Inexpensive General Purpose Pulse Generator
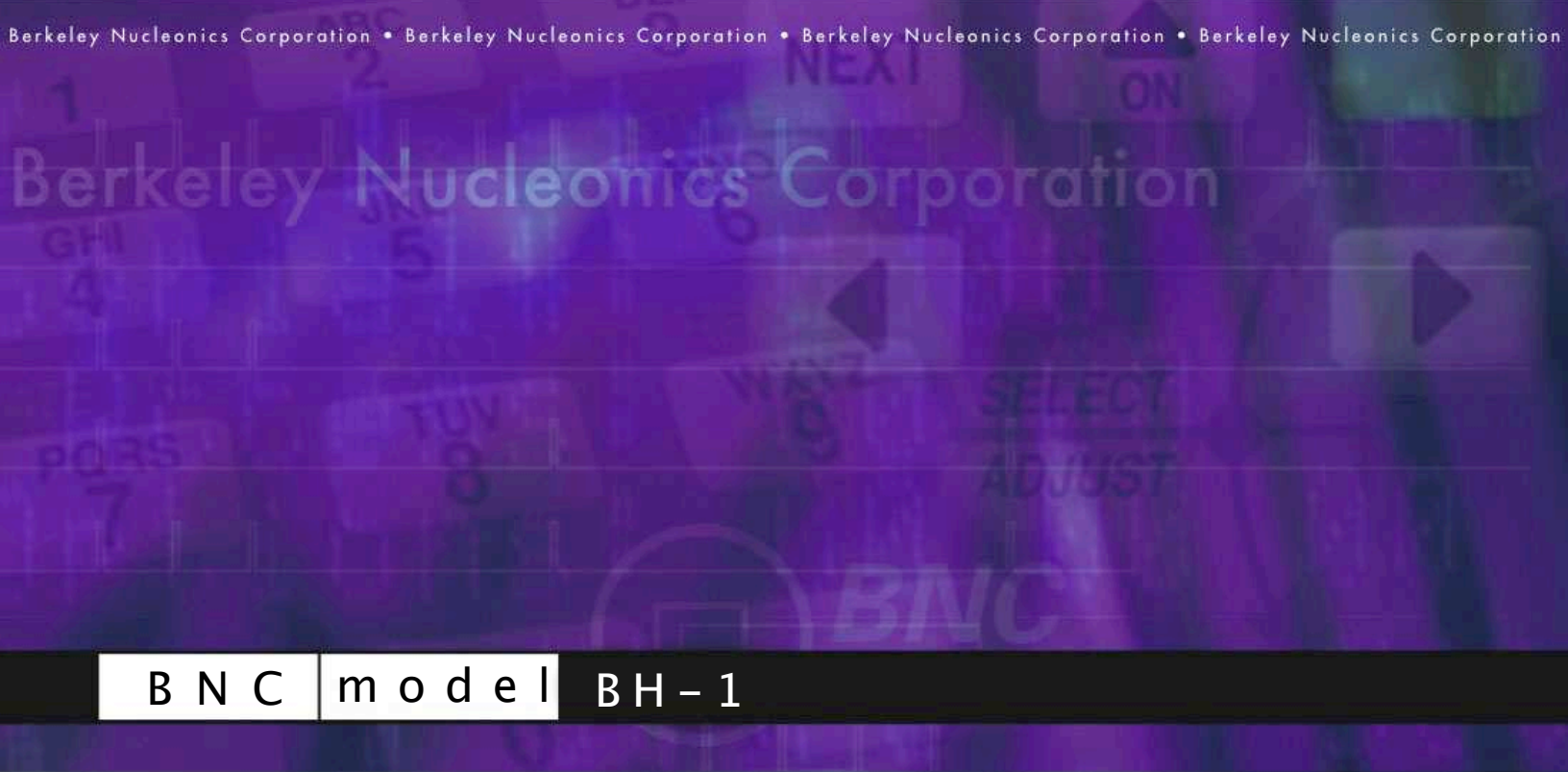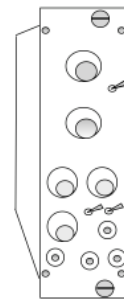
BNC

BNC model BH–1

MODEL BH–1

- Amplitude jitter: less than 0.002% rms
- Delay adjustable from –50 nS to 10 ms
- Integral linearity of amplitude ±0.1%
- Fall time 50 nS – 1000 /°s

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SPECIFICATIONS

The Model BH-1 is a tail pulse generator which simulates the broad range of pulses encountered in the nuclear field. Typical applications of the Model BH-1 include: determining the proper timing of linear gates and coincidence units, linearity measurements of amplifiers, threshold setting of discriminators and single channel analyzers, and measuring resolution o flow noise preamplifiers.

Frequency 10 Hz to 1 MHz, continuously adjustable.

External Trigger Requires 1 volt, positive pulse.

Single Cycle One pulse occurs each time the push button is pressed.

Single/Double Pulse This toggle provides for a pulse pair whose separation is varied by the delay controls. Minimum separation is 50 ns.

Rise Time of Output (10-90%) 20 ns to 50 us (in 11 steps), exponential shape and independent of decay time.

Decay Time Constant of Output(100-37%) 50 ns to 1000 us (in 11 steps), exponential shape and independent of risetime for decay/rise time >10.

Trigger Out Positive 3 volt pulse, 10 ns rise time, 0.2 us width, 50 ohms output impedance.

Delay -50 ns advance to 10 ms delay (between Trigger Out and leading edge of output pulse).

Output Amplitude Zero to 9.99 volts maximum. Adjustable by ten-turn potentiometer.

Attenuator X10 and X100 providing up to 1000: 1.

Integral Linearity of Output ±0.1%.

Duty Factor Effect Amplitude shift less than 0.1% below 30% duty factor. Duty factor in percent for tail pulses is defined as: (8 decay time constants/pulse spacing) X100.

Output Polarity Positive or negative.

Output Impedance 50 ohms.

External Reference Input ±15 volts max.

Jitter of Frequency and Delay Less than 0.1%.

Temperature Coefficient of Output Less than 0.03%/°C.

Amplitude Jitter (Resolution) Less than 0.01% peak, 0.002% rms of pulse amplitude.

Power Required +24 V at 50 mA, -24 V at 50 mA, +12 V at 175 mA, -12 V at 80 mA.

Mechanical Dimensions Double-width AEC module, 2.70 inches wide by 8.70 inches high.

Weight 3.5 lbs. net, shipping 7 lbs.

Generate Logic Pulses for Triggering, Delaying and Gating

Tail Pulses with Adjustable Fall Time