

ACT-01

Analog Sampling & Reconstruction Trainer Kit



ACT-XX is a Digital Communication Trainer System to understand various digital Modulation and Demodulation Techniques. Various functional block diagrams are provided on-board for Teaching/Training. This Kit provides with various Test Points to visualize the signals on Oscilloscopes.

Features

- Onboard synchronized 1 KHz Sine-wave generator.
- Sampling frequency 2, 4, 8, 16, 32 KHz
- On-board separate Sample and Sample & Hold circuit/output.
- Sampling Duty cycle of 0-90% in steps
- On-board 2nd & 4th order Low pass filter with cut off frequency of 3.4 KHz
- In-Built Power Supply

Specifications

- **Sine Wave Generator**
 - ✓ Provides Synchronized Sine waveform output of Frequency 1 KHz & 2KHz.
 - ✓ Amplitude of 0-5V p-p
 - ✓ Amplitude adjustments possible
- **Pulse Generator**
 - ✓ Switch selectable sampling frequency of 2, 4, 8, 16, 32 KHz.
 - ✓ 6.144 MHz. Crystal Controlled Pulse Generator.
 - ✓ Provision for External sampling Input up to 40 KHz with amplitude of 5V.

● On-board features

- ✓ Sample Circuit/Output
- ✓ Sample & Hold Circuit/Output
- ✓ Switch selectable Sampling Duty cycle of 0-90% in steps
- ✓ 2nd & 4th order Low pass filter with cut off frequency of 3.4 KHz.
- ✓ 8 Nos. of Switch Faults Provided.
- ✓ Block Description Screen printed on glassy epoxy PCB

● Interconnections

- ✓ All interconnections are made using 2mm banana Patch cords.

- Test points are provided to analyze signals at various points.
- All IC's are mounted on IC Sockets.
- Bare board Tested Glass Epoxy SMOBC PCB is used.
- In-Built Power Supply of +5V/1.5A, ±12V/250mA with Power ON indication
- Attractive ABS Plastic enclosures.
- Set of 2mm Patch cords for interconnections
- User's Manual with sample experimental programs

LIST OF EXPERIMENTS

- ☞ To study the Sample signal and Sample/Hold signal and its reconstruction
- ☞ To study the effects of different Sampling frequencies on the reconstructed signal
- ☞ To study the effects of Varying duty cycle of Sampling frequencies on the amplitude of the reconstructed signal
- ☞ To study the effects of 2nd and 4th Order low pass filters for the reconstruction of the signal

Note : Specifications can be altered without notice in our constant efforts for improvement.