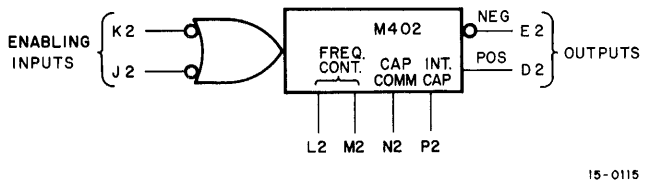
M402
Photo Mod Clock

The 402 module contains a stable RC-coupled multivibrator that produces standard 100-ns timing pulses at adjustable repetition rates.

The module is intended for use as a source of timing signals in a digital system. Repetition rate is adjustable from 1 Hz to 500 kHz in two ranges. An internal capacitance, selected by a jumper wire, facilitates coarse frequency control; and an internal light source provides continuously variable adjustment within the selected range.



M402 Simplified Diagram

Coarse Frequency Range

Frequency Range	Cap	Interconnections Required
250 Hz to 500 kHz	0.01 μF	None
1 Hz to 6 kHz	2.00 μF	N2 - P2

A 2-input OR gate input is provided for start-stop control of the pulse train. A level change from HIGH to LOW with fall time less than 400 ns is required to enable the clock.

Fine frequency adjustment is obtained by applying a control voltage to pins L2 and M2. This voltage changes the intensity of a lamp inside the module, which in turn adjusts the recovery time of the multivibrator. The voltage applied between pins L and M should be limited to the range of 0V to 5V.

The following are the input, output, and power characteristics of the M402 module.

INPUTS: Each ENABLE input presents 1 unit load. For input characteristics of pins L and M, refer to text above.

OUTPUTS: Output pin D supplies positive 100 ns pulses capable of driving 10 unit loads. Output pin E supplies pulses that are the reverse of pin D. This output is capable of driving 9 unit loads.

POWER: Power dissipation of the M402 module is 5V at 100 mA (maximum).