

Product Name :
PC Based Manual Antenna Trainer

Product Code :
NLAB-ELECTRONICSAB200006



Description :

PC Based Manual Antenna Trainer

Technical Specification :

PC Based Manual Antenna Trainer has been designed to provide useful tools for hands on experimentation and teaching of various commonly used antennas in VHF-UHF-Microwave band in the laboratory for students of all levels. It can be used in stand-alone mode as well as be interfaced with a computer via USB interface. In this Receiving antenna is rotated manually from 0 to 360 degrees and accordingly receiving antennas signal strength can be monitored on the Receiver. The system consists of a set of two tripods one for mounting the transmitting antenna and another for mounting the receiving antenna, 22 Antennas, RF Transmitter/ Receiver, Antenna Plotting Software and relevant accessories/ cables.

Network Analyser: RF Transmitter & Receiver:

Frequency : 86 - 860 MHz PLL synthesized

Step Size : 0.05, 0.1, 0.25, 0.5, 1, 10, 100 MHz

Accuracy : 0.01%

Display : 16X2 Backlit LCD

Functions : Menu, Enter, Escape, Up & Down

MemoryLocation : 1000 individual frequencies and level can be stored/recalled

Output Impedance : 50 Ohms

RF Level : 90 dBuVTypical

Measurement : RF level in dBuV with 0.1dB resolution

Dynamic Range : 60 dB Log

Manual Mode : Data logging for antenna gain & polar/cartesian plot

USB interface : Easy connectivity to PC using polar pattern plotting software

Power Supply : 230V @ 50 Hz

Experiments:

Variation of field strength with distance

Plot radiation pattern of omni directional antenna

Plot radiation pattern of directional antenna

Polarization of vertical and horizontal antenna

Study resonant and non resonant antenna and estimate VSWR and impedance

Demonstrate reciprocity theorem of antennas

Study current distribution along the element of antenna

Study different antennas polar plots, radiation patterns, gain, beam width, front back ratio

Comparison of different antennas

Shipping List

Antennas OtherAccessories Microstrip Circular patch

01. Microstrip Rectangular Patch

02. Microstrip Circular patch

- 03. Microstrip Ring
- 04. Microstrip Triangular patch
- 05. Crossed Dipole RHCP
- 06. Microstrip Slot
- 07. Microstrip Co-Linear
- 08. Microstrip Semicircular patch
- 09. Log Periodic
- 10. Dipole L/2
- 11. Axial Mode Helix RHCP
- 12. Endfire Array L/2
- 13. Phase Array L/4
- 14. Broadside Array L/2
- 15. Dipole L/4
- 16. Yagi Uda (4E)
- 17. Yagi Uda (3E)
- 18. Folded Dipole
- 19. Monopole
- 20. Sleeve
- 21. Axial Mode Helix LHCP
- 22. Square Loop

Square Loop

- a. RF Transmitter Tripod & Receiver Tripod
- b. Stepper In/ Trigger BNC Cable with push button
- c. Experimental Manual
- d. USB Connecting Lead

e. Antenna Plotting Software CD

Naugralabequipments

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