

Another mystery

Don Francois of Manchester, MO has sent another light mystery. Unlike the puzzle of a few months ago, however, that rather sneakily made use of several hidden subminiature components as well as other bits of subterfuge, this new mystery circuit is guaranteed to have *no* hidden parts. Examine the two circuits in Figs. 3 and 4.

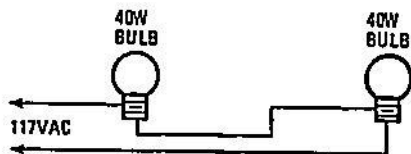


FIG. 3

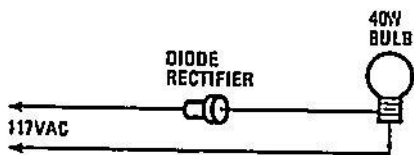


FIG. 4

Don found that the measured voltage across all three bulbs was the same. He measured equal current in both circuits. You would expect the three bulbs to be of equal brightness but that was not so. The bulb brightness in one circuit was much greater than in the other.

Now, on the surface that is exceedingly strange. However, some thought should lead you to the answer to this seeming anomaly. (If you can guess which circuit is brighter, you should be on the right track.)

WARNING: If you build those circuits to check the data, there is exposed 117 VAC. Take great care not to come into contact with that AC voltage.

If you can figure out what is *really* happening in those circuits, let me know.

R-E