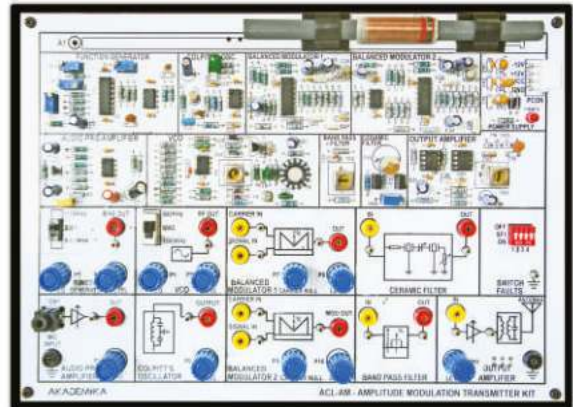


ACL-AM Amplitude Modulation Transmitter Kit



FEATURES

- On-board audio oscillator of 100Hz ~ 10KHz frequency
- Voltage controlled oscillator of 400KHz ~ 1500KHz frequency
- Balanced modulators for DSB/SSB AM generator
- Colpitt's oscillator of 1 MHz
- Audio pre-amplifier
- Output amplifier 600 KHz ~1650 KHz
- Ceramic filter of 455 KHz
- Band pass filter at 455 KHz with 10 KHz bandwidth
- On- board antenna

SPECIFICATIONS

Audio oscillator (sine wave generator)

- Frequency : 100Hz ~ 10 KHz
- Amplitude : 0 ~ 2 Vpp
- Audio input : Audio preamplifier with microphone input

Voltage controlled oscillator (VCO)

- Output signal : Sine wave
- Frequency range : 1) 400 KHz ~ 500KHz
2) 400 KHz ~ 1500 KHz
- Amplitude : 0 ~ 2Vpp
- Output impedance : 50Ω

Ceramic filter

- Center frequency : 455 KHz
- Bandwidth : 10 KHz $\pm$ 3 KHz
- Band Pass Filter : 1.455 KHz - Central Frequency
: 10+/- 3KHz Bandwidth

Balance Modulator 1

- Modulation : Amplitude modulation, Double side band, single side band (USB and LSB)
- Carrier Input : 1-1000 KHz
- Modulation Input : 0.1 - 100KHz
- Carrier Null : Adjustable
- Output Amplitude : Adjustable

Balance Modulator 2

- Modulation : Amplitude modulation, Double side band, single side band (USB and LSB)
- Carrier Input : 1MHz
- Modulation Input : 400-500 KHz
- Carrier Null : Adjustable
- Output Amplitude : Adjustable

Output amplifier

- Gain adjustable connected to antenna

Antenna

- MW Coil

Switch Faults

- 4 switch faults are provided on board to study different effects on circuit

Interconnection

- 2mm PCS2
- Test Points : Various Test points to observe signals on oscilloscope

Power supply

- GND, +5V, +12V, -12V

EXPERIMENTS

- Study of double side band AM generator
- Study of single side band AM generator
- Study of adjustment of transmitter tuned circuits
- Voice transmission with DSB/SSB AM transmission
- Effect of switch faults