

Compact, free-standing, battery powered pulse generator.



DG2A Train/Delay Generator

The DG2A is a compact, free-standing, battery powered instrument which can be used to generate trigger pulses required for repetitive stimulation. Also featuring DELAY controls, it is useful for determining nerve or axonal Effective Refractory Period (ERP) through the production of a delayed second pulse.

Various modes allow output pulses to be produced singularly (SINGLE), continuously (FREE-RUN & GATED) or in a burst (TRAIN), with the burst/train duration and pulse frequency determined by the front panel controls. In each of the modes (except FREE-RUN), outputs can be initiated either by the front panel push button, a TTL compatible trigger/gating pulse or a suitable foot switch.

The unit has control of train duration over three full decades, pulse repetition rate (or frequency) within that train over five decades and control of the delayed pulse over three decades. It has two BNC output sockets (i) the SYNC output produces a pulse to trigger recording devices or synchronize other equipment and (ii) the OUT output produces either a delayed version of the same or pairs of delayed and non-delayed pulses.

Additional Specifications

Delay

Total range: 1 ms - 1200 ms in three overlapping ranges

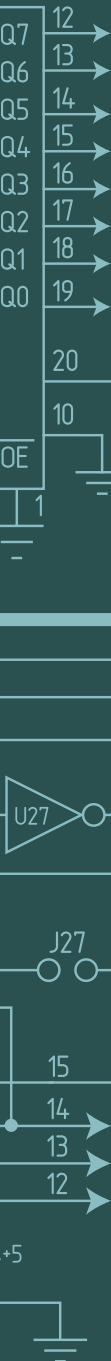
Control: Single turn control marked 1 - 12 ms with intermediate integer panel marks

Accuracy: $\pm 1\%$ at '1' and '12' marks, $\pm 5\%$ at intermediate marks

Multiplier: x1 ; x10 ; x100

Internal Jumper: Enable "x10" - giving a 10 ms - 12 sec total range. The front panel provides a check-box for marking with a waterproof pen when enabled.

Indicator: "TOO LONG" Red LED that flashes if DELAY is longer than can be produced for each pulse.



Outputs - SYNC

Connector: BNC socket

Signal: Positive going, 200µs pulse, TTL compatible pulse (5V amplitude).

Outputs - OUT

Connector: BNC socket

Signal: Positive going, 200 µs pulse, TTL compatible pulse (5 V amplitude).

Control: Selection of only the Delayed pulse (upwards) or both the Sync and Delayed pulses.

Indicator: Amber LED flashes for each OUT output pulse.

Internal Jumper: Enable "Active Low" - giving an Output that is Low during its active phase. The front panel provides a check-box to mark with a waterproof pen when enabled.

Power

Consumption: <2 mA

Internal: 9V PP3 - (IEC-6LR61) style. Alkaline preferred

Battery Life: Approximately 250 Hours with Ever Ready 6LF22 or Duracell MN1604

Dimensions

Size: 188 x 110 x 60 mm (w h d)

Weight: 490 grams (1 lb.) with battery fitted.

Please note that no accessories, other than a battery, are supplied.

Specifications of the DG2A

The unit always produces a pulse to synchronize other equipment at SYNC and a pulse delayed from SYNC by DELAY controls.

- **Modes:**

Control: Four position rotary switch. Movement of this control will immediately terminate any cycle and keep it in a Reset state for about 1 second. This is a useful feature should an exceedingly long cycle be selected by accident. Functions: SINGLE - Input signal triggers a single Output pulse. FREE-RUN - Continuous Output pulses as set by REPETITION controls. GATED - Input signal enables unit to produce pulses as set by REPETITION controls. TRAIN - Input signal Triggers unit to produce pulses as set by REPETITION controls for the time as set by the DURATION controls.

- **Input:**

Connector: BNC socket. Levels: TTL high (>1.5 V), TTL low (<0.8 V). Polarity: Active High (GATE/TRAIN) and Positive edge (SINGLE) or Active Low and Negative edge by Internal Jumper. Internal Jumper: Enable "Active Low" - allows a Low Input during its active phase. The front panel provides a check-box to mark with a waterproof pen when enabled. In Active Low an external contact closure can be used. Push-button: Has same function as a valid input signal. Indicator: "TOO FAST" Red LED flashes if a Trigger is received while the unit is busy.

- **Duration:**

Total range: 10 ms - 12 seconds in three overlapping ranges. Control: Single turn control marked 1 - 12 sec with intermediate integer panel marks. Accuracy: ±1% at '1' and '12' marks, ±5% at intermediate marks. Multiplier: x0.01 ; x0.1 ; x1. Internal Jumper: Enable "x10" - giving a 100 ms - 120 sec total range. The front panel provides a check-box to mark with a waterproof pen when enabled.

- **Repetition (Frequency):**

Total range: 0.01 - 1200 Hz in five overlapping ranges. Control: Single turn control marked 1 - 12 Hz with intermediate integer panel marks. Accuracy: ±1% at '1' and '12' marks, ±5% at intermediate marks. Multiplier: x0.01 ; x0.1 ; x1 ; x10 ; x100.

Isolated Stimulators Ordering Information

Part No.	Product Description	Price
DG2A	Train/Delay generator	\$ 856

U.S./Canada prices shown. International prices add 20%. Email or visit web store for latest prices.