

OMEGA TYPE ETB –235 Advanced FM Transmitter and Receiver Trainer has been designed with a view to provide practical and experimental knowledge of Frequency Modulation / Demodulation technique as practically implemented in Analog Communication system.

OBJECT

To Study Theory of Frequency Modulation & Demodulation:

- 01 Varactor Modulation.
- 02 Reactance Modulation.
- 03 Detuned Resonant Circuit.
- 04 Quadrature Detector.
- 05 Phase locked loop Detector.
- 06 Foster - Seeley Detector.
- 07 Ratio Detector.



FEATURE

The board consists of the following built-in parts:

- | | |
|--|---|
| 01 POWER SUPPLY | : ± 12 DC IC Regulated power supply. |
| 02 FM Modulating signal generator | : Sine wave |
| Frequency Range | : 300 Hz to 3.4 KHz |
| Amplitude Range | : 0 to 5 Vpp. |
| 03 Modulator Type | : Varactor modulator (With carrier frequency adjustment) |
| | : Reactance Modulator (With carrier frequency adjustment) |
| 04 Demodulator | : Detuned resonant detector. |
| | : Quadrature detector |
| | : Foster - Seeley Detector |
| | : Ratio Detector |
| | : Phase locked loop Detector |
| 05 Mixer/Amplifier | : 1 No. (With gain adjustment) Allows FM input signal to be amplitude modulated by a noise input to demodulation. |
| 06 Low pass Filter | : 3.4 KHz. Cut of frequency Amplifier (with adjustable gain) |
| 07 VCO Circuit | : FM Wave form demonstrate |
| 08 Test Point | : 78 |
| 09 Power supply requirement | : 230V AC, 50 Hz. |
| 10 On Board Switched Faults | : 8 Nos. |
| 11 On Board Amplitude limiter with Amplitude control. | |
| 12 Input - Output and Test points provided on board. | |
| 13 A self contained Trainer. | |
| 14 Effect of noise on the detection of FM signal may be investigated. | |
| 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 | : 3.700 Kg. (Approx.) |
| 18 Dimension | : W 415 x H 165 x D 315 |

OTHER APPARATUS REQUIRED :

- 01 Dual trace CRO 20MHz OMEGA TYPE CRO-20
- 02 Patch Cords

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

OMEGA ELECTRONICS

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