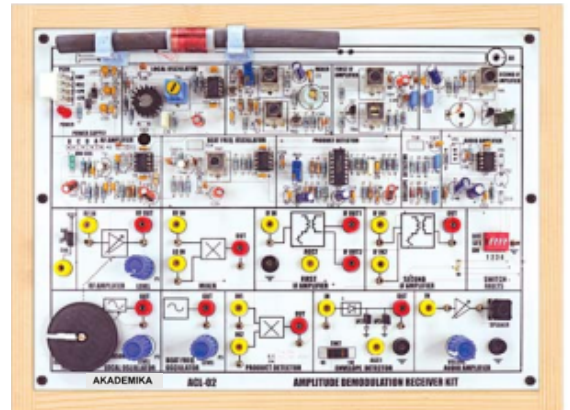


ACL-AD

Amplitude Demodulation Receiver Kit



FEATURES

- Dedicated Amplitude Demodulation Receiver Trainer for practical study of AM reception.
- Includes complete RF, IF, detection and audio stages on a single board.
- Built-in RF amplifier, local oscillator and mixer sections.
- Includes AGC sections for studying automatic gain control.
- Individual functional blocks can be interconnected and studied separately.
- Includes a fault-switch section for troubleshooting and fault-analysis exercises.
- Suitable for hands-on study of AM receiver and demodulation concepts.
- Mobile based interactive e-manual

SPECIFICATIONS

Super heterodyne receiver

- Frequency : 400 KHz ~ 1.5MHz
- Intermediate frequency : 455 KHz
- Inputs : RF signal
- Output IF frequency : 455 KHz adjustable
- IF filter : Dual tune L C
- RF amplifier with variable gain

Mixer (frequency converter)

- Dual Gate MOSFET
- Input : Local Oscilloscope and RF
- Output frequency : 455KHz adjustable
- Band pass filter : 455 KHz center frequency

Voltage controlled oscillator

- Output signal : Sine wave for local oscillator input
- Frequency : From 400 KHz ~ 1650 KHz
- Amplitude : Adjustable from 0 ~ 2Vpp
- Output impedance : 50 Ω

1st IF and 2nd IF amplifier

- Central frequency : 455 KHz
- Load impedance : Variable R-L-C
- Gain : 40 dB with automatic gain control

Diode envelope detector

- Detection of the positive and negative envelope with variable RC filter DSB

Product detector

- Operating frequency : Adjustable from 400 KHz ~ 500 KHz SSB
- Input amplitude : 1Vpp

Audio output

- Amplifier with speaker
- Audio amplifier gain : 20dB

Receiving media

- MW coil antenna and via cable

Switch faults

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

Interconnection

- 2 mm banana socket

Power supply

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

EXPERIMENTS

- Study of double sideband AM reception using envelope diode detector
- Study of single sideband AM reception using product detector
- Study of image frequencies
- Study of adjustment of receiver tuned circuits
- Voice reception using DSB/ SSB AM receiver (super heterodyne receiver)
- Effects of switch faults