



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

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|-----------------------|--|
| Compared to 8 bit PCM | : 3 bits per sample |
| Interconnections | : 2 mm socket |
| DC Supply | : $\pm 5V, \pm 12V$ 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

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