

Random Timing Analog Pulse Generator RPG-104

Application: Evaluation and adjustment of radiation signal processing circuits in development and production stages

This system generates analog pulse train that has random timing of the events, programmed pulse amplitude and programmed pulse rate. Since this simulates the output of radiation detectors such as Si(Li), HPGE, SDD, PC and SC, this is useful for the performance evaluation and parameter setting of signal processing circuits especially pulse pile-up rejecters. If compared to a combination of a real detector and a radiation source, the biggest advantage is that the count rate is easily adjustable in wide range.

Features

- 1) Generates 1 to 4,000,000 pulse per second (pps) in high accuracy
- 2) Since the minimum pulse interval is as short as 100 nano-seconds, the pulse pile-ups occur properly.
- 3) Four independent pulse generators are built in. Since each can have independent pulse rate and pulse height, the performance of the processor under the circumstance of having high count-rate peak and low count-rate peak nearby at the same time.
- 4) Since various kinds of outputs are equipped, this can be used for signal source of wide variety of circuits such as preamplifier, signal processor and MCA.

Specifications

- | | |
|------------------------------|---|
| 1) Number of pulse generator | 4 |
| 2) Pulse rate | 1-1,000,000pps (4,000,000pps in total) |
| 3) Pulse interval | a) Quasi-random (with look-up table)
b) Uniform |
| 4) Minimum pulse interval | 100nsec (dependent on pulse rate) |
| 5) Signal amplitude | Variable (12bit resolution) |
| 6) Output Signals | a) Non-integrated analog
b) Integrated analog (Pulse or register feedback)
c) Digital (Timing Only) |

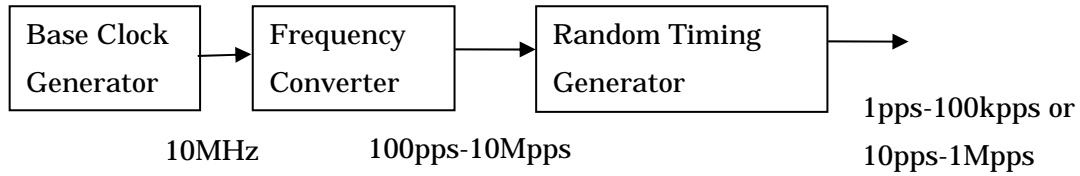
X-Bridge technologies Co., Ltd.

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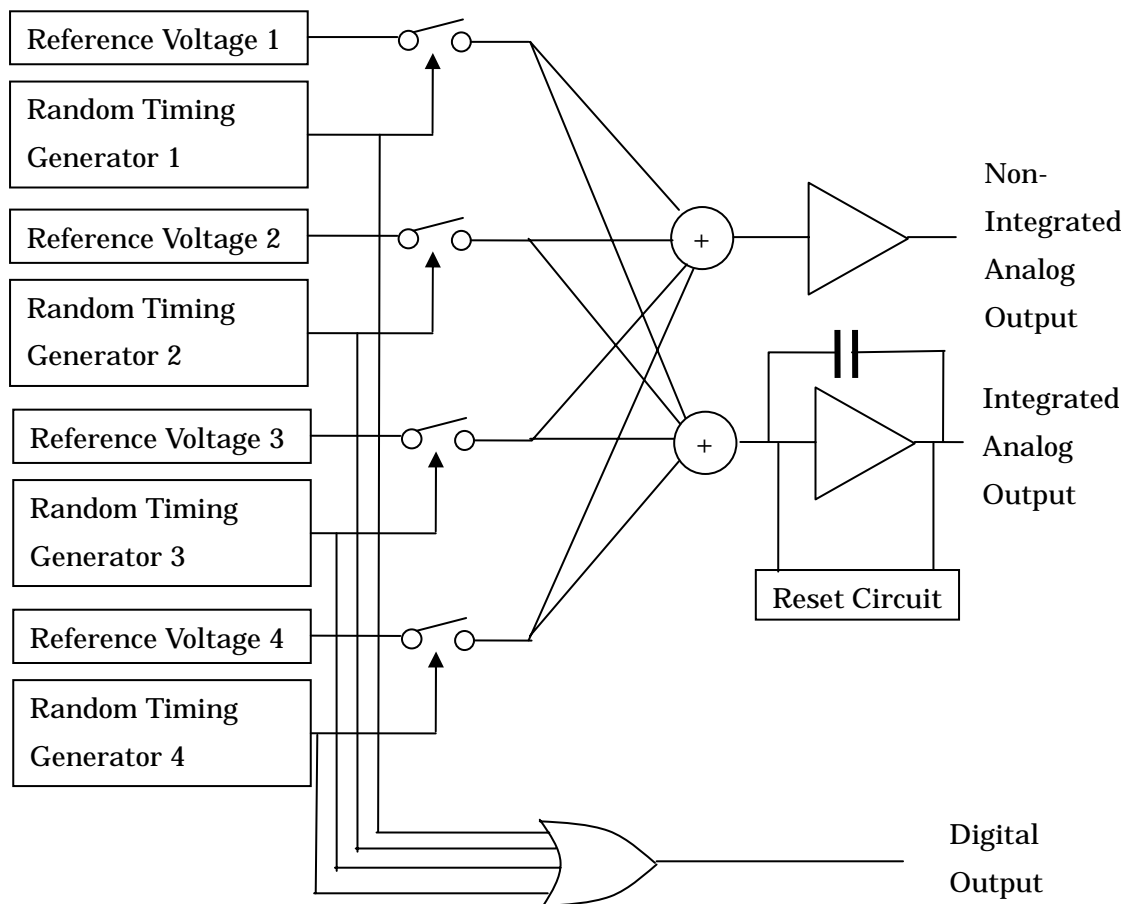
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Block Diagrams

1) Random Timing Generator



2) Entire Circuit



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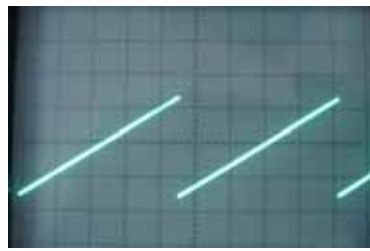
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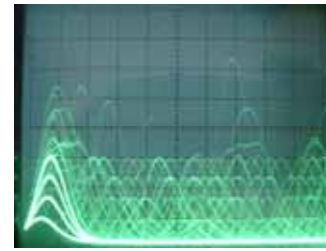
Output Signal Waveforms



Random Interval Mode

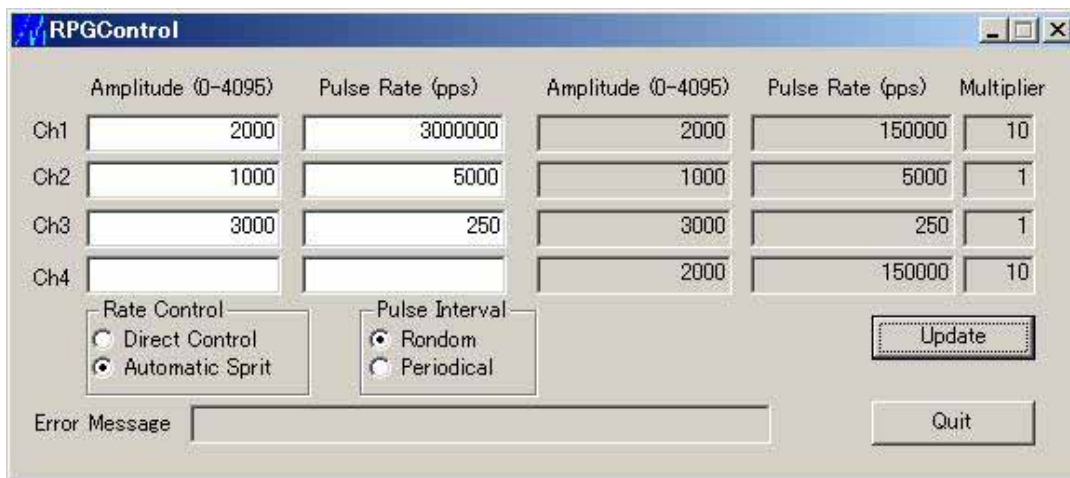


Constant Interval Mode



Signal Processor Output

Control Software Window



Computer

A PC is to be prepared by a purchaser. It should fulfill following specifications.

Windows XP/2000

1 open PCI slot

1 open 3.5" storage bay which is accessible from the front panel

Price

6800 USD + Shipping Cost

Control Software included

PC and OS not included

Warranty

1 year

All specifications are subject to change without any prior notice.

For further information, write to X-bridge Technologies.

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