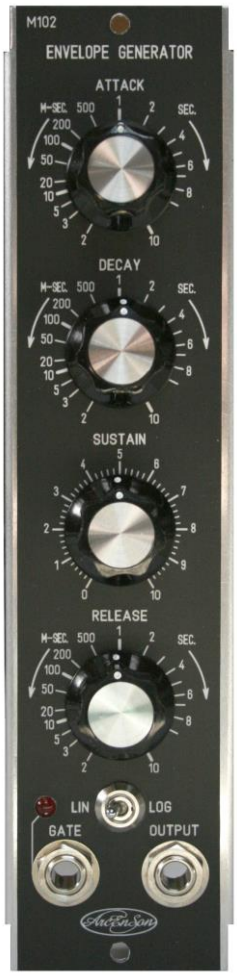
# M102 Envelope Generator




## *PIN ASSIGNMENTS*

| | |
|---|---|
| 1 | -15V |
| 2 | A GND |
| 3 | A GND |
| 4 | +15V |
| 5 | D GND |
| 6 | +5V |

## *FUNCTION DESCRIPTION*

At the introduction of a positive Gate pulse of 1.5Vdc minimum the M102 Envelope Generator produces a single voltage contour whose Time/Voltage variation is determined by delay potentiometers which are: **ATTACK, DECAY, RELEASE** and a time constant sustain level pot named SUSTAIN. A Gate zero voltage brings the actual voltage level to the **RELEASE** pot regardless of the actual **ATTACK, DECAY, SUSTAIN** positions. The **RELEASE** generates the final decay curve to zero. The M102 Envelope Generator needs a positive Gate pulse to start the envelope curve. A single zero voltage drop of the input Gate signal in the middle of an envelope generation will start back the envelope process from the actual voltage level.(see figure 1) The **LIN/LOG** switch gives choice of the curve caracteristics. The circuit diagram is mostly from the Tom Wiltshire's VCADSR project (www.electricdruid.net) but the PIC .ASM file has been slighly altered by myself (pots lookup tables) to precisely track the **ATTACK, DECAY, RELEASE** timings from 1msec. To 10sec.

## *ELECTRONIC SPECIFICATIONS*

**Panel Size:** Single width 2.125"w x 8.75"h.
**Attack Time Range:** 1ms – 10 sec
**Decay Time Range:** 1ms – 10 sec.
**Release Time Range:** 1ms – 10 sec.
**Sustain Level Range:** 0-5 volts
**Output Level:** 0-5 volts
**Output impedance:** 1k
**Gate input Threshold:** 1.5 volts
**Gate input impedance:** 100k
**Power:** +15V@3mA, -15V@3mA, +5V@5-16mA

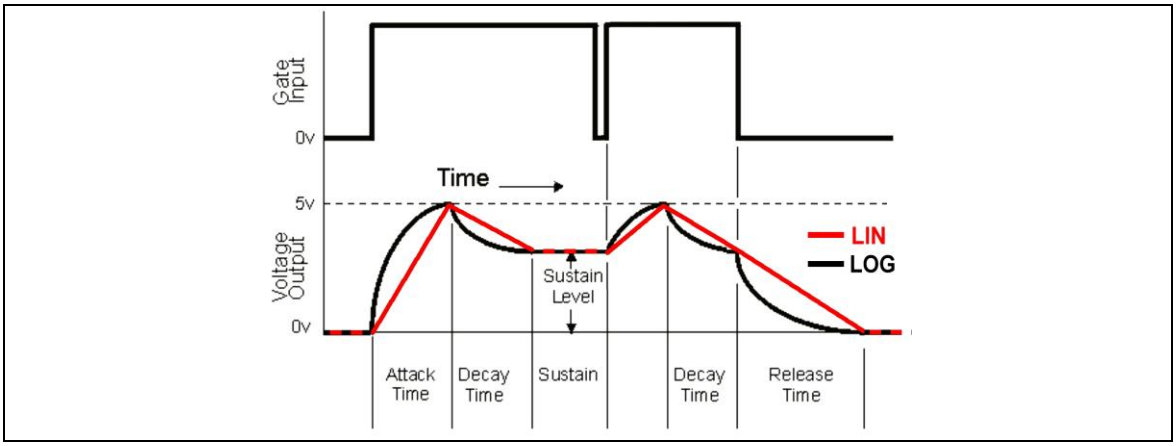



Figure 1