

LM317 Digital Controlled Modulator

- [10 Channel LM317 driver using CD4017](#)

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Using a 10 channel decoded decade counter CD4017, and a 7414 Schmidt Inverter to flip-flop toggle the ENABLE and RESET pins on the decade counter, which allows controlling a specific number of sequential channels activated, each train. The downside, is that no Gate Off Time is possible, as the counter just restarts at channel 1 during the cycle.

CD4017 10 channels directly drive 10 - H11D1 opto-couplers. At +5V REG TTL, 82R nets 60mA max current for the photo-diode. 2nd stage pots are then used to attenuate the pulldown current of the LM317 in sequenced order.

Attenuation can be linear, as in consecutive 10% increments, or any combination desired to achieve various waveshapes

LM317 Power supply adapted from Max Miller's board design.

Duty cycle is strictly limited to 50%.

[LM317-Modulated-Variable-Supply.png](#)