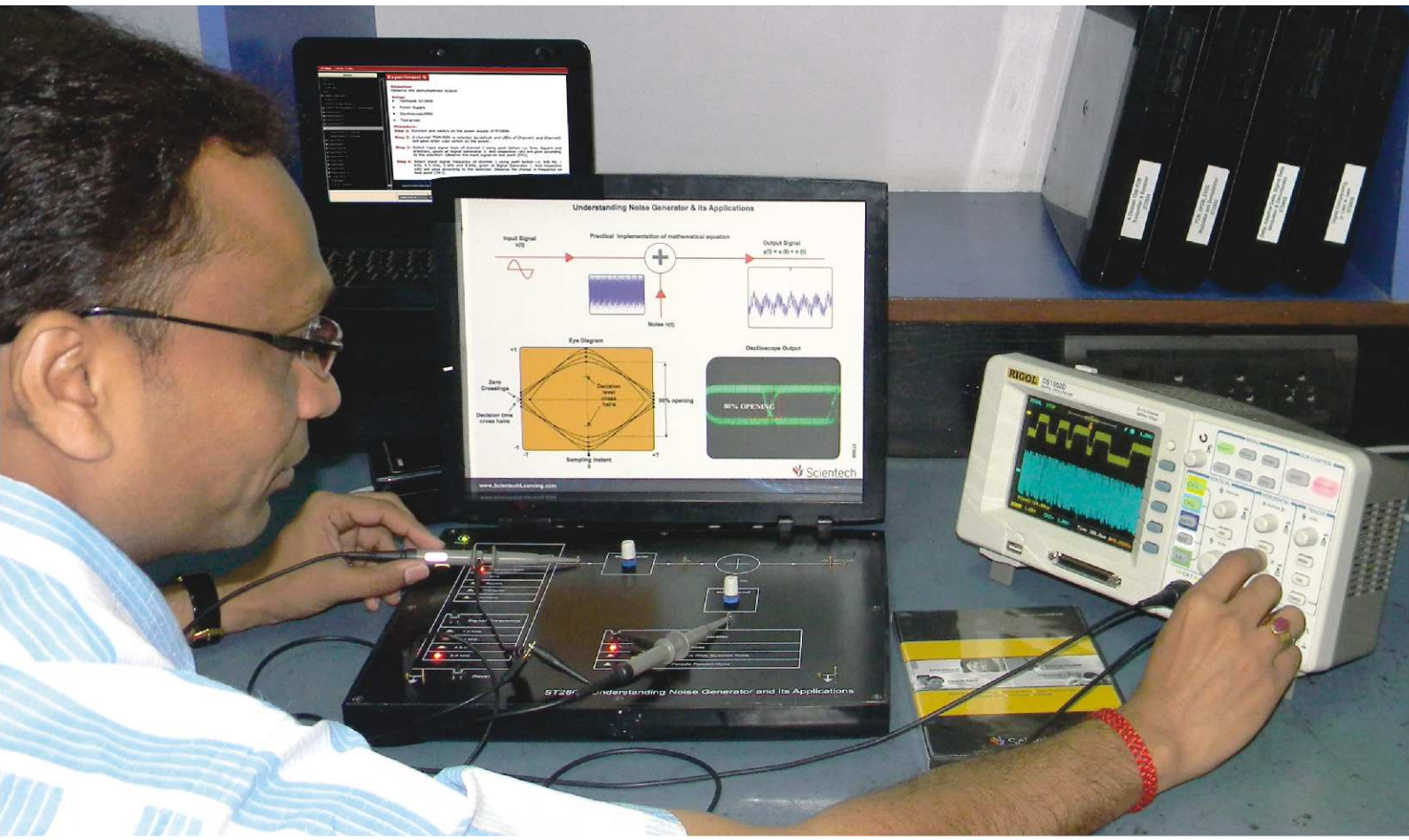
Scientech

Understanding Noise Generator and its applications

Scientech 2806

TECHBOOK



Scientech TechBooks are compact and user friendly learning platforms to provide a modern, portable, comprehensive and practical way to learn Technology. Each TechBook is provided with detailed Multimedia learning material which covers basic theory, step by step procedure to conduct the experiment and other useful information.

Scientech TechBook 2806 provides an extensive hands on learning on Noise Generator and its applications.

Features

- **Detailed study & analysis of Signal with & without Noise.**
- **Complete study of mathematical equation y(t) = x(t) + n(t).**
- **Selectable Signal frequencies.**
- **On-board DDS Signal Generator for standard and arbitrary signals**
- **Can be issued just like a book for hands-on learning**

Scope of Learning (Experimentation)

- Study of different types of Noise and their frequency spectrum

  White Noise

  Additive White Gaussian Noise

  Pseudo Random Noise

- Practical implementation of mathematical equation :

  $y(t) = x(t) + n(t)$

- Study and analysis of Signal to Noise ratio-

  By varying Noise amplitude

  By varying Signal amplitude

- Study and analysis of eye pattern with and without Noise.

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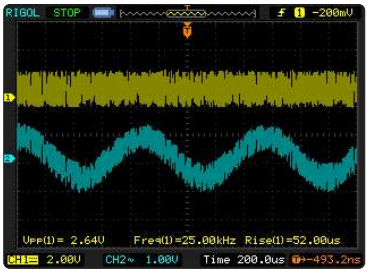
Technical Specifications

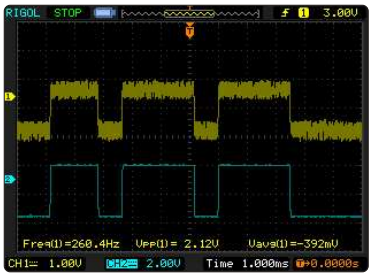
Noise generator	:	White Noise
		Additive White Gaussian Noise
		Periodic Random Noise
Internal Signal Generator	:	Direct Digital Synthesizer
Types of Signal	:	Sine, Square, Triangle, Arbitrary signals.
Frequency	:	1.2KHz, 2.4KHz, 4.8KHz, 9.6KHz
SMD LED Indicators	:	13nos for
		DDS Signal selection
		DDS Signal frequency selection
		Noise selection
Selection Mode	:	Push switches
Crystal Frequency	:	8MHz
Test Points	:	5 nos
Gain selection for Modulating Signal	:	10K potentiometer
Gain selection for Noise	:	10K potentiometer
Product Tutorial	:	Online on www.ScientechLearning.com
Dimensions (mm)	:	W 326 x D 252 x H 52
Power Supply	:	110V - 260V AC, 50/60Hz
Weight	:	1.5Kg (Approximately)
Operating Conditions	:	0-40°C, 85% RH
Included accessory	:	2mm Patch cord - 2nos



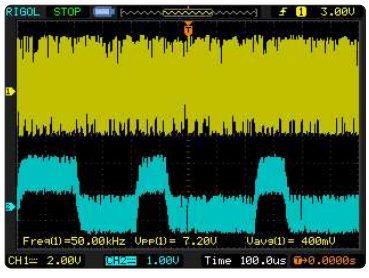
Noisy output

AWGN Noise

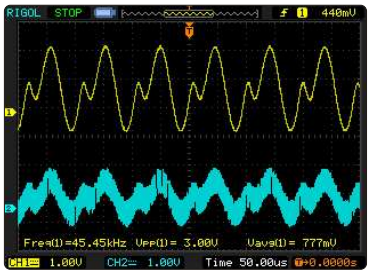
White Noise



Input Random Data with Noisy output



Random Data with Noise



Noisy arbitrary waveform

Subject to Change

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