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QST Issue: Sep 1977
Title: WWV on the Heath HW-101 (August 1977 Hints and Kinks)

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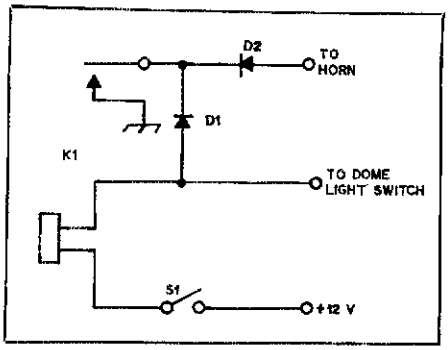

Fig. 1 — This original alarm circuit was manually set by switch S1. Opening the door would then sound the horn.
D1, D2 — 1 amp, 50 PIV silicon diode.
K1 — Spst relay, 12-V coil.
S1 — Key switch or toggle switch.

the rear lot. It is closed on two sides by townhouses and the third side is fenced. We live in the last unit from the street entrance and I parked next to the fence. Leaving the car, pizza in hand, I did not take time to lock the driver's side, but as I passed in front of the car I reached down and flipped the toggle switch to activate the alarm.

On finishing our late snack, Carol and I retired about 11 P.M. At 3:20 A.M. I was abruptly awakened by the obnoxious sound of a "stuck" car horn. I grabbed by robe, flew downstairs and out the back door to immediately turn off the alarm switch to silence that ridiculously loud horn. Then, I stood there and looked around that large parking lot with not a sign of life anywhere. No lights came on in the apartment complex so I walked back inside puzzled as to why that stupid alarm had gone off for no apparent reason. I was met by Carol, who had also been jarred out of a sound sleep. She had gone to her window, which overlooks the parking lot, in time to see two people jump into a car sitting in the middle of the lot and speed away.

With this confirmation I reset the alarm and called the police. After the police left and I returned to bed, the adrenaline still flowing, I could not sleep. As I laid there I realized my alarm was no longer a novelty and that my off-on switch had been neglected many, many times. I don't even know why I turned it on that evening. I usually don't at home and at times don't even lock the car. It was time to make the alarm foolproof.

A Fail-Safe Revision

Thus far, my alarm had cost me less than $1.50 and three hours of sleep. It was time to increase my investment. The next morning, over several cups of coffee, I sat with paper and pencil and came up with the revisions shown in Fig. 2.

The alarm is set at all times, with only a reset switch to turn it off after activation. That requires a time delay so the driver and passengers may enter the car, then close the doors before the alarm goes off. S1 is now a normally closed push-button type (for reset) in the door jamb so I can't forget to set the alarm. The time delay for entry is provided by the NE555 timer along with components R1 and C1. Going to my junk box again, I found that R1 could be 100 kΩ to 1 MΩ and C1 between 10-22 pF to yield a time value of 15-45 seconds.

The original assumption of opening the door has not been violated, only modified. In order for a person to remove any equipment from under the dash of my compact car, the door must remain open for leg room. Once the alarm has been operated, closing the door will not deactivate it.

My original premises that this sort of thing only happened to others and that the alarm was a mere novelty had been proved wrong. How about you? What do you think? How much will it cost you to be proven wrong? QST

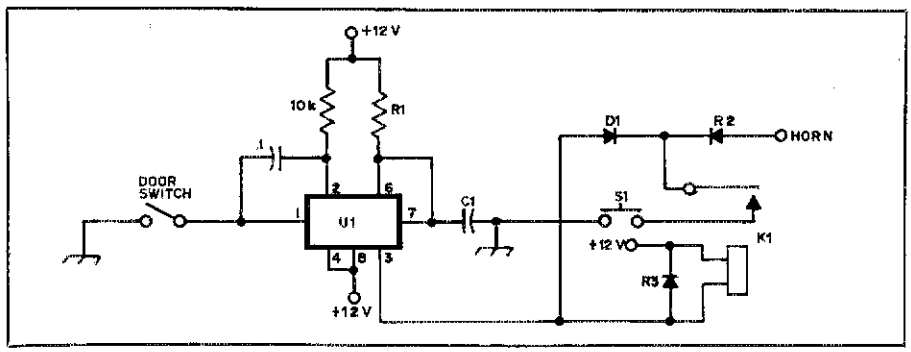

Fig. 2 — The revised alarm circuit is always "on." Before activating the horn, opening switch S1 starts the time delay, determined by R1 and C1.
C1 — See text.
D1-D3, incl. — 1 amp, 50 PIV silicon diode.
K1 — Spst relay, 12-V coil.
R1 — See text.
S1 — Normally closed push-button switch.
U1 — NE555 timer.

Strays

TURNED TABLES

□ A few years ago, not too long after I had upgraded from Novice to Advanced, a friend of mine became interested in amateur radio. I tutored him through the code and theory and later administered his Novice exam. With my assistance, he passed the Tech and only a few weeks later, the Advanced.

When I went to take my First Class Commercial Phone exam in Chicago recently, it was administered by none other than my friend, recently hired as the FCC examiner in Chicago. If he hadn't been ill when I took my Extra Class exam, he would have given me that one too. Can anyone else say that his First was administered by someone he had previously given a Novice exam? — *WB9IWO*, from *Squelch Tale*, July, 1977

□ We enjoy reading the items our readers send us — and we are always looking for good Stray material. Yours will have a better chance of being printed, though, if you type it, double spaced. If photos are enclosed, they should be black-and-white on glossy paper and the larger the better. Color photos will reproduce, but not as well as black-and-white. Send them to Strays Editor, *QST*, ARRL hq.

Feedback

□ In "More PEP — Less Paint" ("Hints and Kinks," *QST* for July), the diodes CR1 through CR4 were inadvertently drawn in reversed order. The correct form is shown on page 333 of *The Radio Amateur's Handbook* for 1977. WA2FIJ stresses importance of installing a back cover on the wattmeter. The LM1458 chip he used is an 8-pin version, not a 14-pin type. In Figs. 1 and 2 the +9-V and −9-V terminals should appear as in Fig. 2.

□ The transistor in the circuit permitting use of an electronic keyer with a DX-100 ("Hints and Kinks," *QST* for August) should be an npn, not a pnp as shown in the schematic. — *WB6CFM*

□ The circuit for the WWV modification of the HW-101, appearing in H & K, page 49 of *QST* for August, 1977, should have shown a dotted line from crystal Y503 (22.895 MHz) to contact no. 3 on the band switch, indicating that this connection should be eliminated.