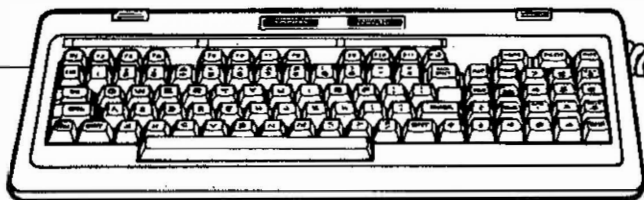


The Tandy 2000 Orphans' WHIMPER



year III, issue 7: June 11, 1989
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David R., coordinator

Found: an Orphan Near You

There's an Orphan near you, and now (at last) you can meet him. In fact, if you have the courage to go exploring, there are a lot of Tandy 2000 Orphans near you. You can have their names and how to find them, for less than a buck a shot.

The Orphan-near-you system has finally fallen in place, partly from the labor of Your Fearless Leader and partly that of some other good people. Particularly important was an individual or group, presently unknown to us, who laid out a four-decimal-place latitude and longitude of every single zip code in the United States. The point chosen is the middle of the rectangle just outside the borders of the zone.

I'll bet you didn't know until now, that ZIP means zone improvement plan.

From this geographical ziplist, a brave bright man in San Juan Capistrano put together a giant program called PC-ZIP, which does all kinds of acrobatics with addresses and zip codes. Naturally, it didn't run on the 2000 when Raymond Melissa kindly sent it to me. But it can be twisted around to work, as shown in the review in this issue.

Luckily, I found a little corner of his program (called CS2.EXE) which I was able to run. And the manual provided the beginnings of a distance-measuring routine. From then on, it was only a matter of time until I broke through, adding longitude correction.

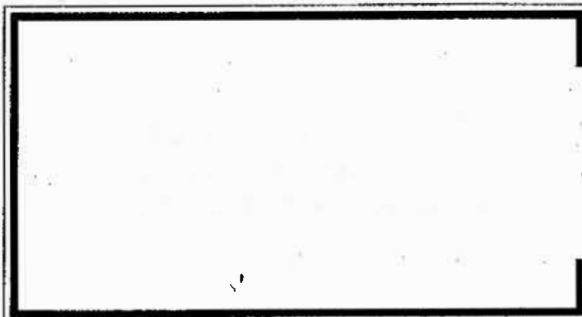
Your Own Inner Circle

What it comes down to is that, with a mathematical formula and program a page long, I can grind your name through the Orphan database and the national zipcode list so that every Orphan within 100 miles of you rolls out on a sheet (or two) of paper.

Your luck will vary. Envision's Dave Nechodom and YFL were the guinea pigs for the program. Dave got just five Orphans within his hundred miles, because he's in the

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open space of the eastern Washington cactus country. David R., on the other hand, picked up Orphans all the way through New Jersey, New York, Massachusetts and Connecticut. My 100-mile circle grabbed 40 names in this densely populated corner of the country. You could have better luck, or end up with only one name, your own. Due to a bug that does not bother me, your name will appear on the list as an Orphan zero miles away.

The good part is that you pay only for what you get, not including your own name. You should send \$13, check or money, adding the words "for my information only" in your note. That's so

you won't call an Orphan and pass him the names when he can pay his share as you did.

Pennies for People

If you're extremely unlucky and get no name, your \$13 comes back to you. If you have just one guy within 100 miles, you pay \$1.00 for him and get a \$12 Orphan refund check. For the second name it's 96¢, the third 92¢, and so on in four-cent steps until you get 25 names for \$13. Number 26 and beyond cost nothing.

That's the most sensible way I can think of to pass out this vital information, enough to pay our costs — but much less than the value of these names to you.

For many of us, a 100-mile drive or call is too far. But I would have to spend half an hour scribbling and programming to twiddle in a different radius you prefer. So I'm sticking with 100 miles (even you Texans don't commute farther than that), and 13 clams isn't the end of the world for 25 2000 owners.

You Get Everybody

If you don't want your name passed out, send a note to headquarters quickly, and I'll zero out your latitude and longitude. Of course that would mean you can't get a list of your own circle.

We have had several hundred members drop out over the years, mostly fleeing to compatibles. You get their names too, although they are not eligible to get yours. They still know what the 2000 taught them. You might score some great prices on 2000 software and machinery they still have lying around. Don't catch "compatible fever" from them.

I suggest you call every name on your list as soon as you get it, to find out their status: quitting or staying, selling or buying, advanced or starting out, nice or nasty.

Our members vary as much as the rest of the world, so don't be surprised when you get Adolf Hitler and Snow White on the phone. Both of them are members in good standing.

Sharing the Wealth

The Orphans organization once hoped to help members help each other to copies of our long-extinct software. Disks are easy. Zeroxing manuals is a lot more strenuous, but disks without manuals aren't much use. Orphans had to give the project up: too big a job.

But when you make friends with your local Orphans, bear in mind that you can, by sharing, make each other software emperors. Just don't expect something for nothing. A fair market price for duplicated 2000 software is 10% of the original retail price (never mind any sale price, that's the owner's good luck). To this you should add any cost and hassle of zeroxing, depending on who does it.

It is our observation at headquarters that half of our members consider this "sharing" ethical, so expect that half the Orphans you

meet will go one way on the issue, half the other. That's their right, and it's not your right to criticize them for either choice. Different strokes for different folks.

If you care about my opinion, I consider it wrong to grab copies of either disks or manuals of any software version that's still being sold. If it's not, I call it a piece of computer history that every Orphan ought to collect and use. Most 2000 software falls into that category.

While headquarters is lined with software old and new, we don't copy it for members. This saves a lot of work, and it keeps Tandy's lawyers at bay.

If you do what you think is right, then I believe you *are* right.

Orphan Fun

If you have enough people in your circle, you may be able to have an occasional Orphan party. Like a family party in a restaurant, expect the complete mix of ages and types. Whatever your 2000-related experiences with other Orphans, tell the Whimper about them.

Best of luck with the Orphans Near You!

2

What's New at HQ

A heroic member finally tricked PCM into publicizing the Orphans. They'll feel awful when they find out. Reading in the Whimper that PCM was refusing, being in bed with Tandy as they are, DLJ fired off a letter to the editor which first compliments them on their marvelous 2000 support (DLJ, you lie divinely). Then he adds, "I have finally found an extremely useful 2000 users group, and I'll provide the address to anyone who sends me a postcard." DLJ, you sly devil, you have broken the blockade.

So far, only a few queries have come to DLJ. These skirmishes always bring a bonus of market research, and the flow thus far

would make me guess that there are now only 200 non-Orphan 2000 users left, of whom 30 read PCM and 20 will see that letter. At its peak the 2000 had 40,000 users, not including the 6000 Shacks that had to buy it.

Yes, I know. The Whimper is not yet quite monthly. The last three issues average one-and-one-sixth months each. I'm trying, but also trying to heed the warnings of a dozen members not to "burn out."

"I somehow missed my renewal notice," says CH2. Members, there isn't any renewal notice. This is a shoestring operation, and if you

The Wisdom of the Ages

The 2000 has been around for a long time, and so has the Orphans organization. Newer members who don't order back issues are missing out on an important resource. Every issue has dozens of stories, such as these:

can't get enough of a clue from the large-size expiration date on your mailing labels, you just lose out. Okay?

Members occasionally add a few dollars for "postage" to a Souvenir Shop order. We treat this as a donation, because the job of refunding and explaining would wipe out too much headquarters time. But you should realize that all prices (even in Flee Market and Sidewalk Salesmen) include shipping to 48 contiguous states. If anyone wants a refund of such a payment, just drop HQ a line and ye shall receive.

Trusting HQ is always a nice thing to do. Last time we had a guy who sent a blank check. This time, we have new member BK, who sent his precious FrameWork and dBIII originals for the copy-free versions. The trusting part is that he sent them with his letter requesting membership. He's getting our survey form, with a note that his order awaits completion of the membership formalities.

Seeing that member John Knowles speaks WordPerfect5 (March, p.14), frustrated PR consulted him and "his help has been marvelous!" It's a lot of fun to hear we helped, PR, and I plan to obey your instruction, "Keep finding new ideas for us!"

"Thanks for the tip," says CC2 about a memory board in Maine. "I've been able to purchase nearly \$600 in parts and accessories, mostly through timely tips from Orphans. That's what a user group is all about."

We criticized Bob Juge recently, for refusing any kind of help to the Orphans. But new member RDP says he got our address from Juge's 2000 BBS. Thanks, Bob, if the plug was intentional and not just an upload that slipped by you. (Bob told me when I called this year that he was pretty much out of the 2000 world, letting his 2000 BBS run by itself.)

It's nice to get offers of hospitality, even though I'm a homebody after years of wandering. To the member in Florida who said he'd help me vacation, and the member in Fort Worth who said I could stay with him while raiding Tandy surplus sales, thanks for the good vibes.

We have two guys who volunteered to join the Guru Gang, but they'll have to wait a bit. One said he's "not qualified," and the other said nothing about what he knows. You people who want to exchange thoughts with gurus, I have to make sure you can speak their language, which isn't the English mama taught.

March 87 - Save big bucks at Tandy mail stores, Gem is the best 2000 screen, dot matrix is the pits.

May 87 - snappy Monopoly in color, list of cheap Tandy franchises, Tandy fighting the Orphans, secret number of 2000s sold, mouse battery.

August 87 - Tandy spy reports, 2000-runnable software.

October 87 - the big funeral sale for the 2000, making Windows do two programs at once, mediocrity in modem-land, SuperZap reviewed, installing a hard drive.

December 87 - our little trick on Tandy, 100 Tandy phone numbers, installing an 8087 chip, the only printer we want to see, the 2000 flipchart we all need.

February 88 - Tandy lawyers lean on us, major word processors like a 747 cockpit, the Tandy 2000 book we found, ten megabytes you slide in in one second, descriptive list of all 2000 hardware, using Egghead without being hard-boiled about it.

April 88 - a mouse for every program you run, new tricks with hard drives, Indiana Jones explores the guts of the 2000, math chip job finishes, a program that slices through your bad writing, viruses.

June 88 - Orphans finds the perfect Postscript laser printer at \$3000, WordPerfect tips and tricks, using non-2000 monitors, networking takes the P out of PC.

August 88 - list of runnable 2000 software, selecting a hard drive for the 2000, more on the Orphan laser, floppies analyzed, crash and reboot adventures, the dumb fad of the messy-desk screen.

October 88 - computer magazines reviewed, Whimpers on disk, hard drive hints, the Holy Grail, floppy problems, underpriced database dBXL.

December 88 - the EISA-IBM battle, hard-drive preparation, your eyes at the screen, Tandy's secret 800 numbers, the Grail again, 87-88 Whimper index, Word is the best, PageMaker, imaginary disk has real speed.

February 89 - the Orphan shareware disks do everything, Tandy exec tells all, the Grail may fail us, screws that cure 2000 ills, WordStar 5 fails, Norton 4.5 crashes.

March 89 - today's computer market, the Guru Gang, we go monthly, never kick the plug out again, our two kinds of floppy drives and what they hate, the invisible hard-drive doubler.

May 89 - part of the Grail on disk, Big Ed dumping six thousand 2000s, Envision fading away, a rubdown for disks, 2000s in religion, stocks and dog-racing.

3

Hardware Help 4

If you have a multi-switch box under your keyboard to switch on the 2000, we published a fix (III-2 p9) to prevent your losing a day's work by pushing a hand or chair against a switch. We made a shield from a slice of a plastic pint soda bottle.

But it turns out that this plastic is flexible enough to fail in its protective function. The new protector on the main headquarters 2000 (the Whimper machine) is made the same way, but from the straight transparent tube of a Crest toothpaste pump (tall size). The former scissors work had to be hacksawed in a vise, edges smoothed with file and knife. The whole job took 15 minutes, a deal too good to pass up when it saves you a day's work.

For you needing help with the old CGP-220, we have a clue. It used to be the Quadram Quadjet, and now LDD2 finds an earlier incarnation of it in the 1983 Canon A-1210, and an Amiga printer. It is described briefly on page 118, July 1983 Popular Computing, a dead magazine that lives on in libraries.

Double-density generic floppy disks do work on RJS2's 4853-1 drives, even IBM mainframe 3174 floppies that he scores for nothing at work. But they can burp a little, and he reports that all the burps he gets "have occurred in the last tracks, near the hub, where things get denser. I have not totally filled many diskettes, so this has not been a problem for me." We learn more about our floppy drives every month.

We have our first serial number reports on floppies: JAW has 4853-1's on his 5325XXX; BJS1 has the -1's on his 5408XXX. Both guys had trouble with Orphan HD's; both are late serial numbers. That makes it look like Tandy used the -1's last.

JAW's rejected HD floppies include "the 50 I just purchased from MEL." I hope you gave MEL a call, JAW. They might be as fair with you as they have been with Orphan headquarters.

The CM-5 color monitor is working on TJN's 2000. It is billed in the catalog as 320x200. TJN or anyone else, does it pump up to the full 640x400 that the 2000 puts out? If so, it's a good deal at \$300, better when from a franchise and/or on sale.

Last Chance

Envision Designs had to get a new phone number when the boss moved. It's 509-545-5785. As we said before, get any orders in fast, because Envision is not long for this 2000 world. We have a report that he's not returning calls, another of a disconnected line, but it can't hurt to try.

Those chip clocks: forget them. "Not enough volume to justify it," says Dave. He's got some "completed" stock left, of which he'll send you a list if you leave a message on his machine.

We have more about those hard-drive directories that refused to heed RST's command to RD (remove directory) from WHB:

All the files in the directory must have been erased. This may include hidden files — they don't show in directories, but they do show in SUPERDIR from the Orphans directory disk. Hidden files must be stripped of their attributes with Norton's FA or Orphans ATTRIB (utilities disk), before they are erasable.

And you can't RD a directory if you're in it. You must be in the directory above it. This makes sense, because a directory is just one of the entries in the directory list above it.

We have a report on DOS 3.2, Tandy's version: CACHE works well and the disk optimizer is fast but dangerous to interrupt. Thanks, CC2. CACHE is an extra that Tandy has added to regular 3.2. Disk-caching on the 2000 also interests AJ. We will be reviewing CACHE

soon. The headquarters copy of 3.2 came from a Tandy store person tired of DR hanging around. You could probably promote yourself a copy just as easily. Just have a pair of PCMAKER floppies (formatted to 360K) with you when you pop the question, so the 3000 or whatever can copy for you. Ask some hard questions first, to get them in a mood to let you copy some DOS and scram.

The reason the clock in PCBOSS runs so damn fast — and it probably does in some other PC programs when run on our 2000 — is that PC clocks tick 18 times a second, the 2000 20 times. This from Doug Fogg's KLOK2K article in PCM last year, via CC2.

If you are programming for the 80186, our rare chip, use 8086 commands in MASM (or whatever). In addition, a dozen commands can be done by the 80186 that the 8086 can't. All of these extra commands can be done by writing them in the 80286 assembly language mode. For specifics, check the Tandy 2000 Programmers Reference, and also in "a technical programming reference work by Intel in Walden software stores," says CC2.

Budget Bungee

We told of an elegant mouse-or-stylus dangler in the last issue, but HN reports (with photos of his work area, always a pleasure to see at HQ) a less-expensive equivalent. He dangles a chain of several rubber bands slip-looped together, from a shelf over his monitor and mouse patio. The lowest rubber band loops around the middle of the mouse cord a foot above ground zero. That's elegance for a nickel, and that's rare.

Get a Running Start

We have carried some nifty suggestions for having your 2000 give you automatic help when you turn the key in the ignition. But RST has made two of them even niftier. He suggests that if you're going to use your autoexec.bat to show a menu (March p. 11), it will roll down quicker if you have it "typed" rather than "echoed." He also has refined the RST virus-checker, his auto-comparison of command.com with a hidden copy that is less likely to have a virus attack. Here is his latest autoexec.bat:

```
echo off
cls
clockget
path c::c:\dos
echo -----
fc /b \command.com \dos
\rescue \safety.tst>dos\rescue\trouble.sho
type dos\rescue\trouble.sho
echo -----
echo
echo If you see anything be-
tween the dashed lines above, your
echo COMMAND.COM has
been changed, possibly by a virus. Take
echo corrective action. Other-
wise, compute in the best of health.
echo
pause
del \dos\rescue\trouble.sho
cls
type menu.doc
echo on
C:\
```

In that heavy middle section, he's comparing (fc=file compare) his main command.com, which viruses love to change, to a hidden copy of it called safety.tst. Since FC only shows differences, he pops them into a file called trouble.sho. This lets him slap it down between the dotted lines where it will catch your attention.

As far as your menu goes, you can have a bunch of sub-menus if you like. Rather than typing W for a batch file that calls WordPerfect, you can have that W (in your main menu) batch you into another posterboard menu. That batch file would be called W.BAT. On that next menu card, a P might mean WordPerfect, an S Wordstar, and so on. Your batch file calling up WordPerfect would be called P.BAT. And after lunch, if you want the menu again, just issue the order, TYPE MENU.DOC and there it is. You can even have a batch file called M.BAT which gives you your menu when you type M<enter>. Thank you RST, for a good start.

With all this talk about hard disks crashing, the Seagate 251 on the main headquarters machine has performed well in its first six months. But in the last month it began getting sick. The May 3 Whimper barely got through the flying error messages, the most common of which was "cannot read drive C:". Naturally, PageMaker was on C:, along with the growing Whimper.

After the Whimper went to press, it got so bad that I had to cope. This should give you unscarred hard-drive users a foretaste of what you're in for.

I didn't lose any work. The headquarters formula is to keep the Orphan database and Whimper-in-progress on floppies on two separate machines, only chirping into hard drives for a day's work. What stays on the 251 is frequently used programs, shareware, and software getting Whimper reviews. Since it all comes in on floppies that I file in boxes, nothing much is lost when a hard drive crashes.

What I did lose was all that installation labor, getting each program to run and respond on the headquarters 2000. As I write this in FrameWork and Word, they are working. I had to use WordPerfect from an Iomega cartridge. PageMaker is still brain-dead, waiting another full installation routine with sweat, swearing, lost hours or days, and dumb luck. If you get this, it means that PageMaker — or a reasonable substitute — finished the job that FrameWork started.

When people say that hard drives "crash," I think of those movie scenes of a car going off a cliff and exploding at the bottom. But my experience was more like going off the road onto a hill, steering like mad and getting banged up on the terrifying way down.

Often RETRY or IGNORE worked and I didn't lose work. Increasingly, however, I had to ABORT; and often it got so bad that only a black or red button would revive the frozen 2000.

Like the patient who survived a fever without the doctor finding out what it was, I am only guessing: I think the prob-

lem was that the "fence" bytes that divide one sector from another lost some of their magnetism. Or maybe the table of contents of C: (D: was quirky too) got scrambled by a passing blast of power sneaking up the wire from the wall. Maybe the blast came while the 2000 was reading its FAT (table of contents) for C: or D:. Your guess is better than mine.

Soon it became hospital time: clearly, another Whimper wouldn't make it through the wreckage. I ordered another 251 as a spare, but it won't get here from Hard Drives Interna-

A Crash at Orphan Central

tional for a couple of weeks. Then I tried the 2000 diagnostic disk, but it specializes in the stone-age Tandy ten-meg drive. Next I plugged in disk test from Norton 4.0 Advanced.

Disk test is a nervous Nellie. When it feels bad about a file, it flunks the whole cluster the file (or part of the file) is in. It moves the file to a new cluster and marks the emptied cluster as "bad." So far, so good, but then the next run of DT marks the new location as bad, and this seems to go on forever. When I broke the chain by copying new copies from original floppies, DT suddenly got satisfied with clusters it had asked permission to close up.

Also, DT was never sure what it didn't like. Some clusters got blacklisted in almost every runthrough of DT, but other numbers came and went at random, good this time and bad the next, then good again.

Not surprisingly, DT loved all clusters at start-up time, only getting nasty as the Seagate heated itself up. Within half an hour, DT would yell crisis.

It was time to save what I could. I rolled almost all of C: and D: into the handy headquarters Iomega twin-20, working fast after a morning start with a cool drive.

Then I put a floppy of DOS 2.11.03 in drive B: and typed HFORMAT C:/S/V/P. I left out the /B for bad sectors, because I've lost the bad sector list that came with the invoice, and I'm too lazy to open the machine to read the list taped to the drive itself. I expected to use nervous old DT to find dozens of

allegedly bad sectors later, but now it loves them all. Silly, scaredycat DT.

The /S after HFORMAT moves two hidden files from the floppy to C:. They tell the 2000 every morning how to compute. These "system" files are msdos.sys and io.sys. I was careful (after much blundering) to use the version of io.sys that has two changes from the Tandy DOS.03 version. One is the Envision revision that tells the 2000 it has 896K memory; the other is the MicroLink change that tells the 2000 to accept a fake drive D:. The Tandy io.sys considers any drive D: a second physical drive. But on the HQ 2000, D: is a figment of the imagination of MLFormat, as are E: and F:.

Before messing with D:E:F:, I had to make sure HFormat didn't grab a whole 32 megabytes of my 40meg Seagate. First I typed /V so I could have an 11-letter "volume" name for the drive show up on chkdisk. Then came the /P, meaning the screen will PROMPT me for numbers other than the full 32 megs.

Of course typing "10" for a ten-meg "drive" C: would be too simple for the sadists who wrote DOS. I had first to think of the 10 as a quarter of the 40 megs the Seagate251 boasts about. Then I went into the specs for the 251. Hard Drives International supplies a nice chart in the instruction package, and I never throw anything out. The screen asks for heads: the many-fingered 251 reads its three platters on both sides with six finger-like "heads" that move together like a frozen hand. I typed a 6 after "heads."

Wanting 10 megs, I

typed 205 after "tracks," a quarter of the whole disk's 820 on the chart. A couple more confirming clicks, and the 2000 formatted 10 megs for me on the outside layer of the drive.

The 251 is like a stack of those targets used in archery. The 251 has three stiff disks, which accept targets painted on both sides of each. Tandy's HFORMAT paints the six outside stripes, and MLFORMAT paints as many extra inside stripes as you want. You choose the stripe widths, the number of tracks in each "logical" (not physically separate) drive.

HFORMAT didn't give me exactly ten megs. Every sector is 512 letters or digits (bytes), even on floppies. On any MFM drive (the only kind we can use), there are 17 sectors on every track. We get 8704 bytes on every track, and we reserved 205 tracks. So this C: "drive" ends up with 10,705,920 bytes. Oddly, CHKDSK reports 10,674,176, a difference of 31,744, 62 sectors lost, strayed or stolen. That's not a big loss out of 3485 sectors, and probably not a loss at all, just my ignorance.

The scary part was finding out whether HFormat would screw up my other three logical drives. MLFormat had made me D:, E: and F: of ten megs each. A member had tried the combination and reported recently that it was safe. But there was a bug: After I put the new C: logical 10-meg drive in with HFormat, D: drive slept through reveille — "bad unit drive D:". The information turned up as drives E:F:G:. No loss, but awkward to have a dead D: hanging around. I called MicroLink, and the younger Bob Spencer Jr. told

me his undocumented fix: it changes the file IO.SYS to look for one physical drive rather than two. It worked fine. First you reverse the "attribute" tags that the file IO.SYS carries in the directory of your booting disk. Of course, you never change your original DOS disk. You do the job with ATTRIBS on the Orphan utility disk, or with Norton's FA.

Making sure the DOS files PATCH and DEBUG are nearby, you type PATCH \IO.SYS,08D8,02,01. This changes the "two" at location 08d8 in IO.SYS into a "one." All done!

After this patching party, tack those protective attributes back onto IO.SYS, RIGHT AWAY.

I copied back to the new C: the files I had stored on cartridges, but I found another problem: while in trouble, I had copied in some of these files fresh from the original floppies. Fine, but the installation program apparently changes some .EXE files. I got crashes right and left (Word and PageMaker, for example), until I reinstalled. When trouble hits, it's best to try rescuing the installed program files, to save the labor of reinstalling.

Having gotten the logical D: drive back on the physical C: drive, I MLFormatted it for its second time, since it had also developed a huge crowd of "read" errors. I had backed it up in an early-morning warm-up — with straight DOS COPY. I am suspicious our DOS BACKUP, and all the quickie backup packages, because they refuse to give the data back when the new drive differs in some way from the drive that crashed.

6

Confusion Out Back at the Tandy Dumpster

Tandy Fort Worth is still a little confused about how to find that dumpster out in back. When 2000 items coming back from around the country pile up, they often heap hundreds in their "outlet" stores in Fort Worth. Then a dozen or two local 2000 owners sniff at them — they're already hardware-rich. Finally Tandy trashes the piles. So it pays to call the Fort Worth outlets every two or three weeks. They won't call you (or me).

At the time I write this, there is a huge pile of 2000 stuff in the Terminal Road Outlet Store, 817-624-1196. Thanks for the report, LCM. I tried to get on their mailing/calling list, but apparently they have none. The current pile has graphics boards for \$15, color chip sets for \$20, floor stands for \$10 — all great prices. They are also pushing used 2000s and monitors at prices that are much too high, so don't get burned.

Floppy Compatibility

Let's clear up a common misunderstanding about our "incompatibility": Tandy 2000 disks *do* travel to ordinary PC's, and from them, with no trouble!

"I keep talking about switching to an AT-compatible, so I can share data disks with PC's at work," says TRR.

You can do that right now, TRR, in both directions. The 2000 happily reads plain-vanilla 360K disks all day, and writes to them with equal ease. It even creates them, if you take the trouble to use PCMAKER instead of our regular FORMAT.

The 2000 does everything in 360K, plus something extra. It makes and uses 720K on a floppy, which the PC and XT compatibles can't do. The AT compatibles, using an 80286 chip instead of the 8086 of PC and XT, have 1.2-meg floppies, a step above us. Some of the newer 286 machines go to 3½-inch disks with 720K or 1440K. The 2000 can use the 720's, adapted by Envision.

Chilling His Chip

It gets hot inside the 2000, and we already know it's a temperamental machine. RJS2 had a machine "going catatonic" every five minutes, so he got a cheap replacement 2000. Later he tracked down the bug.

"I got to thinking about it, bought a can of freon, environmentalists forgive me, and the machine worked fine after any small burst of freon on the 80186 chip. A friend at work cleaned and remounted the chip, and it now works fine."

Presumably it was dusty or had corroded contacts, or both. All it wanted was a little bit of petting and attention.

Poor RWS suffered agony with Norton before returning it, and the Whimper congratulated him on completing "Inc 1a", Incompatibility 1a, a course in how tough computing can be.

Tease and Sympathy

Foul, cries BES. He says we should have more sympathy for RWS. Foul, the Whimper replies. We have sympathy, but such a sad occasion turns out better if we laugh than if we cry. So we laughed, and noted the keystrokes "/D1" which would be helpful to RWS if he had the guts to try Norton again.

Guts is what computing is all about, and giggles can get you guts.

Back in basic training, an experience that makes later life lovely by comparison, we dogtired dogfaces were forced one night to wiggle snakelike a hundred yards on soggy sand under machine-gun fire with tracer bullets, in pouring cold rain. Somebody kept setting off big booms all around us, to make the "battle" realistic. Wet sand pushed into our oversize shirts and pants. Knees and elbows hurt, but they yelled that if we raised into a normal crawl the bullets would kill us. The rain swept over us in sheets. We were cold. We were miserable. How's my Hemingway? We finished, and they herded us into trucks for a bumpy midnight ride to the ugly tents we lived in. It was the smelly bottom of life as we sat there in the dark, bouncing on sidebenches, unspeaking.

Then came an odd sound. Somewhere ahead of us, from another truck in our hopeless caravan, was the sound of singing, singing so loud it got past the roaring of our truck. The familiar tune was Auld Lang Syne, "Should old acquaintance be forgot —" I thought they must be crazy up there, but somebody on our truck sang out the army words: "We're here, because we're here, because we're here, because we're HEEEEERE—"

The wonderful insanity of it grabbed us, and we sang those idiot words for half an hour, all the way home. We screamed. We rolled on the heaving metal truck floor as we laughed and cried. It was hysteria, and it was a piece of heaven in hell. I loved those guys as never before — or since — and grinned until I fell asleep that night.

Computing will never be that rough for us Orphans, but it helps to laugh at its darker moments. You'd better find that out, BES, or you'll crack when you should be cracking wise.

Machine Mysteries

WordPerfect 5, dated 1-3-89, locks up when ACB "does a booboo," (what booboo?), and his DMP won't print "either standard. PRS works, after you edit the port to PRN." Who can help ACB? When you guys write headquarters, be more specific than this example. YFL is more ignorant than you are.

Tandy's 2100 draws admiration and anger from JLM, who loves its output but needs help in sending graphics to it. Who knows of a program or two that will cooperate? JLM has written a driver in Basic that sets fonts with keyboard commands. Who wants it?

Mitsubishi makes a replacement for 720K floppy drives (our Mitsubishi 4853 and 4853-1 are extinct), CDT reports, but gives no part number, price or how-to-order info. He also reports that, according to various Mitsubishi gurus, this disk drive (1) works in the 2000, (2)works after you jiggle a few thingies, (3)doesn't work, and (4)none of the above. Who knows more? Please report.

Dave Nechodom at Envision has been assembling a 720K 3-1/2-inch drive for the 2000 at a nice price, which might be a wise move for replacements. Headquarters bought one, yet to be installed. But as you know, Envision is fading out.

Finally, a nice note about the Three Bears, our slang for the three orphan shareware disks. "Thank you immensely for UTILS, DIRS and TOOLS. They certainly deliver what you describe. ALLO4K alone was worth the whole expense. It saved me fully 20% of the capacity of my nearly-full hard drive, by compressing my many dinky data files used by bigger programs." (Sorry, initials lost.)

7

Free, Black and Twenty-One

After a year and a half of my nagging, Iomega just finished and sent the Orphans a disk which enables its 5-inch cartridge drives to run the full 21 megs (we were getting 10) on their black 5-inch disk cartridges. It's in the Souvenir Shop. I haven't finished my test series on this disk, but it seems likely to give us the full capacity we wanted.

One early clue: I was able to get cleaner performance by taking out the IO.SYS that Envision and MicroLink disks altered. Both alterations added imaginary "drives" to the 2000. One or both of these patches confused the Iomega disk. More on that in a fuller review.

Tandy and Iomega insisted that the 5-inchers wouldn't work with the 2000. I got around that by changing switch settings inside the Iomega box. On the drive top (the more crowded top if you have twin drives) is a little box of six switches. It comes from the factory with 1,2,4 on and 3,5,6 off. I took a toothpick and set 4 on, 1,2,3,5,6 off. This made the drives run with the headquarters 2000.

The 5-inch-square black cartridges are plastic boxes a quarter-inch thick, ten millimeters in their cardboard jackets. They are often called Bernoulli boxes, after the scientist who first studied the air motion that (here) keeps four tiny drive arms very close to the two spinning floppies inside the box.

I was able, with the new disk from Iomega, to format a cartridge to 21.4 megabytes. I had sadly put 10 megabytes on it last year.

Now we can move 21 megs in or out of the Iomega drives in just two seconds of gentle pulling. I keep a group of 20-meg cartridges on a shelf by the Orphan computer station; a gigabyte fits in 20 inches. We rave-reviewed the 5-inch system at 10 megs (II-3,p7;II4,p9). Now the great

advantages of the system are doubled. Those of you who have (or can grab) the cartridge controller board Tandy made for the 2000, you are lucky people.

Those of you who want to pay about \$100 for these boards, please write to headquarters. If we get 100 such requests, I will push on a hardware guy who said he would make us a set. Iomega seems willing to let us make a batch, because it would give them drive sales. That was also the motivation behind their writing the driver disk.

Some newer members have been curious about the "BS-60," the "sort of" removable 20-meg hard drive for \$60. This is it, but only the second 20 megs costs \$60. The first costs a hundred or two for the controller board that goes in the back of the 2000, plus \$750 (internal drive in a B: floppy slot) to \$1600 (twin drives in a stand-alone box).

The 5-inch drive is nothing like the television-sized 8-inchers Tandy used to sell. The twin-20 5-inch drive is only as big as a bathroom scale, 14 inches square and three inches thick.

For this 20-meg breakthrough we have Iomega's Brad Loveland to thank, plus his irritated boss Rick Johnson. Orphan Jim Baxter lent Iomega one of his 2000s for a year and a half.

A Quicker Booter

If you dislike those long waits while the 2000 starts up in the morning, here's another patch to add right now: PATCH IO.SYS,6E57,E817,EB11. This changes the "232,23" at locations 6E57 and 6E58 of IO.SYS to "235,17." This patch, again for those with only one physical hard drive, tells the 2000 it doesn't have to call a second hard drive and wait for the answer, during bootup. I didn't time it, but I'd guess it cuts five seconds off a bootup time of about 30 seconds.

8 Software Support

MASM 1 can be made to run with a fix supplied on page 15 of the February Whimper; but I erred in copying HJB's ".8086." It should be ".8087." Thanks for the correction.

Sorting in Basic can be a drag. RJS2 has supplied HQ with a routine he wrote "for an in-core table sort using the shell-sort technique" which is "about 30 times faster than a bubble sort." Members who want his half-page of code send one clam. Mention this page and issue so I can find this offer.

FoxBase 2.0 and 2.1 run on our machine, CH2 reports, when you call it with this line: FOXPLUS -NOTIBM. The big news was already reported in our Software List Update, but this trick is a way in.

You guys have a wealth of information in back issues, but only when you read them. We have a plaintive query from CS2: "My biggest need right now is a general ledger program. Any suggestions on how I might go about finding one?"

Checking through our August 1988 Whimper's software list, which CS2 got, I find not one but NINE programs that have "General Ledger" in the title! Egad, guys, do your reading!

Best Database Gets Better

There's a new version of dBXL out. dBXL is the DBIII+ clone that headquarters uses. For the money (\$110 street) it's our best. LAM sends some tricks for using 1.3 that may also be helpful to those with an earlier version:

"Install ANSI.SYS as a device driver in your CONFIG.SYS file, or you will get garbage on the monitor. [Write DEVICE=ANSI.SYS as a line in your config.sys file.—DR]

"Add RETRACE=ON to the CONFIG.XL file, or you'll get a blank screen after loading dBXL.

"When running SETUP.EXE to tailor dBXL to our beloved 2000, select IBM COMPATIBLE rather than MS-DOS from the first menu; select YES for INTERRUPT 10. If you click the obvious instead, MS-DOS and TANDY 2000, your screen will be agonizingly slow.

"Make the function keys (F1, F2) work by giving the answers you prefer in the KEYBOARD menu of SETUP.EXE. Otherwise they won't work at all."

Mailing-List Blues: Why Zip-zip-zip When PC-Zip Does It?

The search for tools for "An Orphan Near You" led Your Fearless Leader to software stores, the postal system (including their giant Memphis headquarters), magazines, and major phone bills.

The trail led at last to your typical one-room, one-man, one-girl software factory in San Juan Capistrano, that California town the swallows come back to. Raymond Melissa is typical of such operations, a sweet guy with a big brain.

The core of his system is DZip, a gigantic list of 90,000 zip codes with other information, ten megabytes long. Type in a zip code, and it tells you a city, a county, a state, an area code. Type in a city and get the other items again. It's what we've learned to expect from computers.

His PC-Zip program set mostly doesn't run on the 2000, our usual problem. But I was able to weave his database into dBXL, our dBIII+ clone, with only the elementary ten-line programs I can creep through. On our snobbish 2000, you can also do it with dBIII or FoxBase. For those who prefer databases unlike dBIII, which don't even import dBIII files, DZip comes in a plain-vanilla version called AZip, in plain ASCII (letters and numbers) without dBASE coding.

You need only your first week's database programming behind you. Then you can pry what you want from DZIP's database at a time cost of an hour or two for each thing that you want done. An expert with a year of databasing behind him would take ten minutes.

There are two delicious new elements in his system that are exciting to all of us who work with mailing and customer lists: We can

spend less time making and adding to huge lists, and we can do "radius" operations. I dreamed up both operations, but I knew it would take me months of programming that I couldn't spare, and I needed that giant 90,000-record zip-list. Melissa had it all, when I finally found him.

If you want every name within 45 miles to invite to a sale at your store, Melissa's work lets you weave that radius seamlessly into your address listings. If you want mail order customers and no walk-ins, you can do the radius in reverse.

If your staff is about to type in 10,000 names and addresses, DZip should make the week bearable: you can type the zip, and let the program type the cities and states for you!

Of course you need a hard drive or an Iomega to store the database. You put the program CS2.EXE in a floppy slot. You insert the disk ZCD.01 in your second floppy slot — or in your only one, after moving the tiny CS2.EXE to your hard drive.

From the CS2 location, you type (typically) CS2 b:ZCD.01 c:DZIP.DBF <enter>. The tightly-canned ZCD.01 disk then expands hugely onto your hard drive. You do the same for the other four ZCD disks, which expand the big file.

You can get the zip-code data almost free from the Memphis Post Office Center, by the way — as long as you have a mainframe to run the giant tape reels they send you. They haven't discovered PC's yet.

PC-Zip sells for \$99, as does AZip. Updates of the list are \$49 twice a year, but I don't see a need for them. Checking the postal people can alert you to big changes.

Getting Near You

With the Orphan.dbf database already working in area 1:, SELE 2<enter> This tells dBXL to pay attention to the next work area. SELE is short for select, because dBIII and its clones understand the first four letters.

USE F:\DZIP<enter> Now the 2000 grabs dzip.dbf and puts it in work area 2. I said F: because the "default" drive is B:, where orphans.dbf is.

INDE ON ZIP TO F:ZIP<enter> The index rolls slowly into a file named F:ZIP.NDX, far from the B:ZIP.NDX that Orphans.dbf uses.

SET INDE TO F:ZIP<enter> This leaves DZIP ready for a trick later on.

DISP STRU<enter> This displays the structure of DZIP. We see ZIP C5, LAT N6 and LNG N7. The ZIP field, for example, has 5 spaces in it. The C means character, rather than numeric.

SELE 1<enter> We're back with the regular Orphan database.

SET INDE TO ZIP <enter> This lines the Orphans up in zip order.

MODI STRU<enter> On the dBXL editing screen that appears, we modify the structure, adding latitude and longitude and shortening the zip field to 5 (bye-bye Canadians).

Now comes the command that "relational" databases are so proud of:

SET RELA TO ZIP INTO DZIP <ENTER> RELA means relation. You tell your child he has to play with the kid next door, because "I now make that kid your cousin."

You told the ZIP field of the Orphan database to find a matching zip in the DZIP index. When you're looking at a single Orphan's record, you can now read his latitude and longitude in DZIP!

REPL ALL LAT WITH DZIP->LAT<enter> This replaces the blank latitude fields of the orphan database with the latitudes we have in the DZIP field. REPL ALL LNG WITH DZIP->LNG <enter> Then my NEAR.PGM takes any Orphan's latitude and longitude and prints out all the Orphans within a hundred miles. The distance trick from Ray Melissa's manual uses squares, hypotenuse, and my correction for longitudes being shorter up north.

Program Problems

Borland's Sprint has a Tandy 2000 screen driver in its installation routine, RDP says, but he can't make it run. Who can? It's not on our software list of last August.

PCToolsDeluxe — same problem, with BES. He reports that PCM (Oct88,pg121) lists the 2000 (in the title flag) as running it. Who is able to? I have doubts: the next program in that issue also lists the 2000, although it's un-runnable. PCM (a Tandy toady) may be playing a sly trick on us, tired of letters about its non-support of the 2000, putting the 2000 label on some reviews again, but at random!

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 (includes other member benefits). Second-class postage has been paid at Westport, Connecticut.

Give a Week to the Whimper

Reviewers Wanted: RealWorld has kindly sent us its latest General Ledger, and its 4-in-1 Basic Accounting. VEdit is offering us its new VEdit Plus 3.1, an agile word processor for programming in all languages. What experts in these fields are willing to review thoroughly and return these packages? You may copy all.

Subgroup News

Can a good computer handle the Good Book? LAM wonders if anyone knows of a 2000-runnable Bible concordance, an index of every single word. You could do a study of violence by calling up "smite," or a check on sexism by doing "woman."

He sends our first request for a subgroup, men of the cloth. All ministers, priests, rabbis, frocked and unfrocked mail-diploma tax dodgers, washed and unwashed holy men, send your names to headquarters and I'll send you addresses of others who send in.

I'm not lazy: it would take me days, stolen from Orphan work, to leaf through the paper records for clues.

10

Souvenir Shop

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

Money— No credit cards. Only U.S.A. checks or U.S. cash, or a foreign check if it came to you with "dollars(U.S.)" and a U.S.A. branch-bank address printed on it.) "Tandy 2000 Orphans" or "Orphans" is good on the pay-to line.

FOREIGN MEMBERS— A few of you guys have been missing the paragraphs above. Read them!

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 burps and black-outs of the 2000.

DISKS

CART: Cartridge driver, version 4.7a for all the Iomega boxes, far faster and smoother than the one Tandy sold. Custom-written for the Orphans, it will efficiently run anything from the old ten-meg fat boys to the new 44-meg style. But it only makes sense with the 20-meg drives, because our DOS 2 limits us to 32 megs on the 44 drives. The greatest benefit: it runs the full 21.4megs instead of the 10 we had. \$10.00. Don't buy it to put on the wire. We broke our Orphan tails to get it, so let the modem guys join the Orphans and pay their fair share.

MAY: May miscellany, a brief grab-bag of stuff recently arrived at HQ. Several shareware corrections are included. It contains the alleged text Grail disk in crippled form, set to reboot

the 2000 after each fifteen-minute test drive. This disk is \$15.00, but a \$10 refund goes to anyone filing a report on successes and failures with the ATG (Alleged Text Grail).

It might not be fair for us to break the time lock on the RDB text grail disk, PGC says. An arguable point, PGC. But RDB did tell HQ that members wanting to break the lock would "have to find it first." I considered that a challenge and, as such, permission from RDB. But considering his words, I think members will find the lock impossible to break.

DIAG: Tandy 2000 Diagnostic Disk, won't fix your machine, but a nice way to confirm your opinion of its health (or sickness). Quite heavily technical. Tests your slide-in boards too. \$10.00.

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 fun in color, it works with VM-1. Graphics board required. Can't be copied to a hard drive or anywhere else.

UTILS: Selected utilities, programs to make the 2000 work more efficiently and give more pleasure. while doing so. Listed in Feb89. \$10.00.

DIRS: Selected directory programs, which list the files in a disk nicely, often with controls that let you to perform DOS actions while the files are on-screen. \$15.00; the extra \$5 is for a Whimper-sized Orphan manual for one powerful program on the disk. Listed Feb89.

TOOLS: Selected gadgets and devices which do special jobs for special needs, and for fun. Listed Feb89. \$10.00.

03: dos 2.11.03. If you picked up an older DOS with your 2000, you should have this latest and last 2000 version. It has a newer version of Basic. \$5.31.

COPIABLE BIG SOFTWARE: The following three disks enable members to put important software on their hard disks for fast action, and also to make floppy backups in case of trouble with th originals. The standard Tandy versions force you to keep an original-package floppy in drive A:, which is a pain.

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; do as in 123 above.

TWIN: Not Windows itself, but the Tandy-written Windows Driver disk which enables the 2000 to run IBM Windows 1. Formerly their #7002611. This disk slyly erases drivers for non-Tandy printers, but we've added instructions for avoiding this trap. (198K) \$20.07. A Windows explanation is on p.18, Feb89.

TRAP: MouseTrap, called Locate by its author. It lets our digi-mouse run the arrow keys, the ENTER key and the F1 key. Now the mouse works in DOS (typing at the A: prompt) and in any software. \$20.19.

BYTE: Creative Byting, a disk of advice on writing user-friendly software that sells. From an apparently out-of-business disk publisher. \$5.00.

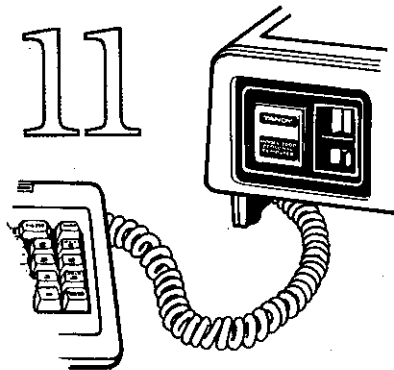
HAM-I: The final version, disk Ic of the Whimper Hamper, ten 1987 and 1988 Whimpers on disk. Useful for word-keyed research, but less relaxing than paper copies. March1987 through October1988, complete. \$40.00.

HAM-UP-I: Disk Ic, only for those who bought an incomplete Ia (no May87) or Ib

(has May87 but ragged-right passages missing from earlier issues). \$5.00 or (instead) a boxed disk sent to HQ.

HAM-II: Disk IIa of the Whimper Hamper, issues Dec88 and FebMar89 plus this issue. (Disk IIa will soon be upgradable to the latest HAM-UP-II in the manner of HAM-UP-I.) \$40.00.

IBMPORT: A book chapter listing and discussing IBM-style hardware ports. It's useful for assembly-language programmers among us, trying to convert IBM-style software for the 2000. 29 pages compressed into 15, \$12.00.



DOCUMENTS

NEAR: An Orphan Near You, every Tandy 2000 Orphan within 100 miles of you. Send \$13.00 plus your NOTE (see below). If you get fewer than 25 names, you get a refund based on your paying \$1 for the first name, 96¢ for the second, 92¢ for the third, and so on. You get name, address and phone(s), plus our calculated mileage from the middle of your zip code to the middle of his. You must include a note that says "For my eyes only," so every Orphan needing a list will pay his tiny share.

BACK ISSUES: Mar87 \$5, MayAugOct87 \$8 each, all in zerox form. Originals of Dec87, FebAprJun AugOctDec88 and FebMar-MayJun89 \$5 each. An in-

dispensable resource for getting value out of the 2000.

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

MAST: Mastering the Tandy 2000, a compressed 28-page zerox of a 100-page out-of-print book mentioned in the February issue. Reprinted with paid permission. \$16.50.

NEWBAS: List and description of extra BASIC commands in the Basic that came with DOS 2.11.03. 24pp. compressed to 8. \$6.

MODS: All the mod service bulletins to correct bugs in earlier 2000s with no "M" at the beginning of the serial number. Usable by anyone with soldering iron and screwdriver. 70 pages compressed to 32, \$19.

512: Instructions for putting 512K (or more) on a Tandy 2000 memory board. 7 pages zeroxed, \$3.00.

VID: List of Tandy 2000 video ports. 3 pp. zeroxed, \$2.00.

VIDRAM: Info on video RAM and attributes by BJK. 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: Making Turbo Pascal 3 run on the 2000, a one-page patch supplied by BJK. \$1.00.

TP3+: The same patch as above, but with more explanation, 3 pages supplied by JAD. \$2.00.

TP4: Using TurboPascal 4 with 2000 by BJK. 4 pages, \$2.00.

SAVBAS: Saving a Basic color screen by HEB. one page, \$1.00.

SOURCE: a hard-to-get list of some or all of the source code for the 2000 BIOS, supplied by LJS. See Feb89 p.5. 4 pages, \$2.00.

Sidewalk Sales

Prices include shipping to 48-state contiguous USA.

Extension cables for the 2000, \$20 each for any length to 10 feet, an extra dollar per foot over that. VM-1 cable or extension, to either round "monochrome" 9-pin-grin "color" output. CM-1 extension, 9-pin-grin-female to the same in male. Keyboard extension, probably not coiled. Mouse extension. Hard-drive ribbon cables, the control cable and the wider data cable, to hard drives. Orphan cablemaker Tim Bates, 313-227-7344, up to 9p.m. eastern.

A mouse: He will buy the Tandy 25-1040 mouse, \$49.95, and wire it to a 9-pin-grin female plug. Equals the extinct \$99 Digi-Mouse, \$95. Bates, see above.

Function-key flipchart, ten stiff 1-1/2" 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. Send \$5.00 (includes postage, packing and handling) to Orphan chart-maker Jack Doerr, 22407 Bayview Drive, St. Clair Shores, MI 48081. This gadget quickly becomes indispensable (it is for me), and takes even more cash plus four hours of hacking and trekking if you do it yourself.

Windows1 complete with manual, the original and only 2000 version, \$50. Doerr, see above.

Software and upgrades. MLFormat lets you format any MFM hard drive into any number of any-size lettered "drives." Our dumb HFormat permits only one "drive" of no more than 32 megabytes. Orphan programmer Bob Spencer, MicroLink Technology, P.O. Box 2666, Sumter, SC 29151. 800-334-9612.

Flee Market

TO ALL: Items are for sale (no offers to buy or trade), 2000-specific (no printers, modems, etc., but CM-1 and VM-1 monitors qualify), with all original parts (such as keyboard w/ computer) and papers unless otherwise noted (mail-in cards will be missing). Prices include shipping to anywhere in 48-state 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. If an item is not sold, you can run it again with a price cut of 30% or more.

BUYERS: always figure out (from area code) what time it is where you're calling. It's unforgivable to wake people up. Ask about software versions and other variables, to avoid misunderstandings.

REALISTIC PRICES: When you don't want your 2000 any more, don't expect other club members to want it a lot more than you do. The double-floppy is worth \$100, with boards worth another \$50 each — more (such as memory) or less (mouse). So an utterly loaded machine with a boxload of major software and a monitor is worth about \$500. JMM1, your double-floppy with 40meg HD, mouse and color graphics is ridiculous at \$1200. If any member wants to pay that ("really the lowest I can go") for this average system, write HQ and I'll put you in touch with JMM1. Ron's ad below is almost as bad. People asking far too much can just do what Tandy is doing: trashing 2000s they're too proud (and spiteful) to sell at today's market price.

Tandy's different, being in a war with the Orphans. But overcharging Orphan members have gotten a lot more than their dues back in value from the Orphans. They're being selfish when they destroy machines they can't get unfair prices for.

Double-floppy with HD board, RAM board 256extraK, clock/mouse board, graphics board w/color, 10meg hard drive, mouse, VM-1. With Windows1, MultiMate, PFSWrite., RMCobol, DOS.03 and others. \$750. 313-388-4986 or 313-758-9482 (8-4 EST), ask for Ron or leave message on the machine.

Reported on the bargain table 4-27-89, Baton Rouge Shack computer center, by MRW: clock-mouse board \$30, graphics boards (14) \$70, Videotex \$1, PFSReport \$1, MultiMate price unknown, CS1 \$200 (he probably means CM-1). 504-928-5260. LATE FLASH: they trashed everything but the "CS-1." So much for reliable Tandy support.

Double floppy \$195, single floppy w/ HD board, RAM board 256extraK, 10meg drive, VM-1, \$495. Joe, 303-833-3865.

Double floppy with RAMboard 256extraK, clock/mouse board, CM-1, RMCobol, PFS File&Report, "schematic drafter." \$600. Stephen, 309-829-6526.

Here's a guy with a major collection: double floppies (5) \$150 (each, of course); VM-1 (3) \$75; graphics boards w/color (10) \$135; color chip sets (6) \$35; mouse boards (7) \$36. The following aren't priced: vianet boards (11), vianet active hub, cartridge boards for Iomegas (6), HD boards (no quantity named), CGP-220 printer (2). Many manuals, almost everything published for the 2000. He also lists 25 pieces of major 2000 software, many with several copies, for \$25 to \$35. Call Jeff, 206-631-3219, and leave detailed message.

Graphics board (new) \$90, color chips \$40, both items installed and tested \$140. Tech ref manual \$10, floor stand w/both twin cables (CM-1, VM-1) \$50 plus UPS. Serial board w/four RS-232 outlets \$100. Sof-term2000, Supercalc3 \$50 each. Jack, 313-777-5900.

Envision 640 board \$380, double-floppy with VM-1 \$345, 256K board \$185, disk cartridge board \$150, monographics board \$135, digi-mouse plus mouse/clock board \$85, floorstand with both color and mono cables \$55. Programmers and TechRef Manuals \$10 each. MSFortran \$80, MASM (version?) \$45, Supercalc3 \$50. John, 213-649-3054.

MultiMate and MSWord1, \$30 each; PFSFile, Report, Write \$20 each. 2000 Service Manual \$30. Walter, 401-397-4038.