



The trainer provides all necessary inputs and connection for students to study signal Sampling and Reconstruction Techniques.

#### Technical Specifications

Crystal Frequency	: 8 MHz
Sampling Frequency	: 2, 5, 8, 10, 20 & 40 KHz (switch selectable)
On-board Generator	: Synchronized 1 KHz sine wave (5 V ) pp
Duty cycle	: 0 - 90% in Decade steps (Switch Selectable)
Low -Pass Filters	: Butterworth 2nd & 4th order Cut-off frequency - 3.4 KHz each
Test Point	: 50
Interconnections	: 2 mm sockets
Power Supply	: 220 V $\pm$ 10%, 50 / 60 Hz on request
Power Consumption	: 3 VA (approx.)

- Crystal controlled pulse generator
- Demonstrates sampling and reconstructed as per Nyquist criterion
- On-board synchronized analog signal generator
- Six, switch selectable sampling frequencies
- Sampling pulse duty-cycle selectable
- Internal/ External sampling signal selectable
- Separate sample and sample/hold outputs available
- On-board second order and fourth order low-pass filters
- Audio Input and Output links to show the transmission and reception of real time signal (audio signal)

#### Experiments that can be performed

- Signal Sampling and Reconstruction Technique
- Study of Nyquist criteria for sampling & reconstruction
- Aliasing & Effect on Reconstruction of Signal due to various Sampling Frequencies
- Effect on Amplitude of Reconstructed signal by varying Sampling
- Pulse Duty Cycle in Sample & Sample/Hold output
- Comparison of 2nd & 4 th Order Butterworth Filters
- Signal Sampling and Reconstruction using External sampling signal and audio signal

Note: Specifications are subject to change.

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