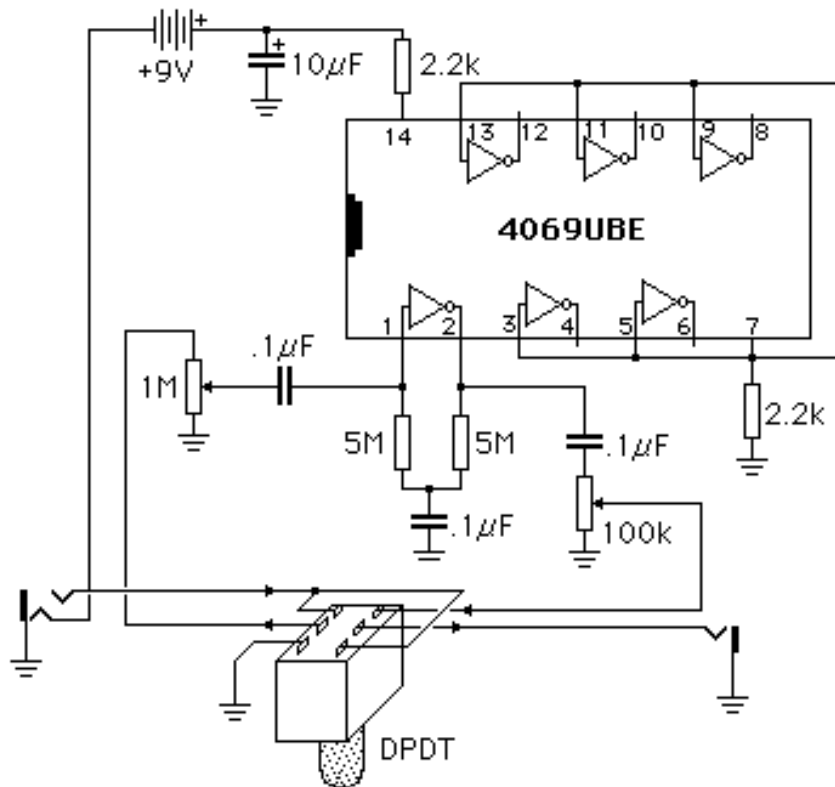


## CMOS Boost



v1.0  
11/02

A decent clean boost can be made using a few parts and a 4069UBE CMOS hex inverter chip. The inverter at pins 1 and 2 is biased into linear region by two 5M resistors, the .1μF cap between them helps keep the input from being loaded down and keeps gain up by reducing negative AC feedback. The inverter is run at full tilt, the amount of boost being regulated by the 1M pot at the input. The 2.2k resistors at pins 7 and 14 help keep power draw low and the output symmetrical. Unequal resistors results in less symmetrical clipping.

Despite the less-than-perfectly-linear performance as a audio amplifier, the CMOS inverter is quite at home with guitar signals. The inherent non-linearities suit electric guitar well, and even at maximum boost is not harsh and nicely musical in quality.