

Product Name :
Satellite Trainer

Product Code :
NLAB-ELECTRONICSAB200010



Description :

Satellite Trainer

Technical Specification :

Features:

Emulation of path loss at uplink and downlink

Emulation of frequency translation

High RF output power and low noise

PLL synthesizer in Transmitter, Receiver and Satellite

Condenser microphone and speaker for audio link

Camera and Monitor for video link

4 Dish for linear polarization study

C/N and S/N measurement facility

Transmit Audio, Video, Digital/Analog data, Tone, Voice, function generator waveforms etc.

Receives & demodulates 3 Signals Simultaneously

Technical Specifications

Satellite Uplinking Transmitter

Frequency : 4 channels in 5.8 Ghz band ; PLL with frequency selection switch & LED indication

RF output level : +3 dBm nominal with wideband RF amplifier with no manual matching required

Audio 1 : Int. 1KHz sine wave / Ext Mic Ext. Function Generator waveform

Audio 2 : Int. 1KHz sine wave / Ext Mic Ext. Function Generator waveform

Video : Analog Camera/VCD compatible

Waveform : upto 5MHz Function Generator

Digital : Max rate 100KHz typical

Baseband : Transmits 3 signals simultaneously at each uplink frequency

Processor : PIC16F4 - 8 bit RISC processor based PLL with 4 Mhz clock

Bandwidth : 16 Mhz

Modulation : 5/ 5.5MHz Audio FM Modulation 8 Mhz Video FM Modulation

Antenna : Detachable Parabolic dish with mount

Inputs : separate terminals for different inputs

Power Supply : 100-240VAC 47-63Hz

Area and Scope of Experimentation:

To set up a passive satellite communication link and study their difference. To study the communication satellite link design: process of transmitting a signal to a satellite (UPLINKING), reception of same signal via satellite (DOWN LINKING) and functioning of transponder of a satellite

To measure the baseband analog signal parameters in a satellite link

To measure the signal parameters in an analog FM/FDMTV Satellite link

To study the functionality of a satellite MODEM

To study the phenomenon of Linear polarization

To measure the C/N ratio

To measure the S/N ratio

To study the effect of fading and measure the fading margin of a received signal

To measure the digital baseband signal parameters in a satcom link

Accessories:

Camera

Monitor

Cables BNC-BNC 2Nos

Serial Communication Software

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