KayPro Column

By David Thompson

The first impression you get when you look at small systems like the Kay-Pro is that all systems should have the small drives. I mean, 8" seems large and clumsy compared with the little disks and drives.

However, after fighting a flaky drive or disk for a few hours you learn that with the smaller drives you need to back up your work about every hour (or sooner) and to back up the backups.

The KayPro may have been more prone to drive problems than some. The drives are Tandons, certainly not a name to be taken lightly, but it appears that Tandon isn't taking as much care manufacturing and aligning these drives as they do with their 8". I've had a number of dealers comment (not favorably) about the Tandon 100s. Anyone who has experience realigning the little units should get in touch with me as soon as possible. There are a lot of people desperately waiting for such info. On the other hand there are many things blamed on drives that may not be drive related, and in fact, the following fix for "drive" errors doesn't involve the drive at all.

Drive Fix

The clock to the 1793 was slow (with respect to the processor) by about 40 nanoseconds, and that made setup and hold times critical. It turns out that with a little heat, the times got too critical. So the mod:

Remove U87 (74LS390). Cut pin 9 (or bend out), also bend out pin 1. Jumper pin 1 to pin 6. Jumper pin 12 to pin 15. Put the 74LS390 back into the socket, making sure that pin 9 and pin 1 are not making contact with anything. (If you bent out pin 9, make sure that it is not touching the resistor lead next to the socket.) Be sure that you don't get any solder down on the parts of the pins that go back into the socket.

This mod is now being done at the KayPro factory so you might take a close look around U87 for signs of jumpering. If there isn't any and you are getting drive errors, then this mod is probably just what the system ordered.

New ROMs

We are selling new character and monitor ROMs for the KayPro. The monitor provides both a non-blinking cursor and 5 retries on a disk read error. The new character ROM contains our new BB character set plus the Non-Linear Greek set (or blanks in place of the special characters).

Reading other 5" disk formats

A software package called UniForm sets up the KayPro to read, write, and format disks for:

Osborne 1, SD and DD
Superbrain
NEC 8001A
Xerox 820, SD and DD
TRS-80 MOD 1 SD
Morrow Micro Decision
Heath with Magnolia, DD

UniForm contains two programs. One lets you format a disk in drive B to any of the above formats, the other lets you read or write any of the formats. You can run the programs on these other disk formats and you can PIP programs between these disks and the KayPro format disk in drive A.

The UniForm programs are completely menu driven so you don't need to refer to the manual. The user interface is well done.

Weaknesses

Drive A is always in KayPro format and you may only transfer files from the KayPro format to the other formats using PIP which is quite slow.

It would be much nicer to be able to select a special format for both drives, and if the format were the same, be able to do a fast track by track copy between the two drives.

It also would be nice if the program smartened up the BIOS enough so the system could automatically figure out a new disk format and access the data with no operator intervention (just like Soft-Ware Publishers dual density package).

Anyway, there is a super demand for this kind of software and I'm sure a number of folks will follow along with new packages. Meanwhile, at $39.95 Uni-Form is certainly worth getting.

UniForm
Micro Solutions
125 S Fourth St
DeKalb, IL 60115

8" Drives for the KayPro

A couple of folks are working on an 8" drive interface for the KayPro II, and we've had numerous requests from users and dealers for information that they might use to help them make this mod.

Well, there is nothing so far, but things should be coming. There are a couple of options.

First, you could do away with the 5" drives altogether. Just modify the CBIOS for 8" and the drive cable for 8" compatibility and pick off 2MHz for the controller.
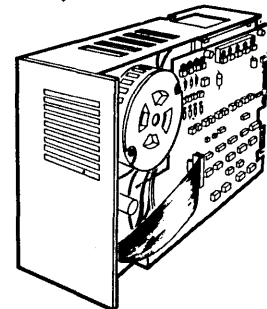
Second, you could add one or two 8" drives as drives C and D. This would take some additional table space for sector decoding, etc., but would be the most versatile.

Since the KayPro has a 1793 on board, you could make your 8" double density (670K per SS disk) but you'd have to speed up the KayPro to 4MHz to transfer data fast enough. (Unless you could figure our how Russell Smith did it at 2.5 MHz on the BB.)

Anyway, considering the calls we get about this, the demand here is pretty gigantic too.

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