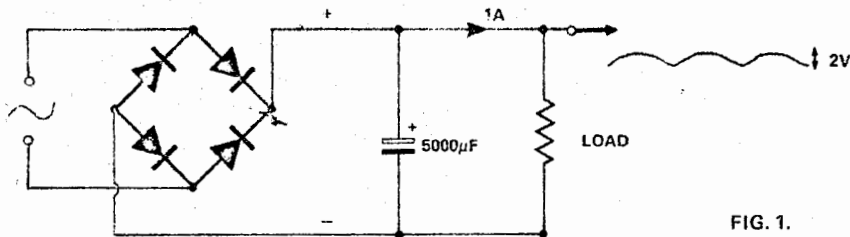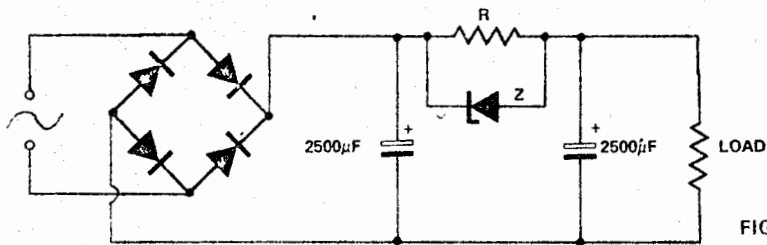# REDUCED RIPPLE AT LOW CURRENT

FIG. 1.

FIG. 2.

In the normal circuit (Fig. 1) the ripple at 1 amp is at least 2 volts. Cheap power amps use this circuit (with low supply ripple rejection) and produce annoying amounts of hum at low signal levels.

In the circuit in Fig. 2 the ripple is considerably reduced at low levels and at high currents the supply voltage is only minimally affected.

Maximum low ripple current $(Im) = Vz/R$ where Ptot R must be more than $Vz^2/R = Im\ Vz$. $IM =$ maximum total current so $P_{tot} = IM \cdot Im\ Vz$. A typical set of values for $Im = \frac{1}{2}Amp$ is $Vz = 3V$, $R = 1\frac{1}{2}$ ohms.