

**OMEGA TYPE ETB –233** This trainer has been designed with a view to provide practical and experimental knowledge of DSB / SSB AM Transmitter technique as practically implemented in Analog Communication system.



## OBJECT

### 01 STUDY OF DSB / SSB AM GENERATION & TRANSMISSION.

- 1.1 Double Sideband AM Generation.
- 1.2 Study of Trapezoidal pattern.
- 1.3 Single Sideband AM Generation.

### 02 OPERATION OF THE AUTOMATIC GAIN CONTROL CIRCUIT (AGC)

### 03 STUDY OF TRANSMITTER TUNED CIRCUITS.

- 3.1 1MHz Oscillator Tuned Circuit.
- 3.2 Balanced Modulator & Band pass Filter Circuit Tuned Circuit DSB Mode.
- 3.3 BFO 455 KHz Oscillator
- 3.4 Balanced Modulator & Band pass Filter Circuit Tuned circuit SSB Mode.

## FEATURE

The board consists of the following built-in parts:

- 01 AF Modulating signal generator : Sine wave  
Frequency Range : 300 Hz to 3.4 KHz  
Amplitude : 0 to 5 Vpp.
- 02 RF carrier signal oscillator  
Frequency Range : 100 KHz to 1 MHz.  
Amplitude : 0 to 10 Vpp.
- 03 Modulators (Two Nos) : Double Balanced Amplitude modulator
- 04 Ceramic Band Pass Filter : 452 KHz to 458 KHz.
- 05 Band Pass Filter : 1 No.
- 06 Switch faults : 8 Nos.
- 07 POWER SUPPLY :  $\pm 12$ DC and +5V DC IC Regulated power supply.
- 08 Test points : 27 Nos.
- 09 BFO Oscillator : 455 KHz.
- 10 Input Audio amplifier with Volume Control for modulating external signal from Mike or Tape recorder.
- 11 Output Amplifier Transmitter : (Gain adjustable) DSB (1MHz), SSB (1.445 MHz) connected to Antenna/cable.
- 12 Mains ON/OFF switch, fuse and jewel light.
- 13 Power supply requirement 230V AC, 50 Hz.
- 14 Dynamic Microphone with 4mm Jack Pin.
- 15 Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/ observation of waveforms.
- 16 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design Procedures, Report Suggestions and Book References.
- 17 Weight : 1.400 Kg. (Approx.)
- 18 Dimension : W 415 x H 165 x D 315

## OTHER APPARATUS REQUIRED :

- 01 Dual trace CRO 20MHz OMEGA TYPE CRO-20

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

## OMEGA ELECTRONICS