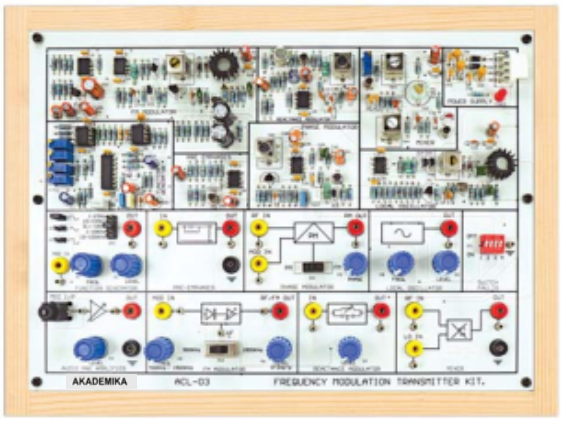
ACL-FM

Frequency Modulation Transmitter Kit



FEATURES

- Dedicated Frequency Modulation Transmitter Trainer for practical study of FM techniques.
- Includes FM modulator and phase modulator sections on a single trainer board.
- Built-in function generator and local oscillator sections for experiment setup.
- Includes mixer and signal-processing blocks for building complete FM signal paths.
- Individual functional blocks can be interconnected using patch cords.
- Includes a fault-switch section for troubleshooting and fault-analysis exercises.
- Suitable for observing FM waveforms and intermediate signals using a CRO/DSO.
- Mobile based interactive e-manual

SPECIFICATIONS

Synchronous function generator

- Waveforms : Sine, Triangular, Square
- Amplitude : 0 ~ 2Vpp variable
- Frequency range : 1 Hz ~ 10 Hz, 10 Hz ~ 100 Hz, 100 Hz ~ 1 KHz, 1 KHz ~ 10 KHz, 10 KHz ~ 100 KHz

Audio input

- Audio preamplifier with microphone

FM modulators

- Varactor modulator with carrier frequency adjustment FM via PM
- Operating frequency : Adjustable from 400KHz ~ 500 KHz
- Input amplitude : 0.1Vpp with integration circuit for indirect frequency modulation

PM modulator

- Operating frequency : Adjustable from 400 KHz ~ 500 KHz
- Input amplitude : 0.5 Vpp with integration circuit for indirect frequency modulation

Mixer (frequency converter)

- Dual gate MOSFET inputs : Local oscillator and RF signal
- Output IF frequency : 455 KHz adjustable
- IF filter : Dual tune LC
- Transmitter output : 455 KHz frequency

Switch faults

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

Interconnection

- 2mm banana socket

Test points

- 29 test points are provided on board to observe intermediate signals

Power supply

- GND, +5V, +12V, -12V
- (Dual output terminals)

EXPERIMENTS

- Study of varactor modulator
- Study of frequency modulation via phase modulator
- Study of phase modulation
- Voice transmission on various modulation methods
- Effect of switch faults