

**MICROWAVE TEST BENCH
GUNN BASED TRAINER
SET-UP NO. 2
OMEGA TYPE ES-502**



OMEGA TYPE ES-502 uses Gunn oscillator with its Gunn power supply and Pin modulator as a microwave signal source along with other standard high quality components and VSWR meter, enables to perform under mentioned experiments in the laboratory. The waveguide components are based on rectangular waveguide equipped with rectangular flange.

The set up is complete in all respect and requires only CRO. Practical experience on this set up carries great educative value for Science and Engineering Students.

OBJECTS:

- 01 To study the V-I characteristics of Gunn Diode
- 02 To study the voice communication by using microwave test bench
- 03 To study the following characteristics of Gunn Diode
Output power and frequency as a function of voltage
Square wave modulation through Pin Diode
- 04 To determine the frequency & wavelength in a rectangular waveguide working on TE mode 10
- 05 To determine the standing wave ratio and reflection coefficient
- 06 To measure an unknown impedance with Smith Chart
- 07 To study the square law behaviour of a microwave crystal detector
- 08 To study the variable attenuator

COMPONENTS:

The complete Experimental Set-up consists of the following items:

- | | | |
|--|---|----------|
| 01 Cooling Fan | 1 | ES-580 |
| 02 Detector Mount Wave Guide | 1 | ES-539 |
| 03 Ferrite Isolator | 1 | ES-534 |
| 04 Frequency Meter
Direct Reading | 1 | ES-535 |
| 05 Gunn Oscillator 10mW | 1 | ES-531 |
| 06 Gunn Power Supply | 1 | GPS-795 |
| 07 H Plan Tee | 1 | ES-552 |
| 08 Matched Termination | 1 | ES-542 |
| 09 Movable Short | 1 | ES-540 |
| 10 Pin Modulator | 1 | ES-532 |
| 11 Slide Screw Tuner(S.S.Tuner) | 1 | ES-550 |
| 12 Slotted Section
with probe carriage | 1 | ES-537 |
| 13 Tunable Probe | 1 | ES-538 |
| 14 Variable Attenuator 20db | 1 | ES-536 |
| 15 VSWR Meter | 1 | VSWR-796 |
| 16 Wave Guide Stand | 4 | ES-543 |
| 17 BNC to BNC Cable | 2 | |
| 18 Smith Chart (Pad of 100Pcs) | 1 | |
| 19 Video Demo CD | 1 | |
| 20 Weight : 25 Kg. (Approx.) | | |
| 21 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References. | | |

OTHER APPARATUS REQUIRED :

- 01 Cathode Ray Oscilloscope 20MHz.

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

OMEGA ELECTRONICS