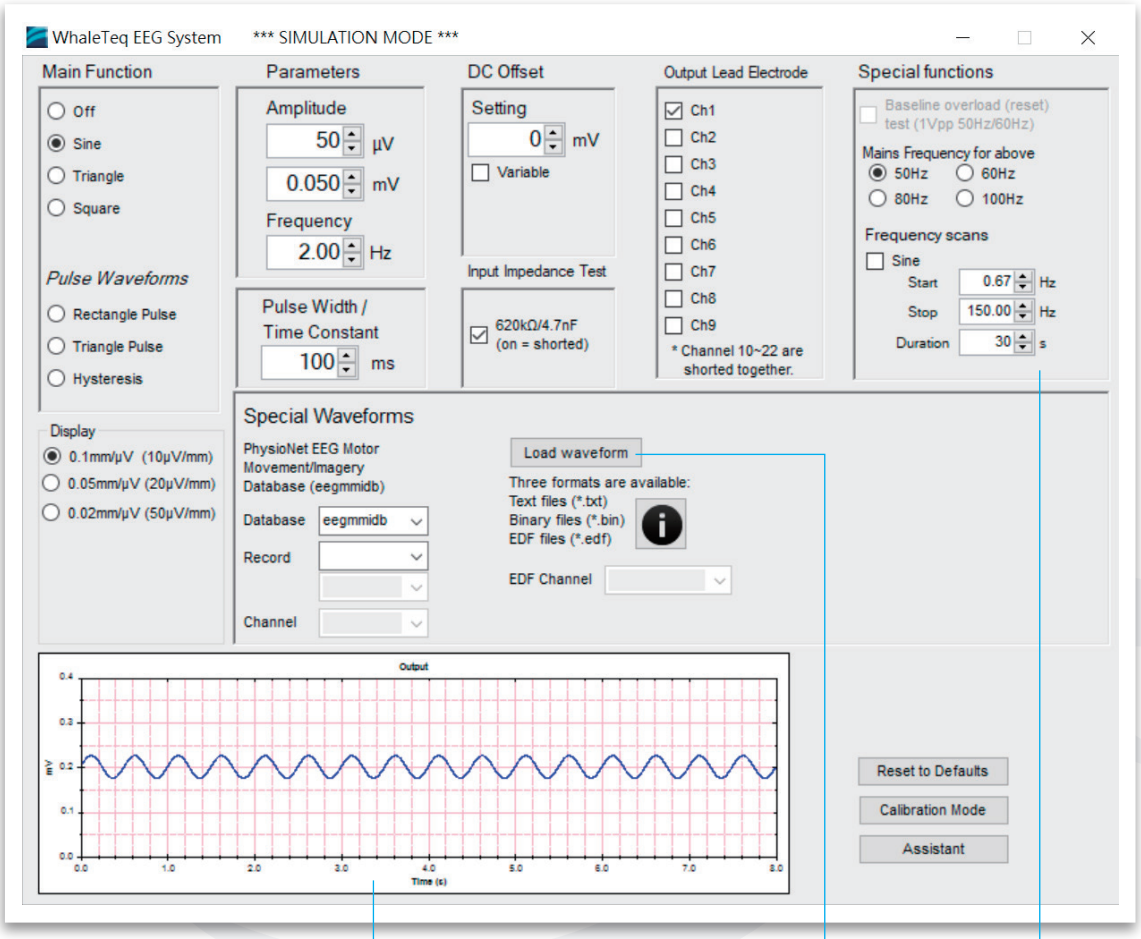
SEEG 100E

EEG Performance Tester

Your EEG Simulator Designed for R&D, Regulatory Compliance and Production Run Testing

- Designed for the latest EEG standard IEC 80601-2-26:2019
- Sophisticated electrical and shielding design enables the test system to output 1µV signal
- 9 channels with auto-select switches for user to test performance individually
- Built-in test circuits as defined in EEG standards with selection of 620kΩ/4.7nF for input impedance test
- Able to load and replay files in PhysioNet's EDF format, binary format and text format
- IEC 80601-2-26 helper simplifies the medical standard with test sequences, options, parameters and pass criteria
- Software Development Kit (SDK) assists user to develop customized or automated test software with less efforts

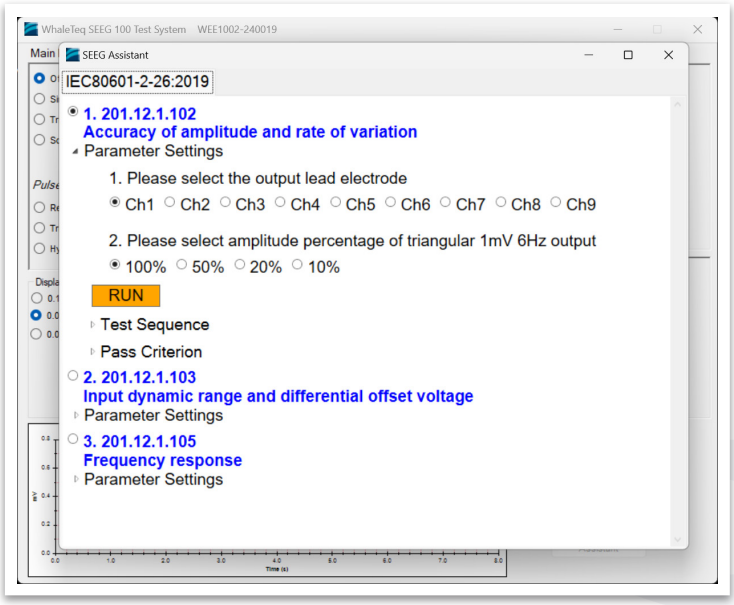
Simple and Effective Tool to Verify EEG Performance



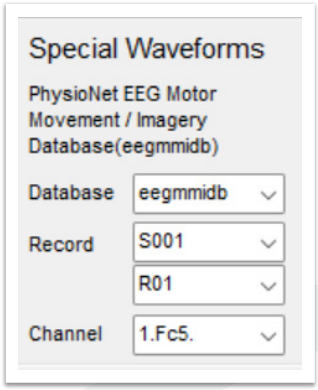
Real-time waveform display

Adjustable parameters per IEC 80601-2-26 required

Load customized waveform format



Optional IEC 80601-2-26 helper simplifies the medical standard into required parameters, test sequences and pass criteria



Easy to download PhysioNet waveforms via EDF File Manager

Specifications

Technical Specifications

Parameters	Specifications
Main output voltage accuracy	±1% for amplitudes of 50μVpp or higher
Main output voltage resolution (DAC resolution)	0.5μV
Frequency / pulse repetition rate accuracy	±1%
Pulse duration / timing accuracy	±1ms
Resistor tolerance	±1%
Capacitor tolerance	±5%
Precision 500:1 divider (50kΩ : 100Ω)	±0.2%
Sample rate	5kHz ± 0.1%
DC offset (fixed, noise free, sourced from internal supercapacitor)	150mV ± 1%
DC offset (variable, may include up to 50μVpp noise)	Setting ± 1% or ±3mV
Power supply	USB +5Vdc supply (no separate power supply required) 0.5A (high power mode)
Environment	15 – 30°C (by design, not tested) 30 – 80% RH (by design, not tested)
Safety EMC standards	No applicable safety standards (maximum internal voltages 12Vdc) For EMC no testing performed. CE marking based on careful selection of parts, including USB protection IC, as well as special filters to reduce noise from microprocessor (8MHz) and DC/DC converter (200kHz).

Signal Type

Parameters		Setting Range	Default Values	Minimum Step Size
Sine	Frequency (Hz)	0.05 – 500Hz	10Hz	0.01
	Amplitude	(-2000) – 2000μV	100μV	1
Triangle	Frequency (Hz)	0.05 – 500Hz	10Hz	0.01
	Amplitude	(-2000) – 2000μV	100μV	1
Square	Frequency (Hz)	0.05 – 500Hz	10Hz	0.01
	Amplitude	(-2000) – 2000μV	100μV	1
Rectangle pulse	Frequency (Hz)	0.05 – 5Hz	5Hz	0.01
	Amplitude	(-2000) – 2000μV	100μV	1
	Pulse width	2 – 300ms	100ms	1
Triangle pulse	Frequency (Hz)	0.05 – 5Hz	5Hz	0.01
	Amplitude	(-2000) – 2000μV	100μV	1
	Pulse width	2 – 300ms	100ms	1
Hysteresis	Frequency (Hz)	0.05 – 500Hz	5Hz	0.01
	Amplitude	(-2000) – 2000μV	100μV	1
	Pulse width	2 – 300ms	100ms	1

Signal Add-on

Parameters		Setting Range	Default Values	Minimum Step Size
DC offset		(-1000) – 1000mV	0mV	1
620kΩ / 4.7nF (Turn on for short circuit)		on / off	Off	-
Noise	Main noise	50Hz, 60Hz, 80Hz, 100Hz (The 80Hz and 100Hz settings are for capacitance correction only, not for testing EEG.)	50Hz	-
Frequency scan (Sine)	Start frequency	0.67 – 500Hz	0.67Hz	0.01
	Stop frequency	0.67 – 500Hz	150Hz	0.01
	Duration	10 – 180s	30s	0.01
Output lead electrode		Ch1 – Ch9 (Ch10 – Ch22 are shorted together.)	Ch1	-

www.whaleteq.com
service@whaleteq.com
8F., No. 125 Songjiang Rd., Zhongshan Dist., Taipei City 104474, Taiwan
+886-2-2517-6255
+886-2-2596-0702