

Tou

Hello Bob,

I'm sorry that I'm so late in getting this program to you but along with trying to get the form made that I find usable for me I've also seem to have too easily let things slide. I've sent you two different programs. One, a single page modification to an existing Bally program which allows easy and quick change to the 'E 16' → 'E 23' commands. The other, a five page program, that is purely my own concoction. This program uses all but about 150 bytes of memory and is somewhat involved but is somewhat informative as to the workings of all the possible 'E' commands.

I've sent you two copies of both programs, one of them is the original so that you can use it to make copies to make additional copies to send to whomever might want one. The original can easily be detected by the clarity of the shaded area on the form, I also wrote the word 'ORIGINAL' on the back of each.

This form, by the way, is something that I've created on the machine that I work on at XEROX, which is where I work, I did have a previous form that was similar but it was not as easy to use. I'm sending you some blanks and you can try them, if you wish. If you can think of any change to the form which might make it even more easy to use I would be glad to hear of it. I might use it.

Also, is the beginnings of another form that I'm in the middle of creating to be used for locating character positioning on the TV screen, and other positioning info. There will also be a third form that will be of great aid in drawing anything on the screen.

It, actually, doesn't take too long to create a form on the machine that I use which is a cross between a computer and a very

high speed line printer. It puts images on paper with laser optics and utilizes XEROX xerographics. It's really quite an impressive machine and as an example of what can be done with it, well if you can envision an 8 1/2" x 11" blank piece of paper and another 8 1/2 x 11 completely black piece of paper this represents the extremes of the machine and everything in-between (just about) can be done by this machine. That includes all different font sizes and styles, logos, lines and even signatures! All this with a resolution of 300 dots to the inch. The speed of this machine is 2 full pages a second. If you wanted to print with a reduced print style and also have put 2 sides of data on the same side of the paper this machine ~~not~~ would print at an equivalent speed of 36,000 lines per minute! Like I said a very high speed line printer

I want to briefly go over some things that I've found:

VARIABLE 'XY' - Tom Wood (in your Arcadian Vol I No 3) mentioned that this was, in reality, two consecutive memory locations. I disagree. I believe it is one memory location that can have a value from -32766 to +32766 which actually we never approach. The value in the variable XY can be computed from the position that the line command was last left. The formula is: ① IF THE X IS (+) THEN 'XY' WILL = 256Y + X

② IF THE X IS (-) THEN 'XY' WILL = 256Y + (256 + X)

Well now, how do we use this formula(s) to figure out what 'XY' is. EXAMPLE: If the last point that the line was put to was X=6 and Y=5 then using formula ① 'XY' = 256Y + X

$$'XY' = 256 \times 5 + 6$$

$$'XY' = 1280 + 6$$

$$'XY' = 1286$$

Or for another example, the last coordinates of the line were $X = -10$
 $Y = -20$ Then using formula (2) $256Y + (256 + X)$

$$'XY' = 256 \times -20 + (256 - 10)$$

$$'XY' = -5120 + (246)$$


$$'XY' = -4874$$

But I don't know what good it does to have the 'XY' variable, yet. Especially since every pixel can be accessed by setting up the X and Y coordinates instead of using the variable 'XY'.

Another item is; I believe a possible MODEM that we may be able to use is in a late issue (NOV?) of KILOBAUD magazine. It was called 'MICKEY MODEM'. The features to make this unit desirable are:

- 1) Runs a very long time on batteries with very little current drain
- 2) Can have a battery indicator
- 3) Can also communicate via voice before, during, and after the actual transmission of computer data.
- 4) Uses actual line connection to phone line with isolation xfmr.
- 5) Has a speaker to use as a sound port.
- 6) Very simple circuit and inexpensive to build.

I better close this letter now, this has ~~gotten~~ gotten much longer than I had planned it to be. And I do want to get this in the mail. And besides I'm getting tired and this pen is starting to make a lot of mistakes.

CHUCK THOMKA 
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