

ALTERED AUDIO AMP

The March 1989 issue was up to **Radio-Electronics'** usual very high standards. I especially enjoyed the article entitled "High-Powered Hi-Fi Audio Amp for Your Home or Car."

What caught my eye was the power converter used to step up the voltage from 12 volts to 75 volts for the final stage (page 53). Winding that transformer may prove difficult. (Of course, you can always break down and buy one, but that isn't as much fun.)

My alternative method, shown in Fig. 1, borrows a page from the old-time radio power supplies used in cars in the 1920's and '30's. The heart of the supply is two DPDT relays that are rated at 5 volts. You might have to fool with some of the values to get it to work properly, but the design is very forgiving, and if you know your P's and Q's with a VOM you might not need a scope.

Each relay is wired as a free-running astable oscillator, and because you can just about pick the coil resistance you like best, getting the right value for the commutating capacitor is not a real problem.

Note that this commutating capacitor is made from the two 100 μ F electrolytic capacitors with the 1N4001 diodes across them. This combination simulates a non-polarized (NP) capacitor. Note that the cathodes of the diodes, and the positive (+) ends of the capacitors face one another.

The frequency of oscillation is usually about 1 kHz, which causes the relays to hum faintly. That

