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Find the *Harvard Apparatus 50-7442* at our website: *Click HERE*

Dual Impedance Research Stimulator



- Single or repetitive pulses
- External trigger input for tetanic train stimulation

Dual Impedance Research Stimulator

This Dual Output Impedance Stimulator uses solid-state circuitry and has all necessary electronic systems to conduct experiments for teaching and advanced research. A built-in LED indicator flashes once for each output pulse which allows the user to monitor the output visually. A built-in audible monitor is also included.

The frequency is selected by a four-position calibration switch. In addition, a ten-turn multiplier control is provided ranging from 1 to 10, expanding the frequency range from 1 pulse in 10 seconds to 1,000 pulses per second i.e. 0.1 to 1000 Hz. The delay circuit provides a time delay between the synchronizing pulse and leading edge of the output pulse, allowing the oscilloscope time-base to be pretriggered so both stimulus and effect can be displayed in an optimal position on the screen. It also permits convenient accessibility when photographic copies of traces are required. A 'Delay Off' is provided when no time delay is desired.

The pulse width is selected by a four-position calibration switch. In addition, a ten-turn multiplier control is provided ranging from 1 to 10, expanding the pulse width range from 10 microseconds to 100 milliseconds. The voltage is selectable from 0 to 150 volts via a three-position calibration switch and 15-position multiplier control.

This stimulator has a three-position stimulus selector switch which provides either a single stimulus pulse, repetitive pulses or a tetanic train in the Gate-In position. In the single pulse position, a manual trigger switch initiates stimulus application and provides one pulse. Repetitive pulse stimulation for the preset parameters, initiates as soon as the switch is moved to the repetitive pulse position. Stimulation continues until the switch is moved from that position.

The Gate-In position provides a tetanic train conforming to the preset parameters, which is controlled by a 12 volt logic pulse supplied by a computer or another external device. More than one Stimulator may be used together by connecting the Gate-Out socket on the first Stimulator to the Gate-In socket on the second Stimulator. Now when the 12 volt logic pulse is received by the first Stimulator, both Stimulators will provide the tetanic train stimulation.

Catalog No.	Power
AH 50-7442	Dual Impedance Research Stimulator, 115 VAC, 60 Hz
AH 50-7459	Dual Impedance Research Stimulator, 230 VAC, 50 Hz

Specifications

Frequency:	
Range	0.1 Hz to 1000 Hz; 1 pulse/10 sec to 1,000 pulses/sec, selectable
Calibration Switch	0.1, 1, 10 and 1,000 Hz, selectable
Multiplier Control	Selectable from 1x to 10x
Pulse Delay:	
Range	0.1 to 1,000 msec, selectable
Calibration Switch	OFF, 0.1, 1, 10 and 1,000 msec, selectable
Multiplier Control	Selectable from 1x to 10x
Pulse Width:	
Range	10 µsec to 100 msec, variable
Calibration Switch	0.01, 0.1, 1 and 10 msec, selectable
Multiplier Control	Selectable from 1x to 10x
Voltage Output:	
Range	0 to 150 V (floating), variable
Calibration Switch	0.1, 1, and 10 V, selectable
Multiplier Control	Selectable from 0x to 15x
Output Impedance	100 Ω for all ranges, additional 100 kΩ when voltage output calibration switch is in the 10 V position
Synchronizing Output	Triggers oscilloscope time-base, isolated from stimulator output to avoid grounding preparation
Stimulus Control	Single or repetitive pulses; external trigger input provided
Power Consumption	10 W, maximum
Gate-In	+12 V logic
Gate-Out	+12 V logic
Front Panel Connectors:	
Output	2 x 4 mm sockets
Earth	1 x 4 mm socket
Rear Panel Connectors	BNC type, Sync, Gate-In and Gate-Out
Dimensions, H x W x D	10 x 30 x 25 cm (4 x 12 x 10 in)
Weight	5 kg (11 lb)

Did you know ? **Harvard Apparatus now sells products for molecular biology. See Section N for complete details.**

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