SCT7272 – Satellite Communication Trainer

Satellite Communication Trainer

Key Features:

- Simultaneous Communication of three different signals at each up-linking frequency
- 2414-2468 MHz PLL microwave operation
- Crystal Control Frequencies
- Communicate Audio, Video, Digital data, PC data, Tone, Voice,
- Function generator waveforms
- Communication of external broadband digital and analogue data and base-band signals
- Choice of different transmitting and receiving frequencies
- Built-in microphone and speaker for Voice and Audio link
- Detachable Dish Antenna at each station
- Facility to attach Analogue/Digital communication kits

The Satellite Communication Trainer 7272 provides an in-depth study of a basic satellite communication system. It consists of an Uplink Transmitter, Satellite Link and Downlink Receiver, which can be conveniently placed in the laboratory. The satellite can be placed at an elevated position if required. The satellite transponder receives signals from an Uplink Transmitter and retransmits at different frequencies to a Downlink Receiver. The Uplink and Downlink frequencies are selectable and carry three signals – Video, Audio, Voice and Data simultaneously. Any broadband signal, digital/analogue data or function generator waveforms can be communicated through the Satellite link.

Experiments

- Understanding the concepts of satellite communication
- Establish a direct communication link between Uplink Transmitter and Down link Receiver using tone signal
- To setup an active satellite link and demonstrate link fail operations
- To establish an audio-video transmission through a Satellite link
- Study base-band analogue signal (voice) in satellite link
- Transmission and reception function generator waveforms through satellite link
- Transmission tone through satellite link
- Establish PC to PC communication using satellite Communication Link

Specification

Uplink Transmitter	• Transmit three signals simultaneously at each up-linking frequency 2450-2468MHz • 4 MHz clock frequency • Wide band RF amplifier. No manual matching required • PIC16F84 – 8 Bit RISC processor based PLL • 16MHz bandwidth • Frequency select switch and LED indication • FM modulation of audio and video • 5/5.5 MHz audio and 8MHz video modulation • Detachable dish antenna • Radiated Power output 25mW (approx) with power control • Transmit audio, video, digital/analogue data, PC data, tone, voice, function generator waveforms • Separate terminals provided for different inputs • Power supply: 230V ± 10%, 50Hz. 60Hz on request
Satellite Link	• Transponder with selectable frequency conversion • Choice of downlink frequencies 2414-2432 MHz • Rotary switch for selecting uplink frequency • Link Fail operation • Detachable dish antennas • Radiated power 25mW (approx) with variable gain control • Power supply: 100 – 240V, 50Hz. 60Hz on request
Downlink Transmitter	• Receives and demodulate three signals simultaneously • Intermediate frequency 479.6 MHz (approx) • 2414-2432MHz fix frequency tuning • -60 dBm sensitivity at tuner input • Built in speaker for audio and video output • Detachable dish antenna • Power supply: 100 – 240 V, 50 Hz. 60 Hz on request

Ordering Information

Model Number:	**SCT7272**
Consists of:	2 x Audio-Video Cable 2pin 2x Patch Cord 8” 1x Microphone 3x Mains Cord 1x Pencil Cell 4x Dish Antenna 1x Operating Manual

LABTECH ENGINEERING
Corporate Office:
House-246, West Monipur, 60 Feet Road, Mirpur-02, Dhaka-1216.
+88 01737 252881
info@labtech-engineering.com
China Office:
No.360 Changshou Rd, Putuo district, Shanghai, China