(tm) LED. The alarm may also be output to the rack power supply, where a sonalert (audible alarm) and alarm output contact closure may be activated. The alarm is set to ACTIVE at the factory. If the alarm output is not desired, remove jumper W1 from the rack card. Refer to Figure 5.

NOTE: To provide earth ground reference, Stand Alone (Enclosure) modules need to be connected to a good earth ground. This can be accomplished by connecting a copper-based conductor from the modules *DC Common/Ground* pin to an approved earth ground.

NOTE: Removing jumper W1 does not affect the operation of the Level/Loss LED. Loss of optical signal will always be indicated by a red Level/Loss(tm) LED.

1.3.2 515R1 and 517R1 Card Cage Racks

To install rack cards in a rack, follow these steps:

CAUTION: GE Security recommends that the power switch on the rack power supply be turned OFF and that the rack power supply is disconnected from any power source.

Make sure that the card is oriented right-side up, and slide it into the card guides in the rack until the edge connector at the back of the card seats in the corresponding slot in the rack's connector panel. Seating may require thumb pressure on the top and bottom of the card's front panel.

CAUTION: Take care not to press on any of the LEDs.

Tighten the two thumb screws on the card until the front panel of the card is seated against the front of the rack.

1.3.3 501R, 502R, and 503R Enclosures

To install rack cards in standalone enclosures, follow these steps:

CAUTION: The rack card module can ONLY be powered by 13.5 VDC. AC power must not be used.

CAUTION: GE Security recommends that the enclosure not be connected to any power source during installation.

Look inside the enclosure to determine the location of the socket for the edge connector on the card. Orient the card so that it will seat in the socket, and slide it into the enclosure until the edge connector at the back of the card seats in the socket. Seating may require thumb pressure on the ends of the card's front panel.

CAUTION: Take care not to press on any of the LEDs.

Tighten the two thumb screws on the card until the front panel of the card is seated against the front of the rack.

2 SIGNAL CONNECTIONS

All fiber-optic links convert electrical signals of some type or types into a light signal at the transmitter and convert the light back to electrical signals for output at the receiver. These electrical signal connections to the S703V series consist of two BNC connectors on the transmitter and receiver.

CAUTION: Make sure all peripheral equipment that is to be connected to the fiber unit is turned OFF during installation.

NOTE: GE Security recommends using Belden 9259 RG59/U coaxial cable between the video equipment and the fiber units. For best image, do not exceed the cable manufacturer's recommendation for maximum distance.

NOTE: Coaxial cable must be terminated with female BNC connectors to properly couple with the Fiber Options equipment.

Connect two video sources, such as cameras, to the S703VT transmitter using terminated coaxial cables. Connect monitoring equipment to the S703VR receiver with terminated coaxial cables.

3 OPTICAL CONNECTIONS

The standard optical connector on GE Security units is the ST type. Connect the pre-terminated fiber to the two fiber units.

4 ELECTRICAL CONNECTION

4.1 RACKMOUNT CARDS

Make sure the power switch of the power supply is OFF, and plug the supplied power cord into a suitable outlet. Press the power switch to apply power to the modules in the rack.

4.2 STANDALONE MODULES

1. Identify the power connector and remove it from the module.

2. Make sure the power supply is not connected to any power source, and strip approximately 0.25 in (6 mm) of insulation from the ends of the cable.

3. Taking care to observe correct polarization of the cable (see table 1 for standalone transmitter modules, table 2 for 501R standalones), insert one lead into one of the screw sockets and tighten the screw. Repeat for the other conductor. Confirm the security of the connection by a light pull on the cable.

4. Seat the connector in its position in the fiber unit.

5. Plug the power supply into a suitable outlet.

CAUTION: The rack card module can ONLY be powered by 13.5-16 VDC. AC power must not be used.

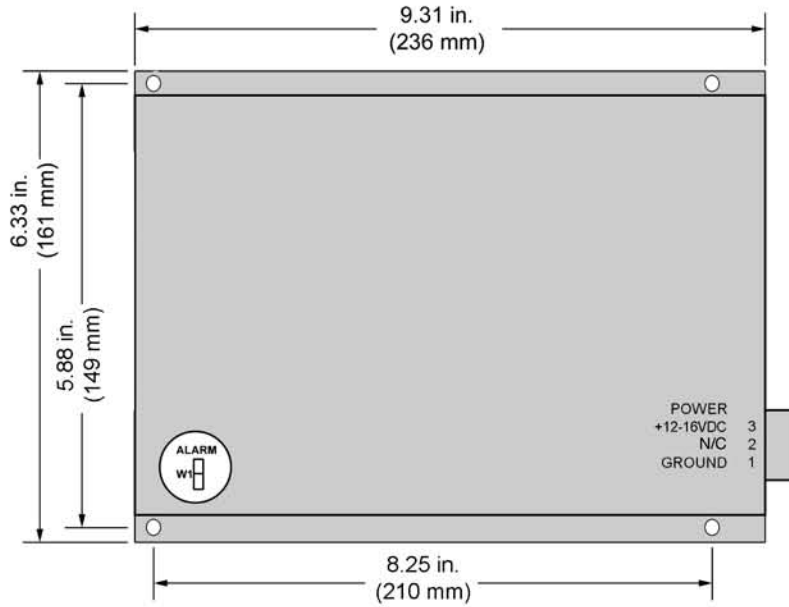**FIGURE 5: 501R ENCLOSURE FOR S703VR RECEIVER**

9.31 in. (236 mm)

6.33 in. (161 mm)

5.88 in. (149 mm)

8.25 in. (210 mm)

ALARM W1

POWER
+12-16VDC 3
N/C 2
GROUND 1

TABLE 2: POWER CONNECTION, 501R ENCLOSURE

PIN	CONNECTION
3	+13.5 VDC
2	N/C
1	Ground

NOTE: *Some 501R Enclosures are labeled "12 - 16 VDC"; however the actual minimum input voltage is 13.5 VDC.*
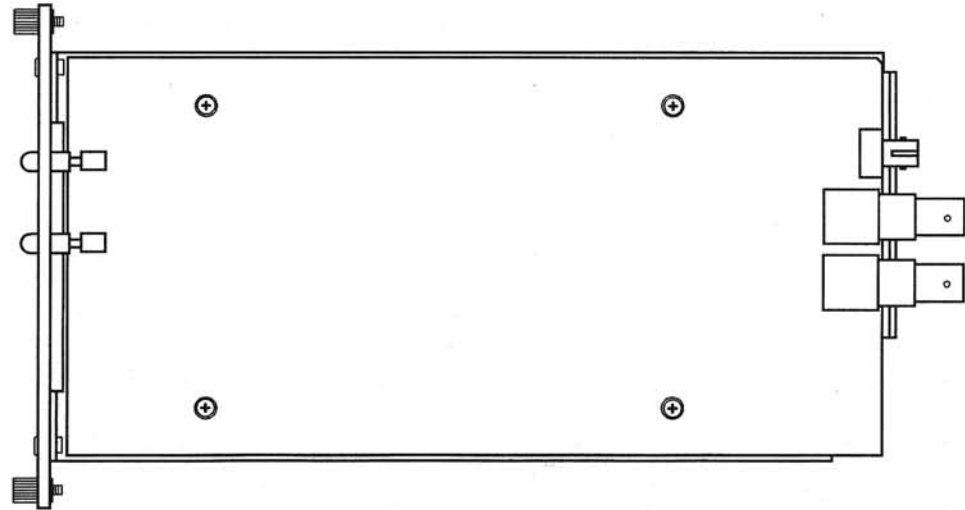
FIGURE 6: S703V RACK CARD

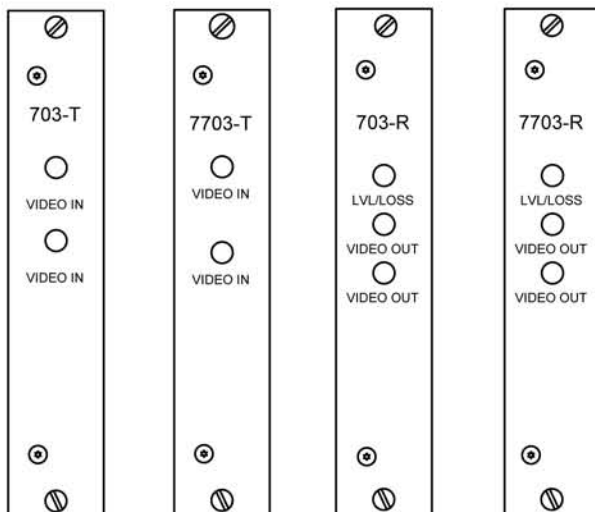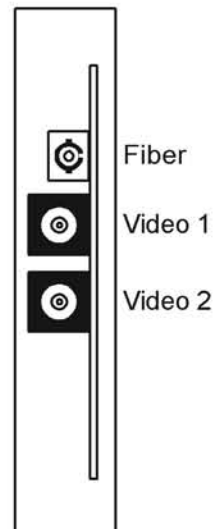**FIGURE 7: RACK CARD FRONT BEZELS, TRANSMITTER (LEFT) AND RECEIVER (RIGHT)**

703-T

VIDEO IN

VIDEO IN

7703-T

VIDEO IN

VIDEO IN

703-R

LVL/LOSS

VIDEO OUT

VIDEO OUT

7703-R

LVL/LOSS

VIDEO OUT

VIDEO OUT

FIGURE 8: RACK CARD CONNECTIONS

Fiber

Video 1

Video 2

Power up the peripheral equipment and verify system operation by observing video on the monitor at the receiver end. If the system does not perform as expected, refer to Table 3 for an explanation of how to diagnose system faults using the LEDs built into the GE Security units.

5 TROUBLESHOOTING

Refer to Table 3 for LED system diagnostic information.

6 CONTACTING FIBER OPTIONS

For technical assistance in the U.S. or Canada, call the GE Security Headquarters . If you are outside the U.S. or Canada, call the closest international office as listed on the back page of this manual.

Have the following information available: exact model number of your fiber-optic links, and a listing of the diagnostic indicators and their respective color or condition.

7 SHIPPING AND PACKAGING

Before shipping or transporting your GE Security unit, pack it securely to prevent damage that could occur in transit. Take care to protect all connectors, LEDs, and corners from possible damage.

8 RETURNS TO FIBER OPTIONS

If any equipment must be returned to GE Security for repair or replacement, you must obtain authorization from our Return Authorization department before shipping the unit.

NOTE: GE Security *will not accept return delivery of any products without prior authorization.*

Call GE Security toll-free at 888 437 3287 and ask to speak to a Return Authorizations representative. You will be given full instructions for returning your product at that time.

NOTE: All authorized returns must be clearly marked with the Return Authorization information. Please follow the instructions completely.

TABLE 3: *SMARTS*™ LED DIAGNOSTIC INDICATORS

LED NAME	COLOR	INDICATION / *CORRECTIVE ACTION*
VIDEO IN	Green	Sufficient video signal received. *No action required.**
	Red	Insufficient video signal received. *Verify video source is connected & operating.*
LVL/ LOSS™	Green	Sufficient optical power received. *No action required.*
	Red	Insufficient optical power received. *Verify fiber connected & within optical budget, receiver power on.*
VIDEO OUT	Green	Video signal received from transmitter and video output functioning normally. *No action required.**
	Red	Video output not functioning. *Verify video source is connected & operating at transmitting end of link.*

* *NOTE: A blank monitor screen may be valid video.*

Customer Support

For assistance in installing, operating, maintaining, and troubleshooting this product,
refer to this document and any other documentation provided. If you still have questions,
please contact technical support during normal business hours (Monday through Friday,
excluding holidays, between 6 a.m. and 5 p.m. Pacific Time).

GE Security

Call: 888 437-3287 (US, including Alaska and Hawaii; Puerto Rico; Canada)
Outside the toll-free area: 503 885-5700
Fax: 561 998-6224
www.gesecurity.com

GE Security

www.GESecurity.com

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