

military & commercial

DELAY LINES



MAGNETOSTRICTIVE ■ LUMPED CONSTANT ■ DISTRIBUTED CONSTANT



CONTROL ELECTRONICS COMPANY, INC.

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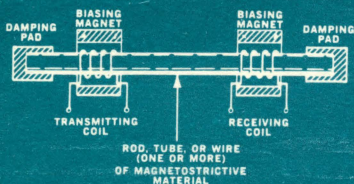
INTERNATIONAL SALES: EMEC Inc., 160 Terminal Drive, Plainview, N.Y. 11803
CABLE: Electronic, Plainview NEWYORKSTATE



To keep pace with a constantly improving technology, CEC offers a complete series of **tested** and **proven** Delay Lines to meet every requirement. At CEC, many years of experience go into supplying consistently high performance at lowest possible cost. Delay Lines shown here the typical, and are merely indicative of the wide range offered by CEC . . . most deliverable from off-the-shelf stocks. Custom-designed units with varying size, weight, volume, terminal or mounting configuration, delay to rise time, bandwidth, VSWR, etc., are also available at low production prices. For simplified ordering, use the handy CEC Engineering-Specification Card.

MAGNETOSTRICTIVE DELAY LINES

In magnetostrictive delay, an electrical signal is converted into a sonic wave which travels through a treated nickel alloy wire and is re-converted to an electrical signal at the "far" end of the wire. The wire length is an accurate measure of the delay time. CEC Magnetostrictive Delay Lines feature substantially long delay capability (to 10,000 microseconds in one unit) and low temperature coefficients (1.0 ppm/°C). Write for specification sheet MS-6402.

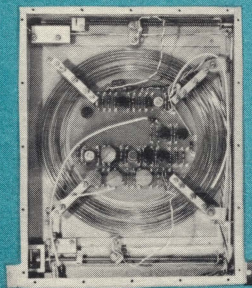


MAGNETOSTRICTIVE DELAY SCHEMATIC

Conversion to a sonic wave, then reconversion to an electrical signal, attenuates the signal as much as 70 db. Most electronic circuits cannot afford to suffer a 70 db loss in signal strength. However, CEC offers Magnetostrictive Delay Lines either without or with unity gain circuits which restore signal strength to its original level. When several delay lines are stacked in series for increased delays, each delay line should include unity gain output circuits to restore signal to its original level at the output of each line.

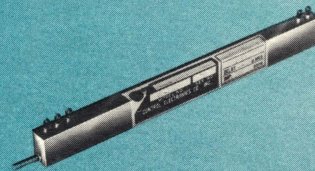
FIXED DELAY MAGNETOSTRICTIVE LINE

Delays to 5,000 microseconds available in 6" x 6" x 1" case; to 10,000 microseconds in 8" x 8" x 1". Circuitry for unity gain included.



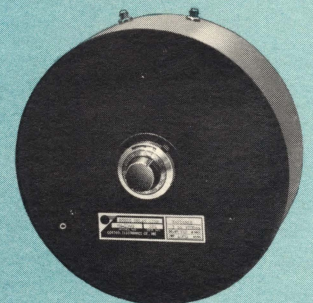
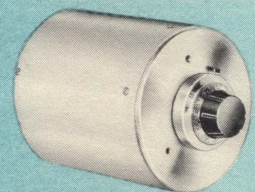
SHORT DELAY — VARIABLE MAGLINES

Used as a variable or fixed delay line. Infinite resolution. Unique clutch arrangement at ends of stops. Ideal for PC boards.



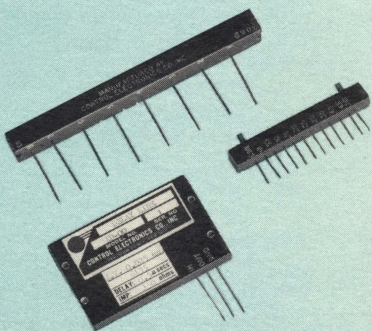
LONG DELAY — VARIABLE MAGLINE, KNOB ADJUSTABLE

Up to 10,000 microseconds delay available in single units. Case dimension: 4" OD x 4 1/2" long or 9" OD x 3 1/2" long.



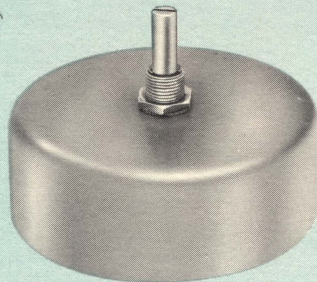
LUMPED CONSTANT DELAY LINES

Lumped Constant Delay Lines offer microsecond delay times in extremely compact packages. Delay is achieved through the usual LC circuits which are matched and designed to offer minimum attenuation of signal . . . for use without additional amplification. Units are hermetically sealed with temperature coefficients of approximately 45 ppm/°C. Write for Specification Sheet LC-6404.



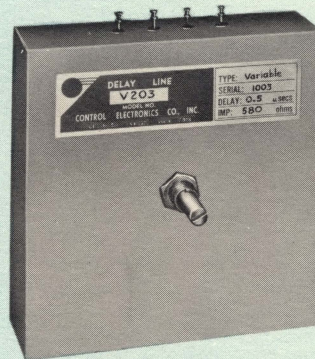
COMPACT, FIXED DELAY LINE FOR PC BOARD APPLICATION—FULLY ENCAPSULATED

Many models with delays to 10 microseconds available . . . attenuation is only 1.0 db. All connections from one face for plugging into PC Board and dip soldering.



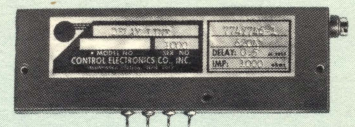
MINIATURE ROTARY VARIABLE DELAY LINE

Only 3" diam. x 1" high unit provides a variable delay line with delays to 3 microseconds . . . resolution 1:120. Sixty position selector switch can be supplied with motor drive.



STEP VARIABLE DELAY LINE

Delays to 12 microseconds available in 60 steps or less. Can be supplied with motor drive. Dimensions: 4 1/4" x 4 1/4" x 1 1/4".

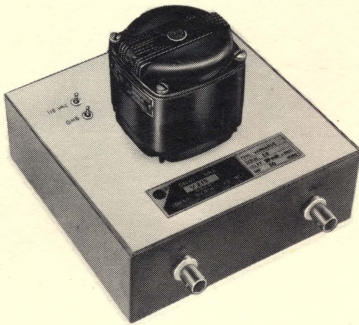


MINIATURE VARIABLE DELAY LINES—TO 2 MICROSECONDS

Can operate at 500 vdc. Screwdriver delay adjustment shown at right end of unit. Dimensions: 4 3/4" x 1/2" x 1 1/2".

HIGH FREQUENCY DELAY LINES

Delays with 500 Mc/s bandwidths available. Write for Specification Sheet HF-6401.



MOTORIZED VARIABLE DELAY

With extraordinarily high bandwidth.

AUDIO DELAY LINES

Delays to 100 milliseconds in one unit with excellent phase, attenuation, impedance and other specifications. Write for Specification Sheet AD-6402.



CASCADED DELAY CABINET

Weighs only 200 lbs. Provides delay of 100 milliseconds (four 25 ms units) with taps at every 1 ms . . . within 1%. Bandwidth: 400 cps.

DISTRIBUTED CONSTANT DELAY LINES

Distributed Constant Delay Lines employ a ground plane or metallic ribbon as the capacitance of an LC network . . . and are generally less expensive than Lumped Constant Delay Lines. Units are hermetically sealed with temperature coefficients of approximately 50 ppm/°C. Write for Specification Sheet DC-6401.



SQUARE UNIT

For easy mounting to PC board. All connector pins extend from one surface.



FIXED DELAY LINE

Compact and accurate with delays to 4 microseconds in this sections. Using several alternating "lines" running back and forth, any delay can be achieved.

Distributed by: