

"That's a windmill, Don," said the February headline, carrying several member promises that the Grail was beyond our grasp, even beyond Don Quixote's. But someone is always proving Your Fearless Leader wrong. Now comes RDB, who says he's making a lot of progress toward the Grail.

It seems that the Grail has two big parts, plus some other chunks. Nothing

is simple, is it? First, and maybe easiest, a text Grail disk must load into memory a trick that listens for software which says, "Show this text on an IBM screen."

The text-Grail gremlin then interrupts the message with, "Take this text down the hall and ask in room XXX where it should go." Room XXX, a regular 2000 department, has long been doing this referral work for us. RDB says he has finished this routine, and he sent headquarters a crippled disk to prove it. (Crippled? See below.)

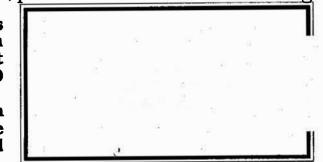
A Picture Too Big to Hang

Many IBM-style programs send a graphic message directly to the screen. There are only 2,000 spaces for letters on our screen, and it's easy to store them in our 256,000 memory spaces. That's where a text Grail disk can find them. But one picture (a graphics screen) takes 256,000 dots of variable color, more information than our entire memory can hold.

So graphics programs don't store the picture in our memory where the text Grail disk could look them up. A forwarding address for graphics, stored in memory, would never transmit a single pixel. The IBM programs are sending their pictures straight to the graphics board memory for storage, bypassing regular memory. So the graphics part of RDB's growing grail is a substitute chip, which

Orphans 387 Main Westport CT 06880

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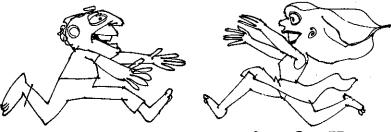
RDB has asked chip-makers to make for him. When he's got a working prototype, he'll send that to headquarters too. "I seriously expect to have the full grail out in two or three months," RDB said March 22. I'm a little skeptical and a lot hopeful. Maybe we'll never get a complete Grail, but it doesn't seem as far away this spring as it seemed last winter.

I've been playing with the RDB text Grail disk, and so far I haven't gotten anything to run that wouldn't run before. This means little, because YFL has precious little time to juggle programs with the alleged text Grail disk.

So I make no promises that this disk works, but to the extent it does, it has great value. However, RDB has seen fit to cripple the disk he sent to HQ with a fifteen-minute self-limit. It reminds me of that little box with a toggle switch on top. You snap the lever and a little hand comes out of a trapdoor and snaps itself back to off. (continues on next page) (Text Grail) If anyone does get this disk from us, he is welcome to hack code to break out the fifteen-minute barrier; please tell HQ how you did it. My first try would be resetting the system clock, but RDB's disk probably has an internal clock that gets its tick-tock straight from the 80186 chip. Its instruction to quit at 15 minutes might be changed to, say, 15 years.

RDB says the disk can go to members from headquarters at any price "within reason, among other things because it's got a timeout in it. Fifteen minutes after it's loaded, it reboots the machine." What if people crawl into the disk and pull out the timeout, I said. "They gotta find it, first," RDB replied.

If anyone wants to play with this alleged text Grail disk, it's yours for \$15 or \$5. It goes out for \$15 (with box and postage), but if you send us a report of a dozen or more successes or failures with it, including exact keystrokes, I'll refund \$10 when I get your report. The tries should be with major software that doesn't run on the



2000. Borrow it, or buy from Egghead if you're on good terms with them. (See how to get along with Egghead, Feb88 p.15. Egghead read that and later approved its content.)

Just so it won't be a total loss, this MayMiscellany disk will have all the so-far corrections to the Orphan shareware (AGAIN.EXE, CHESS.EXE, MISSION.BAT, possibly others). It will also have whatever recent arrivals we have at heaqdquarters, such as a simple typing-tutor program CJR just sent — it works. Check the Souvenir Shop for MayMiscellany.

"The version on disk is supporting text mode only," RDB says, "anything that will show on a PC with monochrome text adapter, except for some of the subtleties of messing with the cursor or grabbing the keyboard."

The One, the Only Machine for You

Reading computer magazines is like reading the diary of a fifteen-year-old. Remembering my own private thoughts of that age, I knew beyond doubt that there was a perfect girl out there for me, carrying an engraved pass to "happily ever after" with my name on it. My only job was to improve myself fast enough to be qualified for her approval when we would meet.

Later I decided to accept a pretty good companion, not a bad deal since I was only pretty good myself.

Even later I decided that my gal is utterly ordinary, even a fat pain sometimes; and so am I. And yet we are living happily (that means without major trouble) ever after. Virtue and compatibility don't do the job; we do.

But the computer magazines are still thinking fifteen-year-old thoughts. The editors have grown up privately, but they conspire in print to support a childish notion of perfection through mating.

The fable has it that if you carefully, expensively pick the right computer hardware and software, your computing life will be the perfect marriage of man and machine from this day forth, tra-la, tra-la. Let's not talk about next month, when the same writers will be urging you to commit adultery with "completely different, far better" tools.

Oddly enough, the course the magazines suggest is the only way sure to fail. He who buys new hardware and

software every few months is the guy who will fail. Year after year, he will spend more time learning the software and fighting the hardware than he'll spend computing. Having lost more than half his work time, he'll be too rushed to read and plan. He'll look for easy solutions and he'll get out what he puts in: mediocrity.

Most members stay with the 2000 because they're too poor right now to move to a mail-order AT clone. But being stuck with 2000 incompatibility forces you to stay with increasingly familiar software. Desert-island determination and desertisland time are your computing muscle.

How Nice Can Work Be?

The quill pen on greasy parchment was a 2; the typewriter jumped to 5. The Tandy 2000 is 8, and the snazziest loaded Compaq is 8.1 -- 6 to you because it brings you into a world where half your time and half your budget will be wasted, from then on.

What's a 10? Floating on a seat in a warm swimming pool with a 3-D color screen built into a pair of sunglasses, with brainwave electrodes and a Cray in the side frames. I send your Orphan goodies by just wanting to. I dictate and format the Whimper in my thoughts. A seemingly real Whimper grows before my eyes, complete with ivory-colored paper, shadows, and a binocular perspective of partly-opened, curving pages. The computer understands my every whim and acts on it in a billionth of a second. The shareware has gotten some general compliments and specific complaints. "I have had a great time exploring the utilities and the toolbox. TED, CED and SEARCH alone are well worth the price."

AGAIN.EXE somehow fell off the edge of the Utilities disk. Early purchasers missed it. Another file slipped, but I pulled it back. The February 20 toolbag list included pkx35a35.doc, which explains pkx35a35.exe. But there was no .EXE file listed with it. No matter, I copied in the .EXE file before shipping any disks out.

Another gremlin visited CHESS.EXE. SAA and BJK report that it crashes. When I checked it on the master disk, mine crashed too. I went back to the chaotic shareware pile and dug out the original, which ran perfectly

What's New at HQ

while I beat it on its dumbest level (taking no chances). Copying it onto the master toolbag disk produced a running chess.exe.

Again, by my error, MISSION.BAT lost some lines and a lot of its effectiveness. If you call it up with TED (or your favorite word processor), you will find four lines that begin with FRAME. After the first such line, insert a line that says WAIT 5. Do the same after the second FRAME line. After the third and fourth, put WAIT 7 and WAIT 9. After the WAIT 9 line, put in seven lines that say nothing but ECHO. You'll find that your MISSION briefing is then more fun. If you move it to another disk, be sure to move the files WAIT and FRAME a.

Present buyers get disks free of these faults. I'll adjust the faulty ones if you send me a box with disk, note and return stamps inside, but you won't: it's not worth it. However, next time you order a disk, ask me in your order to copy onto it the correction that's due you. I will. Incidentally, the MayMiscellany disk will have all current corrections on it.

It's a Whole New Ball Game

New annual membership rates, now that we're doing the Whimper every month, are \$24 USA (50 states and Puerto Rico); \$27 for APOs and FPOs; \$33 Canada and Mexico; and \$40 all other countries. Those with existing subscriptions need pay no more until their expirations. You wild and crazy two-year men may have made a wise investment after all.

People who paid after April 1 got \$24 memberships or renewals; those before then got the year for \$18. If \$24 people mailed in \$18, I gave them 9 months.

More a Hamper, Less a Bag

After much work by members who typed missing parts to disk, the Whimper Hamper is complete. Hamper Ic, packed full, has issues 4 and 5 of year I, all 6 of year II, and issues 1 and 2 of year III. In calendar terms, that's MarMayAugOctDec87, and FebAprJunAugOct88. Ten issues in all. A second disk, Hamper IIa, has December88 through this one, four issues. It will be relabeled IIb, etc. as issues are added.

Hamper Ia (lacking May87) and Hamper Ib (including May87 but with parts of some issues still missing) are extinct, and their owners can upgrade as described in the Souvenir Shop.

We are all indebted to Orphans H. Glen Guyer, Donald A. Buttram, and Wayne K. Yandell, who keyed in the missing sections. Thanks, guys, for a long job well done. The Whimper Hamper at \$40 isn't a lot

The Whimper Hamper at \$40 isn't a lot cheaper than \$62 for the issues on paper. It's harder to read than paper and lacks the headlines, cartoons and white space that make reading more pleasant.

But the Hamper is for research. You can pull it into a word processor, enter a word like cartridge or Envision, and a short time later (with a search command) you have every passage discussing your key word. Of course you can't use a word like 2000 or Tandy unless you like 100-page printouts. If know you saw a mouse battery size beginning with CR (it was CR2320), you run a search for CR. A search goes faster, by the way, if you look for exact case: a search for CR, cR, Cr, and cr will take longer than CR, plus extra time to dump Cray, crazy, secret and so on.

The search must go file-by-file in a word processor, meaning one issue at a time.

POSTMASTER: Send address changes to the Whimper, 387 Main Street, Westport, CT 06880. The Whimper (ISSN 1040-0052) is published every month by the Tandy 2000 Orphans, address above, for \$24 yearly (with other member benefits). Second-class postage is paid at Westport, Connecticut.



Norton and some other utilities will let you search the entire Hamper disk with one command, even both Hamper disks if you have them combined in one hard drive directory.

Alternatively, you can combine all issues into one file on a floppy or hard drive. First, add words like JUNE WHIMPER STARTS at the beginning of each file. You can read one issue by running a search for those opening words. Then copy them to a new location with a command like COPY I-4.WMP+I-5.WMP+I-6.WMP B:<enter>. Now all the fancy tricks of your word processor find things in back Whimpers. But the action will be slow: the combined file is bigger than available memory, and will be buzzing to and from disk during your searches.

A Cover With Credibility

We see the big computer magazines dating the issues on the newsstands in early May as "June." They expect people getting a newspaper to be tempted by a date that sounds immediate, right now. That "June" issue was actually written in March.

The Whimper is different. The date you see on the cover is the day on which I made the last change: pasting the date on the cameraready cover. The date rolls from MS Word through the Orphan laser on its own sheet of zerox paper. I back it up with double-face tape, trim with scissors, and fingernail it onto the photostat of the logo, previously pasted on the lasered front page. I no longer do the doublesize pasteup at 600dpi, because I've snuck three issues in at 300dpi with no complaints.

I stop reading your letters about a week before the cover date, for seven days of godawful labor. And for about a week after the cover date, I play catch-up with the mail pile.

The 11 days for you to get your copy, after I close the issue with a cover date, is two days of my fiddling, seven days at the printer, and two days in the mail. Our lead time (when the last story in an issue arrives at HQ, until you read it) is only 18 days. That's what a cover date means on the Whimper.

Good Scouts

Thank you for the cash gifts JSZ, EMS, RRJ, DCS, JEC, KLK and LMS; and to those who say "keep the change," pretending it would be too difficult to write the exact digits on their checks.

Thanks also to the kind members who have recently sent shareware and theirware for headquarters to review and/or offer: SAA, DWK, CJR, RDB, HGG, RLR, DB2, JMDY, LCM, WKY, DAB. And to those who sent disks previously and never got a Whimper thanks, a Whimper apology. Only in 1989 did I rediscover the surface of the headquarters desk. Now, every job gets done (or discarded) as it comes in.

Scoutmasters

The Guru Gang, born last month with seven members, has added four more: CJB, DEB, RDB and WCC1. If you like to do surgery on 2000 guts and tailor software, be sure to let headquarters know. We will add anyone who is reasonably comfortable with assembly language, ROM burning, memory mapping, things like them there. All members get eachother's names, addresses and phones, and the same of headquarters.

Do You Live in Scribble City?

While I have made no progress on the Orphan-Near-You project, I did go through the March Whimper pile with a pen, writing all the city-twins. By that, I mean that if A and B lived in Keokuk, I scribbled A's address on B's Whimper and vice-versa. I did have to stop doing this when I got to overpopulated Orphan towns: Baton Rouge, Oklahoma City, Houston, Fort Worth, Austin, Tucson. I skipped all three west coast states; it was getting late.

God Computes --

Running heaven and earth is a big job; so God must have computerized soon after Adam lost count of his grandchildren. About a dozen Orphans are men of the cloth, and like their Boss they embrace computers.

Running a house of worship is a perfect outlet for the versatility and power of the 2000, as GGS reveals:

"We use it for word processing and finances routinely, with some database work. Another use is membership maintenance: keeping track of family relationships, time and talent of members, communion records, etc. It merges with the word processor, providing up-to-date labels for our mailing list of over 500 families, a total of 1400 members. The membership maintenance program was written by a nearby pastor." This calls up a picture of the Pearly Gates, where I give the gatekeeper a name and he turns to a little standup desk by his gatehouse window. Click clack clickety clack. He seems to be reading a screen. "Egad," says YFL, "I should have known they'd be computerized."

"Hmmm," he says. "Aren't you the one who gave Tandy all that trouble? Hmmmm." He reaches for a phone. I think, "Oh shit, I was afraid this would happen."

After ten minutes, both giant gates swing open. Four Secret Service types walk through, looking around quickly with fingertips inside their trenchcoats. A tall bearded man in a white burlap robe with this glow around his head comes out of the fog inside the gate and walks over to me, his hand extended. "I've been looking forward to this, David R. let's have a sip of the grape."

-- so Does Mammon

But the 2000 is a versatile machine. In its impartial chips, faith in God and faith in Dog are just an anagram apart. A battery of 2000s is running a dog track for DH. He has the same variety of uses: databasing, publishing, and member-tracking, although in this case the members are greyhounds, and the talent and time refer to race 2000 performance. One flashes the results to newspapers and "wire services" (dare I say bookies?) with its mo-dem. Ye olde spreadsheet and database set up races and record the purse payments.

Our dear machine rises to great heights and goes to the dogs with equal ease.



There's always a nice Shackman somewhere, enraging Tandy by giving good service to the 2000 owner who's not interested in moving to a later Tandy computer. JDE reports that such a paragon operates in Wyoming. I'll skip

his name to give him as much safety as possible. He's called and modemed all kinds of

third parties, and the deepest recesses of Tandy Fort Worth, to find JDE parts and software. He shares Tandy information freely. Tandy has gotten on his case at least once, for his forbidden helpfulness.

I regret telling about these great guys in an ungreat organization, because Tandy

Digitize Thyself

That time to number your initials has rolled around again. Alphabetically: BJS1, the sum of your zipcode digits is 27; newcomer BJS2, your sum is also 27! Egad. BJS1, your last zip digit is a 7 and BJS2, yours ends with a 9. You guys with two zips, like with P.O. boxes, we're using the zip on your laserprinted Whimper labels.

BM1, your total is 24; BM2, 15. BN1, 21; BN2, 25. CJC1 20, CJC2 31. CS1 23, CS2 29, DB1 20, DB2 27, DES1 16, DES2 17, DJW1 29, DJW2 20. DKS1 38, DKS2 16, ES1 23, ES2 also 23. ES1's zip ends with 6, ES2's with 0. GH1 16, GH2 22. JAF1 30, JAF2 10. JC1 27, JC2 10, JCC1 31, JCC2 13, JJW1 19, JJW2 20, JR1 16, JR2 20, JRB1 15, JRB2 23. JRH1 20, JRH2 26, JRH3 15. KEM1 15, KEM2 25. KS1 23, KS2 17, LAM1 27, LAM2 24.

MAB1 you're a foreigner now, no zip; MAB2 your zip total is 20. MAH1 9, MAH2 17, MAH3 24. MDL1 17, MDL2 17 again! MDL1 your zip ends in 0, MDL2 2. MEB1 18, MEB2 19. MMC1 20, MMC2 24. PS1 22, PS2 16. RD1 18, RD2 30. RJS1 16, RJS2 14. RLA1 23, RLA2 22. RM1 your Canadian zip code adds up to 36, RM2 21, RM3 3, RM4 25. RW, we're calling you RW1 now, zip total 17; RW2 16. TEB1 27, TEB2 24, TEB3 20. TJM1 12, TJM2 25. WAT1 no zip (you're miss-ing in action), WAT2 17. WCG1 19, WCG2 19 again! WCG1 your zip ends in 3, WCG2 0. WW1 25, WW2 16.

Personally, I find that my numbered initials (DR1) seem very distinguished.

only gets mad at them after getting the smuggled Whimper. Am I helping Tandy get the good apples out of their cider barrel? I think not. This country was colonized, and later torn away from Britain, by proud, inde-

Diamonds in the Gravel

pendent people whose thinking is still with us. Some of those proud people run

Shacks in places far from Texas, and refuse to let Tandy act like King George III. When Tandy says a salesman or manager must be disciplined for helping 2000 owners, the area manager says okay but doesn't always do it. Three cheers for the art of un-subordination: disobeying without being obvious about it.



League of the Lifted Pinkie

We have a handful of members living in secrecy and dread, as Jews (still) live in Germany. This persecuted class is our gays, treated as enemies by just about everyone. It's lonely being gay, like living in a city that's been 99% wiped out by atomic war.

The roughest thing about being gay is lacking the security of marriage. Marriage is nothing but a legal setup in which couples who want to break up have to pretty much destroy eachother's lives. All couples have major fights, but the marriages survive fights because the

If you keep your Whimpers in a loose-leaf binder, save that little pile of paper disks in the punch until you check the holes. RST had to search his cellar trash Or a February Flee Market phone digit. Both he and JAD suggest a wider gutter margin for the holes, but I don't want to Sacrifice the better-look-ing white space at other parts of the page.

Our thanks to the kind contributor of "five easy pieces" last month, Jack Doerr. He sent photos of several easv-to-confuse hard drive add-on parts.

alternative is worse. Gays, being barred from marriage, break up a home with every big fight, so they're sure to grow old alone.

Any Orphan who is gay (male or female, they have mutual respect) can write to headquarters and get the names of all other gay members who similarly write in. The first people I would expect to hear from are members from Islington and Cantonment, who clued me in with those courageous joint bank accounts on their checks. Some of you San Francisco types might want in also.

Personally, I find the regular sex system inspiring and the gay way horrifying, but gays as people tend to be humble, brave, witty and bright. That's because they need those qualities to cope. The same might be true of negroes in Detroit. Mexicans in Fort Worth, Chinese in Sacramento, ladies in IBM, and so on. If any minority member would like to see "hands across the Orphans" for his (her) group, let us know.

It's Fun to Run a Lifeboat.

This is just about the most ordinary letter we ever got, but I find it inspiring. It's exactly what every non-Orphan 2000 owner still out there should be sending us.

Dear David,

I was reading PC Computing Magazine the other day and I found your letter to the editor. I do not know your last name; it was not in the article, so I apologize. I am interested in joining your club. I own a 2000 and I am quite comfortable with it. I would like to know more about this computer and get more use from it.

I have heard of the Tandy 2000 Orphans, but did not know how to get in touch until I saw the letter you wrote. I feel like an orphan when I go to the neighborhood computer stores.

Please send me an application to join your club. I hope I can contribute in some way.

> PCS Arizona

PCS, you live in the lowest-priced PC marketplace outside of Hong Kong, although you're stuck with state sales tax when you use it. You will be able to keep your 2000 purring for bottom dollar. I use that initial R. to avoid member phone calls, which would wipe out the club. Thanks for coming in with us.

IBM does it.



One hears that IBM never lays anyone off, and the same thing for Tandy. But John Roach has figured out how

When IBM wants to get rid of a guy, they merely transfer him to a location that his employee profile says he hates. Or they hand him a job "troubleshooting" some incurable leper-colony outpost of IBM that is only kept open as a way to get rid of people. He finds himself doing futile,

Harvest time at Envision Designs is almost over, and the winter of the 2000 is at hand.

Orphan Dave Nechodom (now at 2121 W. Henry St., Pasco, WA 99301) has asked to be dropped out of the Sidewalk Salesmen listing. He's had to take full-time non-Envision work, and is not eager to work past midnight every night. If you want an upgrade that you know he does, I suggest you get your order in dav-

before-yesterday and expect it to arrive in over a month. He's honest enough to refuse your money if he just won't have time. I just

bought a boatload of stuff from him, packing the headquarters cabin for the long winter.

Is anyone out there who uses oscilloscope and soldering pencil, reads circuit diagrams for pleasure, and would like to make a thousand or two clams every ' that east Washington accent.

month? You could substitute for DWN. You would put in 20 or 30 hours a week. DWN would provide instructions, selling you his stock of harddrive boards and 896K motherboard mezzanines — both being improved Envision devices. Anyone who thinks he qualifies — and will stick with it for two or three years send headquarters a note with details.

DWN will provide 640K upgrades for any big

> flock of boards you guys get from the SOS (store operating systems). If only a few of you score, he'll be willing to provide zeroxed instructions. I'll

be checking with Dave and telling you more. Envision is fading away.

I used to think Dave's cheerful telephone greeting, "NnnYALE-o," was unusual. But tonight I got Mrs. Envision, and guess what? She said "NnnYALE-o." I guess it's



Stock Up If

You're Sticking

Around

Making Good Guys Love Goodbyes

thankless work 80 hours a week with the most repulsive people he's ever met. After he appeals for transfer, Armonk chuckles and he quits. He doesn't know he's been fired.

Tandy has copied the scam. There are store managers who call Fort Worth for you, dig in the back room piles, and slip you floppy copies of goodies we're not allowed to have. Tandy smells them out, and one day old Alphonse is gone. Some tough

kid in his first necktie tells you he's the manager. He doesn't seem to hear your questions about where old Al went, and why.

Old Al is selling Tandy 1000's to novices in the nearest ghetto, or worse. Soon enough, Al will be working for someone else. But like those quitting IBM, the transferred Tandy managers don't even know it was a hint. The poor guys think quitting Tandy was their own idea.



How Red is Big Ed? How Green Is His Dumpster?

Big Ed Juge, marketing manager at Tandy, has heard that the Orphans want the 6000 2000s that still work the daily store accounts in regular Shacks which aren't computer centers. His smuggled copy of the Whimper said so, and his "radius" confirmed it for him.

Big Ed and I have "radiused" eachother. I require signatures from Fort Worth area applicants, promising they won't let the company read Whimpers. And Big Ed has alerted all Shack managers within fifty miles of Orphan headquarters to tell David R. nothing, but be friendly and find out what he's up to.

Those six thousand 2000s, about to be trashed, are a fascinating story of Tandy's dark corporate personality. They were originally force-fed to all the stores in 1984, because the 2000 was not selling and Tandy wanted to boast about thousands of quick sales. The 2000 is great, but their store accounting software does not have any use for this greatness.

use for this greatness. In 1987, admitting defeat, Tandy sold all its stillboxed 2000s for 10% of retail. Many Orphans bought spare machines, and others wished they had. Those store-accounting 2000s became an embarrassment. The 300 computer centers had to dump them in 1987 for 3000s. Regional managers went around to the 6000 noncomputer-center Shacks and asked store managers to get their 2000s farther out of sight in back rooms. A manager usually denies having the 2000 back there at all, until you go back and point at

it, looking him in the eye.

But Fort Worth feared that if it sold those 6000 remaining 2000s, a lot of 2000 owners would finally find the "support" Tandy had been promising. It's great to have a spare machine for swapping parts and multitasking. Tandy delayed. There were fights in Big Ed's corner office.

But now Tandy is making its move. Forcing Tandy 3000s (much inferior to the 2000) into the stores, Fort Worth will quietly destroy 6000 magnificent 2000s in May, June and July.

The strangest part of this massacre is the insane cover story: Shack managers have been passing on wild gossip about the store machines being rented, owned, shipped back to Fort Worth, locally trashed, and so on. But with the obvious Orphan interest, Tandy is reported moving to an amazing gambit. A gambit, non-chess fans, is intentionally losing a battle to win a war. It sometimes works.

Tandy is alleged to be planning a nationwide mailing to its business customers (and probably its new Grid customers). That mailing would offer group-purchases of systems at around \$500 apiece. That's way above market, even among us faithful Orphans, and nobody will buy. The 2000 is non-compatible, and a still-famous (PCMag 8-7 p.71) flop.

Big Ed is having this impossible, embarrassing maneuver forced on him by former accountant John Roach, who can't bear to write off a loss without a fake sale.

The system being "sold" is a double-floppy 2000

The Future Is Here

We have requests from new applicants JDE and MDP for an expansion card chassis. This wish is less often expressed these days, for a practical reason: All our serious members are running two or more 2000s, so when a crush of jobs causes card crowding, the solution is simple: Do your CAD on machine A, you database on B, and your Great American Novel on C. A side benefit: You get the fast multitasking that is only wish-listed for \$10,000 machines with many megabytes of memory. For a few hundred extra clams, we have it now. See your chance below.

with graphics board, color chips, memory board, and hard-drive board with (oddly) drive C: coming from the outside connector and drive D: from the inside connector. It will include a faded-out CM1 — they've kept those machines turned on all day for five years. The CM-1 is worth \$25, but worthless are the bundled-in stone-age modem and prehistoric external 10meg hard drive.

The total market price for this used system is \$260, but the market glut of these six thousand machines brings it down to \$50 — what a sensible seller would ask. I offered Tandy \$300,000 from individuals for the fleet, in the name of all you guys willing to grab loaded extra machines for \$50. But Tandy has not replied, in line with its yearold policy of ignoring Orphan communications. Our last line from Tandy was a March 1988 Roach letter accusing us of anti-Tandy bias. He was dead right.

After selling literally zero out of six thousand at \$500, Tandy will put in the Fort Worth landfill those that store managers haven't dumpstered. Why? Because panicky Tandy would rather lose \$300,000 than let any support get to the immortal machine that refuses to die.

Drop by all Shacks near you, and feel out the manager. He may sell to you "privately," or let you unscrew some boards before the burial (buy him a good lunch with a folded greenback). These guys sometimes resent Tandy as much as you do.

There's game afoot, sports fans. Get yourselves ready to move.



Hang Your Own Triple-Drive, \$5.25

Are you adding a hard drive to your double-floppy? Just trace our drawing on flat sheet metal and bend it up into a hard-drive bracket for Seagate, MiniScribe, whatever. You a copy for no charge if you send JAD or JDE a #10 (business letter size) SASE and a friendly note. They're good guys to do it, and I suggest you guys include a \$5 check or greenback. JAD is at 22407 Bayview, St.Clair Shores, MI 48081.

JDE is at 3427 Dover Rd., Cheyenne, WY 82001.

JAD and JDE, avoid 97% zeroxes — or draw 3% oversize before you use them.

MFM is Here to Stay

Those of you asking whether they can run SCASI hard drives off the Iomega board, forget it. Writing the driver is possible but too hard. Our hard drives will remain MFM-controlled. Note that MFM disks will run under high-tech coding, but unreliably. If you go to a 386 or 286 system, plan on selling your hard drives with your 2000, or staying with lowtech MFM.

Stress for the Goose, Sauce for the Gander

Adding an 8087 to your 2000 will more than double the speed of programs that do math. This includes spreadsheet work and many graphics programs like AutoCad. Don't buy the 8087-1 chip (\$180 street) and Tandy interboard (\$75), JDE advises, but hire Tandy to do the whole job for \$495. Fine if you can spare the extra \$240, but the changes to the motherboard take fifteen minutes of careful soldering and scraping (Whimper II-3, II-5).

soldering and scraping (Whimper II-3, II-5). Pay Tandy five bills if you like. But doing it the "hard" way is your best bet. Aside from saving you \$240, it will give you a valuable lesson of life: Anything which is highpriced and seems scary will turn out easy and cheap for the few gutsy enough to learn and do it. If you're bright, the only thing you can't do better yourself is rectal surgery.

Tandy charges an awful price for the hard-drive "kit" -- a slide-in controller-board tray, a stone-age 10-meg drive you don't want, and a bracket. Poor JDE bought the giant kit, but if you can find a hard drive board, buy a modern drive (20 to 70 megs) with a fraction of the wattage and price of the klutzy Tandy 10meg. Some cheap parts, and you're in.

That mysterious black bus on the hard drive card's back panel may run a 48-meg tape cartridge backup, Tandy 25-3020. JAD also suggests that the 25-3020's driver disk for 1000/1200/3000 might adapt to the 2000 with minor rewriting. A newer tape unit might be a better choice, and watch out for a possible 32-meg limit. If someone makes progress on writing a driver, please notify headquarters.

Beware the BS-60

Some people who found Orphans in PCComputing are just now getting their first regular issue. They will still be curious about our \$60 removable hard drive. As we pointed out in March, that was inaccurate B.S., for which I apologize. The \$60 buys only a pair of floppies hidden in a flat black box. It is transformed into a "removable hard drive" by an \$800 (street price) Iomega cartridge drive.

We presently get only 10 megs per cartridge on the 2000, but Iomega continues its very slow work for Orphans, to make them run a full 20 megs.

All these options require the slide-in cartridge board, which Tandy sells for an awful price. But we will get it manufactured for around \$100 if we collect fifty orders for it. Watch the Whimper for updates.

Don't Read in Color

Moving from VM-1 to color interests RHA, "if the graphics are fine enough to support my word processing with at least the quality of character definition I get with my VM-1." Bad idea, RHA. As previous Whimpers have said, the color screen (CM-1 or openmarket multisynch) is muddy compared to the VM-1. For example, the dark band between the letters MM on a VM-1 is black with gray edges. On CM-1 it is a wispy hint of gray, the letters almost welded together. Only a silly goose does word or number processing on a CM-1. Take a gander and you'll see.

Here's Watts Cookin'

Members worry about using our stock HD power supply (it's a screw-on roof panel over the main power supply) with "bigger" hard drives. Worry not. Newer drives from Seagate and MiniScribe use so little power that you can run two 70-meg half-heights with less power than the Tandy drive uses.

You probably think of a 2000 as a heavy drain on your electricity, and worry about leaving it on all day. But a 2000 with two floppies and a 40meg Seagate uses only 141 watts, not much more than a light bulb.

A twin-20 cartridge drive pulls 33 watts. Our 2106 laser gets by on 44 watts. It also has a little toaster inside that heats up for 30 seconds at the start, and one second every thirty after that. It takes short snorts of 600 watts.

King of the RD

Subdirectories, like the woman Porgy sang about, are "some-time things." When you want to get rid of one, you first erase every file with DEL *.*. Then you wipe out the directory itself with RD OLD-STUFF. The RD means remove directory.

But RST complains that his efforts to remove a directory fail because two files called . and .. block his RD command. I don't think so,

How Modern Are Your Mods?

If your 2000 has an M before the serial number, RST suggests, that might not include all 46 mods (modificatins). It could have been given the paste-on (or scratch-on) M during a shop visit where only a then-current group of mods was done. The same could be true of manufactured "mod" machines with their printed-on M. Next trip to the shop, ask the guy to look for later mods; you can look yourself if you have the Orphan mod book.

A Ram on High Sandwich

Another member reports that he did the 512K bit to his memory board, using the Orphan directions. KLK has the "512 mod up and running with no problems." YFL buys the Envision 640 upgrades of the same board, although paying more for the privilege. 120ns 256kbit DRAM chips are down to \$8 now in computer trade magazines (InfoWorld, PCWeek). RAMming is again a good idea.

Ever since the big boys "pantsed" me at the Y, I have this fear of things falling off. They hung my little brown corduroys from the street sign across Monroe Avenue, while I crouched behind a pingpong table. A bigger boy brought them back to me.

So when disk jackets were coming off every time I pulled a floppy out of a container, that old insecurity came rushing back. The way people put disks in things is not right.

You should push the *side* of the jacketed disk into any envelope, box or file. You can write a title on the opposite side that remains visible.

When you pull a sideways disk out, the jacket comes along, preventing fingerprint fatality and collisions with gum or staples on envelopes.

Keep Your Pants On

RST. On my machines RD works after DEL *.*, and DEL *.* wipes out the dot-files. Keep trying with our DOS manual open, RST: chances are, there's one move you're doing differently from what I'm doing.

I'm doing. RST calls the dot files "a waste of space." The dotfiles may not be files at all (I don't have time to check), but they are codes. The single-dot means "this directory," so if you're typing it into your DOS command, you don't have to

I am tired of hearing doctors

say the Latin name of the

part that hurts, with "itis"

on the end of it, and paying

fifty clams to hear I should

go home and rest up. Now it

seems that our dear/ ma-

chine has been acting like

the damn dumb doctor all

B:." "Disk error reading drive

fancy electronic disease at

all. You cure it with a rub-

ters 2000 started whining about diskitis today, so I ran

another format on the "bad"

disk. A lot of question marks

appeared at the end of the format line. "135,168 bytes in bad sectors," the doctor said proudly. (You know how excited doctors get

A:." "Diskitis." "Diskitis."

"Error writing drive

But diskitis is not a

The silly headquar-

along.

down.

type out OLDSTUFF. And double-dot means "the directory above this one."

A lonely slash means the root (main) directory of the disk, so CD\ will move you to the top. But if you want to go up only one step, you say CD .. —which means, change to the parent directory of OLD-STUFF, the one right above it.

Who wants to run the DMP110 or DWP 210 out of Word 3.1? See drive brackets below for JDE's address.

There are a couple of 2000s in Kansas which keel over dead every five minutes. They reboot themselves and give a cheery good morning. But five minutes later it's quitting time again. SAA hopes the backscrews he ordered from Orphans will help (did they?).

But the 2000 has (until mods 11, 15, 23, 42 are done) power-supply glitches. SAA has "mods" and an M serial number, but how many mods are meant by the M? 16? 40? 46? Were they really done? Only a careful exploration of the box will answer those questions.

9

Distrusting Diskitis

when they find that you're falling apart.) Blemishes? I turned the

Blemishes? I turned the floppy inside its jacket, using two fingers in the hole. It looked beautiful but it felt stiff. A fuzz-lined floppy should turn easily, and this one would hardly turn at all.

So I rubbed all its edges (the bottom edge very cautiously) on the edge of the desk, as if notching the desk with a knife. Then the disk formatted like a champ and copied like a star. End of diskitis. Disks need loose edges, not a tight fold of the black jacket.

Flat cardboard envelopes squeeze a floppy enough to make it hard to rotate. This gets worse when the postal service crams a lot of mail into one tray or bag. Use the more expensive corrugated disk boxes.

The Friendly Skies of CM-1

Retired pilot HS says of our Flight Simulator, "I am really amazed at some of the reality that was programmed into this toy." Aside from the con-trols and windows, FS lets you choose weather, season, day/night, and flight con-trols. It starts out steering like a big cabin cruiser in the harbor. When you snap a few menu lines, it begins to get as nervous and slippery as a real plane. We have two Orphans who fly for a living, and I'd like to hear their reactions to FS.

Two members complain about Flight Simulator not loading onto a hard disk. No, our Orphan FS cannot be copied to anything. Microsoft froze the disk because the party-party crowd to whom FS appeals tends to pass disks around. Orphans has located a defroster, but he's unable to produce a copiable disk.

And there is no way to quit FS, even if you land and pull into a hangar. You have to turn off the 2000.

Don't You Believe It

You can't ever trust a software maker's assurance (through a telephone sales rep) that its program runs on the exotic 2000. If they say it does, it probably doesn't. If they say no, it very well might. Take a chance, and make sure it's not a chance by asking about incompatibility returns, and by using Master or Visa. Credit cards have a 120day bounce privilege. Thanks for the reminder, LDD2.

Software List Update

SOFTERM 3.00.08 (better than Tandy 26-5261 Softerm2000), \$150, Softronics, 800-225-8590. Cubic Tic-Tac-Toe, Tandy 90-0490, \$15. FoxBase+2.1-Big news, a major database. Thanks, REF.



Headquarters has received a stick that rises from a clamp on CAD tablet or keyboard, with a coil spring growing out of the top of it. When you feed your tablet stylus or mouse cord through, you grab it without the usual grubbing around under papers to find it. No more tangled cord, and you don't have to jerk to get your slack. Between grabs,

Software Support

Keep Your Old Way Handy

have never had the courage to try installing it, for fear of upsetting ongoing projects." CLW's WordStar experience applies to all upgrades: you don't have to worry. Use the new version from a separate floppies until it's humming. On hard drive, keep the new

"I purchased the upgrade, but version in its own directory, which acts like a separate disk. See our DOS manual. REName the old version to keep them from copying on top of eachother. Use RE-Named floppy copies of information you wrote or processed, so your crashes won't kill the originals.

Dangle a Digitizer the stylus or mouse dangles

central and ready, just touching. Like the Doerr flipchart, this idea is simple but right, and worth more than its small price to the mouse or stylus addict. BES is selling the 16inch CAD dangler in lexan transparent plastic for, \$32,50, the 8-inch mouse

dangler 26.50. 805-399-7173 for questions, orders to 2021 Margo Lane, Oildale, CA 93308. Any Orphan who wants the oak prototype can have it from HQ for the same \$32.50. Instead of transparent plastic with a clamp, it has a nicely-finished square oak base and oak post under its over-arching spring. It seems

Correction

There is an error in the disk drive pictures on page 10 of the March Whimper. The drive on the left should bear the label 4853 (cross out the 1): the right-hand picture is a 4853-1 (add dash-1). Sorry. All the text used the correct drive names.

Third-Guessing the Second-Guessers

Stock market "technical analysis" is an interest of member R. C. Perrussel of Ensign Pulver fame (page 5, October 1988). One theory tries to predict a stock's performance by what's really going on — changes in ages in the population, fads, tariff bills moving through Congress, new faces in leadership, weather. These guys are doing "fundamental analysis." But the "technical analysis" people read only those mountains and valleys on the price/time charts. They look for "double bot-toms" and "moving averages" and (by compar-ing them with charts from previous years) try to predict where the curves will go.

At first glance the technical guys look like witch doctors. But they are really fundamentalists in disguise. One of the important real forces behind stock prices is the thinking of surging herds of newsletter readers. The stock gurus read and copy eachother, producing visible waves of reaction from marketplayers. A double-bottom might be caused by news of the first bottom causing a stampede to a second bottom. In studying past curves, the technical guys are studying the movement style of the herd, a real market force.

RCP welcomes correspondence from members who want to hear his tech-analysis thinking, and from savvy members who know stock management or analysis programs that run on the 2000. He can't find any. P.O. Box 422, Salina, KS 67402.

New Tricks With Old Software

We have a report that DOS 3.2's Shiptrak works fine on the 2000, and JDE adds this fascinating question: What other DOS 3.2 commands work on the 2000? I'd like a list from everyone who has discovered some. I have 3.2, donated by a Shackie, but haven't had time to plug it in. We have two members trying to patch 3.2 (or 3.3) to the 2000.

We offered a QuickBasic patch on the toolbag disk in the February Whimper, but admitted in the March Whimper that it adapts only completed QB programs, not the Quick-Basic package itself. Now we have a member who says he can make QuickBasic itself work on the 2000. More on this when HQ has the working disk I requested. As always, distribution depends on the wishes of the author.

The notifications have gone out to those willing to dupe Windows 1 for members, and to those members who have requested this service. See the ground rules on page 11 of the March Whimper. Anyone wishing to join either group, write a note to headquarters.

Notifications have also gone out to the three members who expressed an interest in a genealogy program. See Uncle Fred, December page 11. Further requests should be sent to headquarters. Lots of people use CM-1 for text, because while the letters are fuzzier than VM-1, they are in living color. But some programs, like WCS's WordPerfect, refuse color unless the 2000 is already painted before WP hits the screen. WCS loads a color program first. He runs and dumps OpenAccess in color from his autoexec.bat. I think other members do likewise. HQ sticks with twin VM-1's, leaving color to the headquarters urchins. There isn't room at the desk ell for a fat color monitor.



The Kids Are Fighting

Klok2K from the shareware disks wipes out NoBurn, when RLS2 runs them in that order from autoexec. FJD gets the same result. Probably they are both grabbing the same memory slot. This could be corrected by rewriting one of them, but it's hardly worth the trouble. You'd only find some other conflict later on. These tidy little shareware programs aren't sophisticated enough to "sit at an empty table." They just grab a preset memory address every time, even if it's already occupied. This ruins the action of the earlier arrival, or even of both. Check in the February Whimper (page 4).

Incompatibility 1a

The Norton Utilities refuse to work for RWS, which he found frustrating after the favorable Whimper review and a lot of weak responses from Norton that cost him a bundle in phone money.

Congratulations, RWS. You have successfully completed Incompatibility 1a, a first-term course in coping with the 2000. You learn nothing in 1a except that you have a hell of a lot to learn. Your failure with Norton earns you an A in Inc 1a: you have perfectly achieved the goals of the course.

Orphans hopes you have the courage to enroll in Incompatibility 1b. The course materials include your repurchase of Norton 4.0 Advanced. Being without Norton on your worst day of 1989 would be far more frustrating than what you have gone through.

A Norton phone clerk told you you need 320K to run 4.0 Advanced. Horse plop. There may be rare situations when 320K

Program Problems

Who can tell GDR a text in assembly-language programming that covers the 80186? There's lots of hidden talent among our members. Please help them find their tools.

Deskmate applications will not speak to PS's RS-232 line, although his WP and dB print through it with no problem. Why?

Is there a Lotus123 workalike that runs on the 2000 and doesn't cost a lot? CJR is tired to death of the

spreadsheet in DeskMate.

MODE CO80 won't work for KLK, who's using our latest DOS .03. His CM1 stays white with a black border, no text, until he goes back with MODE BW80. Why?

There is a key-numbering bug in the new Basic that came with DOS.03, SAA reports. The manual says the number used with the commands ON KEY GOSUB and KEY/TRAP is equal to the Fkey number, F1 through F12, the arrow keys taking 13-16. Not so: only F1 through F10 would be handy for speed, but your 256K is fine for everyday (and Bad Day) Norton use. Just be aware (as the manual obtusely hints) that typing /D1 at the end of a command makes a stubborn command work on the 2000.

Your 2000 refused to diskcopy the Norton disks from 360K to 720K. You say "the Tandy 2000 must use high density (96TPI) disks." That's usually untrue as to what you buy, and always untrue as to how you format. Our DOS 2.11.03 has a program called PCMaker, a lot like Format. PCMaker produces a plain-vanilla IBM-compatible 360K disk, instead of the 720K the 2000 usually uses. The versatile 2000 cheerfully reads, writes, copies and diskcopies with 360K disks. It does some 360K to 720K transfers, reporting failure; but when you check directories, you find the files safe and sound on the 720K disk.

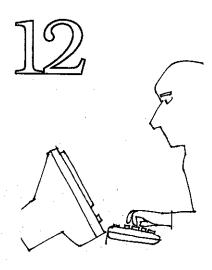
follow that promise, with the arrow keys grabbing 11-14. Numbers 15 and 16 do nothing, and there seems no way to invoke F11 and F12 from a program. Who has a fix for us?

PCBoss has a bug, not a vicious one but more of a ladybug. SAA says that PCBoss's internal clock, which starts counting from zero, runs six minutes fast per hour. The program may be unaware how fast the 2000 is: please tell us why (that would be fascinating) or how to fix it (more fascinating).

Try My Sci-Fi

It's not often that you find a good idea in a major computer magazine, since all of their ideas add up to "buy from our advertisers.

But in the April PCWorld, the departing David Bunnell gets away with describing a futuristic com-puter you can't buy (for a change). It understands conversation and hand signals, all the usual sci-fi horseradish. In the middle of his smoky dream is a workable idea that he apparently didn't notice.



He wants the screen and keyboard right together. touching. And he's right!

You're always checking the waist-high keyboard, even though you touch-type, so you can find ESC, F6, PGDN. Then up to the eyelevel monitor, wearing out neck and nerves glancing up and down.

The solution: Get the screen down so close to the keyboard that they're touching. The screen should slant back as much as possible. You may need a floor stand or some other move to get the 2000 out from under the monitor.

As soon as PCWorld hit headquarters, all hell broke loose. Now both VM1s are basically kissing the twin kevboards. Computing is suddenly about 75% as hard as it used to be. Thanks, David Bunnell, for good thinking hidden in your dream.

Souvenir Shop

Your order—Please order by the short title, like "03" for MS-DOS 2.11.03. All prices include postage, packing, handling to 50 others Former On here all 10" 50 states. Foreign Orphans, add \$5 per order of any size, to pay me for the hour I spend fighting the bank and the post office.

Money-No credit cards and no foreign checks. U.S.A. checks or U.S.A. cash. (A foreign check is OK if it it came to you with "dollars(U.S.)" and a U.S.A. branch-bank address printed on it.) "Orphans" is good on the pay-to line.

DISKS

MAY: MayMiscellany, a brief grab-bag of stuff recently arrived at HQ. Several shareware corrections. The alleged text Grail disk (see story). \$15.00, but a \$10 refund for filing a report on it.

DIAG: Tandy 2000 Diagnostic Disk, won't fix your machine, but a nice way to confirm your opinion of its health (or sickness). Tests slide-in boards too. \$10.

FLY: Flight Simulator 1, the golden oldie that runs on the 2000. \$10.39. Orphan manual is far better and far briefer than the original. Great in color, OK with VM-1. Uses graphics board. Uncopiable.

UTILS: Selected utilities, programs to make the 2000 work more efficiently and give more pleasure. \$10.00. DIRS: Selected programs which list the files in a disk,

often with controls to perform DOS actions while the files are onscreen. \$15.00, the extra \$5 for a Whimper-sized Orphan manual for one program.

TOOLS: Selected gadgets and devices for special needs and fun. \$10.00. Above three disks listed Feb89, pp. 10-11. 03: dos 2.11.03. Latest and last 2000 version, with

newer Basic. \$5.31.

123 (123E if you have Envision memory): Unprotected Lotus123 version1, Tandy 26-5300. \$5.09, send your original program disk and get it back unchanged with our copiable version. We need your original to keep out of copyright trouble.

FW (or FWE): Unprotected FrameWork 1, Tandy 26-5320. \$5.03, and do as in 123 above.

DB (or DBE): Unprotected dBaseIII, Tandy 26-5353. \$5.11, and do as in 123 above.

TWIN: Not Windows itself, but a Tandy-written disk which enables the 2000 to run Windows 1 (only). Formerly their #7002611. Syly erases drivers for non-Tandy printers, but instruc-

tions for avoiding this. (198K) \$20.07. See p.18, Feb89. TRAP: MouseTrap, lets our digi-mouse run arrow keys, ENTER key and F1. Works in DOS and in any software. \$20.19.

BYTE: Creative Byting, a disk of advice on writing userfriendly software that sells. From a publisher. \$5.00.

HAM-I: Complete version Ic of the Whimper Hamper, ten 1987 and 1988 Whimpers on disk. Useful for word-keyed research, but less relaxing than paper. March 1987 -- October 1988, \$40.00.

HAM-UP-I: Disk Ic for those who bought a Hamper lacking May87 or ragged-right passages. Send \$5.00 or a boxed disk with duplicate postage inside to HQ.

HAM-II: Disk IIa of the Whimper Hamper, Dec88 and FebMarMay89. \$40.00. (A HAM-UP-II will be available.)

DOCUMENTS

Attention: The April sale of back issues is over.

BACK ISSUES: Mar87 \$5, MayAugOct87 \$8 each, all in zerox form. Originals of Dec87, FebAprJun AugOctDec88 and FebMar89 \$5 each.

MOU-MAN: Tandy's clock-mouse installation manual, 16 pages compressed into eight zerox pages, \$6.00.

MAST: Mastering the Tandy 2000, compressed 28-page zerox of 100-p. out-of-print book. Permission pd., \$16.50. NEWBAS: List and description of new BASIC commands

in DOS 2.11.03 Basic. 24pp. compressed to 8, \$6.00. MODS: All 46 modification bulletins for bugs in most

2000s. Use nickel parts, soldering iron and screwdriver. 70 pages compressed to 32, \$19.

on a Tandy 2000 memory board. 7 pages zeroxed, \$3.00. VID: Tandy 2000 video ports list. 3 pp. zeroxed, \$2.00. 1 page, \$1.00.

VM3: Modifying a Tandy VM-3 to work with the 2000, by MOR, has pictures. 4 pages zeroxed, \$2.00.

TP3: Using TurboPascal 3 on 2000, 1p. from BJK. \$1.00. **TP3+:** Same patch, more explanation, 3 pp., JAD, \$2.00. **TP4:** Using TurboPascal4 w/2000 by BJK. 4 pp., \$2.00. SAVBAS: Saving Basic color screens by HEB. 1p., \$1.00. SOURCE: Hard-to-get list of some or all 2000 BIOS

source code, supplied by LJS. See Feb89 p.5. 4 pages, \$2.00. IBMPORT: Listing and discussing IBM-style hardware ports. For assembly-language programmers trying to convert IBM-style software for the 2000. 29 pages compressed into 15, \$12.00.

HARDWARE

BACK SCREWS: Mandatory mod #16, eight fat black screws (Tandy AHD-2974) for the four back panels of the 2000. in an envelope. See Feb89 p.12. Eight dollars from Tandy, \$2.00 from Orphans. Extra sets of eight in the same order, \$1.00. Eliminates many 2000 burps & blackouts.

Sidewalk Salesmen

Prices include shipping to 48state contiguous USA.

Extension cables custommade for any wire to, from or in the 2000. \$20 each plus \$1 per foot longer than 20 feet. **Mouse**, Tandy 25-1040 wired as the Digi-Mouse, \$95.. Orphan Cablemaker Tim Bates, 313-227-7344, before 9pm eastern.

Function-key flipchart, indispensable after you try it. Ten stiff $1 \cdot 1/2^{"}$ by 11" pages in a 19-ring plastic edge-binder (specify ivory/brown or white/blue). Slips into existing slots above the F-keys and displays written or double-face-taped-on key functions for your ten favorite programs. \$5.00. New **Windows1** complete, \$50. Orphan Chartmaker Jack Doerr, 22407 Bayview Drive, St. Clair Shores, Mi 48081.

MLFormat: enables formatting any size hard drive into separate lettered "drives." Orphan Programmer Bob Spencer, MicroLink Technology, P.O.Box 2666, Sumter, SC 29151, 800-334-9612,

Flee Market

Items are 2000-specific (no printers, modems) with all original parts and manuals unless otherwise noted. Prices include shipping to anywhere in 48state continental USA. Prices may be negotiable; we don't print hints of that sort.

SELLERS: 3-line limit (240 spaces), plus one line per 2000 offered. You can run unsold items again with 30% cut. BUYERS: Check area code,

don't wake people up. Ask about versions and variables to avoid misunderstandings.

Double-floppy with color graphics, clockboard, Envision 640 and Envision HD board w/no hard drive inside, some software without manuals including ACAD, MMate, 123. \$600. Curt, 503-645-5533 days, 503-695-2707 evenings (Oregon time).

Double-floppy with graphics board and VM-1, \$300; color chips \$25; 2000Service Manual \$25; dBII \$25, dBIII \$45, DeskMate \$45. Oops! Sorry the member ID is lost from this one; please place the ad again.

Flight Simulator, 2000 version with an extra 3-1/2 disk, full package with manual. He has four. \$22.50 from Sandy Saunders, 805-399-7173.

There's a Shack in Maine with 2 vianet boards for \$75 each, a cartridge board for \$45(26-5147), and three old-style 128K memory chip kits for \$33 each. These are 64Kbit chips; the 512K and Envision 640K upgrades use 256Kbit chips. They also have a copy each of 123, FrameWork and Softerm2000, and three Symphonies, all \$40 each. A VersaCAD entry is \$71 (demands digitizer pad), PFSFile \$16, Vid-TexPlus \$9. 207-786-2133, manager David Denison, not a member.