

{tag} International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

[Volume 179](#)

-
[Number 34](#)

Year of Publication: 2018

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10.5120/ijca2018916717

{bibtex}2018916717.bib{/bibtex}

Abstract

Analog electronics lab devices are very delicate instruments. The devices are Function generator, Variable Power supply, Oscilloscopes, Bread board, probes and jumpers. The most delicate instrument is the Function generator. A function generator is a universal tool used by every electrical engineer at some point in their career. Sine, square, sawtooth and triangle waves of different periods, duty cycles and amplitudes are required as input to many digital and analog circuits. A digital function generator creates these input signals which can be used in variety of applications. There is currently a wide range of commercial function generators available, many of them fetching a high price. This paper proposes three modules a Digital function generator, a voltage supply and a waveform display. Which reduces cost and occupies less space. This paper aims to generate the various waveforms commonly used in a Academic laboratory. In this project digital techniques are used to synthesize the waveforms, also to generate variable voltages that are necessary as input source for analog and digital circuits. A dual channel function generator which generates four waveforms such as Sine, Square,

Triangle and Sawtooth. And a display to show waveforms to the users to analyse input and output waveforms.

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Index Terms

Computer Science

Information Sciences

Keywords

Function generator, Mechanical, Analog, IC, Computerised, Digital, DSP, DDS, Arbitrary, Square, Triangle, Sawtooth, Sine.