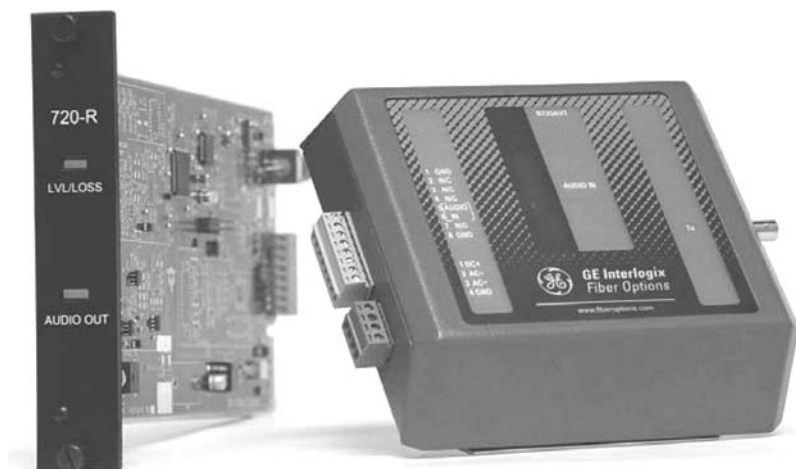


Fiber Optic System
Single Channel Audio
Models B720A and B7720A

installation instructions



GENERAL

This manual is a guide to the installation and operation of the B720A and B7720A series fiber optic audio transmission system. Please read the entire manual before installing the equipment.

NOTE: The series numbers B720AT and B720AR are used to describe all models of transmitters and receivers unless noted otherwise.

The Series B720A and B7720A audio transmission systems offer transmission of one channel of line level audio. The B720A system operates over one multimode fiber while the B7720A uses one single-mode fiber.

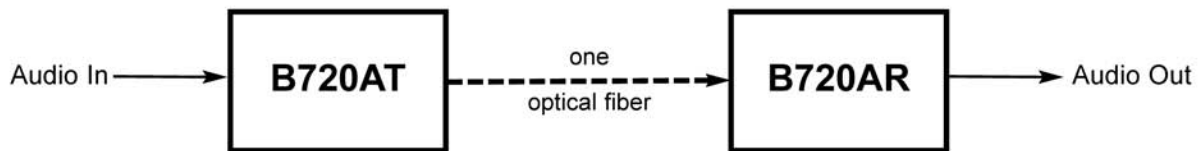
A complete system consists of an B720AT transmitter and an B720AR receiver. Units are designed for standalone operation or for installation in Fiber Options' 503H, 515R1, or 517R1 Card Cages.

Unpacking the Unit

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

B720AT Transmitter or B720AR Receiver
(B7720AT Transmitter or B7720AR Receiver)
Instruction manual

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

SYSTEM DIAGRAM**MODULE SETUP**

Before installing the B720A/B7720A transmitter or receiver, perform the setup procedures described in the following paragraphs.

Alarm Jumper

Rack cards are supplied with an alarm function that activates 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™ 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 ON (ACTIVE) at the factory. If the alarm output is not desired, move jumper W3 to "OFF" position. Refer to Figure 1.

NOTE: Setting alarm inactive does not affect the operation of the LEVEL/LOSS™ LED. Loss of optical signal will always be indicated by a red LEVEL/LOSS™ LED.

INSTALLATION

Installation Considerations

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

Standalone Modules

1. Determine where the module will be installed, and ensure that there is adequate space at both ends for making the various cable connections. See Figure 3.

CAUTION: Although rack cards are hot-swappable and may be installed without turning off power to the rack, 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.

1. 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.

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

CONNECTIONS

Audio Connections

Audio connections are made to the 8-pin removable screw terminal on the B720A. Refer to Table 1. When connecting audio cables, always wire the AUDIO OUT pins on the audio equipment to the AUDIO IN pins on the fiber links, and the AUDIO IN pins on the audio equipment to the AUDIO OUT pins on the fiber links. See Figures 1, 2 and 5. The audio inputs and outputs can be wired in the following manner (refer to Table 1):

1. Single ended stereo: for stereo operation, left and right channels are referenced to ground.
2. Differential operation, single channel: in this configuration, the audio signal is input differentially to Diff In + and Diff In - pins. Likewise, the audio signal is output on Diff Out + and Diff Out - pins.

Fiber Optic Cable Connection

Most cable manufacturers identify the individual fibers in the cable. Select appropriately terminated fiber and mark both ends with unique identification label (e.g. for cable no. 03, fiber no. 08) to ensure that the fiber connected to the near end is the same one that is connected to the far end.

The proper optical connection will link the transmitter's TRANSMIT (OUT) port to the receiver's RECEIVE (IN) port. See Figures 1 and 2.

1. Wipe the inside of the port's sleeve with a lint-free pipe cleaner moistened with reagent-grade isopropyl alcohol. Blow dry with dry air.
2. Clean the connector using a lint-free cloth dampened with alcohol to thoroughly wipe the side and end of the ferrule. Blow the ferrule dry with dry air. Visually inspect the ferrule for lint.
3. Fasten the fiber optic cable to the port.

Power Connections

Standalone Modules

Standalone units may be powered either by 24 VAC or by 12-16 VDC. Connect input power according to the label on the module. See Figure 2 and Table 2.

FIGURE 1: B720A - B7720A RACK-MOUNT MODULES

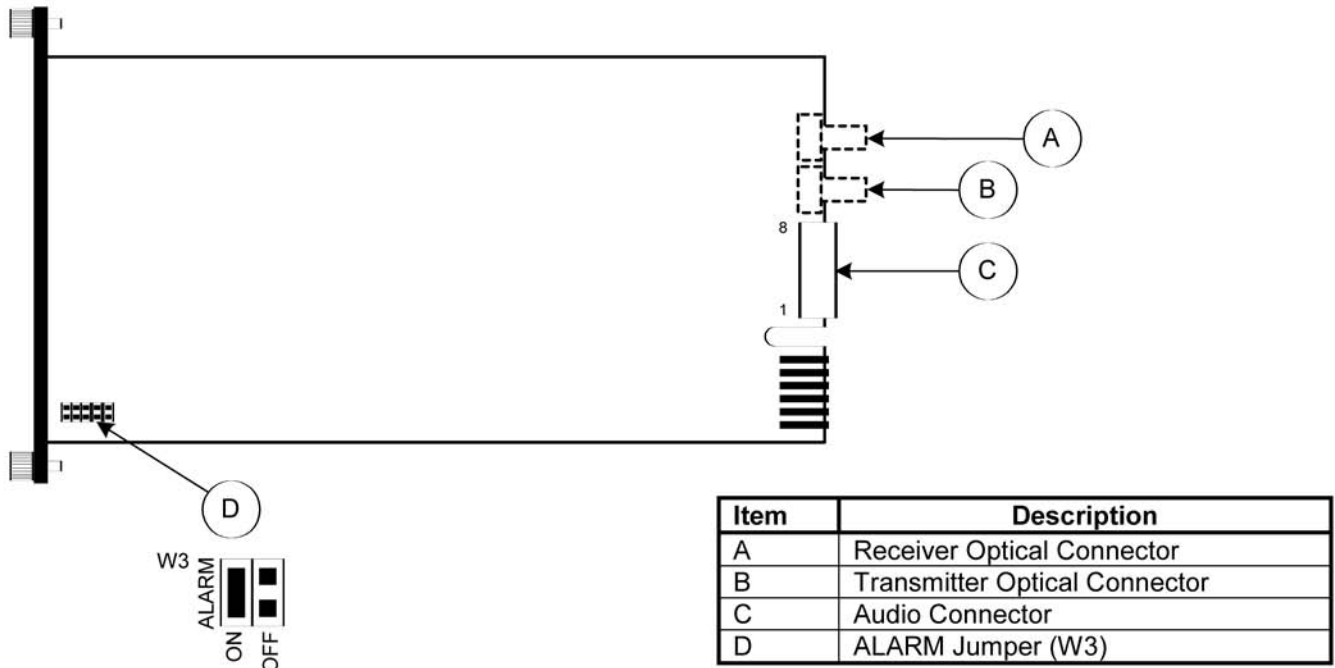
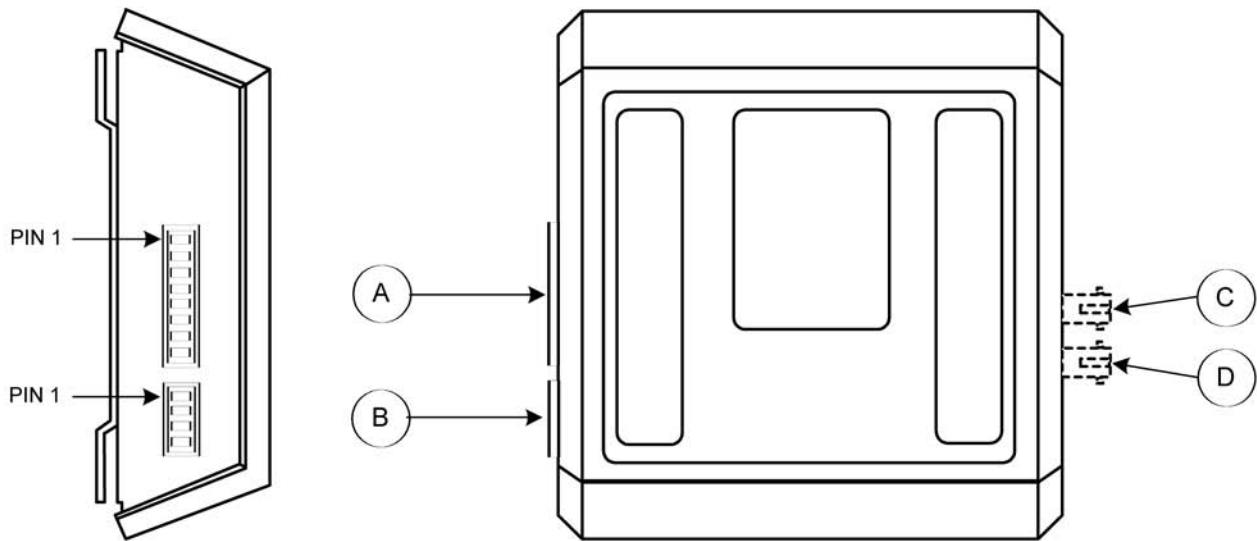


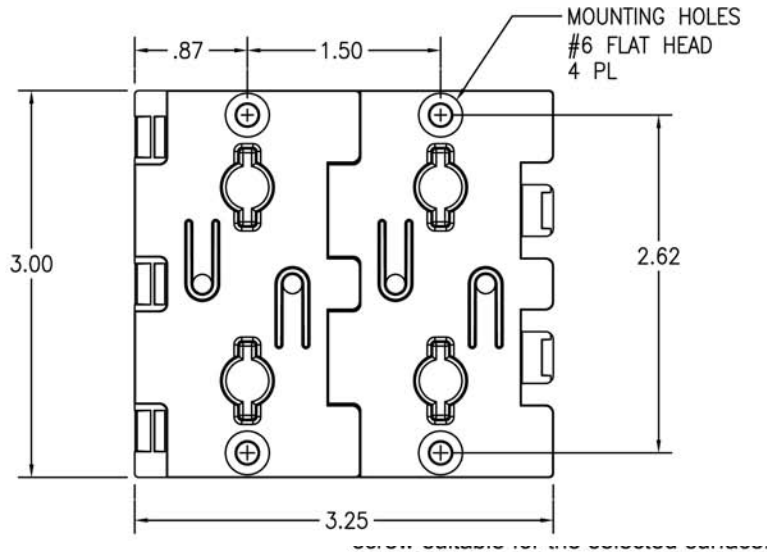
FIGURE 2: B720A - B7720A STANDALONE MODULES



Item	Description
A	Audio Connector
B	Power Connector
C	Receiver Optical Connector (On Receiver Only)
D	Transmitter Optical Connector (On Transmitter Only)

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.



Rack Modules

Power connections are made automatically when the card is installed. To supply power to the rack, connect the rack power supply to an AC outlet and set the power switch to ON.

SMARTS™ DIAGNOSTICS

The B720A has built in Status Monitoring And Reliability Test System (*SMARTS™*) diagnostic capabilities. This includes LED indicators for monitoring audio and optical status. They are described in the following sections.

LED Operation

Refer to the Table 3 for an explanation of how to diagnose system faults using the LEDs built into the Fiber Options units.

The B720A has 2 LED indicators that are very useful in describing the current state of operation, as well as the current status of data flow and fiber optic signal strength. These indicators are LEVEL /LOSS™ and AUDIO IN (or OUT). See Figure 6. They function as follows:

LEVEL/LOSS™ Indicator

This LED is useful for indicating the relative optical signal strength at the fiber optic receiver. When sufficient optical power is being received, the LED is green. If no or insufficient optical power is received, the LED will be red.

AUDIO IN/OUT Indicators

The AUDIO IN (or OUT) LED on the transmitter indicates the strength of the audio signal. The AUDIO IN LED remains green as long as an adequate audio signal is being input to the module.

The LED will be dim for a midrange audio signal or bright green for a high level audio signal.

When the audio input becomes too weak, the LED will turn off. The LED will be amber when the audio level exceeds the maximum input level.

The AUDIO OUT LED on the receiver performs a similar function, except that it refers to the audio output from the module.

OPERATION

B720A links operate automatically once installed. For an explanation of LED color codes, refer to LED Operation and Table 3.

MAINTENANCE

There is no operator maintenance other than keeping the units clean.

TABLE 1: B720A/B7720A AUDIO CONNECTIONS

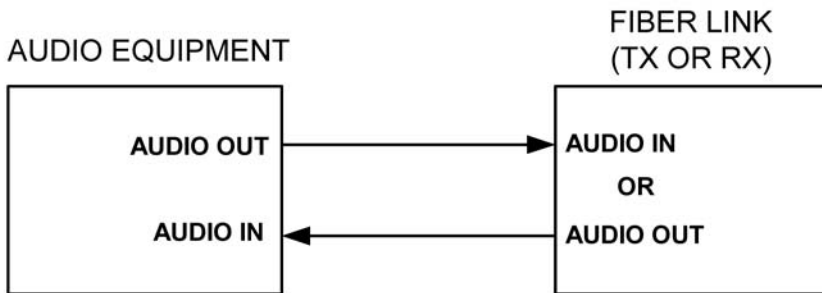
PIN	FUNCTION
1	Ground
2	OUT LEFT/DIFF OUT - (Receiver Only)
3	OUT RIGHT/DIFF OUT + (Receiver Only)
4	No Connection
5	IN LEFT/DIFF IN - (Transmitter Only)
6	IN RIGHT/DIFF IN + (Transmitter Only)
7	No Connection
8	Ground

TABLE 2: B720A/B7720A STANDALONE MODULE POWER CONNECTIONS

PIN	FUNCTION
1	12 – 16 VDC
2	24 VAC Tx ONLY
3	24 VAC Tx ONLY
4	DC GROUND

NOTE: Rx models are DC only

FIGURE 5: FIBER LINK AUDIO CONNECTIONS



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.

FIGURE 6: B720A/B7720A RACK-MOUNT FRONT PANELS

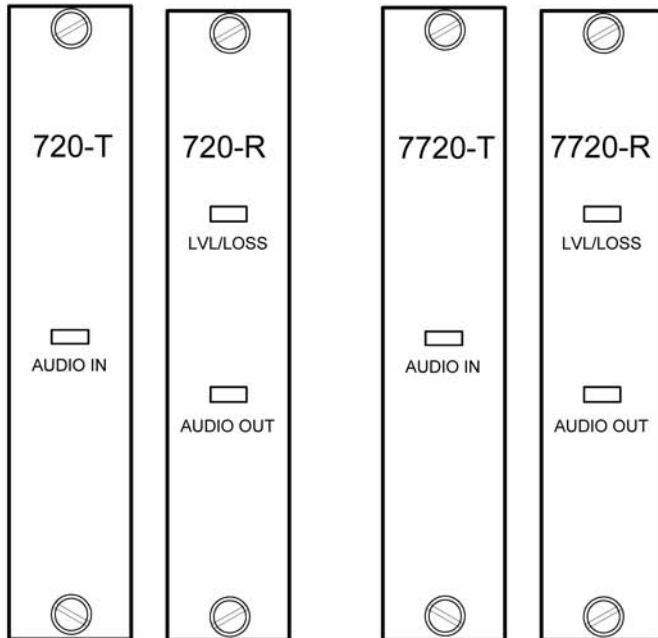


TABLE 3: LED DIAGNOSTIC INDICATORS

LED Name	Color	Indicates/Corrective Action
LEVEL/ LOSS	Green	Sufficient optical power received. <i>No action required.</i>
	Red	Insufficient optical power received. <i>Verify fiber connected & within optical budget, receiver power on.</i>
AUDIO IN/OUT	Amber	Maximum audio level. Consistently high audio levels are clipped. <i>No action required.</i>
	Green	Adequate audio level present at unit. <i>No action required.</i>
	Off	No audio signal at unit. <i>Verify audio connected, audio source has power.</i>

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

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