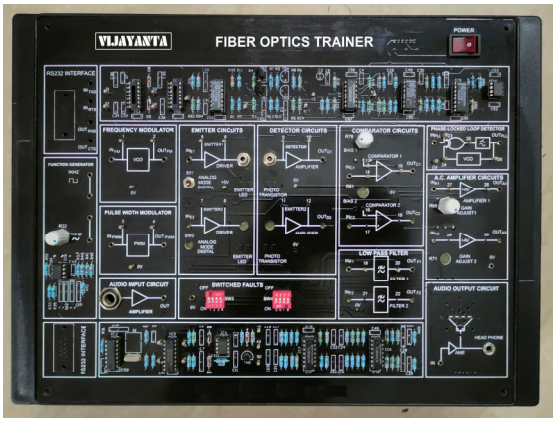
VIJAYANTA

ISO - 9001: 2015

FIBER OPTICS TRAINER

Model: FOT – 100

Fiber Optics Trainer is designed to learn the basics of Fiber Optics. The trainer demonstrates properties of Fiber Optics Transmitter & Receiver, characteristics of Fiber Optics Cable and different types of Modulation / Demodulation techniques. A large number of experiments are included in the Manual. Fiber Optics Trainer can also be used to demonstrate various Digital Communication techniques via Fiber Optic link using Digital Communication Trainers.



❖ FEATURES

- Simplex Analog & Digital Trans-receiver
- Single Module covering large number of experiments including
- experiments with Optical Power Meter
- 660 nm channel with Transmitter & Receiver
- AM-FM-PWM modulation / demodulation
- On board Function Generator
- Crystal Controlled Clock
- Functional Blocks indicated on-board mimic
- Input-output & test points provided on board
- On board voice link
- Built in DC power supply
- Numerical Aperture measurement jig and mandrel for bending
- loss measurement
- Switched faults on Transmitter & Receiver

❖ SCOPE OF LEARNING

- Setting up Fiber Optic Analog & Digital Link
- AM system using Analog & Digital Input Signals
- Frequency Modulation System
- Pulse Width Modulation System
- Study of Propagation Loss in Optical Fiber
- Study of Bending Loss
- Measurement of Numerical Aperture
- Characteristics of E-0 Converter (LED)
- Characteristics of Fiber Optic Communication Link
- Setting of Fiber Optic Voice Link using Amplitude, Frequency & PWM Modulation
- Study of Switched Faults in AM,FM & PWM system
- Propagation loss using Optical Power Meter

VIJAYANTA TECHNOLOGIES PVT. LTD.

(Formerly Vijai Electronics)

Address - Dr. Baldev Singh Marg 28/147 Civil Lines, Roorkee-247667 Distt. Haridwar, Uttarakhand

Phone No.: 01332 – 272509, 7579200827, E-Mail : vijayantatechologies@gmail.com, vijaielectronics1965@gmail.com

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❖ SPECIFICATIONS

1.	Transmitter		1 No., Fiber Optic LED having peak wavelength of emission 660 nm
2.	Receiver		1 Nos., Fiber Optic Photo detector
3.	Modulation Techniques		1. AM 2. FM 3. PWM
4.	Drivers		1 No. with Analog & Digital modes
5.	AC Amplifier		1 Nos.
6.	Clock		Crystal Controlled Clock 4.096 MHz
7.	PLL detector		1 no.
8.	Comparator		1 nos.
9.	Filter		1 nos. 4 order Butterworth, 3.4 KHz cut-off frequency
10.	Analog Band Width		350 KHz
11.	Digital Band Width		2.5 MHz
12.	Function Generator		1 KHz Sine wave (Amplitude adjustable) 1 KHz Square wave (TTL)
13.	Fault Switches		8 Nos.
14.	Interconnections		2mm Banana Socket
15.	Test Points		29 Nos.
16.	Power Supply		230 V ±10%, 50/60 Hz
17.	Dimensions (mm)		W 405 x D 275 x H 105
18.	Weight		2.8 Kg. approximately
19.	Operating Conditions		0-40°C, 80% RH

- Included Accessories

1.	Patch Cord		6 nos.
2.	Mains Cord		1 no.
3.	NA Measurement jig		1 no.
4.	Mandrel		1 no.
5.	Fiber Cable		2 no.
6.	Microphone		1 no.
7.	Headphone		1 no.
8.	Learning Material		Operating Manual

Note: - There may be any change in specification due to continuous R & D without notice.

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