

# SORTING ON HP-67/97

The June 1977 issue of HP Key Notes described a Bubble Sort Routine (#00619D) for HP 67/97 that sorts as many as 21 data registers using 69 programs steps. I have written programs for the Bubble Sort using only 21 steps for as many as 22 data registers. The HP program can sort in either ascending or descending mode, presumably selecting by keyboard entry. My program can do either but one step in the program has to be changed when using only 21 steps. Keyboard selection of the mode can, of course, be done with 17 additional program steps and about 1/3 longer run time for a maximum disorder sort.

I have also enclosed a Shell Sort routine which has 45 steps but which is much faster than the Bubble Sort. For the full 22 registers at maximum disorder, for example, the Shell Sort runs in less than half the time of the Bubble Sort (or 3 minutes faster!). When the number of registers to be sorted is small -- 6 or less -- the Bubble Sort is a few seconds faster.

I use the Sort routines in a "Racing Results" program for boat racing where the competitors' elapsed times are converted to corrected times. Then, the competitors are sorted into order of corrected finish by the Shell Sort.

This program has greatly speeded up our Sailing Club's time in determining handicap race results as well as reducing errors. Now, if I only had an HP 97 sort that we could post printed results ...!

I hope these programs -- or routines -- will be helpful to the Club Members; and I am sure someone will make my programs more efficient!

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R/S



## USER INSTRUCTIONS

1. Load side 1 of program card.
2. Store data to be sorted in  $R_1-R_{s22}$ .
3. Set DSP to correspond with maximum decimal places in data to be sorted.
4. Store # of data to be sorted in  $R_0$ .
5. To sort, press D.
6. For a new sort, clear all registers, go to step #2.