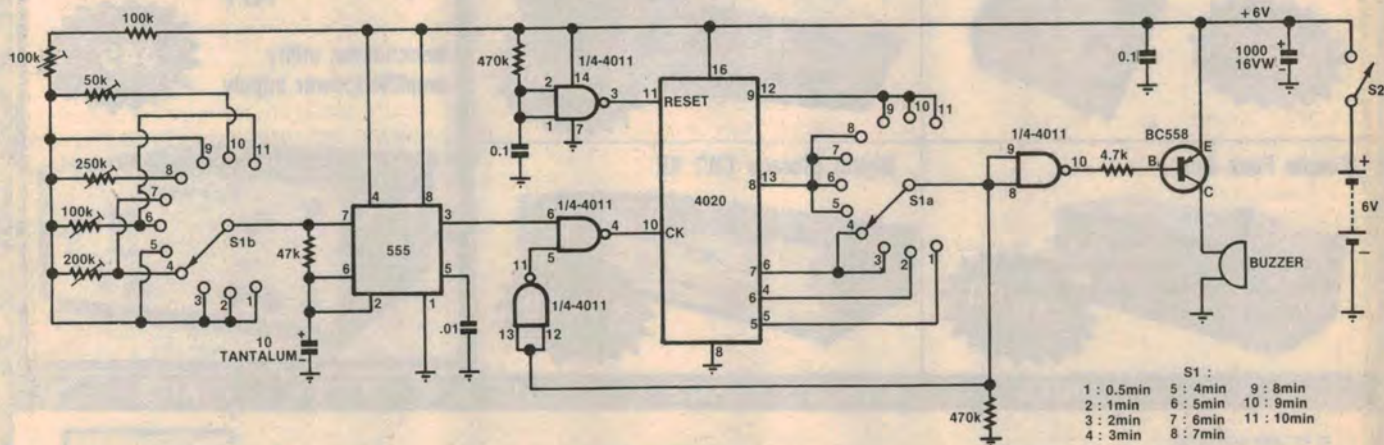


# Intermediate intervals for the Utility Timer



Whilst the simple Utility Timer described in the August, 1978 issue of EA provided for selection of the timed interval in a binary sequence (1,2,4,8,16,etc.) for some applications a linear selection (eg. 1,2,3,4,5 etc) of timed intervals may be preferred. The Timer may be modified to provide such linear time increments by replacing the single-pole selector switch with a two-pole version, and the addition of four trimpots.

To obtain the intermediate time intervals, clock frequency has to be lowered for a desired counter output, eg. reducing the clock rate by 33⅓% on the two-minute setting will produce an interval of three minutes; reducing by 20% on the

four-minute setting gives five minutes.

Referring to the circuit it will be observed that the 100kΩ CALIBRATE trimpot is removed from the board and interfaced with the new trimpots by the second pole of the selector switch, such that the frequency of the 555 oscillator can be varied according to the selector position.

Mechanically it is preferable to mount the trimpots on a tagstrip which can be bolted to the front panel, rather than soldering them directly to the switch. Adjustment of the modified unit will take some 50 minutes, with the 100kΩ standard rate trimpot being adjusted first — initially on the half-minute setting, then the four-minute setting for finer adjust-

ment. Next the 200kΩ trimpot (50% slow) can be adjusted for the three-minute period, followed by the second 100kΩ trimpot (25% slow) for the five-minute period. The seven-minute period is set by the 250kΩ trimpot (75% slow), and finally the 50kΩ trimpot (12½% slow) is adjusted for the nine-minute position.

It should be noted that the four-minute adjustment sets the ½, 1, 2, 4 and 8 minute positions, the three-minute adjustment the 3 and 6 minute positions and the five-minute one the 5 and 10 minute positions.

B.M. Byrne,  
Indooroopilly,  
Qld.