

AM/FM Radio Training System

RTS-4000



Feature:

- System consists of AM Transmitter and Receiver and FM Transmitter and Receiver
- Includes full documentation for Instruction Manual, Experiments Manual and Model Answers.
- Monitor points (w test points) must be provided to enable students observe the signals in the system.
- More than 30 simulated faults (switched fault DIP switches) are introduced into the system via switches or similar devices, easily operated.
- The faults easily identified from the behavior of signal at the monitor points or voltage measurements at test points.
- The trainer must also consist of
 - a. DC Power Supply Unit.
 - b. Built-In microphone and Tone Generator.
 - c. 19KHz Pilot Frequency for FM Stereo.
 - d. Speaker System (L & R Channel).
 - e. Terminal for external Input and headphone output (Stereo).
 - f. Stereo/Mono Switch.
 - g. AM/FM Selector Switch.
 - h. Volume Control.

The RTS-4000 Radio Training System is a comprehensive and self-contained system suitable for demonstrating AM and FM radio transmission.

The system contains 4 (four) separate modules - the AM/DSB Radio Transmitter and AM Radio Receiver modules and the FM Radio Transmitter and FM Radio Receiver modules.

AM / DSB Radio Transmitter and Receiver

AM Radio Transmitter:

Specification:

- Perfect AM transmitter which is able to produce 1MHz
- Use with the AM receiver experiment module for AM communications
- Experiments cover crystal oscillator, modulator percentage, sinewave / voice modulator, balance modulator, RF amplifier, adjust and coupling, and antenna adjustment

Experiments covered:

- Principles of Amplitude Modulation

- Analysis of AM Waveform
- Amplitude Modulation of RF Signals
- Principles of Single-Sideband Transmission

AM Radio Receiver:

Specification:

- AM reception in the frequency range of 535KHz to 1605kHz
- Intermediate frequency of 455kHz
- Use with the AM transmitter experiment module for AM communications
- Experiments cover oscillator mixer, 1st IF amplifier, 2nd IF amplifier, and audio amplifier
- Equipped with DIP switches for fault simulation so that students can practice troubleshooting

Experiments covered:

- Heterodyning Principles
- Circuit Diagram of a Radio Receiver
- Analysis of Radio Circuit

FM Radio Transmitter and Receiver

FM Radio Transmitter :

Specification:

- Perfect FM transmitter which is able to produce 10.7MHz intermediate frequency
- Use with the FM receiver experiment module for FM communications
- Experiments cover crystal oscillator, frequency modulator, RF buffer, reference oscillator, frequency tachometer, and audio modulator

Experiments covered:

- Frequency-Modulation Transmitter
- Phase Modulation
- Frequency Multipliers
- Experimental FM Transmitter

FM Stereo Radio Receiver :

Specification:

- FM reception in the frequency range of 88MHz to 108MHz
- Frequency shown by 7-segment display
- Use with the FM transmitter experiment module for FM communications
- Experiments cover tuner, FM IF amplifier, FM MPX, and audio amplifier
- Equipped with DIP switches for fault simulation so that students can practice troubleshooting

Experiments covered:

- Monophonic FM Receiving System
- Stereophonic FM Receiving System
- Discussion of FM Subsystems
- Integrated Circuits of FM Receiver

Accessories

- Power supply 240VAC, 50Hz
- Instruction Manual, Experiment manual and Model Answers
- Small adjustable antenna