

THIS simple circuit (Fig. 1) using one i.c., consists of a relaxation oscillator formed by gates G1 and G2 of a 7400 with timing components C1, C2, R1 and R2. The outputs are gated through gates G3 and G4 to the loudspeakers LS1 and LS2 when associated morse keys MK1 and MK2 are operated.

Whilst the frequency may be varied by choice of the capacitors and resistors mentioned, it is probably advisable to stick to the values given since there can be problems with the circuit not starting.

A number of loudspeakers were tried, as well as headphones and all worked well. Although the recommended logic supply voltage is 5V, a 6V lantern battery has been used over a long period with no trouble. Drain in use is about 20mA so battery life is good.

The resistors R5 and R6 are included as current limiters and the loudspeakers may be replaced by l.e.d.s if visual display is required as for example with deaf operators.

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TWO-WAY MORSE TRAINER

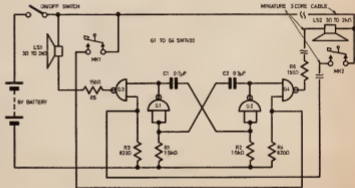


Fig. 1.