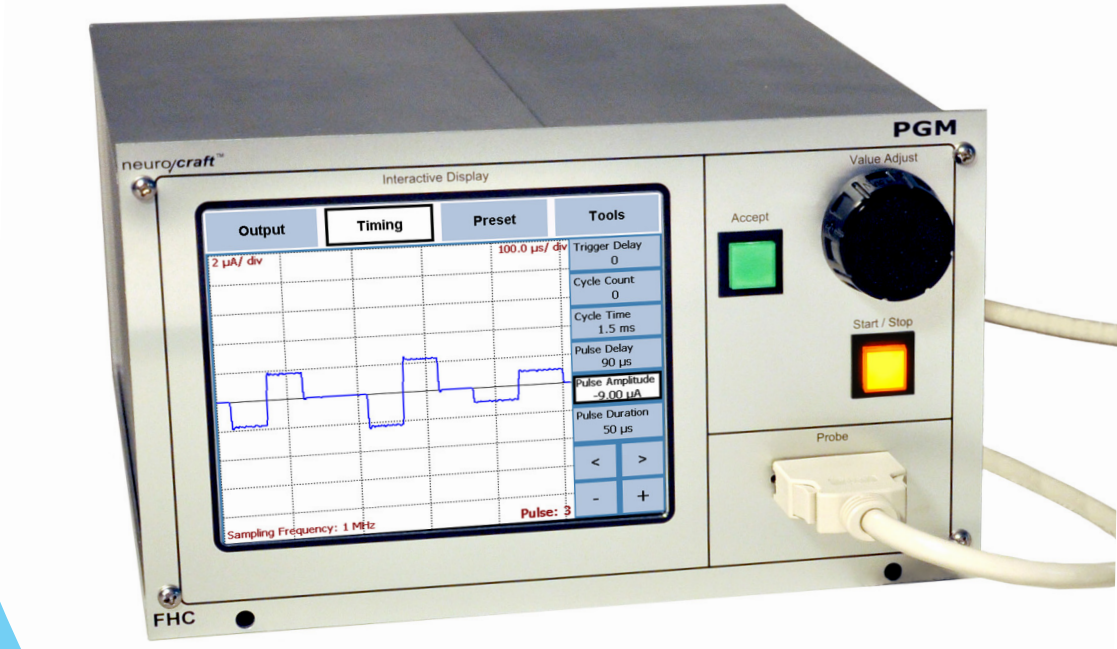
FHC

Neural microTargeting™ Worldwide



Neuroscience Research

StimPulse

StimPulse

The neuro/Craft™ StimPulse Electrical Stimulation System is comprised of two devices, the PGM Pulse Generator Module and the ESG Electrical Stimulus Generator, that deliver isolated electrical stimulation in a wide range of user-defined timing and pulse parameters.

Touch Screen – Intuitive, visual touch screen base user interface makes it easy to create arbitrarily complex stimulation patterns.

Real Time – Real time monitoring of stimulus output across isolation barrier.

Flexibility – The Pulse Generator Module (PGM) provides a broad spectrum of timing control parameters, from simple to complex, without the need for additional channels or devices. A wide range of waveforms are supported including monophasic or biphasic square, charge-balanced biphasic, ramp, sine, zeta, and multi-level rectangular. Arbitrary waveforms are easily imported or exported from Matlab, or similar general-purpose waveform editors, through USB port connections. Simple or complex pulse timing trains of 1 microsecond resolution are created through an intuitive, graphical interface, or imported through the USB.

An onboard digital signal processor (DSP) performs real-time control of the operation. The PGM is fully customizable through simple firmware updates using USB ports. Additional USB interfaces to a PC, external storage device, keyboard and mouse are also provided.

The PGM's intuitive user interface supports straightforward creation and storage of multiple user presets. Easy import/export functionality allows sharing of these presets between devices, as well as convenient storage.

Performance – The ESG Electrical Stimulus Generator delivers a galvanically isolated constant current or voltage with a compliance range of +/-125V. User-configurable features include AC/DC output coupling and mulitiple chassis shielding options.

Safety – To protect subjects, the ESG and PGM automatically shut off if output exceeds set voltage/current parameters. The mini transformers provide high output isolation characteristics. The microelectrode cabling is designed with "No Touch" connections.

Feature Rich – The compact PGM may be rack mounted or set on a desktop. The ESG is linked to the PGM by a 3m data cable, allowing placement close to the preparation. Digital inputs include programmable triggering options, and outputs conveniently link to recording and behavioral systems. The PGM may also provide timing for other lab devices. The touch screen interface doubles as a graphic display of the ideal or actual output during the experiment. A secondary analog output of the ideal or actual stimulus output is provided for viewing or recording.

- Simple or complex timing trains of 1µsec resolution in a single channel device.
- Medically isolated constant current or voltage with a compliance range of +/-125V.
- Monophasic or biphasic, charge-balanced, and multilevel rectangular pulse output with additional ramp, sine, zeta, and arbitrary waveform support.
- Built-in viewing function displays ideal or actual stimulus delivered during output.
- Custom waveforms and trains can be imported from Matlab or similar general-purpose waveform editors via USB port.
- Digital inputs/outputs for interaction with recording and behavioral systems, or to provide timing for other lab devices.
- Safety output shutoff if actual voltage/current exceeds set parameters.
- User-configurable AC/DC coupling of the output and multiple chassis grounding options.
- Preset functionality allows storing of specific parameter settings for later recall.
- Factory loaded presets provide convenient templates for startup programming.
- Fully customizable for specific application needs through downloadable firmware upgrade.
- Onboard Digital Signal Processor (DSP) performs real-time control of the operation. Flexible firmware and USB ports allow updates and customization through flash upgrades.
- Desktop or rack mountable.

Ordering Information:

55-60-0 – PGM Pulse Generator Module
55-65-0 – ESG Electrical Stimulus Generator

Replacement Items:

55-65-0-01 – ESG Output Cable Pair (2')
55-65-0-02 ESG – Output Cable Pair for FHC Microelectrodes (2')
55-65-0-04 – Communication Cable (5')
55-00-4 – BNC Adapter Cable
55-00-9 – Male Phono Patch Cable

Additional Items Required for Operation:

55-XXX – Line Cord (country specific)

Optional Accessories:

55-11-0 – SAF Rack Frame for Stand-Alone Modules
55-00-10 – USB Mouse
55-00-11 – USB Keyboard
55-00-12 – Stylus
55-00-13 – Stimulus Output Extension Cable (2')

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