



## OFF SOUNDINGS CLUB

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TO: Mary Ann  
FROM: Dick

This is to let you know what I've found in my "audit" mode.

1. I looked around a bit on NOR'EASTER, but I couldn't find the print-out you made for me. So, I entered the Finish Times from the cards and compared the corrected times to the times given in the Day (for the first five in each class). If you can send me the print-out of the computer results, I'll do a comparison study. (Or fax it to me, at the same phone number.) A copy of my program's results is enclosed, for your info.

2. Card Calculations -- Having entered into my program the times from the cards, my results should reflect what the cards show. Where my results differ from the card results shows a problem with the card calculations. None of these changed the order listed in the results.

a. Now and then, the decimal minute figures are not correctly carried down from Finish Time to Elapsed Time during the subtraction of the Start Difference. And, in several cases the three-decimal Finish Time was rounded to two decimals in this step. The computers (yours or mine) won't do that. And, in a few cases, the result of the subtraction was entered as the Corrected Time; that is, the multiplication by TCF was omitted.

3. Card Entries -- Once again, we did not numerically check the card results with the computer at least some of the time. I think we were satisfied with only checking the order of the Corrected Times. It would be better if we took the time to compare the numerical values, as well.

a. Correcting the card results in Class C-1, HOOLIGAN went from 605.79 to 555.50 (combined corrected time) and remained in 13th Place. The Finish Time was written in as the Elapsed Time (the subtraction of the Start Difference was not done). I assume your computer results confirm the 555.50 value.

b. Correcting the card results in Class C-2, WOLVERINE went from 520.56 to 525.41 (combined corrected time) and remained in First Place (the multiplication by TCF was not done). I assume your computer results confirm this.

4. TCF Correction -- As you remember, the Chief Measurer informed that Peter McFadden's rating should be corrected from 188 to 194. Your program apparently does not accept RAT as an entry -- so, I calculated his new TCF by hand, and blew it -- in two ways. I used the correct formula and came up with 0.8772. When I entered the new rating for BAMBOO at home on Monday, the TCF was 0.8902. What I think I did was enter a wrong key on the calculator. We'll

have to be sure and double-check this sort of thing in the future. The other potential error is not including PE, the penalty adjustment. The complete TCF formula is:

$$TCF = (600 / (480 + RAT)) * (1 + (0.003 * PE))$$

and I forgot to use the second term. Fortunately, McFadden had no penalty and PE is zero, so no harm was done in this case. But the potential for a problem is there.

A way out of this problem is to arrange Frank's program to accept RAT as an input, rather than use TCF as the input. However, I think that this might introduce another problem. Does Frank's program use the TCF as listed in the Race Booklet (a number with exactly four decimal places)? Or, is his TCF a quotient taken from my disc -- which would have as many more decimal places as the computer's design uses? This could be the source of our differences in round-off.

BTW, McFadden's position did not change.

4. Tie -- My calculations show a combined corrected time for RAMPAGE of 538.31, and 538.32 for STERLING (C-1), the boats being in 6th and 7th place. I propose to use these results stand, unless your results show something else -- in which case I'll have to study this some more.

I have taken these results, duplicated the file, and then set the PE (penalty) field to zero, in order to get a set of results disregarding the penalties. I'm sending a copy of this to Norm Rabe, who does the scoring for our perpetual trophies, to Bill Loweth, for inclusion in the ECSA Newsletter, and to Bill Squier, who does the scoring for the ECSA Circuit.

Dick