



**Basic voltage controlled amplifier for electronic music use.**

### **Advantages--**

- 1) simple, reliable, uses a single dirt-common pentode--pinout shown will work with almost any 7-pin miniature pentode or tetrode (pinouts 7BD, 7BK, 7CH, 7CM, 7DF, 7EW, 7FQ, 7GA, possibly others)**
- 2) works with ANY vacuum tube having a screen grid--even large transmitting tetrodes will work**
- 3) imperfect, also making it useful to musicians looking for unique tonal effects--distortion depends on tube type and is usually in the range of 1% to 5%, high but acceptable for electronic-music applications**
- 4) No one will patent or copyright this--I found it in several old textbooks. There is too much prior art to allow patenting.**

### **Disadvantages--**

- 1) some pentodes/tetrodes work better than others, having more gain etc.**
- 2) output needs buffering to drive solid-state**
- 3) high output signal might need to be divided down**
- 4) some tubes will have hum induction problems if the heater is run from AC power--clean DC is needed, unless a tube with a coiled filament is used, such as most 6AU6s or EF86s.**
- 5) might be a "thump" at output when using fast attack or decay times in control voltage--usually adjusting these times can avoid a thump.**