

both ansd 12/16/85

June 7, 1985
8605 W. Douglas Ave.
Milwaukee, Wi. 53225
(414) 353-5099

Don Gladden
59400 Nine Mile Rd.
South Lyon, Mi. 48178

Dear Don:

I personally would like to have the option of programming on a high resolution screen. I have interfaced Texas Instrument's TMS9918A video display processor with my Astrocade computer, the chip having a high resolution mode, but I would prefer to program on a high resolution screen mapped by Bally's custom address and data chips because Bally's high resolution map (320 x 204 pixels) is easier to work with. Recently I have attempted to get my Astrocade computer to operate in the high resolution mode. I was aware that Datamax Inc. manufactured the Datamax UV-1 computer (16K ROM, 16K Screen RAM, and 32K User RAM) which utilized Bally's 3 custom address, data and I/O chips. In July of 1984, per my request, Datamax sent me copies, for a price, of electronic schematics and PC board layouts, but to my surprise, the copies were for their upgraded UV-1R (32K ROM, 256 Multipage Screen RAM, and 32K User RAM) computer. With the aid of these schematics I came up with a scheme allowing my Astrocade computer to operate in the low or high resolution mode. Unfortunately, there's a "bug" in my scheme. I can display the high resolution map, write to it or read from it, and perform all the magic functions on it, but I get these glitches on the screen, occasionally, which appear and disappear. I used 0.1uf bypass capacitors judiciously for the four 16K banks of Screen RAM (I used type MK4116N-4 chips) and all other chips. I think the problem is somewhere in the timing. Datamax's CPU board layout, where the Bally custom address and data chips are located, doesn't quite agree with its CPU board schematic, ie., some resistors and capacitors appear on the CPU board layout but not on the CPU schematic. Datamax's scheme for the microcyler is almost identical to Bally/Astrocade's microcyler. Datamax added a chip to their microcyler which doesn't look like its wired correctly (a drafting error?) and I haven't been able to figure out the reason for that additional chip due to lack of appropriate information on the Bally custom address and data chips. True the Dave Nutting Associates manual provides information on the 3 custom chips, but offers no help as to how one would wire the required four 4K banks of screen RAM (and microcyler?) to get the high resolution map. What I would like to do is get my hands on copies of Datamax's UV-1 computer back in 1981 when it was a simpler system having only 16K ROM, 16K Screen RAM, and 32K User RAM.

I said all of this hoping the Arcadian might be able to help me out. How many other Bally/Astrocade computer users would be interested in expanding their system to provide an optional Bally high resolution map? Could you possibly print the following ad in the Arcadian?

Don Gladden
59400 Nine Mile Rd.
South Lyon, Mi. 48178

June 8, 1985
8605 W. Douglas Ave.
Milwaukee, Wi. 53225
(414) 353-5099

Dear Don:

I would like to provide for each new issue of the Arcadian an article on machine language programming for the Bally/Astrocade computer. Hopefully the article would generate interest in some users to explore this powerful language. Perhaps programs with complex graphics might be created as a result of this interest.

With regard to submitting my articles to you, I have no idea as to how the Arcadian produces some of its articles with such small print. The only printer I have is an electrical typewriter. I could submit my articles to you using a double column on a 7" x 9.5" space giving you room for a border line, the Arcadian logo and so on. Would I be allowed to fill 3 pages (sides)? I have a lot of information to share, information that I haven't seen in the Arcadian (Vol. 4-6). Please give me some input regarding article submittals.

I realize you don't know what my background in machine language programming is. My articles will stress examples. Let my examples establish my credibility. I can show how to create fast non-blinking graphics.

This paragraph is for the Arcadian's information (for whatever its worth) that we users might pool our resources and continue support of the Bally/Astrocade computer. I haven't submitted any written material to the Arcadian previously because I have been working on projects for use with my Astrocade computer, projects such as:

1. A substitution for the Bally/Astrocade AC power transformer
2. Adding (or replacing RF modulator with) a composite video output and audio output for improved picture and sound
3. Interfacing Texas Instrument's TMS9918A video display processor
4. Adding 32K dynamic RAM addressed 8000-FFFFH and
5. Adding switchable 12K static RAM addressed 5000-7FFFH along with a video-cade copier connector.

I plan to build an eeprom programmer that can be used with the Bally/Astrocade computer so that 2K, 4K and 8K EPROMS can be "burned". I also plan to develop a troubleshooting procedure and troubleshooting/check program for a Bally/Astrocade motherboard and hopefully any memory add-on. Incidentally, substitutions or equivalent replacements for any electrical/electronic component in the Bally/Astrocade computer will continue to be easily available, with the exception of the 3 custom chips and perhaps the +10V voltage regulator LM342P-10 (component #VR2). Most probably, the 3 custom chips will eventually be unavailable. The +10V voltage regulator is not used often and may eventually be unavailable. Jameco Electronics (415-592-8097), for example, is clearing out their stock of the LM342P-10 (it is listed in their flyer #127). For those who have committed themselves to the use of their Bally/Astrocade computer (I know I have), my advice is to take advantage of ABC Hobbycraft's sale on Astrocade units for \$34.95 and motherboards for \$5.00 so you have some back up parts while they are still cheap and available.

Sincerely,
Michael C. Matte
Michael C. Matte