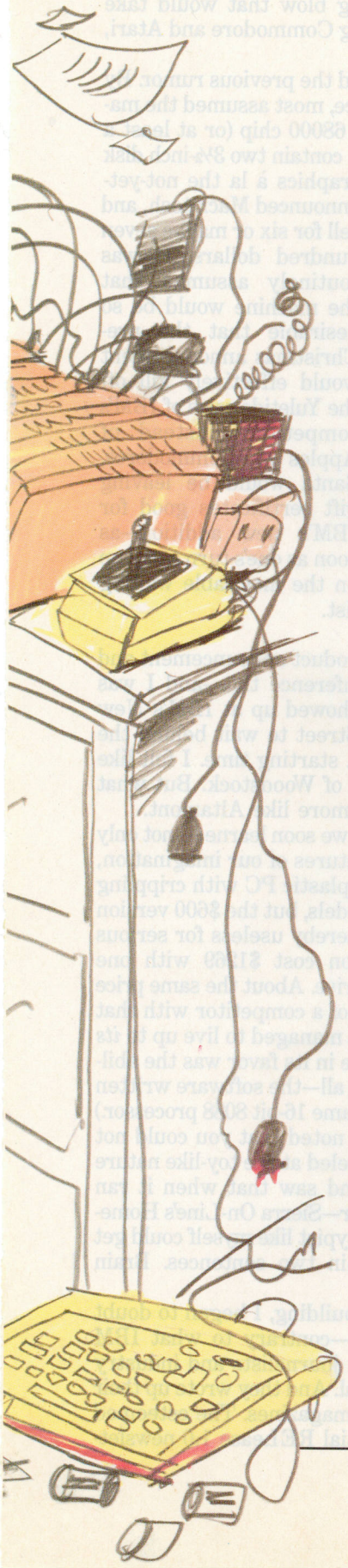

IBM
IBM PC Jr
KEITH BENOIS



# THE LIFE AND TIMES OF PC JUNIOR

## Will the new PCjr fare better than the original?

BY STEVEN LEVY

It's hard to believe that the PCjr, IBM's much-heralded foray into the home computer business, has been on the market for less than a year. It seems like forever. Much of that year, of course, has been spent speculating when IBM would fess up to what became widely recognized as a monstrous miscalculation, and either enhance the $1269 machine into a useful piece of machinery, or drop it altogether.

IBM, with its usual candor, insisted that nothing of the sort was in order. *It's a perfectly wonderful machine,* said the folks from the IBM Entry Systems Division at Boca Raton, Florida. *It's only you guys from the press who don't like it.*

STEVEN LEVY (*left*) is a contributing editor of *Popular Computing.* Illustrations were drawn by Keith Bendis; photographs are by Guy Hand.

But even IBM had to admit that while people were lining up to buy Junior's chief competitor, the Apple IIe (and later the IIc), the PCjr was selling slowly—very slowly. In fact, according to the best available estimates, the 50,000 Apple IIcs sold on the day of its introduction represented almost as many PCjrs sold in the machine's entire first incarnation.

Finally, nine months after its introduction and seven months after its first appearance in stores, the "new" PCjr was unveiled, almost surreptitiously, in a July 31 press conference where the supposed main event was a reading program for schools. Not until the final paragraph of press-kit announcements did that release mention the enhancements that transformed the tragic Junior into a new machine, demanding reevaluation. "In addition," reads paragraph four of that fateful release, "the company introduced new features and options for the PCjr, including a typewriter-style keyboard, additional memory and power attachment options, a speech synthesizer, and new cartridge and diskette programs." *Oh by the way. . .we're floating a scheme that may salvage the biggest flop in the history of computing.*

This article is more or less a review of this "new" machine. But the PCjr calls for something other than a standard hardware review. The machine is not merely another alternative for prospective buyers: it represents a major chapter in the history of personal computers. Despite its unprepossessing appearance, the PCjr is a virtual Rosetta stone whose meaning and message must be understood in order to understand the success or failure of *any* home computer that comes thereafter. We must not only evaluate the PCjr as a potential addition to our home and office, but we must seat it at the dinner table to gauge its conversation, lay it on the couch to psychoanalyze it, pull down its drawers to check for rashes. And once the verdict is delivered, we must ponder *why*. To do less would be to forget the astonishing importance with which we all imbued this machine. Indeed, the entire computer industry was nearly hysterical with anticipation in the months before November 1, 1983, when IBM hastily convened the nabobs of computerdom to show for once and for all the reality of the chimera that people had been calling "Peanut."

In fact, those were the glory days of the PCjr, those days and weeks before the announcement, because the rumors of the Peanut's capabilities had stretched far beyond reasonable expectation. Such was the fear that IBM had thrown into the industry. Its workhorse, the PC, had been such an undeniable success that many were ready to concede the entire field—lock, stock, and microprocessor—to the boys from Boca. "AND THE WINNER IS. . .IBM!" crowed the cover of *Business Week*, and those who refuted it did so halfheartedly. And now would come the crushing blow that would take Apple, and even the low-balling Commodore and Atari, down for the count.

Each rumor of Peanut topped the previous rumor. By the time of the press conference, most assumed the machine would use the powerful 68000 chip (or at least a faster chip than the PC's 8088), contain two 3½-inch disk drives, support bit-mapped graphics à la the not-yet-announced Macintosh, and sell for six or maybe seven hundred dollars. It was routinely assumed that the machine would be so desirable that the pre-Christmas announcement would effectively kill off the Yuletide sales of IBM's competitors—instead of Apples or Commodores, Santa would be leaving gift certificates good for IBM's new addition—as soon as one's turn came up on the inevitable waiting list.

## The Big Event

IBM cast the event as a "product announcement and demonstration"—no press conference this—and I was among the journalists who showed up at IBM's New York headquarters on 57th Street to wait behind the velvet ropes until the 10 a.m. starting time. I felt like I was at the eighties version of Woodstock. But what awaited us was, to my eyes, more like Altamont.

The Peanut—or the PCjr, as we soon learned—not only lacked the state-of-the-art features of our imagination, but seemed dinky, a smaller, plastic PC with crippling limitations. It came in two models, but the $600 version had no disk drive and was thereby useless for serious computing; the other version cost $1269 with one double-sided 360K-byte disk drive. About the same price as an Apple IIe, it was more of a competitor with that than with the the Mac (which managed to live up to *its* rumors). One thing it did have in its favor was the ability to run some—but far from all—the software written for the IBM PC. (It used the same 16-bit 8088 processor.)

I looked over the machine, noted that you could not add a second disk drive, marveled at the toy-like nature of its "Chiclet" keyboard, and saw that when it ran IBM's choice of word processor—Sierra On-Line's Homeword—even a medium-speed typist like myself could get a full line ahead of it within two sentences. Brain damaged!

But even before I left the building, I began to doubt my own judgment. Because—contrary to what IBM would later say—most of the journalists and industry pundits swooned with approval. And they wrote up their approval in newspapers and magazines. The esteemed Esther Dyson of the influential RELease 1.0 newslet-

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ter wrote in her November 28 issue that "Despite its Chiclet keys, we found the machine extraordinarily cute and friendly, given its parent, and we expect it to be a big winner (no controversy here). Software vendors have rushed to write for it; customers have rushed to order it, even putting money down; consultants have rushed to predict big numbers for it, feeding the frenzy of the other two groups."

Maybe it's me, I thought. Maybe the PCjr is a good machine, and I'm just not seeing it. But soon after I received an original PCjr for evaluation, I found out what the critics missed and the public divined fairly quickly—the original PCjr was an overpriced, limited machine.

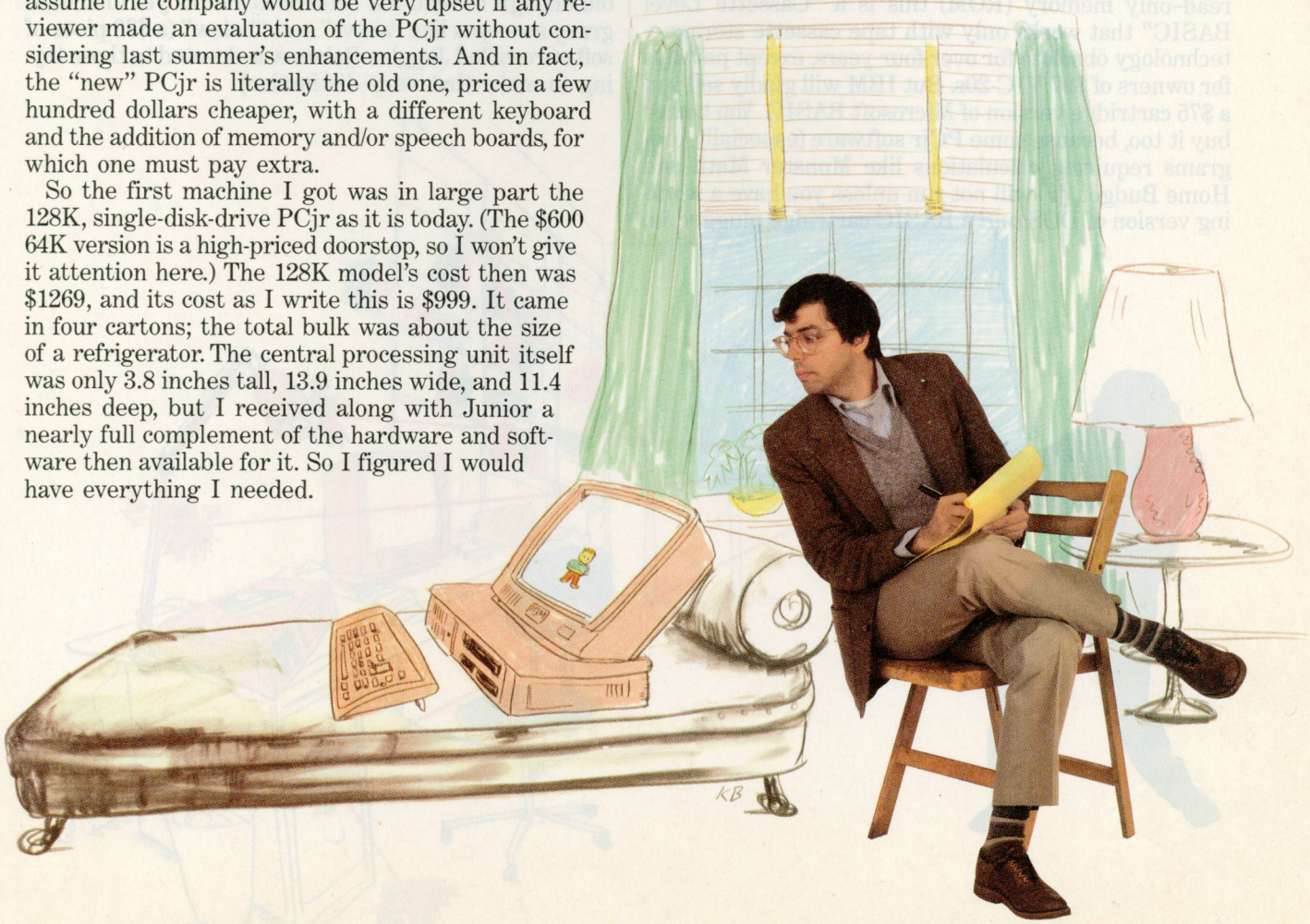
## The Original Junior

In discussing my experience with the "old" PCjr, I will restrict myself—except for a few explicit exceptions—to the features that one might still find in the "new" PCjr. I should say right away that as far as IBM is concerned, there is no such drastic distinction, though I assume the company would be very upset if any reviewer made an evaluation of the PCjr without considering last summer's enhancements. And in fact, the "new" PCjr is literally the old one, priced a few hundred dollars cheaper, with a different keyboard and the addition of memory and/or speech boards, for which one must pay extra.

So the first machine I got was in large part the 128K, single-disk-drive PCjr as it is today. (The $600 64K version is a high-priced doorstop, so I won't give it attention here.) The 128K model's cost then was $1269, and its cost as I write this is $999. It came in four cartons; the total bulk was about the size of a refrigerator. The central processing unit itself was only 3.8 inches tall, 13.9 inches wide, and 11.4 inches deep, but I received along with Junior a nearly full complement of the hardware and software then available for it. So I figured I would have everything I needed.

I set about unpacking, and easily followed the clear, if somewhat condescending instructions (don't get me wrong, I'll choose condescending over unclear any day of the week) to make the very simple connections between computer and television. No tools were needed. I plugged in the cord with the brick-like external power supply to the computer on one side and the wall on the other. (There is also room for joysticks, light pen, and a serial port.) And that was all I needed—I thought. Then I read a piece of paper that said: IMPORTANT; DO THIS FIRST. It said to upturn the keyboard, slide open a battery compartment, and "Insert the four AA batteries as directed." *What* four AA batteries? Was IBM joking? Were they selling a $1269 computer with *batteries not included*?

Yes. I finally got batteries by pilfering from my mate's Walkman. It was a minor, but telling inconvenience of the PCjr. Apples, Commodores, Ataris, and IBM PCs do not require four penlight AA batteries. Junior does. I know this is due to the one true innovation of the PCjr,



the infrared scheme that lets you use the keyboard without a connecting wire, but it took me 15 minutes to realize that the benefits of this feature were dubious at best. When I work with PCjr on a desktop, it doesn't matter whether there's a wire or not. When I work with the keyboard on my lap, the board often moves to an angle that directs the infrared light away from the target on the CPU unit—and my input is mangled or lost.

Obviously, infrared technology, at least on this machine, has not reached the point where one can work without a wire attaching the keyboard to the computer. So I began tearing up boxes to look for the optional IBM PCjr Keyboard Cord. For those of you who aren't reviewers this item costs $20 at Authorized IBM Personal Computer Dealers. This item has the proper connectors, but is basically a plain old wire.

The wire is the least expensive of the essential PCjr "options." Of course, the monitor is not included in the price. Since the output of a color television is often fuzzy (as it was with mine—even in large-type 40-column mode I couldn't make out any words), plan on getting a good color monitor for four or five hundred dollars. Paying extra for a monitor is no surprise, but in the strange world of IBM, something even as basic as the operating system costs extra—so every PCjr owner winds up paying $60 for DOS 2.1.

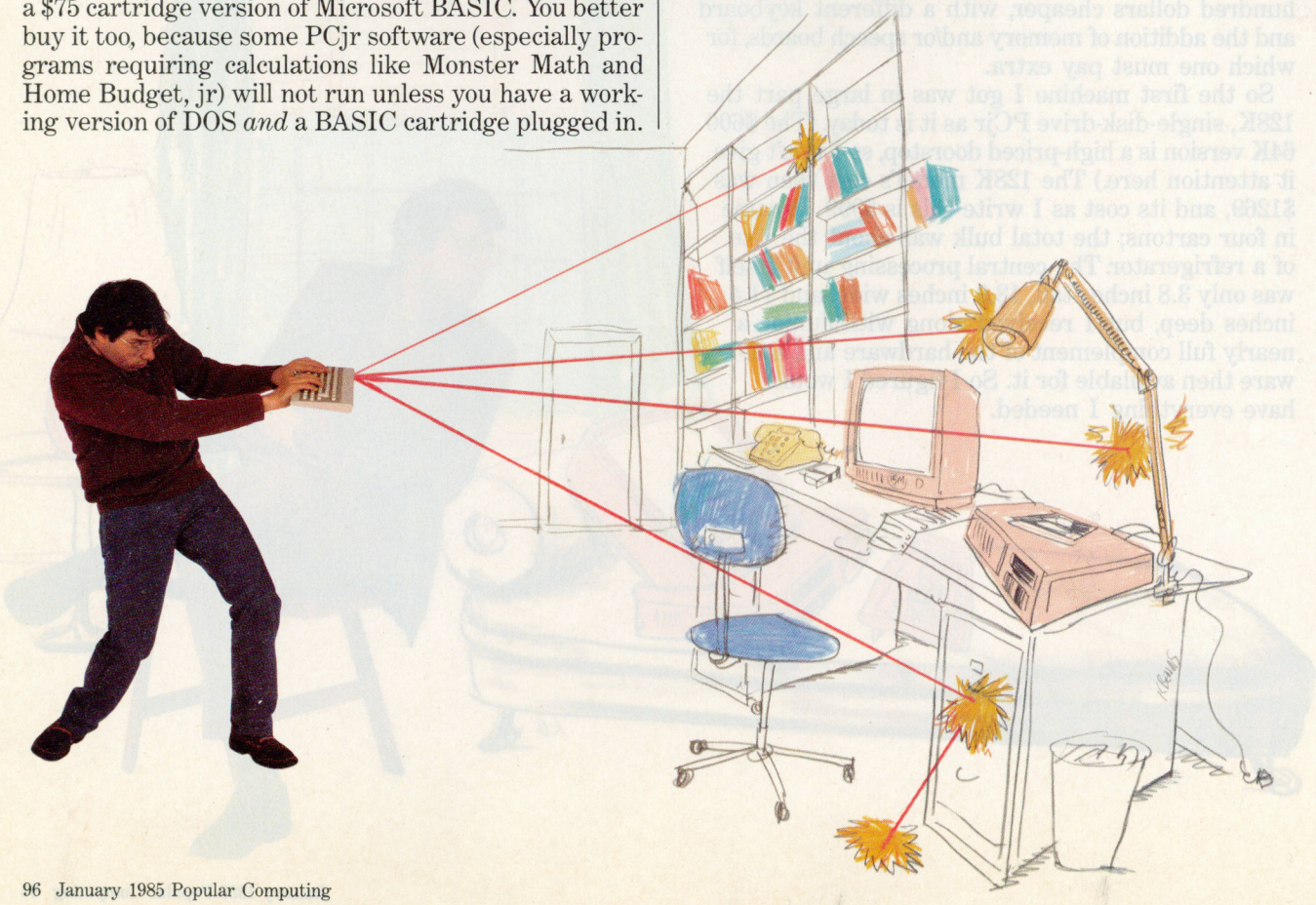
Also, although every PCjr has a version of BASIC in read-only memory (ROM) this is a "Cassette Level BASIC" that works only with tape cassette storage—technology obsolete for over four years, except perhaps for owners of $97 VIC-20s. But IBM will gladly sell you a $75 cartridge version of Microsoft BASIC. You better buy it too, because some PCjr software (especially programs requiring calculations like Monster Math and Home Budget, jr) will not run unless you have a working version of DOS *and* a BASIC cartridge plugged in.

Don't forget a printer, either—you can buy the rather primitive IBM PC Printer for $175, or you could add any of a number of parallel printers, if you wish to spend an additional $99 for the PCjr Parallel Printer Attachment. It does not take much time for the PCjr to become a $2000 machine.

## Adventures in Wonderland

That said, I sat down to divine the meaning of the PCjr. I did not have to insert a piece of software to get to the heart of the matter. The machine, correctly discovering there was no disk in its single drive, immediately reverted to the rather useless (except for game-playing purposes) Cassette BASIC. But following the colorful instructions, I pressed the Escape key to bring up a piece of software burned into every PCjr ROM, there forever, available to run at any time, uncrashable and irreplaceable. This piece of software is called Keyboard Adventure. Its purpose is to teach me the wonders of the IBM "Freeboard" keyboard. It does this by means of a cartoon character named "PC," who cavorts around the screen as he explains the difference between a capital letter and a lowercase one. "PC" slightly resembles Gerald McBoing-Boing, without his talent for aural mimicry.

Keyboard Adventure, like many selections from the "old" PCjr library, seems to be directed at an age group old enough to read full sentences, but as yet unable to grasp concepts like "above" and "below" (a $30 piece of software called Juggles Rainbow is devoted to those trying to make that very distinction).



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Much of the PCjr documentation seems written at this precarious level, which makes for very weird reading when things get technical or some arcane point in BASIC is being explained. It's as if IBM assumes that PCjr owners are victims of a previously unclassified free-floating autism. A logical conclusion would be that this is due to IBM's urging that parents work with their kids to learn the computer. But if that were so, would *everything* in the manual be couched so simplistically? (Could not the parent, who plans to use PCjr for office work after little Tommy is asleep, explain things to little Tommy?) And why would Keyboard Adventure, a program that once mastered by even a 7-year-old need never be run again, be permanently burned into the machine?

The overwhelming evidence seemed to me that IBM had given us a machine for little kids that also runs some grown-up programs. Among those was a family budget program published under the IBM logo. But the you-are-a-moron tone persisted even here. When I ran this program, I felt that it was a classic example of software fascism: it presented me with a menu of several choices. The only one that worked was CREATE/CHANGE BUDGET. After pressing that choice, I got another menu. The one logical choice of the six options seemed to be: CREATE BUDGET. So I pressed that choice. I then got this message: CREATE A NEW BUDGET? (Y/N). Exasperated, I pressed Y. Amazingly, the program did not leave it at that. ARE YOU SURE? it asked.

Then there is the instructional disk included with Junior. Step by step it takes you through difficult concepts like hitting two keys at once for functions. It is presented in a Wonderlandish, game-style fashion. A disk of sample programs is also included with Junior. One simply emulates a typewriter. Another is a Computer Hangman game, something I thought had gone the way of the Teletype terminal. Another program prints out your shopping list.

Now, there is nothing wrong with directing a computer toward the simpler things in life. Education is important, as is easing the difficulty of tasks one does in running a home. Still, there was nothing the PCjr seemed to offer in those fields that wasn't already implemented, and better, on lower-priced computers.

So what were the advantages of the PCjr? Mainly, the sound and graphics capabilities—they surpassed those of its older brother, though of the first few games IBM had released on cartridge only one was even vaguely interesting, and that was Crossfire, a Sierra On-Line program released two years earlier on other computers. Anyway, the cartridge translation of Crossfire took little advantage of the PCjr's TI 76496 three-voice sound generator chip. (A few months later, Sierra On-Line issued a disk-based version of the program that had kind of a rock music background.) I began using IBM's new $400 PCjr color monitor, which effectively displayed bright color and delivered loud, if not clear, nonstereo sound. But was not as sharp in displaying characters as the regular IBM color monitor; 80-column mode was fairly fuzzy.

It would be up to third-party software publishers, then, to take advantage of sound and light. As of this writing, little of that software has appeared.

To be worth even part of its steep price tag, the PCjr should be able to do some fancy telecommunicating and some decent word processing. The former went smoothly: The $199 modem card plugged neatly into one of the two open expansion slots inside the machine. I was able to use IBM's Personal Communications Manager program to hook up to on-line services (though first I had to figure out how to turn off the automatic line feeds that prevented me from using Telenet). Word processing was tougher, but eventually I found the Homeword program to be usable for short notes, after I discovered something buried in the manual—turning off the icons on the bottom of the screen allowed the program to run fast enough to keep up with my typing. I later learned from technical people that the method the PCjr used to refresh the video output made slow-running programs a chronic problem.

In any case, most of the programs that seemed to make the PCjr useful were things like the PFS Series—low-power IBM PC programs which also ran on Junior. (IBM now publishes these programs in its "Assistant" series.) You could also use PCjr to run the very decent IBM Logo program or Visicalc. And it plays a mean game of Ultima II.

## Down for the Count

As months went by, though, it became clearer and clearer that this computer did not, and would not, deliver on its promise. The chief culprit, of course, was the keyboard. Even though IBM kept insisting that it was only a few disgruntled journalists who disliked it, the keyboard was universally despised, and with good reason. The keys, which really did look like Chiclets, were spaced apart from each other and were not labeled, except for faint markings on the base of the board above each key. Ostensibly, this was so that one could use keyboard overlays, perhaps ones that took advantage of the fully programmable keyboard. Still, for someone like me, a half-touch-typist who often refers to the keys, the keyboard is a disaster. Whenever I got rolling and tried to touch-type, I felt like I was trying to climb a

CONTINUED ON PAGE 174

CONTINUED FROM PAGE 97

wall, my fingers scrambling for holds. Even entering a line or two while accessing a database on Compuserve was a chore with this keyboard.

Another strike against the PCjr was the fact that the standard memory configuration on the IBM PC had gone up to 256K and was quickly rising beyond that. PCjr could muster only 128K, and a major selling point—the "take programs home from the office" factor—was virtually gone.

In any case, the computer-buying public wisely ignored the PCjr, despite dealer price cuts ("We've got to get rid of them somehow," a dealer told me last spring, explaining why he was giving printers away with discounted Juniors.) One mark of a good computer is the appearance of a piece of software specifically written for that machine that does something that, for a while at least, can only be done on that machine. Think of Visicalc for the Apple, Lotus's 1-2-3 for IBM, Musicalc for Commodore, MacPaint or Filevision for the Macintosh. It is damning to note that no such software emerged for the PCjr. Instead, a vicious downhill cycle began—as it became clear that not much of an installed base of PCjrs existed, or ever would, the software publishers who had been busily converting their products to Junior pulled back. Those who jumped in early, confident that any product backed by IBM would be a winner, got scalded. Ken Williams of Sierra On-Line released several games in specific PCjr formats, and in late spring, he told me he was taking a bath on all those games. "The machine is a turkey," he said.

This was IBM he was talking about. The company that was supposed to win the home market in a walk had fallen flat on its face.

## Rebirth of the PCjr

Then it was August, and there was a "new" PCjr. Again, the rumors proved more exciting than the reality—the word on the street had been that IBM was going to come out with a totally new version of Junior with 256K minimum configuration, all for under a thousand bucks—with, of course, a new keyboard. As it turned out, the new keyboard did arrive, and IBM did right in promising a new replacement to all PCjr owners with the Chiclet model. (You get to keep the old one, and I expect it to be a terrific collector's item.) But the memory expansion would be partitioned in optional 128K increments—each 128K addition would cost around $300 in addition to the $999 retail one-drive computer. Another thing one might add to the computer was a $300 speech synthesizer with a vocabulary of 196 words on-board. IBM also announced some new PCjr software, including a Paint program, an Andrew Tobias Managing Your Money program, and a conversion of 1-2-3 especially for Junior.

I was very eager to get this stuff home. It amounted to no less than a personality change for the same PCjr who had been dealing with me like a recalcitrant third-grader. True to all the PCjr hardware documentation I had received so far, the manuals gave me simple instructions to hook on the memory attachment. IBM had toned down the cartoon characters on these new additions to the *Guide to Operations* (which soon was so stuffed with additions that the three-ring binder could not hold any more pages). But the most satisfying move was switching the keyboard from Chiclet to the new one. The size was virtually the same as the much despised predecessor (as it turns out, the same Idaho supplier made the new one), but the keys were real. It made a huge difference. Not that it was a particularly comfortable keyboard—while the keys were easier to hit, they still felt kind of squishy, and typing was more difficult than with the keyboards of the IBM PC, Macintosh, Apple IIe, Radio Shack Model 100, or even the Commodore 64. But even "barely acceptable" is a great improvement.

I was even beginning to think that at $1300 for a 256K machine, the PCjr might be a decent low-cost Wordstar or spreadsheet machine. Heck, at 512K, it might *cook*. I admit to feeling a little tingling down my spine when Don Estridge, the head Boca Raton-er, told us at the press conference that at $1300, the PCjr with a 128K memory attachment (for a total 256K) was "the best deal in town." Take that, Apple! And that warm feeling continued when I booted up the new Junior and saw the little diagnostic label that tells how much memory is active climb from 128K to 256K.

The high point of all this was when I got a copy of the new Colorpaint program, perhaps the best single PCjr-only program ever written. Once I got the Mouse Systems mouse ($150), used the $25 serial cord to plug it into the machine, and then plugged the mouse's power supply into the wall power outlet, I was ready to boot a DOS disk in the system, stick in the Colorpaint cartridge in one of the two cartridge slots, and type "g" at the A> prompt—a typically Byzantine process for starting a PCjr program. On-screen was a close cousin to Bill Atkinson's Macintosh MacPaint program, complete with pull-down menus; icons for spray paint, fill, erase, and text; options for brush stroke and circles. . .all kinds of things that MacPaint had, except the PCjr could do it in color! Now *this* is what I call computing! It was considerably slower than the Macintosh, and the Mouse Systems optical mouse is positively crippled compared to Mac's nimble pointer, but still, the program was elegantly done, and its crisp resolution and color showed the PCjr's graphic skills to full benefit.

## DOS Dilemmas

But that turned out to be the exception. Because as I delved into the new pile of equipment from IBM, it became clear that this stuff was not meant to exploit Junior's strength—sound and graphics—but to make Junior a mightier business machine. It turns out, though, that making PCjr go that extra mile takes a considerable toll on a computer that was originally called "the easy one for everyone."

Let's start with MS-DOS 2.1. As operating systems go, it is not the friendliest for a consumer-oriented computer. On a one-drive system like the PCjr, it can be deadly. Copying disks, for instance, is a process that can

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range from annoying to downright treacherous. On the Macintosh operating system or even a relatively dense system like CP/M, the system shows concern when a "destination disk" (that will receive the contents of a disk the user wants backed up) has information already on it—information that will be permanently lost if the disk-copy proceeds. Those systems warn the user and give him or her a chance to take the disk out before it's too late. The PCjr's operating system doesn't much care. Also, the on-screen prompts during the copying process are rather confusing—DOS 2.1 refers to disks as being from "Drive A:" or "Drive B:" when it is as clear as day that there is only one disk drive! So it is all too possible to lose valuable data. Even the cheerleading PCjr-dedicated magazines have noticed this fault, most amusingly when a reviewer of Homeword got so confused at the process that he erased the contents of his only program disk. I can sympathize—more than once, my attention has flagged during the eight or nine required swaps, and I wind up with a disk in my right hand and one in my left. I look hopelessly at one, then the other, trying to figure out which is the "Drive A:" disk, and which is "Drive B:" (as we shall see, the worry is compounded when we get to Drive C:).

You also have to worry whether a given application requires an 80-column display. Some applications, like Personal Communications Manager, allow you to patch the 80-column mode onto it. But with most applications, 80 columns is accessible only from DOS. So you wind up booting Wordstar and finding a 40-column display—with the normal command menu on top, which allows you perhaps room for one sentence on-screen at a time.

Then there is the annoying requirement in some cases of having to boot a DOS disk in order to run a program. Few programs allow you to copy DOS onto the disk itself—unfriendly, in any case, and unheard of in the Apple, Atari, and Commodore worlds, but downright hostile when one is immersed in the murky world of PCjr memory enhancement. In order to use the full 256K (or more), you must make up a different DOS disk. This is done by first backing up the old DOS disk, then using a supplied "Memory Options" disk to create a "DOS with memory enhancement" disk. Some applications allow you to copy this second version of DOS onto the application itself. Some don't. You must keep track.

Confusing? Well, in order to use the "RAM disk" capability of Junior, you have to prepare a *third* version of DOS. Again, on only some applications can you create an auto-boot disk with this application. Like all RAM disk schemes, of course, the information held in this imaginary "Drive C:" (which emulates a disk drive by apportioning part of the computer memory) is totally gone when the power is turned off or the machine is reset. Not ideal for a computer used at home.

It was also clear that making the PCjr do heavy-duty tasks required some kluge-work in the hardware, too. Once you add more than one plug-in "enhancement" to the side of Junior, you have to add a $150 power-supply module. The size of this module is no larger than the others—about an inch thick, adding not much bulk to the unit—though once you have four or five of those mothers attached, the center of gravity gets seriously skewed. However, the power attachment is hooked to a leaden, brick-like transformer like the one on the regular power cord. It also requires a power outlet. So if you have a 512K PCjr, you will have four modules daisy-chained to your machine. (IBM does not recommend adding any more than four attachments: you can add, say, a parallel printer attachment only at your own risk.) When you use the mouse, your Junior will need no less than *four* power outlets—one for the system unit, one for the extra power supplied, one for the mouse, and one for the monitor. (Add another if you use a printer.) Can you imagine *carrying* that octopus anywhere? Compare this to the Macintosh, a one-piece unit with a handle that requires one power cord for everything mentioned above.

## Writing With Wordstar

My original goal was to write this very review on Wordstar on the PCjr. Everything initially went all right when I used the second version of DOS—which took advantage of the 256K I had on-board but did not use the RAM disk. Oh, there were some problems. Wordstar on PCjr is not exactly a dream. For one thing, the program did not seem suited to the workings of Junior, in ways I suspect that users of IBM-PC software will find true of other programs run on PCjr. For instance, Wordstar has many one-key commands like hitting the "d" key to open a document. This can also be done by hitting a single function key. But hitting a function key on Junior is a two-stroke operation. What is the purpose of a function key when it's twice as difficult to use as the standard way of doing things?

Then I tried to use Wordstar in RAM-disk mode. Even after I followed the instructions carefully, I could not get anything logged into the RAM disk while using my third version of DOS. When I did, I would type one character into a file, and the program would hang, not moving until I reset it. I wound up writing this review on my Macintosh.

## Phantom Drive C

Eventually I talked to some friendly representatives of IBM and got the RAM disk working properly. It turned out that I had been confused between the

sketchy Micropro prerelease documentation on using the RAM disk and IBM's cryptic documentation, which—true to its Gerald McBoing-Boing spirit—was clear on installation processes but was absolutely Panglossian on its optimism that things would go right on the first try. Therefore I was helpless when things didn't go right.

I gladly admit that the RAM disk application gives PCjr considerably more muscle; my crowning achievement in this case was creating a Wordstar document in the phantom RAM disk named "Drive C" (don't ask me why a one-drive machine gets up to the third letter of the alphabet in naming its drives), getting out of Wordstar, running the communications program, and uploading my newly created document to an electronic service. The process went smoothly, and I recognized that Junior *can* be useful, if you bring him up properly. Of course, if at any point in the process I had done something stupid, like trip on one of the power cords or put a cartridge into the slot, the information in that document would have been gone.

The RAM disk can also be flummoxed by copy-protection programs, which can't be stored in "Drive C:" All of this underlines the hit-and-miss characteristics of a machine whose personality has been changed so drastically in the first year of life. Some things will work, some won't. It is up to the user to figure out which ones work. Since the big-memory PCjr is so new, publishers for the PC have yet to address the problems of PCjr owners who try to run their programs. And it is not at all clear that they will *ever* deal with those problems.

The point is this: a machine that was once packaged as a very-easy-to-use computer is now more powerful, but at the cost of becoming perhaps the most complicated consumer-oriented computer on the market today. While other manufacturers are concentrating on simpler user interfaces, IBM has in this case decided it is more effective to heatedly whisper in our ears that we can now run 1-2-3 on a $1000 machine. The people at the July 31 press conference, dazzled by the promises, asked Don Estridge if he weren't worried that the low pricing of the PCjr wouldn't affect sales of the IBM PC. Estridge said, in effect, Let it happen! We want computing power to the people! But the raw economics of it are quite different. You can now buy a 256K two-drive IBM PC for as little as $2000 (or a Compaq portable with two drives, a monitor, and graphics for $2200), less than $1000 more than a PCjr with memory enhancement that brings the machine to 256K. That extra cost is the difference between the constant inconvenience of a one-drive system with three different DOS disks, and a full-keyboard, fully expandable, one-power-cord machine that is the standard computer in the corporate world today.

It is very hard to believe that any person whose finances are sophisticated enough to require 1-2-3 cannot scrape up $700 or $900 to make the difference between a kluge and a relatively elegant computer. I think that IBM has very little to worry about when it comes to sales of the "new" PCjr cannibalizing PC sales.

## The Smell of Death

Now it is time for the *why* of it all. For the first few months of the PCjr debacle, some journalists kept trying to get officials from IBM to admit what to some seemed obvious—the designers of the machine deliberately crippled Junior to keep prospective buyers of the higher-priced PC from buying bargain-priced Junior. Thus the Chiclet keyboard, the single disk drive, the apparent memory limitation. But anyone who spent time with the original PCjr could see that any such admission, even if some IBM employee were dumb enough to voice it, was irrelevant. The packaging of the machine, from the Chaplin-with-baby-carriage advertising to the Dick-and-Jane tone of the instructional disk, said it clearly: this is a machine for the home, for all those home computer tasks which some people say are possible. Judging from the cynical collection of software IBM originally packaged with Junior—a selection devoid of innovation—it seemed that IBM didn't really believe that a computer could be useful in the home at all. But since Apple was doing well, and people were buying Commodores, IBM perhaps figured that some of those same people might well be swayed into buying a home machine with those magic initials that already had won the personal computer field in the business market.

When everything backfired, and few wound up buying PCjrs, IBM turned its back on the mainly-for-home theory and tried to muscle it up. But since the machine was specifically designed as a simple home computer, the result was like putting a 428 Mopar engine in a Honda Civic: the car's interior was still tiny, and you constantly had to replace the brakes, but you could go fast. I suspect that memory-hungry computer buffs will react to the PCjr in the same way that speed freaks would react to the Honda Civic kluge: with disdain.

Imagine a scene that is entirely possible with the new, schizophrenic PCjr: your typical pinstriped suited entrepreneur is showing off his spreadsheet to the venture capitalist. He turns the machine on before he puts the disk in, and the PCjr responds as usual, bringing up the useless Cassette BASIC. Embarrassed, the entrepreneur reaches over to grab the disk, but his elbow presses the Escape key on the corner of the lightweight keyboard. This brings up Keyboard Adventure, with the cartoon character "PC" dropping down the right side of the screen with a blissful smile on his face. You think this guy will get his venture capital?

I think a lot about Keyboard Adventure when I roll the 256K PCjr through its paces. I also think a lot about not having a second disk drive, and having all those versions of DOS 2.1. Finally, I think about the lesson we have all learned from this: IBM is not infallible. It makes mistakes. Fortunately, not many will make the mistake of buying the PCjr, unless the rumors are true that IBM plans to cut the price hundreds of dollars more and sell it through K-Mart. Though its maker seems dedicated to supporting it, the machine has the smell of death about it. Long live its descendants, which undoubtedly will benefit from the hard-earned lessons IBM has learned from the sad, sad PCjr. □