



Sciencetech Antenna platform Sciencetech 2262 is a student friendly trainer kit for studying characteristics of different antennas. Sciencetech 2262 is designed so that students can take the readings and plot the polar plots themselves, thus understanding the subject thoroughly. They can even stop & repeat the readings in between if needed.

All the antennas are made by high conducting rods with chrome finish for long durability and mounted on the glass epoxy PCB for easy mounting and dismounting Areas of Experimentation and Study

- ▶ Polar plot & Polarization of various antennas.
- ▶ Wave modulation and Demodulation
- ▶ Antenna Gain
- ▶ Antenna Beam Width.
- ▶ Element Current study.
- ▶ Front Back Ratio study.
- ▶ Antenna matching.
- ▶ SWR measurement.
- ▶ Antenna radiation with distance.
- ▶ Antenna bandwidth measurement

## Features

- ▶ Self contained, simple and student friendly trainer
- ▶ Hands on set-up for measuring and plotting radiation patterns of different Antennas
- ▶ Built in RF & Modulation generators
- ▶ Built in frequency display
- ▶ Antenna Matching Stub
- ▶ Characteristics and SWR measurement
- ▶ Transmitting and Receiving levels observed on meters
- ▶ Built in DC power supply
- ▶ Fully documented, Operating manual and polar charts (2 types) with each trainer
- ▶ "Antenna kit" for fabricating special antenna
- ▶ Compact design
- ▶ Light weight
- ▶ 2 Year Warranty

## Scope of Learning

- Study of Simple Dipole /2 Antenna
- Performing Polarisation Test and Modulation Test
- Study of Reciprocity Theorem
- Study of variations in the radiation strength at a given distance from the antenna
- Antenna Current Sensor and SWR Measurement
- Study of Rhombus Antenna, Ground Plane Antenna, Slot Antenna, Helix Antenna and antenna bandwidth

## Technical Specifications

RF generator	:	550 to 850 MHz approximately (with level adjust)
Modulation Generator	:	1 KHz approximately (300 mV)
Directional Coupler	:	Forward & Reverse (On board selectable)
Matching Stub	:	Slide Stub
Antenna Rotation	:	0- 360 Degree, Resolution 1 Degree Transmitting & Receiver masts provided
Receiving antenna	:	Folded Dipole with reflector
Detector Display	:	Adjustable meter
Interconnections	:	BNC
<b>Power Supply</b>	:	230 V $\pm$ 10%, 50/60 Hz
<b>Power Consumption</b>	:	3VA (approximately)
<b>Weight</b>	:	3 kgs. approximately
<b>Dimensions (MainUnit-mm):</b>	:	W 285 $\times$ H 75 $\times$ D 385
<b>Learning material</b>	:	Online (Theory, procedure, reference results, etc).

## List of Accessories (Full Unit) :

<b>I. Antennas</b>	:	<b>22 nos.</b>
1. Simple Dipole /2	:	1 no.
2. Simple Dipole /4	:	1 no.
3. Simple Dipole 3 /2	:	1 no.
4. Folded Dipole /2	:	1 no.
5. Yagi-UDA Folded Dipole (3E)	:	1 no.
6. Yagi-UDA Folded Dipole (5E)	:	1 no.
7. Yagi-UDA Simple Dipole (5E)	:	1 no.
8. Yagi-UDA Simple Dipole (7E)	:	1 no.
9. HertzAntenna	:	1 no.
10. Zeppelin Antenna	:	1 no.
11. /2 Phase Array	:	1 no.
12. /4 Phase Array	:	1 no.
13. Combined Co-linear Array	:	1 no.
14. Broad Side Array	:	1 no.
15. Log Periodic Antenna	:	1 no.
16. Cut Paraboloid Antenna	:	1 no.
17. Loop Antenna	:	1 no.
18. Rhombus Antenna	:	1 no.
19. Ground Plane	:	1 no.
20. Slot Antenna /2	:	1 no.
21. Helix Antenna	:	1 no.
22. Detector Antenna	:	1 no.
<b>II. Rods for Ground Plane Antenna</b>		
1. 6.9cm	:	1 no.
2. 8.5cm	:	1 no.
3. 20.5cm	:	1 no.
<b>III. Current Probe</b>	:	1 no.
<b>IV. Transmitting Mast</b>	:	1 no.
<b>V. RF Detector</b>	:	1 no.
<b>VI. Receiving Mast</b>	:	1 no.
<b>VII. Accessories Kit:</b>		
1. BNC –Tee	:	1 no.
2. BNC - BNC Adapter (M)	:	1 no.
3. BNC - BNC Adapter (F)	:	1 no.
4. BNC (M) - BNC (F) Adapter (L-type)	:	1 no.
5. BNC – BNC Cable 25"	:	2 nos.
6. BNC – BNC Cable 18"	:	1 no.
<b>VIII. Polar Graphs (dB A)</b>	:	25 nos.
<b>IX. Polar Graphs (for normalised reading)</b>	:	25 nos.
<b>X. Antenna Fabrication Kit</b>		
1. Two PCB's	:	1 no.
2. 14 SWG wire roll 20"		
<b>XI. Mains Cord</b>	:	1 no.
<b>XII. VIP Suitcase</b>	:	1 no.
<b>XIII. +7.5 - 9V DC Adaptor(500mA)</b>	:	1 no.

## List of Accessories (10 Antenna)

<b>I. Antennas</b>	:	<b>10 nos.</b>
1. Simple Dipole /2	:	1 no.
2. Yagi-UDA Folded Dipole (3E)	:	1 no.
3. Yagi-UDA Folded Dipole (5E)	:	1 no.
4. Yagi-UDA Simple Dipole (5E)	:	1 no.
5. Yagi-UDA Simple Dipole (7E)	:	1 no.
6. Hertz Antenna	:	1 no.
7. Loop Antenna	:	1 no.
8. Log Periodic Antenna	:	1 no.
9. /2 Phase Array	:	1 no.
10. Detector Antenna	:	1 no.
11. Helix Antenna	:	1 no.
<b>II. Current Probe</b>	:	1 no.
<b>III. Transmitting Mast</b>	:	1 no.
<b>IV. RF Detector</b>	:	1 no.
<b>V. Receiving Mast</b>	:	1 no.
<b>VI. Accessories Kit :</b>		
1. BNC –Tee	:	1 no.
2. BNC - BNC Adapter (M)	:	1 no.
3. BNC - BNC Adapter (F)	:	1 no.
4. BNC (M) - BNC (F) Adapter (L-type)	:	1 no.
5. BNC – BNC Cable 25"	:	2 nos.
6. BNC – BNC Cable 18"	:	1 no.
<b>VII. Polar Graphs (dB A)</b>	:	25 nos.
<b>VIII. Polar Graphs (for normalised reading)</b>	:	25 nos.
<b>IX. Antenna Fabrication Kit</b>		
1. Two PCB's	:	1 no.
2. 14 SWG wire roll 20"		
<b>X. Mains Cord</b>	:	1 no.
<b>XI. +7.5 - 9V DC Adaptor(500mA)</b>	:	1 no.

## List of Accessories (Base Unit)

<b>I. Detector Antenna</b>	:	1 no.
<b>II. Current Probe</b>	:	1 no.
<b>III. Transmitting Mast</b>	:	1 no.
<b>IV. Receiving Mast</b>	:	1 no.
<b>V. RF Detector</b>	:	1 no.
<b>VI. Accessories Kit :</b>		
1. BNC –Tee	:	1 no.
2. BNC - BNC Adapter (M)	:	1 no.
3. BNC - BNC Adapter (F)	:	1 no.
4. BNC (M) - BNC (F) Adapter (L-type)	:	1 no.
5. BNC – BNC Cable 25"	:	2 nos.
6. BNC – BNC Cable 18"	:	1 no.
<b>VII. Polar Graphs (dB A)</b>	:	25 nos.
<b>VIII. Polar Graphs (for normalised reading)</b>	:	25 nos.
<b>IX. Antenna Fabrication Kit</b>		
1. Two PCB's	:	1 no.
2. 14 SWG wire roll 20"		
<b>X. Mains Cord</b>	:	1 no.
<b>XI. +7.5 - 9V DC Adaptor(500mA)</b>	:	1 no.

Designed & Manufactured by -  
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