

Engineer's newsletter

Calculator can serve as stopwatch . . .

The HP-45 calculator can be used as a 12-hour digital stopwatch if you press the right keys, says Jim Trulove, Phoenix, Ariz. It seems you simply turn the power on, press RCL, and then simultaneously press three keys: R↓, STO, and CHS. The display then will change to **four ordered pairs of zeros, representing, from left to right, hours, minutes, seconds, and hundredths of a second.** It may require several tries before you hit the keys exactly at the same time, he says, but it can be done. And be sure to press the RCL key before each try, he warns.

Once in the stopwatch mode, pressing CHS starts and stops the timer, while EEX turns off the digits displaying hundredths of a second. $\Sigma +$, since it's in the lower right-hand corner, may be a more convenient key to stop the timer. To return from the timing mode, press ENTER ↑. However, note that the HP-45, unlike the HP-55, does not have a crystal-controlled time base, and the timer function may not be accurate, although it can be calibrated, says Trulove.

. . . in two ways at least

Speaking of simultaneity, *Electronics* received three letters describing the calculator/stopwatch within the space of two weeks. Burl Buchanan, Fountain Valley, Calif., and R. J. Eikelberger, of Licon, Chicago, Ill., also suggested the idea (Trulove's letter arrived first). However, Buchanan and Eikelberger both said **the timing function can be obtained by pressing CHS, 7, and 8 simultaneously after the RCL key.**