



Satellite Communication Trainer ST2272 provides an in-depth study of basic Satellite communication system. It consists of Uplink Transmitter, Satellite Link and a Downlink Receiver, which can be conveniently placed in the laboratory. The Satellite can be placed at an elevated position if needed. The Satellite Transponder receives signal from Uplink Transmitter and retransmit at different frequencies to a Downlink Receiver. The Uplink and Downlink frequencies are selectable and can carries three signals - Video, Audio, Voice, and Data simultaneously. Any Broadband signal or Digital/Analog data or Function Generator waveforms can be communicated through the Satellite link. Web camera is also supplied.

Technical Specifications

Uplink Transmitter

- Transmit three signals simultaneously at each up-linking frequency
- 2450-2468MHz up-linking frequencies selectable by Frequency selection switch and LED indication
- 4 MHz clock frequency
- Wide band RF amplifier. No manual matching required
- PIC16F84 - 8 Bit RISC processor based PLL
- 16 MHz Bandwidth
- Frequency select switch and LED indication
- FM Modulation of Audio and Video
- 5/5.5 MHz Audio and 8MHzVideo Modulation
- Detachable Dish Antenna
- Radiated Power output 25mW (approx.) with power control
- Transmit Audio, Video, Digital/Analog data, PC data, Tone, Voice, function generator waveforms etc
- Separate terminals provided for different inputs
- **Power Supply** : 220 V ±10 %, 50 Hz / 60 Hz on request

Satellite Link :

- Transponder with selectable frequency conversion
- Choice of 2 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** : 220 V ±10 %, 50 Hz / 60 Hz on request
- **Power Consumption** : 2.5 VA (approx.)

Downlink Receiver :

- 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** : 220 V ±10 %, 50 / 60 Hz on request
- **Power Consumption** : 2.5 VA (approx.)
- **Dimensions (mm.)** : W 340 × D 241 × H 105

- 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 etc
- Communication of external broad band digital and analog 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 SCIENTECH Analog/Digital Communication Kits.

Experiments that can be performed

- Understanding concepts of Satellite Communication
- To set up Direct link
- To set up Active Satellite link
- Study Satellite transponder
- To set up Satellite communication link
- Study Audio-Video transmission through Satellite link
- Study Base Band Analog signal(voice) in Satellite link
- To transmit and receive function generator waveforms through Satellite link
- To transmit Tone through Satellite link
- To establish PC-to-PC Communication using Satellite Communication link

Included Accessories

1. BNC to BNC small	4 no.	9. Plastic Box of Antenna	1 no.
2. Audio-Video Cable 2 Pin	2 no.	10. Cable RS 232	2 no.
3. BNC to Banana	2 no.	11. Cable RS 232 (2m-1fm)	1 no.
4. Patch Cord 8"	2 no.	12. CD-ROM	1 no.
5. Microphone (Ahuja)	1 no.	13. CD-BOX	1 no.
6. Mains Cord	3 no.	14. Accessories Box	1 no.
7. Pencil Cell (Microphone)	1 no.	15. Op. Manual	1 no.
8. Dish Antenna	4 no.	16. Dust Cover	1 no.

