ARBITRARY DELAY GENERATOR

AMO tronics

for MULTI-CHANNEL PRECISION TIMING

Easy-to-use multi-trigger digital delay generator for precisely timed lab control

- Internal precision clock source, calibrated to GPS clock
- 1ns delay resolution
- 1:1, 1:n flexible output mapping
- Individual pulse delay, trigger delay, pulse shift, analog-to-digital
- Fiber optic or BNC inputs & outputs
- 1 digital & 1 analog input
  Additional 8 inputs - optional
  (fiber optical / digital interface)
- 8 digital outputs
  Additional 24 outputs - optional
  (fiber optical / TTL / MOSFET / RELAY)
- LED input / output monitoring
- Comfortable graphical user interface
- OS independent precision timing, remotely controlled

Precisely timed control of multiple signals is crucial for many applications in research, development and testing. The Arbitrary Delay Generator - ADG offers engineers a powerful and cost-effective solution. Analog and digital electrical or fiber optical inputs are available to feed in up to 2+8 signals into the complex delay engine. Configurable 1:1 or 1:n mapping to 8+24 digital or fiber optical outputs gives users a high
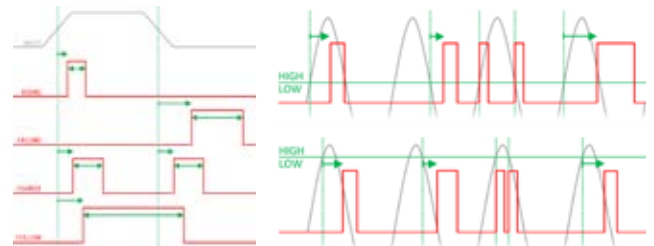
Examples: Digital / analog input with different edge / delay / duration settings, high/low definition and resulting pulse pattern
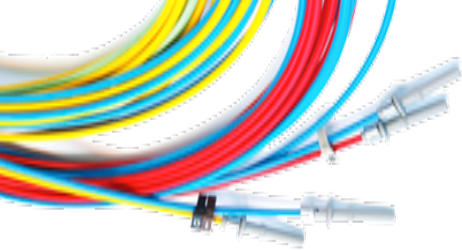
FLEXIBLE TRIGGERING

for UNIVERSAL APPLICATIONS

degree of flexibility. The exact high/low level definition for the analog input offers additional pulse generation options.

Electrical and fiber optical output interfaces

For inputs and outputs, a broad spectrum of electrical and fiber optical interfaces is available. Each channel can be set up with individual signal delay, pulse duration or edge shift functions.

The precise time resolution of 1ns, calibrated to the GPS clock source, easily serves the most demanding applications.

The graphical user interface SW of the Arbitrary Delay Generator reflects the actual system hardware, thereby simplifying the setup of input-output mappings, delays and pulse durations.

After the user confirms the setup, it is downloaded to the real-time hardware and the ADG works independently of OS and configuration PC.

Specification:

- Resolution: **1 ns**
- Fiber length: **< 300 m**
- Fiber type: **Multi-Mode / POF**
- Fiber connectors: **ST / Versatile Link**
- BNC input: **TTL, 24V, 48V**
- BNC output: **TTL 3.3V, 5V, 12V, 24V**
- Relay switch: **ON-OFF / ON-TRI-ON**
- Isolated MOSFET output: **300V / 5A**

OUT	IN	DIR	DELAY [s]	PULSE [s]
1.1	D	--	500n	
1.2	D	⌐	1u	500n
1.3	A	⌐	100m	500m
1.4	A	X	200m	750m
1.5	1	--	2	
1.6	1	⌐	2.500	2.500
1.7	2	⌐	3.500	2
1.8	3	X	5	1
2.1		--		
2.2		--		
2.3		--		

DELAY SETUP

INPUT SIGNAL
1 - Input

TRIGGER DETECTION
⌐ rising

DELAY TIME [s]
2.500

PULSE DURATION [s]
2.500

Configuration part of software user interface

Available accessories:
- Fiber cables
- Fiber-to-BNC converter
- BNC-to-fiber converter

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