

ACL-06 FDM TRANSMITTER / RECEIVER TRAINER KIT



ACL-06 is an analog communication trainer kit designed to study the fundamentals of frequency division multiplexing using DSB modulation technique. Using this module students can well understand the basics of the Balance Modulator, Band Pass Filters, Demodulators and Frequency division multiplexing and demultiplexing techniques.

FEATURES:

- Onboard Clock generator
- Onboard Carrier wave generator
- 2 channel FDM communication system
- DSB AM Modulator
- DSB AM Demodulator
- Band Pass Filters
- Low Pass Filters
- Out of Band signal transmission
- Voice Communication (optional)
- Switch Faults

TECHNICAL SPECIFICATIONS :

Carrier Generator :

Subcarrier : 1 KHz to 20 KHz and 1 KHz to 30 KHz with adjustable amplitude of 0-2 Vp-p

Pilot carrier : 256 KHz

Transmitter : High frequency transmission using DSB

Multiplexing : Frequency Division Multiplexing

Channel : 02 Nos.

Band Pass Filter : Band pass filter

Pass Band : Filter 1 & 3 frequency range 7 to 11 KHz with fc 9 KHz

Filter 2 & 4 frequency range 18 to 22 KHz with fc 20 KHz

AM/ DSB MODULATOR:

Modulation : Amplitude Modulation.

: Double Side Band.

Receiver : Amplitude Demodulation of DSB

Demultiplexing : Frequency Division Demultiplexing

Low pass filter : 4th order butterworth 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.

LIST OF 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 effect of out of band signaling
- To study effect of switch faults
- To study voice communication through FDM (Optional)

ACCESSORIES:

Red Short Links	: 10 Nos.
Red Long Links	: 03 Nos.
Crocodile Links	: 02 Nos.
Experimental Manual	: 01 No.
Circuit Description Manual	: 01 No.
Power Supply	: 01 No.

OPTIONAL:

FG-01 Function Generator

A I/O Audio Input Output Kit

e-Manual Interactive Multimedia Software & Manual



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