LINK-D PHYSICS OF FIBER OPTICS TRAINER KIT

LINK-D 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.

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. LPT2023 silicon photodetectors.
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 1KHz, 1KHz to 10KHz
Amplitude	: 0 to 4Vpp. (Except Square)
Voice Communication	: Fiber Optic voice link using dynamic MIC & SPEAKER.

Signal strength indicator:

8 LEDs provided to measure optical power.

Fiber Optic Cable:

Type	: 1000 micron Step Index, Multimode Plastic Fiber
Fiber Lengths	: 1 & 4 Meter.
Power Supply	: GND, +5V, +12V, -12V.

LIST OF EXPERIMENTS:

- Initial Fiber end preparation (Connectorisation).
- Light travelling around corners in an Optical Fiber.
- Coloured light travelling down an Optical Fiber.
- Photodiode detecting light.
- LED output as a function of a current.
- LED shining light into fiber.
- Adjusting coupling efficiency of the LED.
- Adjusting coupling efficiency of the photo diode.
- 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.
  - Measurement of connector loss.
  - Measurement of bending loss.
  - How connector loss is affected by fiber end quality.
- Measurement of Numerical Aperture.
- Setting up of Fiber Optic Analog Link.
- Setting up of Fiber Optic Digital Link.
- Setting of Fiber Optic Voice Link.

ACCESSORIES:

Red Short Links	: 10 Nos.
Crocodile Links	: 02 Nos.
Plastic Fiber 1 Meter (with connector)	: 01 No.
Plastic Fiber 4 Meter (without connector)	: 01 No.
N.A. Jig & Steel Ruler	: 01 No. Each
Connection Sleeves (Splicing unit)	: 01 No.
Simplex Plugs	: 02 Nos.
Microphone	: 01 No.
Speaker	: 01 No.
Experimental Manual	: 01 No.
Circuit Description Manual	: 01 No.
Power Supply	: 01 No.

OPTIONAL:

e-Manual Interactive Multimedia Software & Manual

FALCON

Unit-128, Hema Ind. Est., Sarvoday Nagar,
Jogeshwari (East), Mumbai - 400 060. INDIA.
Tel: 91-22-28348429 / 28248665 / 2834639
Fax: 91-22-28370165.
Email: falcon@falconindia.biz
Web: www.falconindia.biz