

Master-8 & Master-8-CP

Programmable Stimulator / Pulse Generator



Master-8 is an eight channel general purpose stimulator for nerve and muscle stimulation procedures:

All eight channels can be operated independently, or synchronized to produce complex patterns of pulses.

Use some channels to stimulate your preparation, while using other channels to trigger other instruments (oscilloscope, PC, etc.) in synchronization with the stimulation.

Master-8 is an extremely flexible system since:

As a **stand-alone** unit – All parameters are set by the front panel keys. You can switch between 8 stored experiments; each using all the eight channels.

When **connected to a PC** (via USB) – Download/upload new experiments. Your PC controls and modifies the parameters of Master-8 in accordance with the feedback from the experiment.

You can use the powerful **scheduler** in order to modify parameters and switch between experiments at scheduled times.

Master-8 is an extremely reliable system as:

Wide time range – interval time between pulses/trains from 60 μ sec. (16,666 PPS) to 3999 sec. (1/3999 PPS).

4 digits resolution – For example: Set the pulse delay to be 10.01 millisecc.

You can **modify parameters while stimulating** – you don't have to stop the experiment.

For example: while stimulating, switch the stimulation rate from one range to another (e.g. from 98 PPS to 102 PPS).

Simple switch-off the stimulation – important for cases where immediate stimulation cut off is required.

Operating Modes

Each channel can operate in any of the following modes:

Free-Run: The channel delivers repetitive pulses.

Trig: Single pulse after triggering (manually, internally from other channels, or externally).

Train: Train of pulses after triggering.

DC: The channel delivers a DC output and is time independent, it can be turned on or off manually

Gate: Each time that an external signal is applied, the channel delivers repetitive pulses. Whenever the external input stops, the channel stops working.

Inter-Channel Connections

Each channel can be internally connected to any other channel with no need to connect wires between channels. Each channel can be internally connected to many channels simultaneously.

Parameters

Each channel operates with the following ranges:

	MIN	MAX	
Number of Pulses per Train	1	59,990	
Pulse Duration	40 μ s	3,999 s	8 decades
Delay Time	100 μ s	3,999 s	> 7 decades
Interval Time (1/time)	60 μ s	3,999 s	> 7 decades

Voltage Range

Each channel can deliver output pulses with amplitudes ranging from -10V to +10V and with maximum current of 20mA.

Multilevel Pulses

Three additional outputs deliver combined multilevel pulses:

Out 2+3	Bi-level pulses (e.g. +/- pulses)
Out 6+7+8	Tri-level pulses
Combined Output	Up to 7 level pulses

Two Additional Clocks

In addition to its standard 8 channels, Master-8 features 2 internal clocks:

The first clock counts the time in seconds up to 24 hours and is used to measure the time elapsed from an event (e.g. the beginning of the experiment). The second clock counts the time in tenths of seconds up to 1 hour and is used to measure intermediate times.

Rack Mounting

Master-8 can be mounted in a standard 19-inch rack.

Regulatory Compliance: UL and CE

Master-8 has not been approved for direct patient use.

Keywords:

Master-8 Pulse stimulator, Master-8 Pulse generator, stimulus generator neuro-physiological stimulator, Master-8 generator, Research multi pulse stimulator, pulse timer.