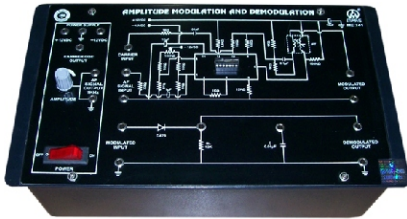


Basic Communication Lab Training Modules

ME 741 - Amplitude Modulation & Demodulation

Objective :

- Observe change in the carrier amplitude according to the amplitude of the modulating signal
- Calculate modulation index of the modulated signal
- Recovery of modulating signal from demodulator circuit



Technical Specifications :

- In built IC based DC regulated power supply $\pm 12V/500mA$
- On board sine wave audio frequency signal generator
Frequency : 1KHz Amplitude : 0-2Vpp Approx.
- On board carrier signal generator
Frequency : 455 KHz Amplitude : 2.5Vpp Approx.
- Modulation using balanced modulator IC LM 1496
- Demodulation using diode detector OA 79
- Glass Epoxy PCB used as front panel of 270mm x 170mm & mounted on light Weight shock proof plastic cabinet
- Circuit diagram printed on Glass Epoxy PCB & all important IC's & test points are brought out on front panel
- Power requirement : 220 VAC $\pm 10\%$, 50Hz
- Weight : 1.0Kg Approx.
- Dimensions (mm) : 300(L) x 175(B) x 75(H)

Standard Accessories :

- Power Chord, Patch Chords & Instruction Manual

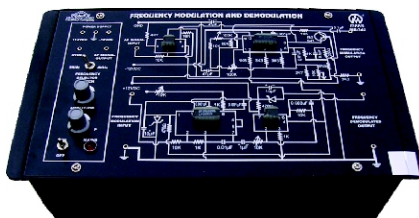
Optional Accessories :

- Dual Trace CRO 20MHz (ME 3020)

ME 742-Frequency Modulation & Demodulation

Objective :

- Observe change in the carrier frequency according to the amplitude of the modulating signal
- Calculate modulation index of the modulated signal
- Recovery of modulating signal from demodulator circuit



Technical Specifications :

- In built IC based DC regulated power supply $\pm 12V/250mA$

- On board sine wave audio frequency signal generator
Frequency: 2 KHz & 4KHz Amplitude: 0-2.8Vpp Approx.
- Modulation using VCO 8038 (Carrier generator internally 62KHz, 5.5Vpp)
- Demodulation circuit using phase locked loop IC LM 565
- Glass Epoxy PCB used as front panel of 270mm x 170mm & mounted on light
- Weight shock proof plastic cabinet
- Circuit diagram printed on Glass Epoxy PCB & all important IC's & test points are brought out on front panel
- Power requirement : 220 VAC $\pm 10\%$, 50Hz
- Weight : 1.0Kg Approx.
- Dimensions (mm) : 300(L) x 175(B) x 75(H)

Standard Accessories :

- Power Chord, Patch Chords & Instruction Manual

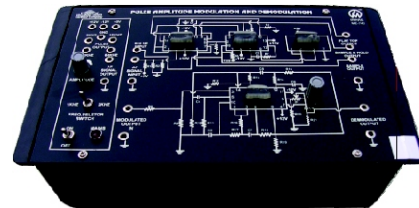
Optional Accessories :

- Dual Trace CRO 20MHz (ME 3020)

ME 743-Pulse Amplitude Modulation & Demodulation

Objective :

- Observe flat top samples, natural samples, sample & hold at different sampling frequencies
- Recovery of modulating signal from demodulator circuit



Technical Specifications :

- In built IC based DC regulated power supply $\pm 12V, +5V/300mA$
- On board sine wave audio frequency signal generator
Frequency : 1 KHz & 2KHz Amplitude : 0-10Vpp & 0-4 Vpp Approx.
- On board sampling pulse generator
Frequency : 8KHz, 16KHz, 32KHz, 64KHz Amplitude : 5Vpp Approx.
- Modulation using IC 7555 Multivibrator
- Demodulation of PAM using 4th order / low pass filter & AC amplifier using TL074 with adjustable gain control
- Glass Epoxy PCB used as front panel of 270mm x 170mm & mounted on light Weight shock proof plastic cabinet
- Circuit diagram printed on Glass Epoxy PCB & all important IC's & test points are brought out on front panel
- Power requirement : 220 VAC $\pm 10\%$, 50Hz
- Weight : 1.0Kg Approx.
- Dimensions (mm) : 300(L) x 175(B) x 75(H)

Standard Accessories :

- Power Chord, Patch Chords & Instruction Manual

Optional Accessories :

- Dual Trace CRO 20MHz (ME 3020)