



ANTENNA TRAINER

MODEL-ANT100G

This trainer has been designed with a view to provide theoretical and practical knowledge of different types of Antennas used in communication technology.



SPECIFICATIONS

Technical Specifications

1. Transmitter : Transmitter 800MHz PLL
2. Tone Generator : 1KHz approx (Output Adjustable)
3. Antenna Positioner : Stepper Positioner Automatic: 1deg & 5 deg steps
4. Receiver : 50 to 860MHz PLL with Centronics & RS232 interface
5. Software : Ccapture, Polar/Cartesian Plotting and analysis of RF measurements
6. Polar Plot : Hardcopy of Polar Plot with list of readings
7. Power Supply : 230V + 10%, 50Hz

Accessories

01. Transmitting Antenna
 - Dipole $\lambda/2$
 - Folded Dipole $\lambda/2$
 - Dipole $\lambda/4$
 - Yagi UDA Folded Dipole (3 E)
 - Yagi UDA Folded Dipole (5 E)
 - Yagi UDA Dipole (7 E)
 - Yagi UDA Dipole (5 E)
 - Horizontal End Fed Hertz Antenna
 - Ground Plane Antenna
 - Ground Plane with Reflector & Director
 - Slot Antenna $\lambda/2$
 - Loop Antenna
 - Helix Antenna
 - $\lambda/2$ Phase Array
 - Combined Collinear Array
 - Log Periodic Antenna

- Rhombus Antenna
- Cut Paraboloid Reflector Antenna
- $3^{1/2}$ Dipole Antenna
- Broadside Array
- 02. Current Probe
- 03. Mounting Stands
- 04. BNC-Tee
- 05. BNC-BNC adapter M
- 06. BNC-BNC adapter F
- 07. BNC-BNC Cable
- 08. Screwdriver
- 09. Operating Manual
- 10. Student Workbook
- 11. Radiation Pattern Plotting Software
- 12. Antenna Fabrication Kit
- 13. Power Cord
- 14. Accessories Case

Experiments

1. To study the variation of field strength of radiated with distance from transmitting antenna
2. To plot the radiation pattern of an Omni directional antenna (Polar plot on log/linear scales & Cartesian plot on log/linear scales)
3. To plot radiation pattern of directional antenna
(Polar plot of Azimuth & Elevation planes on log/linear scales and Cartesian plot on log scales)
4. To study the phenomenon of linear and circular polarization of antennas.
5. To demonstrate that the transmitting and receiving radiation patterns of an antenna are equal and hence confirm the reciprocity theorem of antennas
6. To study and plot the radiation pattern of the dipole/Folded dipole antennas
7. To study and plot the radiation pattern of the monopole/whip/collinear antenna
8. To study and plot the radiation pattern of the end fire array (L/2) antenna & L/4 phased array (W8JK antenna)
9. To study and plot the radiation pattern of broad side array antenna.
10. To study and plot the radiation pattern of the loop antenna
11. To study and plot the radiation pattern of biconical antenna
12. To study and plot the radiation pattern of crossed dipole antenna
13. To study and plot the radiation pattern of vee antenna
14. To study and plot the radiation pattern of log-periodic antenna and LPDA-PCB
15. To study and plot the radiation pattern of slot antenna
16. To study and plot the radiation pattern of sleeve antenna
17. Design of Yagi-Uda antenna, folded dipole, loop antenna, helical antenna, microstrip antenna.
18. To study different types of antenna characteristic using simulation exercise

In keeping view of SIGMA policy of continuous development and improvement, the Specifications may be changed without prior notice or obligation.

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