

**MICROWAVE TEST BENCH  
KYLSTRON / GUNN BASED TRAINER  
SET-UP NO. 5  
OMEGA TYPE ES-505**



**OMEGA TYPE ES-505** uses Klystron tube with its power supply and mount, as a signal source along with other standard high quality components and VSWR meter, enables to perform under mentioned experiments. The waveguide components are based on waveguide type with flanges.

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.

**OBJECT**

- 01 Study of the characteristics of klystron tube and to determine its electronic tuning range
- 02 To determine the frequency & wavelength in a rectangular Waveguide working on TE<sub>10</sub> mode
- 03 To determine the standing wave ratio and reflection coefficient
- 04 To measure an unknown impedance with Smith Chart
- 05 To study the square law behaviour of a microwave crystal detector
- 06 Study of attenuators (fixed and variable type)
- 07 Study of Tee  
- E Plane Tee - H Plane Tee - Magic Tee
- 08 Study the function of multihole directional coupler by measuring the following parameters.  
- Main line & Auxiliary line VSWR  
- Coupling factor and directivity and Isolation
- 09 Study of circulators/Isolator

**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 | E-Plane Tee   | 1 | ES-551   |
| 04 | Ferrite Isolator  | 1 | ES-534   |
| 05 | Fixed Attenuator 10db   | 1 | ES-549   |
| 06 | Fixed Attenuator 3db  | 1 | ES-547   |
| 07 | Fixed Attenuator 6db  | 1 | ES-548   |
| 08 | Frequency Meter Direct Reading  | 1 | ES-535   |
| 09 | H-Plane Tee   | 1 | ES-552   |
| 10 | Klystron Mount with Klystron Tube 2K25  | 1 | ES-533   |
| 11 | Klystron Power Supply   | 1 | KPS-801  |
| 12 | Magic Tee   | 1 | ES-553   |
| 13 | Movable Short   | 1 | ES-540   |
| 14 | Matched Termination   | 2 | ES-542   |
| 15 | Multi Hole Directional Coupler 10db   | 1 | ES-558   |
| 16 | Multi Hole Directional Coupler 20db   | 1 | ES-556   |
| 17 | Slide Screw Tuner (S.S. Tuner)  | 1 | ES-550   |
| 18 | Slotted Section with probe carriage   | 1 | ES-537   |
| 19 | Three Port T Circulator   | 1 | ES-560   |
| 20 | Tunable Probe   | 1 | ES-538   |
| 21 | Variable Attenuator 20db  | 1 | ES-536   |
| 22 | VSWR Meter  | 1 | VSWR-796 |
| 23 | Wave Guide Stand  | 4 | ES-543   |
| 24 | Y-Circulator  | 1 | ES-561   |
| 25 | BNC to BNC Cable  | 2 |          |
| 26 | Smith Chart (Pad of 100Pcs)   | 1 |          |
| 27 | Weight : 25 Kg. (Approx.)   |   |          |
| 28 | 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**

**Works:**

28E & F, Malviya Industrial Area,  
Jaipur-302 017 (INDIA)  
Phone: 0141-2751559

E-mail : info@omegaelectronics.net  
: omegajaipur62@gmail.com

[www.omegaelectronics.net](http://www.omegaelectronics.net)

**Marketing Division:**

B-28, Fateh Singh Scheme, Opp. Rajputana  
Palace Sheraton, Jaipur-302006 (INDIA)  
Phone : 091-141-2375647, 2379223