



Sciencetech TechBooks are compact and user friendly learning platforms to provide a modern, portable, comprehensive and practical way to learn Technology. Each TechBook is provided with detailed Multimedia Product Tutorial which covers basic theory, step by step procedure to conduct the experiment and other useful information.

Sciencetech 2661A AM / FM Radio Receiver is a comprehensive learning solution specifically designed to study and understand the working principle and basic operation of both types of superheterodyne radio receivers; AM Radio Receiver and FM Radio Receiver. The TechBook provides the conceptual and step by step understanding of a superheterodyne receiver system through measurement of voltages and observation of waveforms at various test points. Block wise modular

organization of circuit function with supporting technical information makes it easy to understand the process of AM / FM reception and demodulation. The exercises conceived to provide a practical approach to the subjects enable a deep analysis of the subjects and will guide the students to understand each function.

Features

- A self contained TechBook
- Functional blocks with self explanatory waveforms and technical details indicated on board
- On board Tuner provided for tuning the AM/FM transmitting stations
- Interconnections between different section using 2mm patch cords
- More than 50 test points for waveform observation and analysis
- 12 Switched faults for troubleshooting at different functional blocks
- Telescopic antenna for reception of AM/FM signal
- On board audio jack provided for Earphone connection
- On board Speaker provided for audio communication
- Product Tutorial

Scope of Learning

- Double Sideband AM Reception and study of Diode Detector
- Single Sideband AM Reception and study of Product Detector
- Operation of the Automatic Gain Control Circuit (AGC)
- To plot Selectivity curve for AM radio receiver
- To plot Sensitivity curve for AM radio receiver
- To plot Fidelity curve for AM radio receiver
- FM Reception and study of Ratio Detector

Technical Specifications

AM Receiver

- Construction : Superheterodyne
- AM Frequency Band : 530 KHz – 1650 KHz
- Local Oscillator Freq. Range : 980 KHz to 2.060 MHz
- Intermediate Frequency (IF) : 455 KHz
- Input Circuits : 1. RF amplifier
2. Mixer
3. Local oscillator
4. Beat frequency oscillator
5. IF amplifier 1
6. IF amplifier 2
7. Automatic Gain Control
- AM Detectors : 1. Diode detector (for DSB)
2. Product detector (for SSB)

FM Receiver

- Construction : Superheterodyne
- FM Frequency Band : 88 MHz to 108 MHz
- Tuning Range : 96 MHz to 120 MHz
- IF Frequency : 10.7 MHz
- Input Circuit : 1. RF amplifier
2. Mixer
3. Local oscillator
4. IF amplifier 1
5. IF amplifier 2
6. FM Detector
7. Automatic Frequency Control

- Audio Output : Amplifier with speaker
- Tuning : Variable capacitor (ganged) dial marking on board
- Receiving media : Telescopic antenna / RF cable
- Switched Faults : 12 Nos
- Test Points : 50 Nos
- Power Supply : 110-220 V AC \pm 10%, 50/60Hz
- Power Consumption : 3VA (approximately)
- Interconnections : 12mm Banana sockets
- Operating Conditions : 0-40^o C, 80% RH
- Dimensions (mm) : W 326 x D 252 x H 52
- Weight : 3 Kg approximately

Included Accessories :

- Patch Cord : 20 Nos
- Mains Cord : 1 No
- Earphone : 1 No
- TechBook Power Supply : 1 No

