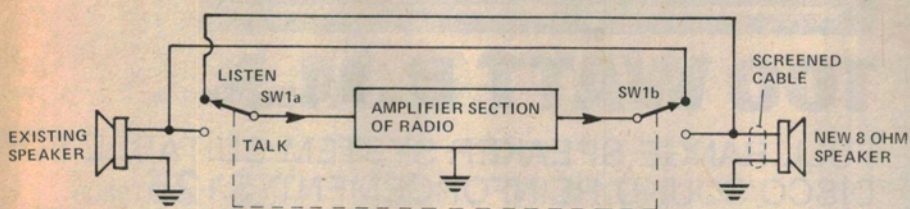


Ideas for experimenters



Inexpensive Intercom

A small transistor radio can be converted into an intercom by adding a switch, a bit of cable and another speaker.

First, sever the 'tuner' section from the rest of the circuit by cutting the appropriate pc tracks. Then connect a wire to the input of the amplifier section — the

wiper of the volume control is the best place. The extra speaker and DPDT switch can then be fitted as shown in the diagram.

The output of the amplifier section will usually go to the earphone socket and so an earphone may be used in the 'listen' mode.

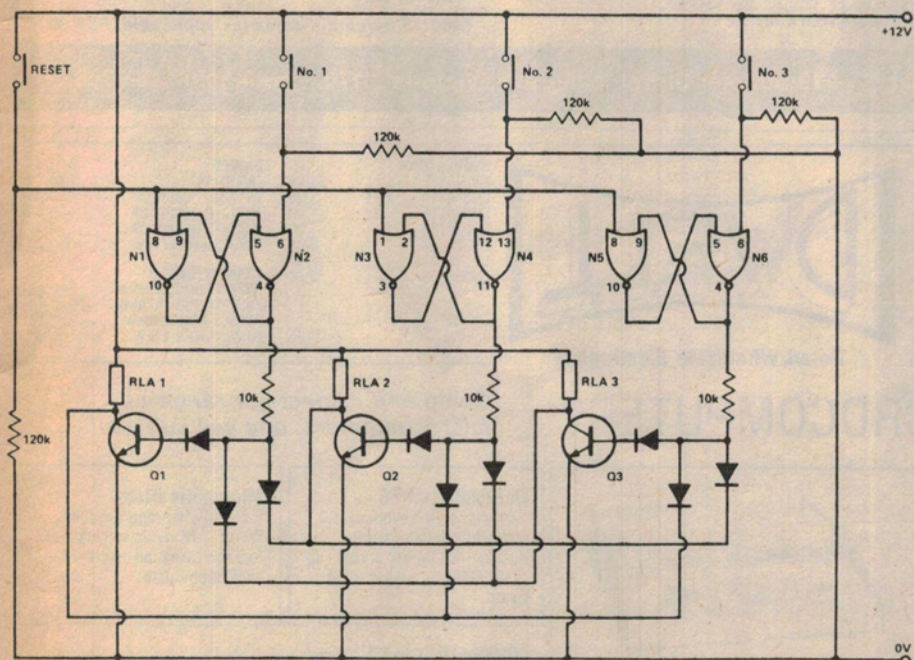
Push-Button Selector

This circuit was designed to enable three relays to be individually switched by their appropriate buttons such that only one relay can be energised at any one time. When any one relay has been energised the corresponding collector falls to near zero volts, which is connected to the base of the remaining two transistors; now if an attempt is made to energise another relay the base of its transistor will remain bottomed and keep the relay off. The reset button must be pressed before another relay can be energised. D1 ensures that each

transistor is kept off until the voltage applied to the base exceeds 0.6 V.

The Flip-flops and push buttons can of course be replaced with standard switches if momentary action is not required.

The circuit was used to control three radio transmitters where it was important that two should not be switched on at the same time. The circuit lends itself to further applications; for example, switching various inputs into an amplifier, where it can replace the self-cancelling selector buttons.



ALL DIODES 1N4001
Q1, 2, 3 8FY51
N1 - N4 CD4001
N5, N6 1/2 CD4001
RELAYS 120R OR ABOVE