



BAK ELECTRONICS, INC. *Biomedical Instrumentation*

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Analog Delay

Model AD-3,6



0.2 TO 48 MSEC DELAYS, CONTINUOUSLY VARIABLE

4 Hz TO 10 kHz BANDWIDTH FOR ENTIRE RANGE

DUAL DELAY OUTPUT PORTS: ONE DELAYED TWICE TIME,
IDENTICAL FILTERING

OPTIONAL DELAY TIME DIGITAL DISPLAY - AD-6

Description:

The Model AD-3 is an instrument for delaying analog signals in time by the simple adjustment of a potentiometer allowing for continuous resolution of delay times. The delay can be adjusted from 0.2 msec to 48 msec.

X1 and X2 outputs are available on the front panel for special applications requiring two delayed outputs in which one delay is exactly one half the other. This is particularly useful for multiwindow spike discrimination (see Application Note). The signal bandwidth is between 4 Hz and 10 kHz for both outputs. The Model AD-3 utilizes charge coupled shift registers for delaying the analog information. It can also be ordered with LED readouts for displaying precise delay times: specify Model AD-6.

Much longer delays can be achieved by adjusting an internal trimpot. However, additional high frequency filtering may be necessary in order to suppress the clocking pulses when delay time is so extended. The Model AD-3 can be used in conjunction with the Model DIS-I Time Amplitude Window Discriminator as part of a spike recognition system for multiunit recordings. The Model AD-3 is of modular construction and slides easily into the Model RP-I rack mount power supply module cage system.

Specifications:

Input Resistance	100 kilohms
Input Coupling	AC
Input Dynamic Range	6 volts peak to peak maximum
Output Resistance	100 ohms X1 and X2 outputs
Bandwidth	4 Hz to 10 kHz (3 db down)
Cut-Off Slope	Low freq. 18 db/octave, High freq. 42 db/octave
Signal Polarity	Non-inverted
Gain	Unity
Delay	0.2 msec to 24 msec (X1 output), 0.4 msec to 48 msec (X2 output), (continuously variable)
Power Requirements	+15 volts @ 20 ma, -15 volts @ 40 ma, +5 volts @ 40 ma
Size	2.8"w x 5.25"h x 7.25"d
Weight	1 lb.

Other BAK Equipment often used with AD-3, 6:

DIS-1	Window Discriminator
PSI-I	Pulsed Sample/Hold Integrator

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