

FOI-2170 and FOI-2171

FIBER OPTIC ISOLATOR



Description

The FOI-2170 and FOI-2171 both provide complete electrical isolation for composite video communications. The units are compatible with NTSC, PAL, and SECAM video broadcast standards. The units are transparent to all monochrome RS-170, color RS170A, and closed circuit RS-330 video. The FOI-2171 has an AGC (automatic gain control) to stabilize the video output for different fiber optic cable lengths. Adjusting the AGC potentiometer will also increase or decrease the overall scene brightness.

The units can be used in areas of high electrical noise or in and out of RF shielded enclosures. The fiber optic cable is not susceptible to interference caused by impulse noise, crosstalk, or EMI. Privacy of communications is also enhanced because the fiber optic cable does not radiate any emissions.

In addition, fiber optic cable offers much longer transmission distances than traditional coax cabling. Multimode optics on the units can extend the distance to 2km. A typical link consists of an FOI-2170 at one end of the network transmitting optical signals to an FOI-2171 at the other end of the network with a single fiber optic cable between them as shown under "TYPICAL APPLICATION".



Video

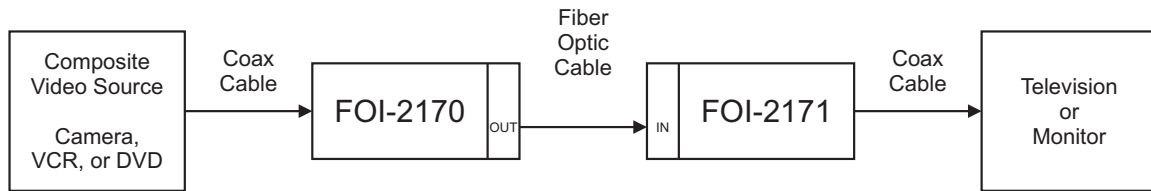
Uni-Directional (Simplex) Composite Video

FOI-2170: Optical Transmitter
FOI-2171: Optical Receiver

Features:

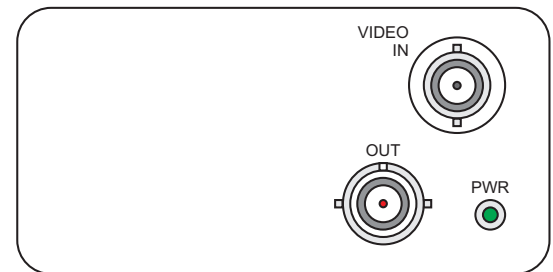
- Video Bandwidth: 4 Hz to 7 MHz
- Compatible with:
 - NTSC
 - PAL
 - SECAM
- Compliant with:
 - EIA / RS-170
 - EIA / RS-170A
 - EIA / RS-330

Typical Application

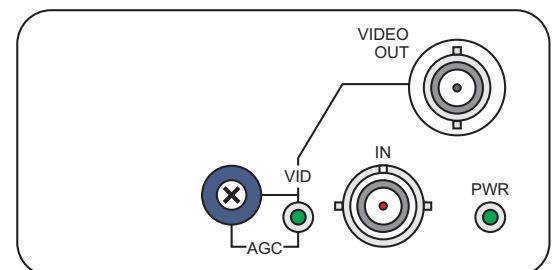


LED Indicators

Model	Label	Color	Description
FOI-2170 and FOI-2171	PWR	Green	Power supply in FOI unit is operating properly.
		Off	No power from the PSQ power supply or open fuse inside the FOI unit. Check that the PSQ power supply is operating properly. If the PSQ power supply is good, separate the FOI unit from the PSQ power supply for 30 seconds and then reattach so that the fuse inside the FOI unit has time to reset. If the PWR led is still off or not constant, replace the FOI unit.
FOI-2171	VID	Green	The AGC (automatic gain control) has stabilized the VIDEO OUT voltage to the reference voltage set by the AGC potentiometer. The overall scene brightness will increase or decrease depending on the reference voltage.
		Off	The AGC (automatic gain control) is busy measuring the VIDEO OUT voltage and comparing it to the reference voltage set by the AGC potentiometer. Weak video signals will be amplified and strong video signals will be attenuated until the AGC loop stabilizes.



FOI-2170-ST Front View



FOI-2171-ST Front View

Specifications

		minimum	typical	maximum	unit
Power Requirement	Voltage Range	7	9	12	V
	Supply Current	-	200	-	mA
Environmental	Storage Temperature	-40	-	85	°C
	Operating Temperature	0	-	50	°C
Video	Bandwidth (-3 dB)	4 Hz to 7 MHz			
	Signal to Noise Ratio (SNR)	45 dB unrated, 56 dB rated			
	AGC Range	10:1			
	Interface Connector	BNC			
Case Dimensions	Size 2	length	width	height	weight
		4.5 in (114 mm)	1.312 in (33 mm)	2.562 in (65 mm)	2 lb (0.9 kg)

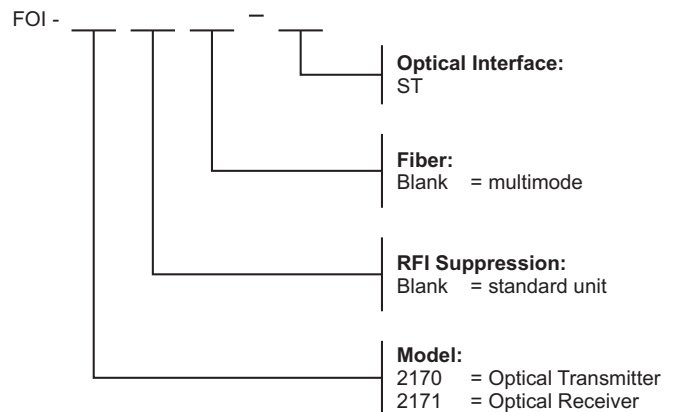
Optical Characteristics

Fiber	Size	Max Distance	Wavelength	FOI-2170 Output Power	FOI-2171 Receiver Sensitivity	Loss Budget
Multimode	62.5 / 125 µm	2 km	820 nm	-18 dBm	-30 dBm	12 dB

Accessories

Model	Description
CMA-2001	Chassis Mount Adapter for RMC-2101
CMA-3002	Chassis Mount Adapter for RMC-3101, RMC-3102
PSQ-2910	Power Supply for FOI-2xxx series
RMC-2101	Rack Mount Chassis, 3-1/2" H x 19"W, rear access
RMC-3101	Rack Mount Chassis, 5-1/4" H x 19"W, front access
RMC-3102	Rack Mount Chassis, 5-1/4" H x 19"W, front access with optical patch panel
WMA-2001	Wall Mount Adapter with optical patch
WMA-3002	Wall Mount Adapter

Ordering Information



Standard Options:

- FOI-2170-ST
- FOI-2171-ST

For special applications that require custom units, please call FiberPlex for more information.