

Master-9 Pulse Stimulator

New

*User friendly
and easy to operate*

Download now
New Upgrades
For Master-9
It is **Free!**



5-Year Warranty!

- 9 independent channels
- Front panel touch screen
- Repetitive, Single, Twin and Train outputs
- Record patterns, and deliver recorded patterns
- Switching between independent experiments
- A stand-alone stimulator that can also be programmed via a PC
- Firmware upgrades via the USB interface

Outstanding Features of the Master-9:

9 channels with repetitive, single and train outputs.

Monophasic and biphasic pulses and ramp outputs.

NEW – Random interval times between pulses

NEW – Download, save and deliver waveforms that you set in Excel files (up to 32K points)

NEW – Record external waveforms, save and deliver them (e.g. SINE WAVE)

NEW – Real time: Record the membrane potential and deliver the inverted potential (e.g. inverted action potential)

The waveform is stored in the memory of the Master-9 even after disconnecting the source. The recorded waveform can now be delivered in all the modes of operation: FREE-RUN, TRIG, TRAIN, and TWIN modes.

Save up to 9 independent recorded waveforms, one for each paradigm.

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

All channels can be operated independently, or synchronized to produce complex paradigms (e.g. Theta-Burst).

Modification on-the-fly:

modify parameters without stopping the stimulation. For example, while stimulating, switch the stimulation rate from one range to another (e.g. from 98 PPS to 102 PPS).

Wide range of time intervals between pulses/trains:

Intervals from 40 microsec to 3,999 sec!! frequencies from 25 KHz, 8 decades.

ΔV Voltage steps

Each channel can deliver ΔV voltage steps, even for biphasic pulses.

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

A stand-alone stimulator that can also be programmed via a PC.

As a stand-alone unit: All parameters are set by the front panel touch screen. You can easily switch between 9 stored independent experiments. Each experiment uses all channels.

When connected to a PC (via a USB interface):

upload and download new experiments.

Control and modify Master-9 parameters from a PC in accordance with experiment feedback.

Scheduler:

use the powerful scheduler to modify parameters and switch between experiments at scheduled times.

Operating Modes

Each Master-9 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).

Twin: Twin pulses after triggering.

Train: Train of pulses after triggering.

DC: The channel delivers a DC output independent of time settings.

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

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 multiple channels simultaneously.

Parameters

Each channel operates within the following ranges:

Parameter	MIN	MAX
Number of Pulses per Train	1	59,990
Pulse Duration	4 μ sec	3,999 sec
Delay Time	4 μ sec	3,999 sec
Interval Time (1/rate)	40 μ sec	3,999 sec

Voltage Range

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

Combined Pulses

Three additional outputs deliver programmable combinations of pulses.

Two Additional Clocks

In addition to its standard 8 channels, Master-9 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 (for example, the beginning of the experiment). The second clock counts the time in tenths of a second up to 1 hour and is used to measure intermediate times.

AC Power

110/230 Volt, 50/60 Hz.

Rack Mounting

Master-9 can be mounted on a standard 19-inch rack.