



An antenna is a device that is used to convert guided electromagnetic waves into electrical signals and vice versa (i.e. either in transmitting mode or in receiving mode of operation). Mine Motorized Antenna Trainer MI-AT22M is a bench-top antenna system design to demonstrate all concepts of an antenna operations. Student can learn easily about various type of antenna operation with their polar plot. This system comes with a motorized antenna unit to record radiation pattern automatically of any antenna mounted on it.

### Learning's

- Study of Polar Plots and Polarization.
- Study of wave modulation and demodulation.
- Study of Antenna Gain.
- Study of Antenna beam width.
- Study of matching Stub.
- Study of SWR measurement.
- Study of Antenna radiation and distance.
- Plotting the Polar graph/ radiation pattern of an Antenna using software

### Technical Specifications

Waveforms	: Sine
RF Generator	: 750 MHz approximately
Modulation Generator	: 1 KHz approximately
Directional Coupler	: Forward & Reverse (selectable)
Matching Stub	: Slider type
Antenna Rotation	: Motorized 0-360° (Resolution 1°)
Receiving Antenna	: Folded dipole with reflector
Detector Display	: Level adjustable meter
Interconnection	: BNC/2mm banana socket
Input Line Voltage	: 230V AC $\pm$ 10% , 50Hz

### Accessories

#### Antennas 22nos

1	Simple Dipole $\lambda/2$	-	1no.
2	Simple Dipole $\lambda/4$	-	1no.
3	Simple Dipole $3\lambda/2$	-	1no.
4	Folded Dipole $\lambda/2$	-	1no.
5	Yagi -UDA Folded Dipole (3E)	-	1no.
6	Yagi -UDA Folded Dipole (5E)	-	1no.
7	Yagi -UDA Simple Dipole (5E)	-	1no.
8	Yagi -UDA Simple Dipole (7E)	-	1no.
9	Hertz Antenna	-	1no.
10	Zeppelin Antenna	-	1no.
11	$\lambda/2$ Phase array	-	1no.
12	$\lambda/4$ Phase array	-	1no.
13	Combined co-linear array	-	1no.
14	Broad Side Array	-	1no.
15	Log Periodic Antenna	-	1no.
16	Cut Paraboloid Antenna	-	1no.
17	Loop Antenna	-	1no.
18	Rhombus Antenna	-	1no.
19	Ground Plane	-	1no.
20	Slot Antenna $\lambda/2$	-	1no.
21	Helix Antenna	-	1no.
22	Detector Antenna	-	1no.
•	Rods for Ground Plane Antenna (different sizes)	-	3nos.
•	Current Probe	-	1no.
•	Transmitting Mast	-	1no.
•	RF Detector	-	1no.
•	Receiving Mast	-	1no.
•	Required Connectors to perform all types of Practical's . Mains cord, Carrying case suitable DC adaptor if required	-	
•	<b>Spectrum Analyzer (Optional)</b>	-	

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