

# Jain Laboratory Instruments









# **Physics of Fiber Optics Trainer**

## **Description**

### **Physics of Fiber Optics Trainer**

#### List of Experiments:-

Light traveling around corners in an Optical Fiber

Coloured light traveling down an Optical Fiber

Photo detector detecting light

LED output as a function of a current

LED shining light into

Transmission of light between two fibers

Transmission through a gap between fibers

Fiber Optic transmission sensor

Fiber Optic reflection sensor

Measurement of Numerical Aperture of Optical Fiber

Setting up of Fiber Optic Analog Link

Setting up of Fiber Optic Digital Link

Setting of Fiber Optic Voice Link

**Switch Faults Study:** 

Effect of switch fault 1 in function generator section

Effect of switch fault 2 in audio preamplifier section

Effect of switch fault 3 in signal strength section

Effect of switch fault 4 in audio amplifier section

Measuring Losses in the fiber:

Measurement of propagation loss in the Fiber

Measurement of connector loss

Fiber bending loss

Features:

On-board Function Generator

Transmitter: 1 No

Receiver: 2 Nos

Fiber Optic Analog Link

Fiber Optic Digital Link

Signal strength indicator

Specifications:

Transmitter: 1 No. LED. Peak wavelength of emission 635 nm Red visible

Receiver: 2 Nos. silicon photo detectors

Modulation: Intensity modulation

Driver Circuit: Analog and digital configuration for 635 nm LED

Analog Bandwidth: 35KHz

Digital Bandwidth: 50KHz

On-Board Function Generator (Sine Wave &TTL Square Wave) :

Frequency Range: 1Hz to 10Hz, 10Hz to 100Hz, 100Hz to 1 K H z , 1 K H z t o 10KHz

Amplitude: 0 to 4Vpp. (Except Square)

Voice Communication: Fiber Optic voice link using dynamic MIC &SPEAKER

Signal strength indicator: 8 LED's provided to measure optical power

#### **Fiber Optic Cable:**

Type: 1000 micron Step Index, Multimode Plastic Fiber

Fiber Lengths: 1 & 5 Meter.

Power Supply: GND, +5V, +12V, -12V at 100mA INT

#### Accessories:

Red Short Links: 10 Nos

Crocodile Links: 02 Nos

Plastic Fiber 1 Meter (with connector): 01 No

Plastic Fiber 5 Meter (with connector): 01 No

N.A. Jig&;;N.AScale: 01 No. Each

Connection Sleeves (Splicing unit): 01 No

Microphone: 01 No

Speaker: 01 No

Experimental Manual: 01 No

Mandrel: 01 No

#### Other Apparatus Required:

Cathode Ray Oscilloscope 20MHz

Fiber Optics Trainer Manufacturer India, Fiber Optics Trainer Exporters, Electronics Fiber Optics Trainer, Buy Fiber Optics Trainer Online India, Lab Exporters India, Didactic, Didactic Electronics Equipments For School Lab, Electrical Training Equipment Exporters and Educational Equipments, Electrical Training Equipment Suppliers, Electronics Instruments and Equipments Manufacturers.

{ "@context": "http://schema.org/", "@type": "Product", "name": "Physics of Fiber Optics Trainer", "image": "https://www.jlabexport.com/images/catalog/product/1993523516\_2017-10-03.jpg", "description": "List of Experiments:- Light traveling around corners in an Optical Fiber Coloured light traveling down an Optical Fiber Photo detector detecting light LED output as a function of a current LED shining light into Transmission of light between two fibers Transmission through a gap between fibers Fiber Optic transmission sensor Fiber Optic reflection sensor Measurement of Numerical

Aperture of Optical Fiber Setting up of Fiber Optic Analog Link Setting up of Fiber Optic Digital Link Setting of Fiber Optic Voice Link Switch Faults Study: Effect of switch fault 1 in function generator section Effect of switch fault 2 in audio preamplifier section Effect of switch fault 3 in signal strength section Effect of switch fault 4 in audio amplifier section Measuring Losses in the fiber: Measurement of propagation loss in the Fiber Measurement of connector loss Fiber bending loss Features: Onboard Function Generator Transmitter: 1 No Receiver: 2 Nos Fiber Optic Analog Link Fiber Optic Digital Link Signal strength indicator Specifications: Transmitter: 1 No. LED. Peak wavelength of emission 635 nm Red visible Receiver: 2 Nos. silicon photo detectors Modulation: Intensity modulation Driver Circuit: Analog and digital configuration for 635 nm LED Analog Bandwidth: 35KHz Digital Bandwidth: 50KHz On-Board Function Generator (Sine Wave &TTL Square Wave): Frequency Range: 1Hz to 10Hz, 10Hz to 100Hz, 100Hz to 1 K H z, 1 K H z t o 10KHz Amplitude: 0 to 4Vpp. (Except Square) Voice Communication: Fiber Optic voice link using dynamic MIC &SPEAKER Signal strength indicator: 8 LED's provided to measure optic Cable: Type: 1000 micron Step Index, Multimode Plastic Fiber Fiber Lengths: 1 & 5 Meter. Power Supply: GND, +5V, +12V, -12V at 100mA INT Accessories: Red Short Links: 10 Nos Crocodile Links: 02 Nos Plastic Fiber 1 Meter (with connector): 01 No Plastic Fiber 5 Meter (with connector): 01 No N.A. Jig&;; N.AScale: 01 No. Each Connection Sleeves (Splicing unit): 01 No Microphone: 01 No Speaker: 01 No Experimental Manual: 01 No Mandrel: 01 No Other Apparatus Required: Cathode Ray Oscilloscope 20MHz Fiber Optics Trainer Manufacturer India, Fiber Optics Trainer Exporters, Electronics Fiber Optics Trainer, Buy Fiber Optics Trainer, Buy Fiber Optics Trainer Online India, Lab Exporters India, Didactic, Didactic Electronics Equipments For School Lab, Electrical Training Equipment Exporters and Educational Equipments, Electrical Training Equipment Suppliers, Electronics Instruments and Equipments Manufacturers.", "brand": "JLab Export", "sku": "5", "gtin8": "5", "gtin13": "5", "gtin14": "5", "mpn": "5", "aggregateRating": { "@type": "AggregateRating", "ratingValue": "5", "bestRating": "5", "worstRating": "0", "ratingCount": "5" } }