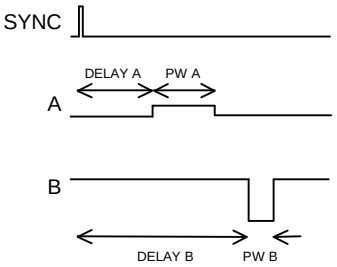


Fig. 1

- Two channels with independent amplitudes, polarities, delays and pulse widths
- Outputs can be inverted, complemented, and added together
- ± 10 Volt outputs, 10 MHz
- 10 ns rise and fall times
- User-friendly front panel
- Extremely versatile
- Dual pulse generator, delay generator, and DC power supply all-in-one!

The versatile Model AV-1023-C is a 10 MHz dual-channel general-purpose lab pulse generator and delay generator providing 0 to ±10 Volts, 10 ns rise time, variable pulse widths and delays, self-explanatory front panel controls and a heavy-duty metal chassis for low emissions and decades of trouble-free service.

Channels A and B share a common trigger source, but have independently controlled delays, pulse widths, polarities, and amplitudes (see Figure 1). The two output channels can be summed together, if desired. One output connector can supply either A or A+B, and the other can supply B or B+A. Two examples of summing are shown in Figure 2.

With same settings as Figure 1:

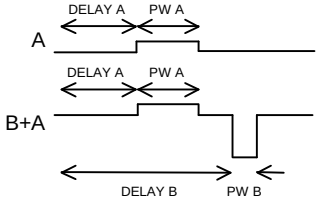
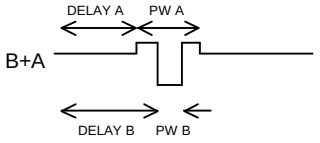


Fig. 2

Or, with reduced DELAY B:



The AV-1023-C can be triggered internally, with the frequency controlled by a 7-position range switch and a one-turn fine control, from 1Hz to 10MHz. The AV-1023-C can also be triggered externally by a TTL (0 to +5V) signal on the TRIG input. A SYNC output provides a narrow pulse to trigger oscilloscopes. The A and B channels are delayed relative to this SYNC output. The pulse widths and delays are variable from 50 ns to 0.5 sec and are controlled by 7-position range switches and one turn fine controls. The pulse widths may also be set to the "DC" mode, allowing each channel to act as a variable ±10 Volt, 200 mA DC power supply, or to supply a DC offset when summed with the other channel.

Channels A and B may be polarity-inverted (i.e. from positive to negative voltages) or logic-complemented (i.e. high and low voltage levels reversed) to provide a wide variety of output waveforms.

The output impedance can be set at 50Ω (for transmission-line backmatching) or at 1Ω for maximum voltage output.

With this degree of versatility, the AV-1023-C is a general-purpose workhorse - perhaps the only pulser-delay generator that you'll ever need!

Fig. 3 demonstrates the versatility of the AV-1023-C, by showing the ease with which the waveforms for measuring semiconductor switching recovery times can be generated:

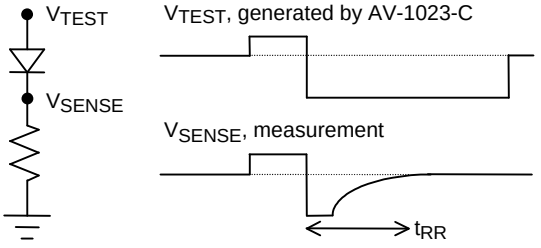


Fig. 3

Model:	AV-1023-C
Number of channels out:	Two
Pulse Repetition Rate:	1 Hz to 10 MHz
Amplitude (to 50 Ohms):	0 to ± 10 V (± 5 V if Z_{OUT} = 50 Ω)
Pulse width (PW):	50 ns to 0.5 sec
Rise time, fall time:	10 ns
DC offset:	0 to ± 10 Volts (± 5 V if Z_{OUT} = 50 Ω) when used in summing mode with one channel's PW set at DC
Source impedance:	1 Ohm or 50 Ohms
Polarity:	Positive or negative
Duty cycle (maximum)[1]:	0 - 3 MHz: 80%, 3 - 5 MHz: 70%, 5 - 10 MHz: 50%, 100% in PW DC mode
Overshoot, undershoot, ringing and slope aberration:	< ± 3% at amplitudes of >300 mV with outputs terminated in 50 Ω.
Propagation delay:	80 ns to 0.5 sec (Ext trig in to pulse out)
Trigger required (Ext trig mode):	+ 5 Volts, ≥ 40 ns (TTL) Trig input impedance: 1 kΩ
Sync delay, jitter:	35 ns to 0.5 sec, ≤ ±50 ps or ±0.05% (sync out to pulse out)
Sync output:	+2 Volts, 50 ns, will drive 50 Ohm loads
Signal connectors:	BNC
Power requirement:	120/240 Volts (switchable), 50 - 60 Hz
Dimensions (H x W x D):	100 mm x 215 mm x 375 mm (3.9" x 8.5" x 14.8")
Weight & chassis material:	4.5 kg (10 lbs), anodized aluminum, with blue-grey plastic trim
Mounting & Temperature range:	Any, +10° C to +40° C

1) The outputs can be logically-complemented, effectively extending the duty cycle range.