Scientech

Differential Pulse Code Modulation & Demodulation
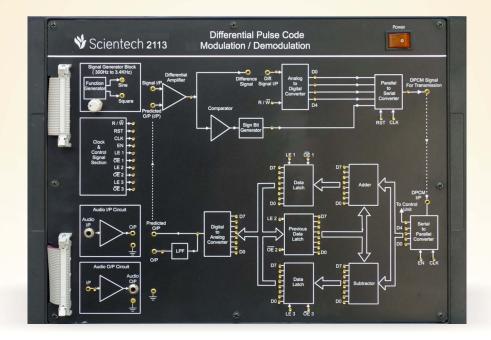
Differential Pulse Code Modulation & Demodulation Scientech 2113, is a manifestation of our increasing efforts to present the modern technology in a best way to the people who want to unfold the mysteries behind the ever increasing communication super highway. To present it in the best way, the Scientech 2113 incorporates the practical operating frequencies for sampling, audio processing and data processing which are commonly used in our public telephone networks.

Features

• **On board DPCM Transmitter and Receiver**
• **On board signal generator block**
• **On board audio input processing circuit**
• **On board audio output processing circuit**
• **Clock and control signal section**
• **Detailed signal processing circuit with complete data and control signal flow**

Scope of Learning

• Study of Differential Pulse Code Modulation and Demodulation Technique
• To verify experimentally that DPCM is a Differentiation Process
• To establish voice link using DPCM technique

Technical Specifications

Signal generator block

Functions	:	Sine and Square
O/P frequency range	:	300 Hz to 3.4 KHz
Audio blocks	:	Audio I/P and O/P processing circuits
Control signals	:	R/W for ADC, reset, Latch enables, OEs
Sampling frequency	:	8 KHz
Bits per sample	:	5 bits including sign bit

Bandwidth improvement

Compared to 8 bit PCM	:	3 bits per sample
Interconnections	:	2 mm socket
DC Supply	:	± 5V, ± 12V DC, 200 mA
Weight	:	1.0 kg (approximately)
Product Tutorial	:	Online on www.ScientechLearning.com
Dimension (mm)	:	W 340 x D 240 x H 105
Operating Conditions	:	0-40°C, 85% RH

Included Accessories

2 mm Patch cords 16"	:	5 nos.
Microphone	:	1 no.
Headphone	:	1 no.
Mains cord	:	1 no.

Subject to Change