

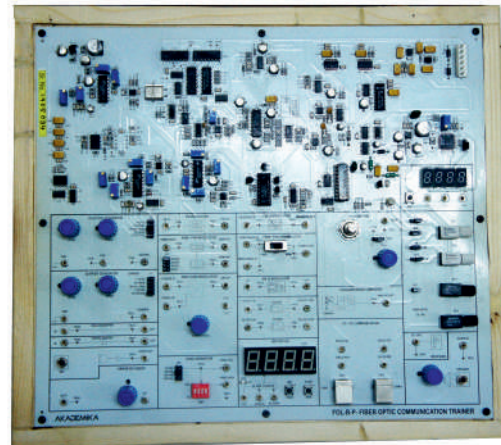
FOL- B-P : Fiber Optic Communication Trainer

FEATURES

- ✓ Fiber Optic Transmitter : Two wavelength (660nm and 950nm)
- ✓ Fiber Optic Receiver : 2 types (PIN Photo Diode, Photo Transistor detector)
- ✓ On board functional generator 1Hz ~ 10KHz
- ✓ Fiber optic analog and digital link
- ✓ Modulation techniques :
 - ✧ Direct intensity modulation
 - ✧ Frequency modulation
 - ✧ Amplitude modulation
 - ✧ Pulse width modulation(PWM)
 - ✧ Pulse position modulation (PPM)
- ✓ Voice communication
- ✓ PC to PC communication using RS232 interface
- ✓ Switch Faults

SPECIFICATIONS

- | | |
|-----------------------|--|
| Transmitter | : Two Siemens fiber optics LED |
| Transmitter 01 | : Peak wavelength of emission 660nm red visible (SFH756V) |
| Transmitter 02 | : Peak wavelength of emission 950nm (SFH450V) |
| Receiver | : Two fiber optic photo detector |
| Receiver 01 | : PIN photo diode with responsivity of 0.3 μ A (SFH250V) |
| Receiver 02 | : Photo Detector with TTL Logic output (SFH551V) |
- On-Board Signals**
- Sine Wave
 - Frequency : 1Hz ~ 100KHz
 - Amplitude : 0 ~ 4Vpp
 - TTL-Square Wave
 - Frequency : 1Hz ~ 100KHz
 - **Carrier Generator**
 - Sine Wave : 1 Hz to 100KHz 0-2V p-p
 - 1.4 Bit PRBS generator
 - Noise Generator with Variable Gain
 - Bit Error and Bit Counter
 - 4 Digit , 7 Segment Display
- Modulation techniques**
- Direct intensity modulation
 - Frequency modulation
 - Amplitude Modulation
 - Pulse width modulation (PWM) (with variable clock 4 KHz, 8 KHz, 16 KHz, and 32 KHz)
 - Pulse position modulation (PPM) (with variable clock 4KHz, 8 KHz, 16 KHz, and 32 KHz)
- Driver Circuit**
- Analog and digital configuration for 660 nm and 950 nm LED
- Analog/digital bandwidth**
- 2 MHz / 5MHz
- Filter circuit** - 2 Nos.
- 4th order Butter worth filters with 3.4 KHz cut-off frequency
- Voice Communication**
- Fiber optic voice link using dynamic mike and speaker
- PC TO PC Communication**
- PC to PC communication using 660 nm and 950 nm LED through USB



RS-232 Port type

- Two 9 pin D type connector

Baud rate

- Maximum 115.2 kbps baud

Fiber optic cable

- Type : Plastic optical cable, step index, multimode

Core Refractive Index-n1

: 1.492

- **Clad refractive Index-n2**

: 1.406

- Numerical aperture

: 0.5

- Acceptance angle

: 60°

- Fiber diameter

: 1000 microns

- Outer diameter

: 2.2 mm

- Fiber lengths

: 1 and 3 Mtr

Test Points

- 41 test points are provided on board to observe intermediate signals

Power supply

- GND, +5V, -5V, +12V, -12V

ACCESSORIES

- | | |
|--|-----------|
| ✓ Mini Links | : 08 Nos. |
| ✓ Short Links | : 02 No |
| ✓ Crocodile Links | : 02 Nos |
| ✓ Jumper Cap Small | : 03 Nos. |
| ✓ Microphone | : 01 No |
| ✓ Plastic Fiber Step Index Multimode, 1000um, 1M | : 01 No. |
| ✓ Plastic Fiber Step Index Multimode, 1000um, 3M | : 01 No. |
| ✓ ACR-14/ON.A Jig | : 01 No. |
| ✓ Steel Rule | : 01 No. |
| ✓ RS-232 Dual Cable | : 01 No |
| ✓ RS-232 Single Cable | : 01 No |
| ✓ Fiber Polish Paper | : 01 No |
| ✓ 1.5 V battery Cell AA | : 01 No |
| ✓ Size | |
| ✓ FOL-B-PEXPT& SER | |
| ✓ Manual | : 01 No. |
| ✓ Power Supply | : 01 No |