

Product Name :

Physics of Fiber Optics Trainer for Vocational Training and Didactic Labs

Product Code :

FBRO-0008

**Description :**

Equipment for Education, Engineering and Vocational Training - Physics of Fiber Optics Trainer - PHYSICS OF FIBER OPTICS TRAINER is designed to learn basic physics of fiber optics including fiber end preparation. Students can also study the construction of transmitter & receiver to form analog & digital link. Ample number of experiments can be performed with this kit by referring to the exhaustive manuals provided with the kit.

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
Measuring Losses in the fiber
Measurement of propagation loss in the Fiber
Measurement of connector loss
Fiber bending loss
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 pre amplifier section
Effect of switch fault 3 in signal strength section
15.4 Effect of switch fault 4 in audio amplifier section

Features:

On-board Function Generator.
Transmitter : 1 No.
Receiver : 2 Nos
Fiber Optic Analog Link.

Fiber Optic Digital Link.
Signal strength indicator.
Technical 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 m e a s u r e o p t i c a l 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.A. Scale : 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

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