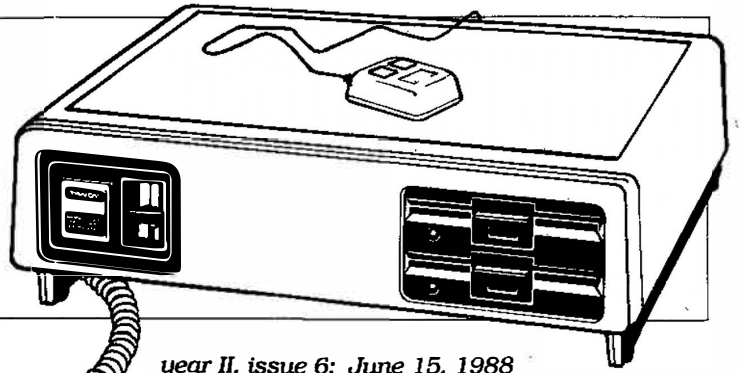
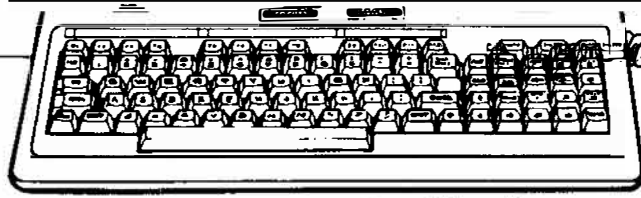


The Tandy 2000 Orphans' WHIMPER



year II, issue 6: June 15, 1988
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Welcome to the Promised Land

Headquarters took the plunge, troops. We laserized. And in the process, we picked the printer for every Orphan, as soon as each of you can afford perfection.

The first thing we learned, we already knew. You can't make a new printer print without weeping rage.

The other big news, we already suspected. PostScript is gorgeous, sexy, cooperative-- too good to be true. But it is true, and it runs on the 2000. It runs on your sneaker, in fact, if you can plug the laces into the printer just right. It runs on just about anything, which is the kind of news the 2000 loves to hear.

The Texas Instruments 2106, winner of our strange selection process, also has five other printers hiding inside of it. Using one of those, before we "broke" PostScript, we did those two labels you found on the front cover of the April Whimper.

A little financial frankness wouldn't do any harm here. The Orphans are buying half of the headquarters 2106, and David R. pays for the other half. It seems about right, since DR will end up owning the whole box, but the box will be working exclusively on Orphan jobs for the first couple of years, more or less. Two years is forever in the computer market.

The box cost a mere three bills, \$2990 to be exact, plus the Connecticut tax that New Jersey insisted on, plus 3% card charge. And thereby hangs a tale.

After a nationwide hunt among the 800 crowd, I selected Westwood, 800-221-1127, strictly for price (the best) and stock (five on the shelf in back). As it turned out, I also lucked out on great service.

The first surprise: after a tough day with an order lady who changed her facts every hour, the cash register rang and I said I needed the machine immediately. (An Arizona company had promised to have "product" (that's what the big guys call stock) within a month, with luck.) My Jersey lady said it would reach me in two days. I didn't believe her, and I was right not to. The darn thing came in 22 hours.

The Arizona flash had said it would be 3000-mile freight for \$150, too big for UPS, and certified check only. My Jersey lady said the box was acceptable to UPS, credit card OK, and get this shipping charge: five bucks. She may have been buttering up Orphan HQ, but I don't mind.

That S on Clark Kent's PJ's Means Support

You get what you pay for or less, they say, so I didn't expect much from Westwood tech support. I was introduced to computing by Tandy, remember. But Westwood happily took my tech calls on their 800 number, digits they don't have in Tandyland. I used no Orphan mention. For a week I was baffled, but encouraged by Westwood's continuing efforts. After a couple of guys tried fixes, one of them mentioned that Art Jones was their in-house PostScript whiz. They obligingly put me on hold, still their nickel, and half an hour later Jones came on.

Details later, but he broke me through into PostScript, and boy was it a thrill. I've been rolling out fancy big print ever since. But I wasn't exactly out of control: I've only run 600 pages of experiments in the first week, 300 the second.

To wrap up the Westwood part, if you want to join forces with HQ in the official Orphan-supported machine, give Westwood a call. Ask for anyone along salesmen's row, and you'll get a quote between \$3100 and \$3400, I think. Say goodbye; it's not nice to tell them someone else in the building has a better price. On a different call, ask for 223, Leslie; tell her you're an Orphan, and she'll sell the 2106 for \$2993 plus shipping, also plus state sales tax if your shipping address is in a state that touches Delaware or Connecticut (but not including Delaware). Even then, you can save the \$200 tax by shipping to a friend outside the tax states. They have 15 right now at that price, but if their cost rises on a later shipment you might pay more.

Leslie asked if I wanted a cut for Orphan participation, and I said no. Tempting, yes, but it would screw up our non-profit status, which would get the tax man and my conscience busy. I have enough problems without making more. She gets

a piece of the action, my guess is a hundred or so, but somebody's going to get it. Their price for the best desktop printer on the market is already unbelievably low.

Check all the 800 crowd to be sure; throats are being cut out there. If you want Orphan support, stick with the 2106, avoiding the higher-priced and inferior AST-PS and NEC-890. Other machines cost much more and still give less. Quick Nadernote: never buy anything but in-stock items unreserved by backorder, and always use a credit card.

If you desperately want to push to \$2800 or \$2900, write Orphan HQ and I'll act when I have ten requests. But the delay could wipe out what I save you: if memory chips continue their price leap, this machine will cost you a thousand dollars more in December, without getting any better.

Never Find a Copout When You Need One

There was always some danger that the companies most willing to lend us review machines would get the nod, but in the end every single maker shafted us. Without exception they were evasive for months, and borderline snotty besides. We ended up having to buy the best one, through heavy study of published specs and reviews. We got those from the makers, and from PCWorld (May) and PersonalComputing (February). See also the May 30 InfoWorld that came out later.

Ditch Your Daisies, Dump Your Dots

NEC, when they realized I would keep calling, gave me their ad agency, which had a young guy call. What is this Orphan laser project, said he. Just wiping every dot and daisy printer off the surface of the earth, said I. Perish the thought, admitted he, mentioning that NEC is buried neck-deep in the dot/daisy market, only slowly nibbling at lasers.

Good point, NEC, and be sure to keep fooling the

dummies who pour solid-gold computing into mud-pie printouts. They will never impress anyone, and their own staffers take twice as long to read their print at work.

Orphans, you don't have to drop three thousand today, but get pointed in that direction. You are using, in 1970 terms, a genius-TV typewriter. You might as well make it the best typewriter in the world, a machine that can out-Gute Gutenberg while you're having coffee.

Shangri-Laser

You old-timers who staggered into Shangri-La in James Hilton's "Lost Horizon", or did the movie with Ronald Coleman, know the thrill of coming from hell into heaven with a sloppy little left turn. You thought that was fiction, didn't you? If so, I hope you're still young enough to hang a left from dot-matrix winter into the sunny spring of the Texas Instruments 2106.

Nobody's claiming that TI is a nice outfit: they stall, mislead and insult as the others do. But their little 2106 is heaven here on earth. Like their two competitors they have PostScript; but they have more emulations and tricks than NEC, and far more than AST, which flunked the PCWorld test cold. In fact everyone flunked that test, and since TI didn't enter a machine, I had to read between the lines.

Bells and whistles aside, the new Ricoh engine, the 4216, produces sharper, cleaner print and graphics. Note its high score for image quality in PCWorld, hiding inside the obnoxiously unhelpful IBM printer. That IBM version scored horribly on everything else, but the 2106 has everything the IBM lacks, meaning it would have gotten a perfect A+ rating among the C-and-worse crowd PCM reviewed. It even does envelopes, laserlabels and heavy card stock. In today's PostScript laser market, it's way better than the rest, and incongruously, it's the cheapest one. I hope TI doesn't realize how far out of line their price is, for your sake. I called up the reputed cloners of PostScript, and they all had an apology, a huge price, or a disconnected phone.

For those who want a \$25,000 linotronic to wipe out the minor jaggies of laser's 300 dots per inch, you've got it when you buy the 2106. This Whimper is going to be set twice as big as the final pages, and photoreduced by the printer's plate camera, no extra work or expense. That comes out to 600 dots per inch resolution, and you might think it looks a bit sharper than previous 300dpi Whimpers. (The April Whimper was 400dpi.) You can move to 2400dpi (art book quality) and beyond with an intermediate photostat of each page or segment of a page.

This 1988 Ricoh engine is also used in the Ricoh 6000 and oddly, the Tandy laser. So it will be easy to get the \$25 toner cartridge (\$18 at Tandy 800-phone franchises). It lasts 1500 normal pages. Parts (except electronics) should also be easy to get from Tandy and others who sell a laser that looks just like the Tandy and the 2106.

TI knows how to write advertising, and they have produced a marvelously detailed two-page sheet of the 2106's many specifications. If 20 or 30 of you write and ask me for it, I'll bug them for a pile and insert it in the next Whimper.

You'll print in PostScript everything you want people to read all the way through. The 2106 prints satiny sharp-edged blacks of coffee-table-book quality in any type style, any size, faster than a dot-matrix printer can make "draft mode" crud.

One little surprise in the laser world, which I should have suspected from my adventures in xeroxing bond paper letters: this new world has no room for my 24-pound 100% rag personal stationery. Only very smooth paper, such as zerox paper, accepts the deeply black sharp-edged letters we buy lasers to get. On bond, laser print varies from dark gray to smudgy. Into storage also goes \$500 worth of stunning rag bond Orphan stationery, which had been knocking socks off of manufacturers I wrote. There's no longer room or use for a typewriter on the headquarters L-desk. We'll have to get new stationery, unless I get savvy enough to roll out letters that print their own letterhead. PostScript does this, for sharp users.

Besides the 2106 and the 2000, you need a strange cable - it took me a week to figure out and find it. It's a null modem plotter cable with RS-232 at both ends. Yes, I know that's gibberish. This cable has a male plug on each end, both with 25 prongs in two rows inside a hood. Each has 13 prongs on top and 12 in the lower row, centered. The hood has slant ends, so it looks like it's smiling. To get the correct side up,

make it smile. The male pins read like a book at both ends, upper left being 1, upper right 13, lower right 25. Only the female RS-232 connectors (on the 2000 and 2106) read backwards, another vague putdown for women.

A weird thing about this cable is that although pin 1, computer end, connects to pin 1, printer end, pins 2 and 3 cross inside the cable. The 1 pins (and the 7 pins) are ground, the electrically-zero "floor" that gathers all the used-up 12-volt beeps going through other wires.

The 2 pin is used by the 2000 to send "print this" signals to the 2106, and the intelligent 2106 uses its own 2-pin to send "display this" signals to the 2000. These signals are a jungle-bird roar of 12-volt blips, ten thousand every second. With both machines talking on pin 2, they listen to each other on the 3-pins, which are called the "receive data" pins in RS-232 land. Imagine using two phones at once, one with a mouthpiece, one with an earpiece, and your caller has the same setup in reverse.

Pin 4? Not connected at all, just to confuse you. Pin 5? Connected directly to the next-door pin 6, at both ends. The final connection gets even wilder. Pin 6, already holding hands with its neighboring 5, cross-connects to pin 20 of the other plug. As with 2 and 3, this crossover happens in both directions.

This is the "are you listening" crossover. When the printer is not too overworked, it keeps a 12-volt light burning in the pin-20 window, for which the computer listens on its pins 5 and 6. When the printer wants to send some conversation to the computer, it also listens on its 5 and 6 for the welcoming 12 volts on the computer's pin 20. These signals are never exactly 12 volts, but both machines understand anything from 5 to 15 volts.

All the other pins, 8-19 and 21-25, are unconnected phonies. But this is only one "are you ready" language. There are four others the 2106 and 2000 can use, which send the "ready" signals through pins 4, 8 or 11 or even 2 and 3. I haven't messed with those yet, and may never.

I first got all the lines right with a straight-25 cable borrowed from Egghead, plus a plug-it-yourself "breaker box". Later I ordered the crossover cable from Global (800-845-6225), their #C4237. It turned out to be male on one end, female the other. So I ordered an any-gender-changer cable from Black Box (412-746-5530), their GH-EY236. It has a male plus a female plug at both ends, and should come in handy next time I'm hooking up a new toy. Being a ribbon cable, it enabled me to ease the printer back to only 2 inches from the wall; closer would crowd its fan outflow. Having properly connected the lines, and having set "DTR" as the "ready" language to use the 5-6-20 route, I still wasn't getting Postscript. So I called Westwood and got Art Jones.

Are you curious what magic the Wizard of Westwood gave me? The answers were much simpler and sweeter than the agony behind the questions.

Go into Edlin, he said, so I typed EDLIN TEST.DOC on my matchless 2000. Then he had me type in this file:

```
/Bookman-Light findfont 45 scalefont setfont
72 720 moveto
(Tandy 2000 Orphans) show
showpage
^c
e
```

(I have omitted the ENTER you hit to move down.)

The PostScript language is remarkably human and makes good sense, compared to Basic and the other languages the 2000 understands. But note that you must type exactly the above; PostScript refuses if even one space or upper-case is wrong.

The control-C closes the file folder, and the E puts the folder in your file cabinet.

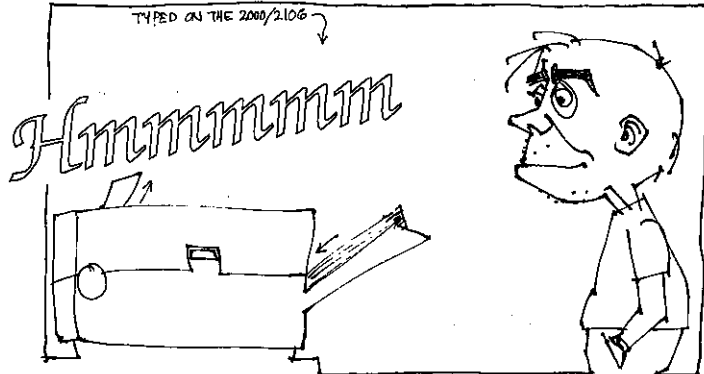
You poke the 2106 control panel until it's in PostScript Batch software interface, RS232 hardware interface, 9600 baud, 8 data bits, 1 stop bit, space parity, and DTR flow control. All these strange words appear on the display while you're pressing buttons; the branching commands appear as you move down, like the roots of a tree.

Now to finish getting the 2106 ready, punch it until it says Online-Idle. Online-Waiting often works, but you never know if it's waiting for YOU. If you find the LCD window hard to read, you have spotted the design error. Set up a Bitty Booklamp as I did, or the equivalent. You'll need it for a week or two and then take it down.

To get the 2000 ready to talk to the 2106, you type in MODE COM1 96 N 8 1 P. This sets up a basket in the 2000 called COM1, into which you can drop files as if it were a disk drive. I suspect that the printer wants to be on and on-line when you have this private chat with your 2000, so it can be sending a welcoming 12 volts from its 20-pin to Tandy's curious 5-6. I turn on the printer two minutes before the computer, not knowing for sure.

Finally, you type this: COPY TEST.DOC COM1. Our organization's name should roll out of your 2106 in beautiful print, but it won't. Remember Printer Rule 1: Printers never print on the first (or second) try. Now try it again, turning things off and on, changing steps and typing. You should get the same thrill I got after 300 tries, on your third or fourth try. When the 2106 finally gets the message, its Online-Idle (or Online-Waiting) will change to Online-Processing.

My mother used to love saying, "What's beautiful, talented and hums?" After a pause she would say "Want a hint?" and then say hmmmmmmmmmm. The 2106 gives you this same



hint when it begins to roll out its gorgeous work. Since it took me a week to make it hum PostScript, I love that sound.

As for PostScript from your word processor, I later broke through in Word 3.1, and will be trying Perfect 3.2 again. More on that in a future issue. This issue, as usual typed into Framework, will be massaged in WordPerfect and edited and printed in Word, moving across the gaps as an asky file. I am adding all the true 66/99 quote marks in Word, having lost them in transit. I counted 333 characters and symbols that roll from Word into the nimble 2106, but few of them travel in asky.

There's one silly thing about running PostScript out of MSWord, and probably WPerfect also. One look at the 2106 tells you it has single-sheet feed from a paper bin. But it refuses to print when you tell that to your word processor! The trick is to go into the word processor's print setup commands and select "continuous" feed, as if it were eating fanfold paper. Suddenly, the silly printer prints.

Laserjet puts out a maximum of 12 points (typewriter size), maybe 24 or 36 if you spend hours tweaking some thousand-dollar accessories. But when I say you can print "any size" in PostScript, I'm not just whistling Dixie. I'm conducting Stars and Stripes Forever, complete with Boston Harbor fireworks.

I printed for fun in 1-point type, an eighth of Whimper size, and in readable 2.6-point, the smallest size that gets out of 300dpi lump city. You can also-- get this-- print a mile high. You just write the point size into the instructions, in this case 4561920. Make sure your first letter is one that blackens the lower-left corner of its box (and page), like a capital E. Run the print, and you get an all-black page (with white margins). Easy on this, you're wasting enough toner for 20 letters. If you have a forklift-load of paper and a wheelbarrow full of toner cartridges, you can "tile" an airport-size capital E. You'll need a scissors and ten years to trim off all the white margins before pasteup. Your completed printout will be readable from the moon, but try to be satisfied with smaller things, like this first home-made PostScript Whimper.

You can get some help from Westwood's expert when your 2106 refuses to print or print right, but expect support from the Whimper as well. (We will not support other laser printers.)

Search the two manuals before seeking help, and buy all the PostScript books available, including the two from Adobe. This documentation is quite good.

It's a glorious feeling, having an output that matches the

quality of the 2000's thinking. In the lingo of a 21-year-old male, the 2106 has a perfect figure, sculpted face, sweet disposition, physical warmth, giant brain, vast wealth, no demands, canine loyalty, and loves you.

It hurts me to send unhelpful TI the usual manufacturer copy of this rave review. It's Orphan copyrighted, TI, so consult your lawyers before you steal from it.

What's New at HQ

So far, Orphans has grown to its huge size from word of mouth and isolated publicity. The July Computer Shopper has an article by me about the Orphans, on page 389. It should bring us a pile of new members, guys who are reading the Shopper for something to replace their beloved 2000s. I have been trying to place such an article for about a year, and this is my first success in doing so.

Intimidation Brings Monopoly

The main market action today is the war between the compatibles, headed by Compaq, and IBM's clonebuster line. We have discussed this before, but it is becoming more apparent that there is nothing superior about the new IBM line, even in its potential for future improvement. Of course it is worthless today, lacking hardware add-ons and software. I hope the big buyers that have been keeping IBM powerful realize that the PS2 is just another IBM invitation to hardware jail, the no-competition go-to-hell bind their customers are all too familiar with. It's about time for IBM to fall flat on its billion-dollar face, and the PS2 can be the cause.

The computer magazines universally hate and knock IBM, partly because of their precarious position in PC-compatibles, but their logic is compelling. Try the Zachman column in the InfoWorld May 16 issue.

IBM is suddenly sending huge bills to all the cloners who have been cloning without harassment for years, with a note that they need not apply for a PS2 clone license until they're paid up. That's IBM's strategy. Zachman found an IBM ad in the Wall Street Journal asking for a herd of patent and copyright lawyers. IBM is vicious but obvious. MicroChannel is a try for monopoly, and nothing more. What do the initials really mean? Check the headline above.

POSTMASTER: Send address changes to the WHIMPER, 387 Main St., Westport, CT 06880. The WHIMPER is published by the Tandy 2000 Orphans, address above, for \$18 yearly. Second class postage paid at Westport, CT. Application to mail at second-class rates is pending at Westport, CT.

They're Taking the P Out of PC

We all suspect all this, but the other major move in today's computer market has more significance for the Orphans. That move is to networking. Again, the move is a smoke screen. Touted as an all-day conference, a way for everyone to contribute to everyone else's work, networking is not being used that way.

It has quickly become nothing more than Big Brother Is Watching, all the bosses peeking through the screen at employee performance with a keystroke or two. Since the bosses buy the computers, not the employees, that's where corporations are going. The airy 80's are over, that golden decade of an unsupervised computer on every staffer's desk. That was the only time in world history when the PC was truly P.

But not quite. You may have noticed that the Tandy 2000, while superb, is also different from the rest and not very networkable. I have noticed, being able to see you all, that buyers resemble their machines, and the owners of the 2000 are a stand-alone, proud sort of people. 99% of us don't need networking, and we don't even want it. We'll do it alone and do it better. Italians asked Galileo why he thought the earth moved around the sun, when ten thousand astronomers knew the sun moved around the earth. "Ten thousand horses run no faster than one," he replied. The end of the 2000 is not in sight.

3

Genius at Work (at Last)

We see the fantastic speed at which computing is developing, and wonder why. It's something about electronics, you say, or the mechanics of the business world, or just Kismet.

No, check this scenario:

About one guy in a hundred is born with an extra intelligence gene, call it a genius gene, and a 140 IQ that makes school easy. One of every hundred geniuses gets a second extra gene that boosts him to 180, and he makes even the smart guys feel ashamed.

That's a problem, that shame. By the time the 99 normals and 1 genius are out of school, the normals are sick of seeing the genius get easy glory, and they spend the next fifty years making sure he gets no more.

There's no place for a genius in the business world. Businessmen took too much pain during school to tolerate geniuses as co-workers. So geniuses carefully avoid thinking, or linger in college, often for life, studying worms or Shakespeare's sex life, because they're not allowed to operate in real life.

Even geniuses are sort of dumb, and they don't realize they've been discriminated against as a class. Back in the genius-free real world it's business as usual, and you can stop being surprised that some people do business in such a dumb way.

Then come computers. Suddenly, geniuses in garages are making toys that businessmen want, little boxes that work faster and better than expensive roomfuls of normal people. Demand is so strong for these garage toys that bankers lend the (ugh) geniuses money, proving that although businesses can't hire geniuses, geniuses can become businesses.

These new businessmen get stupid to fit the business world, but they still remember those garages and have enough sense to hire more geniuses. Inventions continue to pour out of such companies at an abnormal speed for "business."

That's how it works, troops: In any line of work which gives a huge advantage to unemployed geniuses, this despised class will swarm like killer bees or piranhas, and a science will leap centuries forward. That's what's making computing grow so fast, that sign on the front window: "Geniuses wanted. Inquire within."

Instant Membership, Just Add Saliva

Some new Orphans get impatient at the mail delays, and ask how they can join with one mailed-in envelope, the day I get it.

Any USA resident can join for a year by sending an \$18 check to HQ, with the following information: 1.name, including a first or middle name plus all initials (for Whimper mentions). 2.street address, not a P.O.box but an RFD number is OK. 3.(optional)an extra address for Orphan mail, P.O.box permitted. 4.phone(s), home and/or office, say which. 5.correct serial number of your most accessible 2000, from the plate that says "Tandy 2000" under the big box by the receptacle for the keyboard, seven digits 6.(optional)a list of any hardware or software items which you have and want supported by Orphans. Instead of a check, the envelope can contain a Master or Visa number with its expiration date and the notation "\$20," which will be charged.

An applicant not completing item 1, 2, 4 or 5 gets a crippled membership with no Whimper or other benefits.

Group Support, One-Liners to Loners

4

Several members, not a lot, have written HQ for specific items of support, but they get nothing. One even put on a tone with me, saying "THIS IS A TEST." I flunked his test, of course.

Those of you who write HQ a request for a direct answer do get an (unsatisfactory) answer if you enclose an SASE (self-addressed stamped envelope). But you won't like the answer, always one line like "read the Whimper" or "nobody makes one that I know about" or "I don't have time to look it up for you."

You do get a lot of support from Orphans, but only when you're willing to wait to see it in the Whimper, and let the other members get it at the same time. That's the only practical way to run a huge one-man organization.

And when the support requested is far-out enough to bore more than 90% of members, the Whimper doesn't carry it at all.

"With all the bad news about the way people get treated by Tandy employees." LER says. "I'd like to put in a good word for the manager of the Riverside Computer Center. He has been very helpful in trying to locate goodies for the 2000, and to suggest ways to overcome some problems I have experienced.

"Also, Rancho Cucamonga Service Center has provided quick turnaround...mods...CM-1 Friday...following Tuesday." But: "Had the February 20 issue of WHIMPER arrived before I took my system in on March 18, I would not have been out \$71.64."

When the Whimper Comes

Many members have written comments and inquiries about the mail situation that show I have not been explaining enough about it.

From the first issue of 1987 through the February 88 issue, we used bulk mail, taking about three weeks to you. October was sent first-class because of the sudden final sale. The rate change of April led me to a fat book called Domestic Mail Manual. Only then did I discover that third-class (bulk) mail has been an unnecessary torture for us. For close to the same price, we now buy second-class mail (but the startup fee was large). Third class gets to you in three weeks, second class in three days! All major magazines use second-class, with the big guys air-expressing forklift pallets to every post office.

The February 20 issue was mailed February 23, but the April 28 issue waited until May 18, due to delays from freelance laser ladies we were using. These facts and some math should explain the various odd times you received Whimpers.

As usual, I am unable to predict when you'll get this issue, but the plan is this: today being June 14, I plan to get camera-ready pasteup to the printer June 15, and mail a back-seat-load of Whimpers June 20. As things now stand, you can't possibly get this issue before June 25, and consider yourself lucky if you get it in June.

The Inner Circle is Two Dots

Your leader made an error in judgment. Adding up all the members who have boasted about their expertise in tweaking hardware and software-- and dividing by two for laziness-- I calculated that we could form a 20-man "Brawn Trust" of amazing power, a meat-hacking Ninja squad on the cutting edge of 2000 technology. So I said in the April Whimper.

I feel the way Mousemaker Spencer felt when 600 downloaded and I paid: surprised, embarrassed and disappointed. After sifting through the avalanche of applications for Brawn Trust, I decided the best first step would be to count them, and here's my report: two applications. One is from CC2, "a novice trying to learn assembly language [for]...a learning experience rather than contributing." The other is CJB, who has been programming for the 80186 and other chips for nine years.

Congratulations to our two charter members. Take things easy in your Texas and Oregon outposts, until more experts join up. I overestimated the willingness of members to help. Mea culpa, and considering my surprise, mea culpa.

Thanks to the several members who have sent archiving utilities to headquarters, most recently RCP sending PKARC. Orphans will not offer archived files yet but may in a year or so, for these reasons:

1. There is less financial pressure to archive mailed disks than modem transmissions. A mailed disk is five dollars and a minute to open the box, while a telephoned disk is about \$20 plus an hour of hassle time.

2. Only a fifth of our members, roughly, have worked with archiving utilities.

3. This club is still expanding fast, and new members often want to get available disks before we fold up (silly idea). It is a bit too challenging to tell a new guy, often a novice, to learn archiving right away.

4. Given the ongoing rivalry between print and phone groupies in the computer world, it gives Orphan HQ satisfaction to offer the convenience of plug-and-go files, no hassle.

Thank you, SDT, for the cash gift.

Look What Flu In

Headquarters may have received its first virus. Luckily, we isolate things on their floppies and run them on a bare machine, so if it was a virus it hasn't traveled to other disks yet.

EGG sent us a neat program to turn DOS and all the other monochrome applications into your choice of colors for the CM-1.

It worked okay, but right after that, the monochrome Fortune Teller disk we tried it on went utterly crazy. I went into its FAT table (my first such trip), and found the whole place wrecked. When Peter Norton took a look, his Utilities said there was no hope of saving Fortune Teller.

There was a copy of MSWord on that machine for my high school kids, and it began forgetting their work-in-progress. I played with it a bit, and it spit out an odd line on the screen: two smiling faces and two male symbols, which sounds an awful lot like an unfriendly greeting.

EGG's disk has been in quarantine ever since, until we can get a new copy of Fortune Teller and run the tests slowly, with backup copies of everything. EGG, while I'm waiting, tell me where you've been getting your goodies. That's right, I didn't say "please."

Two members, GJK and DN, have talked with Microsoft about getting a 2000 version of DOS 3.3, and both report that Microsoft wants a mere \$100,000 for it, plus maybe royalties. That seems to imply that Microsoft would do the rewrite for the 2000. But DN seemed to think that it was \$100,000 even if an Orphan did the writing, and I can't understand that. We want 3.3, but so far we have no volunteer to write the port, assuming both Nechodom and Spencer are too busy. When we do have such a volunteer, and a working disk, I'll ask MS for a fair deal, and if they won't deal, you'll all find DOS 3.3/2000 in your mailboxes as a gift, along with a moderate rise in renewal rates. My way: give people a complete chance to be nice; then clobber them.

There is another possible gleam of light at the end of the 2000's incompatibility tunnel. GJK has been in touch with Rob Pollin at Sunrise-Littleton Technology, makers of SoftGraf, a program which convinces IBM software that it's talking to a CGA screen when it isn't. (ComputerShopper, June, p.338) Why not lie to a 2000? Interesting, said Pollin, but prove to me there's interest from 2000 owners. Okay guys, prove it to him. 301-963-0341; 15200 Shady Grove Road, Rockville, MD 20850. He'll get a copy of this Whimper.

Pollin wants our video addresses below B800 hex. Anyone who understands that, and has them, buzz him or write Orphans, please. I'd like to push on him by phone, but feel I ought to arrive bearing a gift. Video numbers would do just fine.

We have some interesting screen addresses in our IN pile, the mail which hasn't been processed far enough to get into the Whimper, so to the member who sent them, fear not! we have your letter.

Get It Said

Headquarters is always interested in what you have discovered and can write down. But we haven't time to write you a "yes" note to every teaser hint. "I have added to the 2000 a big mouth it talks its little head off but it slows down some programs. If you are interested let me know."

I'm sorry I lack the time to write, WTB, but if you have a trick that makes our 2000 more fun, please send it in.

JNW, your letter of May 23 looks very valuable. You are one of the half-dozen sharpest members when it comes to forcing our machine to cooperate with software.

But please! I can't understand sentences without verbs, and programming without keystrokes! Your whole letter, while I am barely able to read your writing, confuses me.

For those of you who want to know what you're not getting this time, JNW's indecipherable letter (\$1 for a zero if you're a better reader than I) touched on these points: making Sourcer work on the 2000, with some assembly-language modifications; A86 runs, but D86 has a black screen so far (he's working on it); our keyboard interrupt is not 9(16), but 78(16); the memory location for current page in IBM is 0:462, in 2000 is 0:489; monochrome video memory on a 2000 is at 3ECO on a 256K machine, 7ECO on 512K, 9ECO on 640K, and DECO on an 896K machine.

I know it's hard to get time to write a clear letter. Many of

us are trying to live three or four lives at once. But like the man said in the war movie, it's no use flying all the way to Germany if you're going to drop your bombs a second early and miss the target. Write with care, please!

You're Righter than You Know

Occasionally, reading a letter from one of our expert programmers, I get a twinge of shame. Am I not bright enough to program? But there's a lot to be said for the person who manages his life like a business, having different resources because he can't do all the work himself.

My sniffing tells me a tenth of you program; a tenth of you know you never will, barring a few ten-line jobbies your software coaxes out of you. I'm in that inactive tenth.

The other eight-tenths of you plan to learn programming one of these years, but not exactly today. Seven of those eight tenths are wrong.

You should not be feeling guilty or pressured, but should accept the position your software gives you: captain of the ship. So you can't plot a chart or tune up an engine. But you only have time to run the ship anyway, not build it. Accept your time limitation, let somebody else program, and be a happy captain.

Sure, tomorrow someone may offer you twice the money you ever hoped to make, as long as you write a big program. Then, and only then, will it make sense for you to learn programming. The test of computing skill is learning programming fast when you need it. The test of living skill is keeping yourself free of impatience and guilt until then.

Shopper Beware, Vaporware

Tandy has announced a product that would revolutionize the personal computer industry if it were real: a \$500 disk drive that writes and erases a gigabyte on \$5 laser floppies.

I speak in the subjunctive because our industry has hardware, software, and vaporware. You know what the first two are for. Vaporware is not a product at all, but a strategy to keep other manufacturers from selling things. Tandy is adopting a strategy that IBM has been using to great advantage for many years. It is standard computer industry practice to promise an imaginary item in a year or two (Tandy's laserfloppy timetable). A year later the promise changes to "in three months," given every month for another year. Then you stop promising.

Yes, someone will put out an erasable optical disk in a year or two. But it will cost \$5000 and use \$100 disks.



Our dear 2000 pulls this out of the 2106, by simply typing "a".

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The List You Missed

As it is with most of you, I can get all my work done in about 60 hours a day. Add about ten for eating and sleeping, and I'll be satisfied with 70. Unfortunately, someone screwed up and left me with only 24 of the precious things every day, so I've been getting behind in a few matters, some of them yours.

That foot-thick block of five-inch disks has been on my desk for months, public and member-written programs that are, my sampling shows, terrific on the 2000. I want to carve them up into a dozen jam-packed platters of fun and efficiency, and compdupe them out to you for five clams a dupe. But I just haven't gotten around to it. I'd also like to run capsule reviews of them, and you know how far that plan has gone.

Also, members have sent additions to the list of 2000 software we ran last August, and I've been trying to load an expanded list into a Whimper for the longest time. Maybe I'll score in the August issue, making it (by purest accident) our Software Inventory Long List Yearly. That's SILLY, for short.

I know how disappointing it is for you guys not to have these resources.

Have a good summer. You remember summer. That's when you wash your hands in cold water, and the Hershey almond bars tear instead of breaking. I like summer, except the first two weeks in August. That's Whimper time.

Hardware Help

You all recall that our experiments with the new 5-inch cartridges from Iomega gave the 2000 (with a DCS board) only ten megs per cartridge, although the drives are rated for 21.4 each. I tracked down the guy who wrote the software and bought the boards, and he said he knew nothing. (A doubtful story that I hear a lot.) Having talked with everyone at Iomega already with only stalls and passed bucks, I gave up.

Imagine my surprise last week when I received my first conference call, from Iomega development chief Rick Johnson and member JB2. The amazing and persistent JB2 is, get this, shipping a 2000 out to Utah (from Michigan), with DCS board installed, for Johnson to play with. And Johnson is really trying, to my surprise; I gave him up after he sent me out looking for know-nothing designer Hillstrom, no longer with Iomega.

Thank goodness for people who get up on their hind legs and roar. We could use about a hundred more of you.

Let's Go to Press

Printing is a strange profession: it's almost impossible for a printer to have any college, and almost impossible for his customer to have less than four years of college. So Marx's famous class struggle peaks when customer brings print job to printer.

Your Whimpers are no exception. Printing time is a deeply disturbing week. There was the man who accused me of calling his print shop slaves on the direct line to his basement (I did), and he was enraged because he could almost smell the fifty-dollar tip I gave them for late-night speed last October.

There was the lady who did one-line jokes from the moments I arrived until whenever I left, no problem, but her subject matter kept me wondering how I should answer: Jesus, menstruation, her children, print customers, violence.

Then there was Mr. Slekyll/Hyde, English accent and pink button-down, but he slept through dawn appointments, smilingly wrecked pasteups while I watched, and took days beyond his promise. When I called and asked how things were coming, he said "Fine, until YOU called."

Whenever tempted to answer disrespectfully, I had to consider that a week of errands, editing and pasteup, unphotostatted, was in enemy hands.

The other printers fade in memory, for which I'm grateful. The current guy is on his second Whimper, a world record, and seems to have had college or at least careful parents. His work has been clean and quick, only a day or two off his predictions. Can this be happening? Stay tuned for further adventures.

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Reach Out and Twix Someone

Member Jim Howard says he would prefer giving more 2000 support on his generic-PC board, and is waiting for more 2000 owners to call in. He calls his board Howard's Notebook, founded in 1981 (amazing age for a board). His comments on the list: Micro Systems was hit by a recent area code change, from 305 to 407. Tom Smith's and Robert Anderson's numbers are disconnected. Daniel Schafer and John Hawley have "BBS" phones that are on voice and just answer, so Howard's modem reported failure on those calls. Seemingly, Howard didn't call back on voice to check their status with the owners. Melvin Kenoly, using the handle Message Exchange 2000, is still operating, as is Bob Juge who is the best, says Howard. Somebody ask Juge why he never joined the Orphans. Is he mad that I pick on his brother? I called Bob up once, but he showed no interest in joining.

Member Manny Gonzalez has a new 2000 BBS, Howard reports, and Manny confirms. Called The Forgotten Machine, the board is in New York at 212-543-6470. It is dedicated to the 2000 alone, with an emphasis on modem communications. It is accessible through PCPursuit and Telenet, and has 2400 baud (and less). My notes have something about "fossil" that I have forgotten twice, sorry I'm so dumb, Manny.

There are rumored to be a new 2000 bulletin board in or near Chicago, plus two in California, but no hard info has come in. It's just gossip for now.

Often, a Whimper article gives a member's phone number. CAUTION! Check your own phone book to find out what state he's in before you call. It is definitely unkind to wake people up so you can ask them to help you work your computer. Okay?

There is confusion about what hardware is needed for the 2000 to run Windows, reports RCP. We all have an agonizing period of ignorance there. You need a graphics board, chips and color monitor, or the chipless board and a VM-1 with trace-1 connected on the graphics board (see earlier issues for this). You also need over 256K of memory-- 384K will cope. Windows in multitasking is impossibly slow with a 384K 2000, reports SVC. He enjoys using it for its desktop utilities, and for single-tasking. Windows multitasking needs 512K to 896K of RAM. Even then, it's not exactly strobe city.

Memory boards running out? A Tandyman member, no initials but codename Bacterium, reports that memory boards "are still available through National Parts, are still selling well, and discontinuation is not in sight." He wrote that May 25. I'm going to have him and Nechodom slug out a fifteen-runder in the Orphan summer sports spectacular. Meantime, if you don't have a memory board, get one now.

Renaming keyboard keys is offered in several utilities, but they don't run on the 2000. RCP enters hundreds of stock market numbers daily, and wanted to hide a minus sign under the right-arrow, which is right next to the number pad and useful for touch number-typists. He could not use an available ANSI.SYS solution, because ANSI doesn't work in a Basic program.

"An answer came from, believe it or not, Tandy Support Department." They sent him a key-trapping program, and then helped him with bugs by adding a couple of lines to fit the 2000. I will put his re-keying program into our public program disks when I can, and meanwhile, anyone who needs quick key help can call him, 913-823-3944, ask for Ray. He would especially like to hear from people who have a better key-naming trick, and so would headquarters.

Magnetic (motors) and radio (everything else) interference is heavy in RLP's college environment, crashing his word processor (LeScript) and communications (VidTex). He found that by working at midday or after midnight he could cut it way down. People are using their appliances and gadgets less then, than in afternoons and evenings.

The 8087 coprocessor mounting board is nicely covered by a Tandy Service Manual, says ACL, sending a copy which I can't find so I can't give you the number. He is still curious about several aspects, including the identity of the alleged new sheet metal required (bottom pan and power supply cover). No one has tipped headquarters. He wonders if the new 80186 chip in the mods will run the 8087. [I don't think so.] And why does Nechodom insist on the expensive 8087-1, when both the 2000 and the 8087-2 allegedly run at 8mhz? That question has not been answered satisfactorily, even by Nechodom when I asked him.

Some repetitive jobs can be simplified by carefully reading the screen. When formatting a dozen floppies, for example, you type Y when it asks if you want to do it again, and later type "any key" to say ready-set-go. The smart way: slip disks in and out, ignoring the question on the screen. Then hit YY as fast as you can, and formatting resumes.

Ble-uss You My Child, For You Can See

The people in Washington who investigate big air crashes do a lot of their work on computers, and a group of their techies recently bought a fleet of sale 2000s with their private money. They had expected easy video, but quickly found that they were flying blind (chuckle) without the extinct VM-1 and rare CM-1.

Orphans has since followed, sympathetically, their video safari. Our sympathy is slightly less than it could be because all twenty-one of them are feeding off one Orphan membership and a xerox machine. Headquarters could use that \$360. Their best video solution to date, courtesy of paying member MOR, is available to all of you:

"I got a NEC Multisync GS monochrome, and it was plug-and-go. I just plugged it into the color monitor port on the graphics board. If you wanted to use the mono port on the 2000, you'd have to get a gender changer or put on a new 7/8

din plug. The GS comes in green, amber, or (as they list it) paper white. I got the white and like it fine. I can use it either white on black or reverse, black print on white background. The cost was \$189 from a firm in the current (May 88) issue of Computer Shopper." This sounds like the ideal solution to VM-1 blindness, considering that a mono multi will make a picture from every computer you can buy, just in case you ever get unfaithful to the 2000.

The crash crew also sends a detailed set of instructions on adapting a Tandy VM-3 to the 2000, which is zeroxed for the souvenir shop if you want it. It requires the soldering of one wire on the circuit board, plus building a new plug on its cable to the 2000, plus some turning of tiny pots to adjust the screen image. MOR's instructions are detailed and fun.

For those of you who read circuit diagrams for amusement, MOR says the fix works on any TTL monitor. The required insider trick is to locate the place where the wire must be soldered.

If you favor a monitor that does everything, I believe the \$500 Taxan 770, reviewed favorably last issue, is switchable from multisync color to all three mono modes-- green, amber, white. I've always had a yearning for amber or white.

All this should give some comfort to the dozen or so members who have sent loud howls to headquarters, seeking the extinct VM-1 for their "blind" 2000s bought at the fall sale.

Program Problems

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WordStar 4 is not running on TJM's 2000, but it runs for me and I don't know enough about TJM's keystrokes to hunt for the differences between his routine and mine. I just followed directions. By the way, I still have not had time to make their thesaurus run, although Microlytics long ago sent Orphans a patch claimed to work the job.

The praised Mace utilities are a disaster for KBH, who also was ambushed earlier by the Windows format command. MCACHE will not run, no problema and par, but their UNFRAGMENT "is lethal." It viciously destroys floppies with cross-links and erasures, with a violence that other utilities cannot mend. The drives actually roar (through the speaker?) when running wrecked floppies. The Mace people suggested the Envision board was to blame, but until a member has a fix, we suggest you all avoid Mace and use Norton or SuperZap.

We aren't doing well on those patches to make dBase and Lotus copiable, report SWR and PEB. I haven't tried the patches because I don't use either, and am too busy even for essentials. I'm sorry about the booboos. Possibly those who sent in the fixes, reading the Whimper, noted an incorrect or unclear instruction and can solve the difficulty with a note to headquarters. WRH and CAN, where are you when we need you?

JWC wants to know if anyone can run the MS-DOS version of Borland's TurboPascal on the 2000.

Software Support

Windows will load in color for KBH, but WordPerfect will not, even when called from Windows. I reported the last part wrong in April.

In PageMaker, she says, "I prefer the color monitor: having text in black & white, and the options and menus in color, makes the whole thing easier to work with, for some reason."

WordStar 4 comes up in color for SVC; he prefers white on blue with highlighted menus. He loads MODE C080 with his start-up autoexec.bat, and used WSCHANGE on the WordStar disk to set his color scheme.

Printing in WordStar 4 baffled SVC, using "LPT1". WVL also had this problem, he says. But SVC got it working by using "LST" as the printer port setting. Ignorant me, I never heard of a printer port called LST; all I ever worked with are LPT1, COM1, and PRN.

Printing your screen in a graphics program: In April I suggested that this was not possible using the SHIFT/PRINT trigger for the DOS program GRAPHICS.COM. Unso, says SVC. Load the GRAPHICS.COM program first, he says, and then go into another program. (I don't understand: do you type GRAPHICS and then receive another prompt, and then type LUMENA or some other program name?) The trigger, he

seems to say, can then print out a 90-degree rotated screen on typewriter-size paper.

Daisy-printing foreign-language marks has been a sore point with PAE, who really knows how to get sore. His slightly smoky English should be sliced like spicy salami and put into the hard-roll letters most of us send to manufacturers. He's good at it. The last computer trend he called unnecessary, he asked HQ who could possibly give "a fuliginous fart" about it. He balled me out for cleaning up his last contribution, so I owe him. (Oops, here comes that letter from our Connecticut Mary Poppins.) Anyway, he's been struggling to print accent-spattered French poetry (dirty poetry?) with his new Word 3.1. But Bill Gates (to whom PAE writes monthly and stridently) has been no help.

Loading commands like MODE LPT1:.,P and MODE LFOFF, in the start-up autoexec file, has been some help, which PAE reluctantly credits to a Microsoft phone voice. But PAE has "become a self-trained expert" and welcomes those who want to get his home-brew print formatters for daisywheeled foreign markings in Word 3.1, Word 1 and Basic. Call Paul at 602-837-3203.

The problem is that the printer must first print a letter and then backspace to that letter and add a mark. Europeans can't seem to write our 26 letters without speckling them with itty-bitty marks. Word 3.1 gets all choked up when asked to backspace, and you can imagine how hysterical proportional spacing makes it. PAE says he can cope, and shows off with a French poem in monospaced daisy courier.

You also find all the European-marked letters in the extended-asky alphabet, so presumably you can score with them on a matrix printer that speaks all 256 bytes of asky.

The PostScript laser appointed the Orphan printer in this issue's main story is also a bit confused by foreign marks, but not very. Just to be difficult, PostScript uses different numbers than asky, but the results are the same, with PostScript's calligraphic perfection added.

Concerning our review in April of Readability, BCT reports that "it sounds a lot like RightWriter, a great grammar, style and readability checker (with suggestions) that I have been using with WPerfect 4.2 on my 2000 for a year."

Many programs which run from two or three floppies, with the hassle of swapping them in and out of drives, can be partly copied to the imaginary disks that hide in Envision's extra memory board. This note is from RCP and regards MultiMate, but it applies to lots of big programs. An unexpected extra benefit is that, after you copy a needed disk, say a dictionary, to a VDISK (fake) drive, it runs a hundred times as fast. Your work becomes both easier and faster.

When you make the change, you have to step through the installation routine for the program again, changing drive names. Often, the Envision invisible drives are labeled E: and F: Put the slowest stuff on them-- the things that, when you call them from a floppy, go grind, grindy-grindy grunt-grunt before they tell you anything. That sound is the slowness of a floppy.

Naturally, you set the VDISKS to a size that will fit the files you want on them. And all of us forget, at first, that we can pack two ordinary floppies full of software on one of the 720K disks the 2000 uses. Repack disks for this convenience when you can.

Symphony has been reviewed on disk by PGC, it says here in my yellow-4x6-card notes for "II-6," and the note says "much too long." If I remember correctly, he likes it. With the print shop guy breathing down my neck, I hold it out of yet another issue. But I hope to put it in next time, so it's scribbled on the "III-1" card.

The DOS manual that came with the 2000 seems complete, but it never mentions CHKDSK/V, the verbose listing. When you type that command, you get more than the usual list of top-row files. You get lists of all the files in each directory, also. Try that in a packed hard disk, and you can finish your coffee while it all rolls by.

Another DOS bit: It is frustrating to have to wait for a grinding COMPDUPE of a disk with directories on it, because COPY *.* skips the directories. A member (initials lost) suggests that if the destination disk has the same directory names on it, the copy command will get every single file across. I tried it and failed, but I may have screwed up. Try it if you need it, such as for a daily backup routine, and whoever breaks through, send me your keystrokes for the Whimper..

When setting up Windows, you may get a screen that says "tough luck, nerd, I won't read C for you, Abort, Retry, Ignore?" Just hit C again, persistently, because C means Continue.

Coping With WordPerfect

Sometimes a member writes a letter, and I can't bear to give it the usual 10-to-1 Whimper compression because it is so beautifully written. AIV's letter on WordPerfect is like that:

"In WordPerfect, changing the printer code to PRN worked! I had tried in vain 1 1/2 years ago to get a regular version of WP to work on the 2000. Everything worked fine, except I could never get the thing to talk to the printer. Where in the world were people who knew something way back then? The exact procedure for changing the printer code to PRN is as follows.

"When in WordPerfect, hit: SHIFT-F7; 4; 3; ENTER; 8; P-R-N; ENTER; 1 (or 3 but not 2); F7.

"That has worked. In fact I am writing this letter to you with my Tandy 2000, using the standard IBM version of WordPerfect. This one bit of information a year and a half ago could have made me change my mind about buying an IBM compatible. I still love my 2000. Oh well, we live and learn.

"Here are a couple other suggestions for WP. The color on a color monitor will work only if you put MODE COLOR in the batch file that starts WP, or enter it in DOS before loading WP. However, color seems to slow down screen rewrites. Straight black-and-white seems to be most efficient, and isn't that what computers are all about? But sometimes I like to be a little bit flashy, so I slow down and use color. I made two copies of the program: one loads in B&W, one in color from a batch file. Then I boot up the one I want, depending on my mood."

Thanks for a great letter, AIV. (I hope he gets this: he's not renewed yet.)

Another member, GJK, on WordPerfect 5: "I'm a beta tester for WordPerfect 5.0, and can report that the IBM version (there will be no 2000 version) is fully functional on the 2000. This means that you can mix text and graphics, create macros from inside WP, and redesignate WP's function keys."

A new crew of drivers for today's printers will be aboard, which is dandy for the PostScript laser selected in our lead story, but as for your old Tandy printer, forget it. Tandy, with its usual surliness to other manufacturers, pulled all its old printers out of the huge WP storeroom that generates their excellent printer support. When Tandy realized they were hurting their own sales, they sent a few printers back, but only the ones they're still making. Pulling support away from old hardware is a major sales strategy with Tandy. The delay kept all Tandy drivers out of WP5, and explains why WordPerfect sounded so bitter in their announcement that no 2000 version would be made.

Some things will be switched when WP5 hits the 2000: the graphics display on-screen is low-res, the old IBM-screen jaggies; a new speed-control for the cursor won't work on the 2000; and as usual, you have to install to a printer called PRN, changing the LPT1 name you'll find in their printer menu.

The Orphanage Souvenir Shop

Electronics parts are not tested by me, but they look OK, and I'll be surprised if a board fails. If you get a bummer, I'll pay back everything but both-ways shipping, which you pay. I won't send you a replacement, however, so if you really need a board that failed, buy a Tandy repair for it.

You will note odd-numbered cents, all prime numbers, on prices. This is to give me help in bookkeeping: a check total carries a buried itemization.

1. Tandy-written Windows Driver disk, formerly their #7002611 and presently our #1, \$20.07 postpaid continental US, others inquire. This disk slyly erases drivers for non-Tandy printers, but we'll add instructions for avoiding this trap. (198K)

2. "Creative Byting," a free-to-copy disk on how to write user-friendly well-selling software, put out by an apparently out-of-business disk publisher. (183K) \$5.00 PPCUS, \$1.00 if added to #1 above.

3. "Suitcase," a hard-disk packing-up utility which parks the heads on the last sector (least likely to have data). This to

protect data when you bump your computer while trying to lower it into one of those open-pit car trunks. The disk unpacks itself next time you turn the machine on. (2K) \$5.00 PPCUS, \$1.00 if added to #1 above.

4. "Mastering the Tandy 2000," a compressed zerox of an out-of-print book mentioned in the February issue. Reprinted with paid permission. \$6.51, postpaid conUS.

5. Unprotected Lotus123. Send your program disk from Tandy 26-5300 with \$5.13 and I'll send it back with an unprotected 123.exe file that copies to any disk any time. No other goodies on this disk. Your disk will come back unchanged and notch-taped, with a separate disk holding the copiable files. I only require the original to make sure you own it, so Tandy doesn't get me busted for copyright infringement.

6. Unprotected Framework. Send disk 1 or 2 of Tandy 26-5320 with \$5.03 and I'll send it back with an added, unprotected fw.exe file that copies to any disk any time. No other goodies on this disk. See end of item 5.

7. Unprotected dBaseIII. Send disk 1 or 2 of Tandy 26-5353 with \$5.11 and I'll send it back with an added, unprotected dbase.exe file that copies to any disk any time. No other goodies on this disk. See end of item 5.

8. Some kind of unprotection for Symphony, send all disks if you want to try for it. \$5.37 and I'll send back an Orphan patch disk with your unchanged Symphony disks. See end of item 5.

9. Instructions for putting 512K (or more) on a Tandy 2000 memory board. 7 pages zeroxed, \$2.00 including postage, a price increase because it's such a big copying job.

10. List of Tandy 2000 video ports. 3 pages zeroxed, \$1.00 including postage.

11. Mousetrap, which lets our digi-mouse run the arrow keys, the ENTER key and the F1 key, in your starting DOS or any software that lacks its own mouse driver, which means that now our mouse goes everywhere. \$20.19, of which \$10 goes to the deserving inventor, \$5 to actual costs of getting it to you, and \$5.19 to the Orphan phone bill.

12. A member's description of his AutoCad custom 20x26 command template, 4pp. zeroxed. See AutoCad under reviews, April88, for description. You can call him (I'll write on his phone number and address) if it interests you. He's not asking much for it compared to its value. \$1 including postage for his letter about it.

13. Modifying a Tandy VM-3 to work with the 2000, by MOR, zeroxed. \$2 including postage. Has pictures.

ADD \$5 SHIPPING to any combination of items below here. If your order is too late, I'll send back your check.

14. Graphics boards with chips (two left), \$135.

15. Graphics board without chips (one), \$100.

16. Color chips (three), \$35.

17. ViaNet board (one), no instructions or cable, \$50. No good unless you have other such boards and multiple machines.

18. Hard drive board (roughly two left), \$100.

19. Clock-and-mouse board (one), \$35.

20. Floor stand for off-desk 2000, a gorgeous item (four still), \$45. With 6-foot cable for keyboard and CM-1; use your own cable for any VM-1.

21. Desk stand for VM-1 (still six left), frees much of the most-needed desk space and tilts/rotates monitor to your best angle. \$15.

22. Tiniest memory board, one of the two that ride above the Tandy main logic board, about 2" by 4". Has chips in it. (one) \$15.

23. 2000 keyboards (two), \$50.

Oops-- you were expecting diskloads of public domain utilities? See What's New at HQ for the usual apology.

Flee Market

Flee Market items run only once, unless you send them in again with a 30%-or-more price cut.

Prices include shipping to anywhere in continental USA. Unless otherwise noted, the items are full-package with all original accessories and paper, except the mail-in cards. Prices may have been labeled firm or negotiable, but I consider both words misleading and do not print them. Negotiate if you please.

PFS Report, \$45. Rhys, 408-370-0761.

MAI-- AR, AP and GL, all for \$190. MultiMate with its upgrade package, \$100. Charles, 313-856-6353.

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