

Converting the electronic music box to pushbutton operation

A modification to the Electronic Music Box described in the December 1980 issue of EA enables each of the programmed tunes/alarms to be selected with individual momentary-contact pushbuttons. Simple timing networks provide about 30 seconds of playing time. With this modification the complete unit becomes very suitable for use as a musical doorbell. In addition, a master reset button provides for simultaneously resetting all inputs and inhibits further triggering of any tune for approximately 30 seconds. This discourages children from continually playing with doorbell buttons.

The circuit consists of a 4043 quad R/S latch with the Q output of each latch enabling the appropriate "select" input of the 7910 Melody Generator. Each

pushbutton triggers the latch by applying a momentary HIGH to its SET input. A $2.2\text{M}\Omega$ resistor connected from the Q output to the RESET input charges a $15\mu\text{F}$ capacitor so that after approx 30 seconds the latch is reset, with Q reverting to low.

A similar 30 second period must elapse for the capacitor to discharge through the $2.2\text{M}\Omega$ resistor, after which the RESET input reverts to a low. During this period the latch cannot be retriggered. Four diode gates enable simultaneous resetting of the four flipflops by the master reset button, with all SET inputs being simultaneously inhibited for the aforementioned 30 seconds.

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