DEL MAR AVIONICS

TO: B. Del Mar, R. Cherry, D. Squires

NO.:

FROM: W. Thornton, M.D.

DATE: 20 September 1979

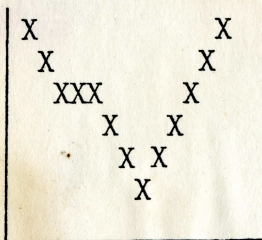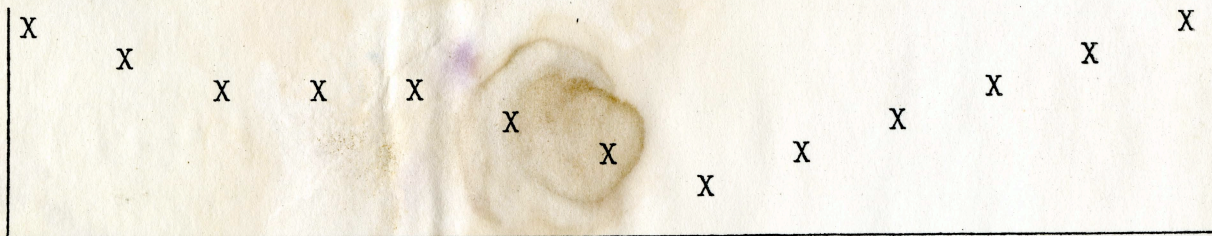**SUBJECT:** Comments on 1981 Blood Pressure Data System

General

It is well laid out and convenient to use. Design and color are acceptable and an improvement over the traditional brown. Working space is ample with the movable units but should be improved by adding a large shallow drawer(s) on the left side.

The instructions, after suitable expansion, can form the basis of a good operators manual. I have divided the recommendations into three categories--Mandatory Changes, Glitches (design oversights, obviously erroneous features, etc.) and It Would Be Nice If.

Mandatory

1. Paper Handling - This is the final product which the user gets and cannot be overemphasized. A Z-fold paper or some other folding scheme is a must. This is related to 2.

2. Length of Plots - All of the plots are too long and should be on a single sheet. Not only are they difficult to handle but they also lose effectiveness in display. For example:

3. Title Formats - These should be horizontal, for example,

    Name   Age   Sex   Race, etc.

    Date   etc.

versus the present vertical which is unconventional and requires too much
space. One should consider whether the description headings are in fact
required. For example, use only John Doe, 41, YOWM EHT, normal renin, no
meds versus present age-41, race-white, etc. I will call back on all titles
with a proposal for a standard.

4. Each plot or list should have some title. This may be only partial, for
    example, patient's name, and probably should not have entire patient title/
    data block. Conversely, the data block should appear at least once, possibly
    through a K.B. entry. The repeated DMA titles and copyright are excessive.

5. Separate 24 Hour Mean Readings - These are now tied to the data table but
    should be separate for they are frequently required. The same is true of
    time epochs in 6. None of these need titles.

6. Mean, S.D., and limits over any selected time period (epoch) must be avail-
    able. This is used to look at work, sleep, etc., periods.

7. Editing by line number must be available. This is used so frequently that
    the existing several functions for a single deletion/addition are not
    practical. It would be desirable to gang load lines for deletion, for
    example:

        D   3, 12, 16, 100, 200   A   1,6 execute

8. Revision of Auto Edit Criteria by User - Every researcher is going to want to
    use his own criteria. This should not be done frequently, rather a program
    change must be made available at a reasonable fee or some such arrangement.

9. Card read-write delays must be tolerated. At the moment, if a card is not
    removed when commanded, the sequence is ruined. This is not acceptable.

10. A standard card format must be immediately established. A major purpose of
    the card is to allow interchangeabilty between users and, at the moment, our
    title format should be used. I would suggest the last letter of the patient's
    family name followed by 4 digits which then form a code. The latter can only
    be suggested to the user. See Mandatory 3.

11. A way to terminate a computer function must be provided. This should be a
    K.B. entry which will allow a second command to either resume the function
    (plotting or whatever) or else terminate it and start another.

12. An easier method of erasing and rewriting errors should be available.

Glitches

1. Make stored command functions available in any order. The existing arrangement will work only if raw data plotting is done first.

2. The histogram should use only values remaining after editing, both manual and automatic. It should not use values which have been manually edited out.

3. Errors must not hang up computer/printer. For example, a command with too many similar letters was given; say, a string of "H's"; this caused the program to lock up.

4. Provide an indication of a printer "back up." Under some conditions the register may overload and it simply requires a key activation to correct, but this is not obvious.

5. Time is inconsistent, that is, 2400 clock is displayed 24:00.

6. It now requires several attempts to load program from Disk.

7. There is at least one "bad connection" to the 660 which results in erroneous data.

It Would Be Nice If

1. We could use commas. They are such a natural part of the language and hard to avoid.

2. Diagnostic S/W for printer, disk drive, etc., were available.

3. Individual values rather than entire lines could be edited.

4. The listing could proceed to edit without commanding A execute.

Most importantly, Dave deserves credit for a job well done. He must be allowed to finish it, however. This job is too much for one person working day and nights. It is foolish to load him with routine engineering, or worse, troubleshooting on other projects and then wonder why this one isn't done. Keep the rest off his neck for a reasonable time and set a deadline for the changes and troubleshooting* and let him do it. Then, give it to Mac for a week for burn-in use. If Mac wants changes, let him coordinate them with me first. Don't let Mac operate open loop and don't let him write the user's manual without my editing it.

This is a nice machine--don't let anyone mess it up now.

                                        W. Thornton, M.D.

WT:lm

_____
        *There appears to be a hardware/temperature problem for the unit stopped again when the A/C was off, yet was normal this morning with no indication of a S/W problem.