LOW-COST ELECTRONIC QUIZ TABLE

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Here is a simple, low-cost quiz table for four game participants. It determines the contestant who first presses the switch (S1 through S4) to answer a question and locks out the remaining three entries. Simultaneously, the be 'on' after a particular competitor has pressed the pushbutton. These timings can be set by presets VR1 through VR4 as required.

The circuit works off 12V, 1.5A power supply. The current rating of the power supply should be according to the load (wattage of bulbs). For higher-wattage connected in parallel to bulb BL1 sounds for the preset time. At the same time, capacitor C1 charges up to 12V, which then discharges through preset VR1. The discharging time of capacitor C1 is decided by preset VR1. For example, if preset VR1 is set for a resistance of 4.7k, it will give a delay of approximately 4 seconds, mean-
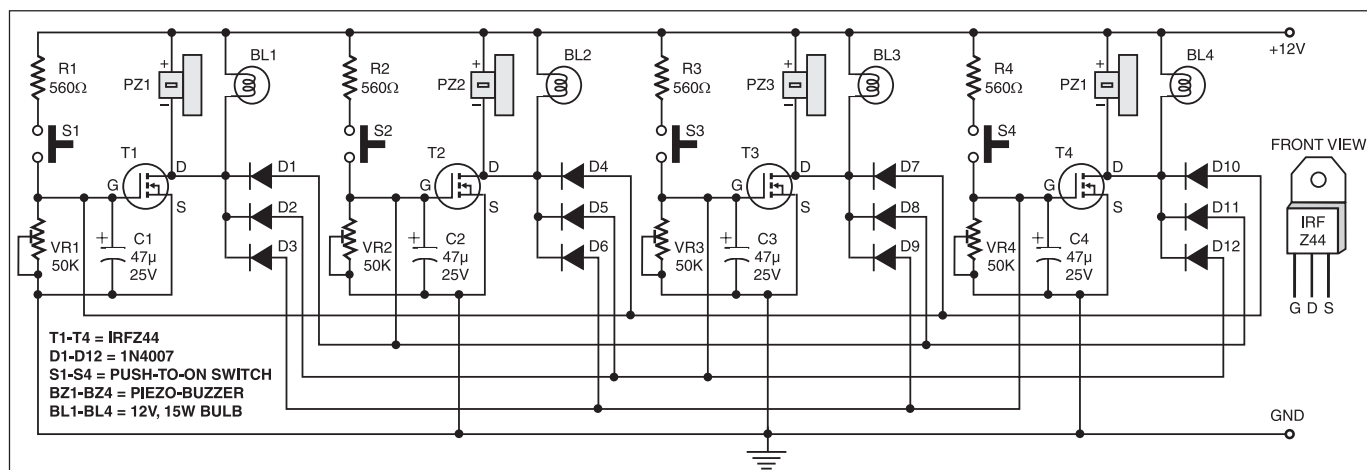

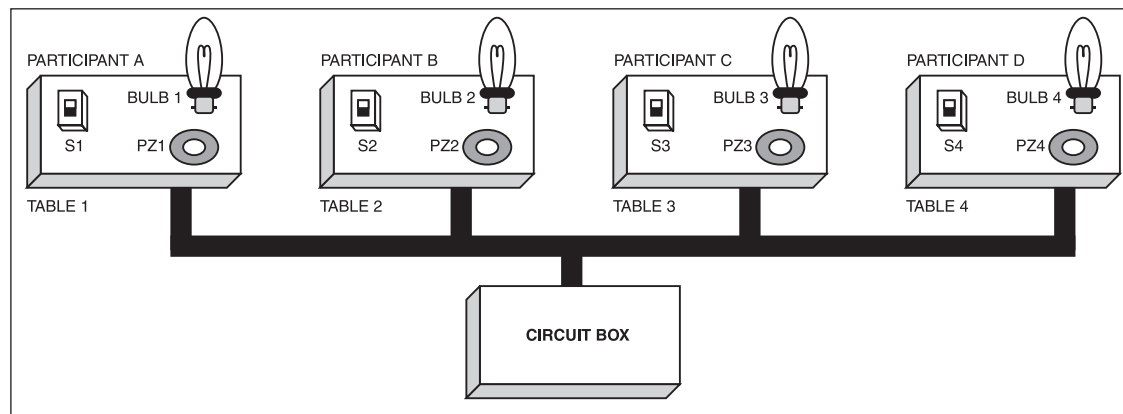Fig. 1: Schematic of low-cost electronic quiz table

Fig. 2: Set-up for electronic quiz table

respective audio alarm sounds and the bulb glows. The quiz table can be used for more number of contestants simply by adding buzzers, bulbs, MOSFETs and diodes. Besides, it provides an option for varying the time for which an individual buzzer and the corresponding bulb should bulbs, use power supply of a higher current rating.

If participant A presses switch S1, MOSFET T1 is triggered and the corresponding bulb BL1 (connected between drain of the MOSFET and 12V supply) glows and simultaneously piezobuzzer PZ1 ing that buzzer PZ1 and bulb BL1 will be 'on' for 4 seconds. It also indicates that participant A is the first to press his switch. Even if any other participant, say, participant B, presses switch S2 after participant A has already pressed switch S1, buzzer PZ2 and bulb BL2 will not function since MOSFET T2 has no gate voltage to trigger because it is grounded through R2 and D1.

The same principle applies for other contestants as well. Instead of bulbs, you can also use a group of LEDs. Fig. 2 shows the set-up for electronic quiz table.