

TLT-A ADVANCED TRANSMISSION LINE TRAINER

FEATURES

- · Actual Transmission Line Provided.
- Characteristics of Transmission Line including attenuation, phase delay, matching, frequency response & standing waves.
- Measurement of attenuation, input impedance and phase displacement.
- · Fault localization within the line.
- Test signal generator provided.
- · Detailed Instruction Manual.
- Set of required patch cords.

SPECIFICATIONS

Transmission Line : Coaxial Cable 100m (25m x 4 Nos)

Impedance Matching Resistance : 0 to 100 (02 Nos)

Test Generator : 1. Sine wave: 4 KHz to 4 MHz.

2. Square wave: 10 Khz.

Interconnections : 4 mm sockets on all input/output connections.

• Test Points : 10

On board circuit mimic
 Illustrates functional blocks for ease of experimentation

Power Requirement : 230V + 10% VAC, 50 Hertz, single phase.

EXPERIMENTS

- Measuring the characteristics of an actual transmission line such as R, L, C, G, Zo, for different lengths of transmissions Line.
- Measuring the attenuation of a transmission line for different lengths of the transmission line for (i) open ended line (ii) short ended line & (iii) matched line.
- Measuring the Input Impedance of the line under different load conditions such as (i) line terminated with matched load; (ii) open line & (iii) short circuited line.
- Measuring Phase displacement between the current & Voltage at input of line for different load conditions (i) line terminated with matched load; (ii) open line & (iii) short circuited line.
- Frequency Characteristics of the line.
- Study of Stationary waves for different load condition (i) line terminated with matched load; (ii) open line &
 (iii) short circuited line.
- Signal phase shift along the line (phase shift & phase delay).
- · Fault localization within the line.
- Line under Pulsed Condition. Study the propagation of the pulse edges along the line under different matching condition viz., Open line, short-circuited line & matched line.

LIST OF DELIVERABLES

- BNC to BNC cable, BNC to Crocodile cable Instruction Manual,
- Set of 13 assorted multicolored multistrand wires with 4 mm plug terminations at both ends.

