

The Kaypro Column

By David Thompson

This column is about "new." I mean new drives and disks, the Robie variety and a new system, the Kaypro PC.

Robie

Speaking of the Robie, this little duckling has the heart of an 84 system, just the drives, drive clock, BIOS and monitor have been changed. Early feedback on the Robie has indicated that there is a problem with the media (disks).

Everyone expected problems with the drives, I mean, 2.6 meg per disk doesn't leave a lot of room for error (or anything else). However, these drives are similar enough to the current 5" drives that it shouldn't be too hard to add them to standard Kaypros (if there are any standard Kaypros still out there what with 5 MHz, 4 drives, and quad density).

Anyway, we're already working on it, and you'll be hearing more about these right here. Don't expect to see these \$500+ drives showing up on the surplus market soon because there is definitely a lot of interest in them. Also, the disks are about \$10 each though they look very similar to standard 5" floppies.

The Robie drive can read standard Kaypro II and 4 disks but it cannot write data on these disks—so software transfers are one way only (whereas a quad-density drive can format and write Kaypro II and 4 disks).

Theoretically the Drivetec drives should provide very good data reliability. You see, the drive has two stepper motors. One positions the head to the approximate track location and the other then adjusts the head position slightly to maximize the signal.

Your Disks are All Wet

The biggest problem with standard floppy disks is that the base material is hydroscopic so it expands and contracts depending on the humidity. A disk you format and write at the coast might be difficult to read on the high desert (especially if one of your drives is aligned slightly differently from the other and it's off in the wrong direction).

Blow-drying (use a slightly warm setting) a disk for half an hour, or placing it in a steamy bathroom for a few hours, might be all you need to do to read a balky disk. (Note, if your girl friend

catches you using her hair dryer on your disks just tell her you're trying out the latest style in software development. If she doesn't buy that, you probably shouldn't try the same ploy on the guys at the funny farm.) Hold the disk's jacket (not your jacket) open a bit so that the moist or dry air can reach all of the surface.

Anyway, the Drivetec drives compensate for the changes in disk diameter. However, disk size is not the only problem caused by the environment. Most disks are rated for 3 to 3 1/2 million head passes (per track) before the media wears out. Well, some of the disks available for the Robie drives are wearing out after 1 or 2 million passes, but this shortened life appears to correspond with high-temperature (80-100 degrees) and/or high humidity (90+%).

At 70 degrees and 50% humidity, the disks appear to be unscathed after 4 million passes.

There appears to be some disagreement about who makes the best Robie media. Drivetec feels that Brown disks are best, and the Drivetec branded disks are really Brown. Other folks feel that Maxell disks are the best. We'll have to wait and see. I hope that these Maxell disks are not as abrasive as the standard Maxell 5" disks. Anyway, Brown is supposedly coming up with a revised media package so their disks may be getting better.

Squeezing in 192 tracks per inch (sardines have nothing to complain about) might appear to be foolhardy especially when you realize that they have data between the tracks. They call this data "servo bursts" and if the drive doesn't detect these little off-track marks it doesn't send index pulses to the Kaypro. Obviously you have to purchase the disks pre-formatted, and heaven help the little gnome who passes a magnet over papa's new disks.

Manufacturing

There are four outfits who either are, or soon will be, manufacturing Robie disks: Spin Physics (owned by Kodak), Maxell, Dysan, and Brown.

Kodak (via Spin Physics) is supposedly working on expanding the disk technology. They already have a super den-

sity 5" disk and are working on an even higher density version with vertically polarized media. Anyway, the Robie drive is already one level behind the state of the art and will soon be two levels down.

Three outfits will be manufacturing Robie-style drives: Drivetec, Kaypro, and Kodak. Kaypro and Kodak will be manufacturing them under license from Drivetec.

There are currently only about a dozen 12X systems in existence (the Kaypro 10 with a 2.6 meg floppy drive). The engineers at Kaypro are using these 12Xs for software development (such a deal).

Ungrounded Problems

The current Robie drives have had a problem with electrical noise, and the folks at Kaypro are testing out the following fix. Unplug the green wires from the grounding tabs on the drives and then tie pins 3 and 7 together on the power supply. This is supposed to tie the chassis ground and the 12V return line together. They feel that the noise results from a ground loop.

Superterm Won't Be

Kaypro will be doing away with Superterm in the very near future. (Do I hear hooray's?) They will be replacing it with a menu-driven version of Myte. (More hooray's?)

PC Compatible From Kaypro

The word is that Kaypro will be showing its new PC compatible at Comdex. It will be a very PC XT like system complete with winchester and will run 1-2-3 and Flight Simulator.

Flight Simulator is significant, not so much because everyone wants to run it, (come fly with me) but because it is considered one of the best tests for PC compatibility. If you can run this program, you are really compatible.

It comes with a Western Digital winchester controller, 256K (you can add an additional 192K on board), an 8088 (I believe) on the plug-in processor card (keeping their options open), and one additional card slot for adding additional hardware.

It will come inside a standard Kaypro 10 cabinet (do I hear murmurs in the

crowd?) and will have a built-in 9" green CRT. The choice of cabinet limits them to the single open card slot. There will be a connector on the back for plugging in another monitor. The system weighs about the same as the current Kaypro 10.

I don't have any word on the software package that will come with the system but considering MicroPros selection of PC software, I wouldn't be surprised to see WordStar, CalcStar ... combined with the new system.

Another Neat Publication

Push and Pop is the monthly publication (30 pages) of Sacramento's Micro-computer User Group. The June issue covered translating Fortran programs into Pascal, CP/M 68K, purchasing a computer, and winchester drive notes. The magazine is well done and easy to read.

The publication contains a list of other

Sacramento User Groups: Big Board, Morrow, S-100, Televideo, Heath-Zenith, Kaypro, Osborne, and Sanyo. The Big Board group's number is 916-383-7059 (Harold Musser, eves), the Kaypro group's number is 916-961-8810 (Marty Meyer), and the Morrow group is available at 916-421-6268 (Milt Levison).

Subscriptions are \$10 per year and their address is SMUG, PO Box 161513, Sacramento, CA 95816 (Attn Push and Pop).

84 Board Service Hints

The 74LS373 (U6) is reportedly the culprit when the centronics port goes to lunch (makes sense).

If you are having autodialer problems, you can check out your dialer chip (U19) by selecting pulse mode in Superterm's dial menu and then listening to the chip (you can actually hear it work). If you

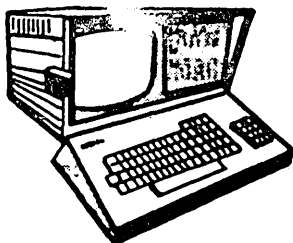
don't hear anything, suspect either the TMS 99531 dialer or the Z80A. As we reported last issue, some people are reporting that their system is locking up during dialing and many of them have been told to replace their Z80A with a Z80H.

On the Kaypro 10s, some people are getting a "status 02" error message. That usually means that the Kaypro can't read the system tracks. (The winchester might not be up to speed or that the system tracks may have been garbaged.) The winchester may be slow coming up, the +12V supply may be weak, or you may need to replace the system track. (Check Kaypro documentation if it looks like you need to rewrite the system tracks.)

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As a member, you will receive the bi-monthly **KUGRAM**® newsletter that is read in all 50 states and 23 countries worldwide. The articles and programs in **KUGRAM**® are aimed at the first time user and the "pro". We have received welcoming comments from both. Our column on CP/M titled **CP/M STUFF**, is regarded as a fine tutorial in working with the KAYPRO operating system. Others include **BOX 100** (letters from members), **CHAPTERS** (new chapters from around the world), **IN RESPONSE** (answers to the many questions we receive), **VENDORS** (suppliers of Kaypro compatible products) and **REVIEWS** of software and hardware for the Kaypro Computer.

KUG also operates its own Bulletin Board and is a SIG (Special Interest Group) on CompuServe (GO PCS 25). You can meet and communicate with other **KUGGERS** through this electronic medium.

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