

HOBBY CORNER

A winner of a circuit to keep any young person amused.

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WITH THE HOLIDAY SEASON ALMOST upon us, this seems as good a time as any to close down the idiot box "contest." Those of you who are regular readers of this column know that we have been looking for circuits that have no useful purpose, yet put on an interesting visual and/or audio show—they just *seem* to do a lot. The idea is to build one or more of those devices and install them into a box that youngsters could use as a control panel of an imaginary space ship, or in some similar way. Just the thing if you need a "different" last-minute gift for some young person.

While I have not counted how many circuits have been sent in, I can assure you that there have been a great many. You have seen some of them here over the past few months, and I'll show you others from time to time, although the competition is closed. By the way, even though the contest is over, if you come up with a good one, be sure to send it in and let us have a look at it.

For now, however, here is the "winner." I will admit that the call was a close one. In fact, it was a four-way tie nearly until the end. The honors must go to MSGT Jerry Duke (APO New York) for the circuit that follows.

Jerry's entry is shown in Figs. 1 and 2. He uses a CD4060 oscillator/divider to drive the rest of the circuit. That IC drives a 74154 demultiplexer, the output of which is latched by four CD4044 quad R-S latches. The output of the latches are displayed on an array of LED's that are arranged to spell out anything you wish. For good measure, Jerry throws in an XR2242 long duration timer to add appropriate (or inappropriate) sound effects.

One way to arrange the LED's is shown in Fig. 2. Each array is made up of from two to four LED's. The arrays are wired into the main circuit at the points indicated. You can arrange the LED's to spell out anything you wish, of course.

Those LED's do not just turn on and off. The circuit goes through 16 cycles. On the first cycle, the first array is lit; on the second cycle, the first and second arrays are lit, and so on. While the lights are going through their paces, the time constant that determines the fre-

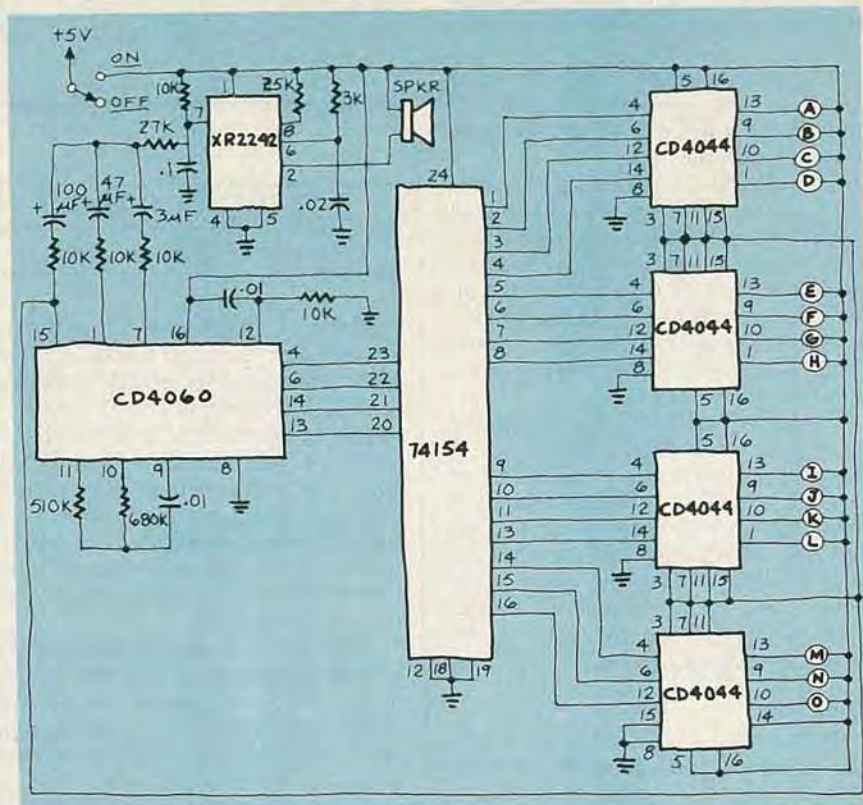


FIG. 1

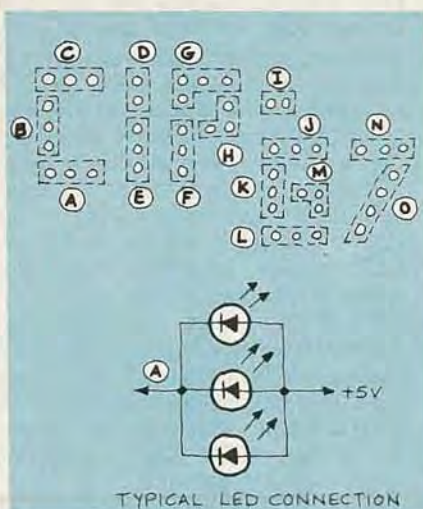


FIG. 2

quency of the XR2242 is being changed by the CD4060. The result of that is a varying whooping and wailing sound that accompanies the LED patterns.

All-in-all, Jerry's circuit is just right

for the idiot box; it is fascinating, yet useless! Thanks to him, and all of you for sharing your ideas.

Sidereal clock

Back in the August 1981 "Hobby Corner," I told you about H.C. Gernhart's search for a sidereal clock circuit. It seems it wasn't astronomy that I had forgotten—just logic! Alan Gee (Sunnyvale, CA) tweaked me gently about the fact that the clock must run *faster* than a normal clock.

He, and a couple of other readers, called attention to an article in the July 1976 issue of *Sky and Telescope* magazine. That article includes a schematic and description of a sidereal clock that looks quite good. It is highly accurate, and does not appear too difficult to build.

The basic idea behind that, and most other similar clocks, is to supply an extra timing pulse periodically to a

continued on page 78