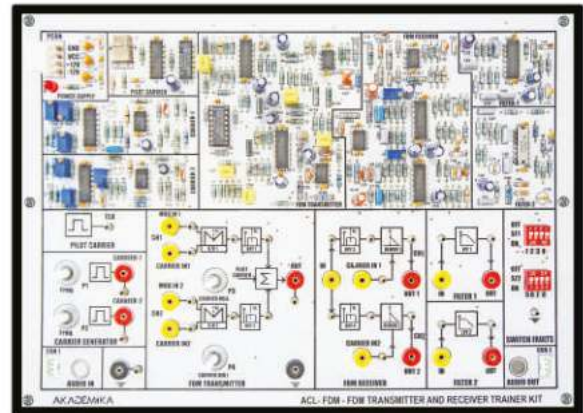


ACL-FDM

FDM Transmitter / Receiver Kit



FEATURES

- Onboard clock generator
- Carrier generator 1 KHz ~ 30 KHz
- Pilot carrier 256 KHz
- 2 channel FDM communication system
- DSB AM Modulator and Demodulator
- Band pass filters 9 ~ 11 KHz and 16 ~ 20 KHz
- 4th order Butter-worth Low Pass Filters

SPECIFICATIONS

Carrier generator

- Sub carrier : 1KHz ~ 20KHz and 1KHz ~ 30KHz
With adjustable Frequency pot
- Pilot carrier : 256 KHz
- Transmitter : High frequency transmission
using DSB
- Multiplexing : Frequency division
Multiplexing
- Channel : 02

Band pass filter

- Pass band : Filter 1 and 3 frequency range
8 ~12 KHz with $f_c \sim 10$ KHz
Filter 2 and 4 frequency range
18 ~ 22 KHz with $f_c \sim 20$ KHz

AM /DM Modulator

- Modulation : Amplitude Modulation
double side band
- Receiver : Amplitude Demodulation of DSB
- De-multiplexing : Frequency division
De-multiplexing

Low pass filter

- 4 order butter worth filter

Switch Faults

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

Interconnection

- 2 mm banana socket

Test points

- 25 test points are provided to observe various intermediate signals

Power Supply

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

EXPERIMENTS

- To study frequency response of band pass filters
- Study of DSB modulation
- To study the operation of frequency division multiplexing
- Study of DSB demodulation
- To study the operation of frequency division demultiplexing
- To study the effects of out of band signaling
- To study effect of switch faults
- To study voice communication through FDM (optional)