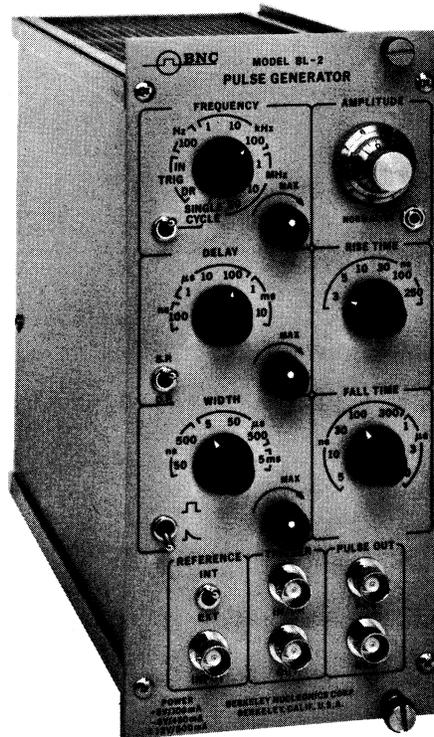


## Model BL-2



The Model BL-2 is a versatile, tail pulse generator capable of simulating the outputs from a wide range of detectors, photomultiplier tubes, and related electronics. It combines good linearity and stability with fast, narrow pulse capability. With its variable rise and fall times and its variable pulse widths, the Model BL-2 can produce short, fast pulses as well as longer, slower pulses. Double pulse capability and simultaneous positive and negative outputs are features that add to the BL-2's versatility.

# SECTION 1

## SPECIFICATIONS

<p><b>FREQUENCY</b></p> <p>Internal:</p> <p>External Trigger:</p> <p>External Drive:</p> <p>Single Cycle:</p>	<p>10 Hz to 50 MHz, continuously adjustable with coarse and fine controls.</p> <p>1 V positive pulse triggers a pulse (single or double), with internal delay and width controls operative.</p> <p>1 V positive pulse generates an output pulse with a width equal to the width of the incoming pulse; internal delay and width controls are inoperative.</p> <p>One pulse occurs each time the pushbutton is depressed.</p>
<p><b>DELAY</b></p> <p>Single Pulse Mode:</p> <p>Double Pulse Mode:</p>	<p>10 ns - 10 ms, continuously adjustable with coarse and fine controls.</p> <p>A single output pulse occurs which is delayed from the Trigger Out by an amount determined by the Delay controls</p> <p>Two equal width output pulses occur. The first pulse occurs when the Trigger Out does; the second pulse is delayed from the first by an amount determined by the Delay controls.</p>
<p><b>WIDTH</b></p> <p>Flat Top/Tail Pulse:</p>	<p>5 ns - 5 ms, continuously adjustable with coarse and fine controls.</p> <p>Toggle switch selects the output pulse shape. The width controls are functional only in the Flat Top mode.</p>
<p><b>TRIGGER INPUT/DRIVE</b></p>	<p>Positive 1 V pulse, 50 <math>\Omega</math> input impedance, <math>\pm 5</math> V maximum input.</p>
<p><b>TRIGGER OUT</b></p>	<p>Positive 3 V pulse, 10 ns rise time, 50 <math>\Omega</math> output impedance.</p>
<p><b>OUTPUT AMPLITUDE</b></p> <p>Flat Top:</p> <p>Tail Pulse:</p> <p>Amplitude Characteristics:</p> <p style="padding-left: 20px;">Temperature stability</p> <p style="padding-left: 20px;">Duty cycle variations</p> <p style="padding-left: 20px;">Linearity</p> <p>Normalize:</p>	<p>0.0 V to 2 V into 50 <math>\Omega</math>, 0.0 V to 4 V into high impedance, continuously adjustable with ten-turn potentiometer, 50 <math>\Omega</math> source impedance.</p> <p>0.0 V to 1.5 V into 50 <math>\Omega</math>, 0.0 V to 3 V into high impedance, continuously adjustable with ten-turn potentiometer, 50 <math>\Omega</math> source impedance.</p> <p>Less than 1% variation from 0 - 50<sup>o</sup> C.</p> <p>Less than 1% up to 90% duty factor.</p> <p>Less than 1% integral nonlinearity.</p> <p>Multiturn potentiometer will vary the amplitude up to 50%.</p>

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- SPECIFICATIONS -

POLARITY	Simultaneous positive and negative pulses are available.
<p>REFERENCE</p> <p>Internal:</p> <p>External:</p> <p>Input:</p>	<p>The output pulse amplitude is controlled only by the Amplitude and Normalize controls.</p> <p>An applied positive level controls the output pulse amplitude.</p> <p>+5 V maximum, 5 k input impedance.</p>
<p>RISE TIME (10 - 90%)</p> <p>Tail Pulse:</p> <p>Flat Top:</p>	<p>3 ns to 250 ns in six steps.</p> <p>4 ns to 250 ns in six steps.</p>
<p>DECAY TIME CONSTANT (100 - 37%)</p>	<p>5 ns to 10 <math>\mu</math>s in eight steps.</p>
POWER REQUIREMENTS	<p>+12 V at 500 mA, -12 V at 400 mA, +6 V at 80 mA, -6 V at 425 mA. (For power, suggest BNC Model AP-3 or AP-2H Power Supply.)</p>
MECHANICAL	<p>Triple-width NIM module, 4.05" wide by 8.70" high in accordance with TID-20893 (Rev. 3).</p>
WEIGHT	<p>4.5 lbs. (2 kg) net; 7.0 lbs. (3.2 kg) shipping.</p>