

NINE-CHIME DOOR BELL

THIS bell is programmed by the user to play a tune with anything up to nine notes. Instead of one oscillator playing the tune, two oscillators are used, which are tuned so as to give a chord on every note.

When the bell push is operated, the latch formed by IC2 is triggered and the decade counter IC3 is reset. The output of the latch counter IC3 is reset. The output of the latch operates a switching transistor. This applies the supply voltage to ICs 1, 3, 4, 5, and 6. At this point, a slow oscillator formed by IC1 is started, the output of which starts the counter counting. A tempo control is provided which speeds up or slows down the tune.

Each output of the counter goes via a preset and diode which are commoned and the output voltage from each note (which is programmed by adjusting the pre-sets), goes to two voltage controlled oscillators formed by IC4 and 5. Each VCO has its individually controllable tune preset. In practice these are set up so the notes produced form a melodic chord. The output from each VCO goes to a simple power amplifier formed by IC6. This is provided with a simple volume control which feeds a loudspeaker.

When the last note has played the counter is automatically reset and the latch also resets. The power is removed from all the i.c.s except IC2, which is always receiving power so the door chime may be triggered.

Graeme Durant,
Selby,
N. Yorkshire.

