



**OMEGA TYPE FO-004** Fibre-Optic Digital Transceiver Trainer has been designed specifically for the study of encoding methods used in digital fibre Optic. transmission system.

Practical experience on this board carries great educative value for science & engg. students.

#### OBJECT

- 01 Design and study of a Fibre-optic digital link.
- 02 Study of rise-time and fall-time distortions
- 03 Study of propagation delay.
- 04 Encoding methods for fibre-optic digital transmission
- 05 Base band or Non Return to Zero (NRZ) Transmission.
- 06 Return to Zero coding (RZ)
- 07 Non Return to zero inverted coding (NRZI)
- 08 Biphas Coding
- 09 Manchester Coding.

#### FEATURES

The board consists of the following built-in parts:

- 01 Two Isolated IC regulated D.C. power supplies.
- 02 Fibre-Optic digital transmitter @ 660nm
- 03 Fibre-Optic digital receiver.
- 04 One metre PMMA fibre patch cord.
- 05 Two potentiometers to vary,  $R_{IN}$  (input resistance) of receiver and  $R_{TH}$  (Threshold resistance) of receiver.
- 06 Encoder IC

- 07 Decoder IC
- 08 Two crystals
- 09 Two reset switches resetting encoder and decoder.
- 10 Adequate no of other electronic components.
- 11 Mains ON/OFF switch, Fuse and Jewel light.
- 12 The unit is operative on 230V  $\pm 10\%$  at 50Hz A.C. Mains.
- 13 Adequate no. of patch cords stackable 4mm spring loaded plug length 50cm.
- 14 Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections / observation of waveforms.
- 15 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.
- 16 Weight : 3 Kg. (Approx)
- 17 Dimension : W 340 x H 125 x D 210

#### OTHER APPARATUS REQUIRED :

- 01 Cathode Ray Oscilloscope 20MHz.
- 02 Digital Multimeter OMEGA TYPE DMM-201

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

**OMEGA ELECTRONICS**