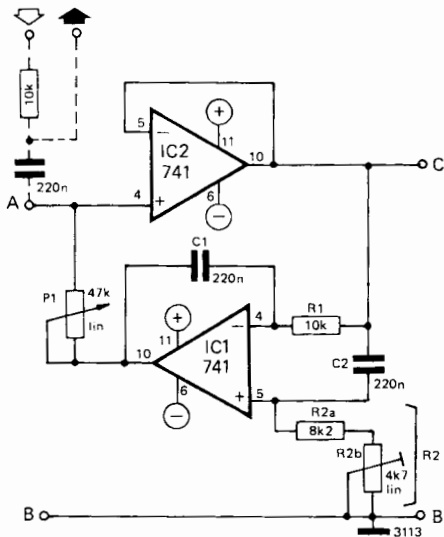


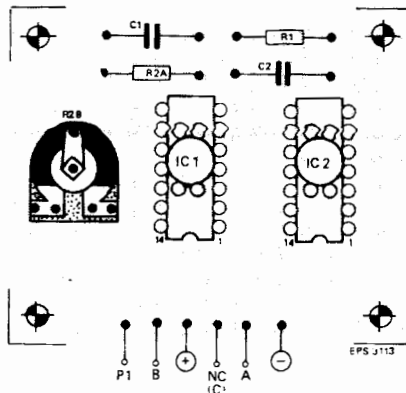
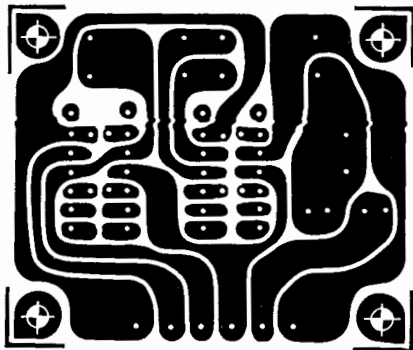
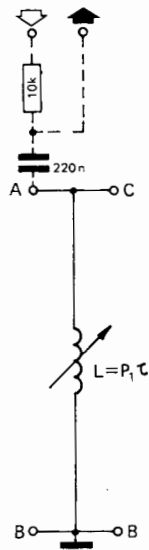
It is possible to imitate an inductor, using a capacitor and a gyrator. This arrangement uses a Miller integrator and a passive differentiator instead. The component values must be so chosen that  $R_1C_1 = R_2C_2 = \tau$ . In this case the impedance developed between the points A and B will be  $j\omega P_1\tau$ . This is

## variable inductance

an inductance of value  $L = P_1 \cdot \tau!$  The value of  $R_1$  ( $= R_2$ ) should be taken somewhere between 5k6 and 22k. In some applications the voltage follower (IC2) can be omitted. If  $R_2$  is made adjustable it will be possible to achieve maximum quality factor by precisely balancing the circuit. When the dashed components are added the circuit becomes a simple hum-rejection filter. Careful adjustment of  $P_1$  and  $R_2$  can enable 50 dB of attenuation to be obtained at 50 Hz, with 3 dB attenuation at 40 Hz and 62 Hz.

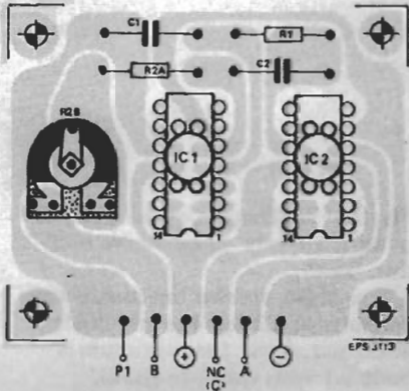


$\equiv$



B  
113

B



EPS J113