

# The Junior Report<sup>®</sup>



May 15, 1988 Volume 4 Number 5

The National Newsletter for PCjr Owners

## Triton Takes Over Racore Products

**California company has major plans to keep the PCjr alive with support and new product catalog**

**B**y the time you read this, you won't have Racore to kick around any more, at least not from a marketing standpoint. Yep, it's official, Triton Products of Foster City, California has taken over the marketing of Racore products in a very big way.

Not only will they produce a new catalog featuring Racore products, jr products from other manufacturers, PCjr compatible software, printers, jr joysticks, etc., they have installed a toll-free number for PCjr owners who need information about PCjr compatible products and software (1-800-227-6900). This is not a technical support line if your PCjr breaks down, but the 25 unit WATTS line will provide plenty of assistance for finding out what's available for the Junior out there.

Terry Miller, Vice President of Operations, expressed much enthusiasm about this changing of the Racore guard. He was quick to note that Triton Products has quite a bit of expertise in "saving" another well-known orphan - Texas Instrument's TI-99/4A. The company currently publishes a 20 page full-color brochure for this computer that has survived way beyond any TI-99/4A owner's wildest dreams. It contains upgrade peripherals, printers, joysticks, compatible software, etc., for a computer far less versatile than the PCjr.

The marketing acquisition of the PCjr product line by Triton will enable Racore to concentrate on their net-



working and LAN products for the PC and AT's. Racore will continue to produce all the PCjr products except the following: PCjr replacement keyboards, PCjr adapter cables for PC keyboards, and the P.C.I.D. cartridge.

Terry Miller also indicated that not only does Triton plan on spending more money on marketing the jr products, but they will actively seek and support new PCjr products from third party manufacturers. If you have any ideas for PCjr products, send this information to Triton Products Company, PCjr Division, 1159 Triton Drive, Foster City, California 94404.

Triton Products enters a PCjr market that has surprised the experts as to its strength and vitality. Triton is a seasoned player in the marketing game and for the PCjr owner, the more players, the merrier.

### Contents

<i>Triton Products</i>	<i>1</i>
<i>Editor's Notes</i>	<i>2</i>
<i>Replacing Jr's Drive</i>	<i>3</i>
<i>Of Mice &amp; Memory: PCjr Magazine Reprint Article</i>	<i>8</i>
<i>DOS Revealed: Part II</i>	<i>12</i>
<i>The Writing Assistant &amp; Racore Drive II</i>	<i>16</i>
<i>Test Drive on the PCjr</i>	<i>18</i>
<i>Running GEM Software 24 on a 1-floppy PCjr</i>	
<i>Eye on Shareware</i>	<i>28</i>

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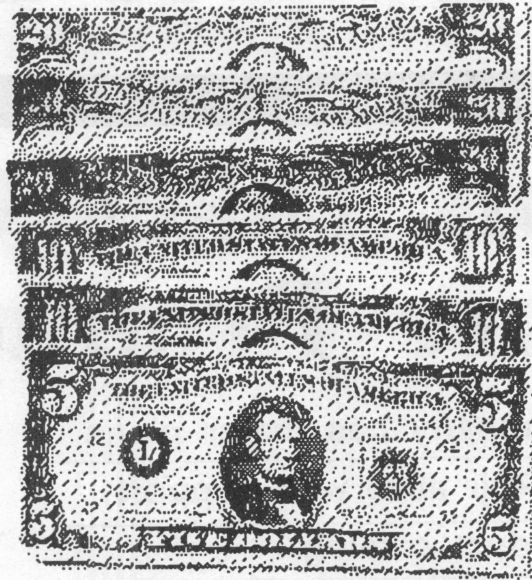


By Harrison Day

## Memory chip crisis brings PCjr owners back into real PC world

Just when you thought that being a PCjr owner separated you from the rest of the PC world, along comes the memory chip shortage. As many of you know, the cost of 256K chips has risen dramatically in the last few months (300 to 400%), affecting all PC owners who have expanded memory on their minds. To give you an example of the possible ramifications to jr owners, the rumor has it that the cost of a fully populated jrHotShot memory board may soon cost more than \$300., an increase of over 30% of its current price. Ouch. Also expect memory expansion board upgrades to cost more. We're hoping that the chip crisis won't be a long one for PCjr owners' sake.

And who says nothing runs on the PCjr? In the May 31, 1988 issue of PC Magazine, the top ten selling business programs are listed, and the jr will run nine of them with some modification or another. They are in order: 1. Lotus 1-2-3 2.01, 2. Quicken 2.0, 3. PC Tools Deluxe, 4. PFS: First Publisher, 5. WordPerfect 4.2, 6. Norton Utilities Advanced Edition, 7. dBase III Plus 1.1, 9. PFS:First Choice 2.0, and 10. Turbo Pascal 4.0. Not bad for a "home" computer.



Speaking about heavy duty programs that run on the PCjr, WordPerfect 5.0, the word processor to end all word processors, has been delayed again, due to bugs. This innovative version of the best-selling word processing program in the PC world, which narrows the gap between desktop publishing and word processing programs, may be the definitive writing tool for PCjr owners. Let's just hope it comes out sooner and not later.

The PCjr videotex terminal capabilities may be put to use sooner than you thought possible after giants IBM and Sears have combined to create Prodigy, a videotex service where you can let your fingers and VISA card do the shopping all on your PCjr screen. If successful, and that's a big if, jr owners can also receive up-to-the-minute news, sports information, and weather predictions. Personally, that's what I thought Cable News was for. Anyway, I figure that anything IBM gets into should automatically be a success, right? Excuse me. while I extract my

tongue from my cheek.

IBM often does a lot of good, however, besides making billions of dollars. For example, a recent article in the Elkhart PC Users Group Newsletter (Elkhart PCUG, 111 A Easy Shopping Place, Elkhart, IN 46514, Editor Del Mineard) reported that IBM has joined a program with the Easter Seal Society that makes it easier for persons with disabilities to purchase computers for therapeutic and rehabilitative purposes. The program includes discounts on IBM hardware and personalized support and training for anyone who is deaf, blind, or disabled. There are ten Easter Seal locations scattered throughout the country - call your local Society for more information.

As the school year comes to a close, look for an extended section next month featuring educational software for the PCjr in our PCjr Magazine reprint series. It should help keep the kids sharp for the fall, provided YOU can survive the summer with the cute, little critters.



## The Junior Report

\*\*\*A Publication of The PCjr Club\*\*\*

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## SOME ADVICE ON DEALING WITH THE DREADED DISK DRIVE PROBLEMS FROM ONE WHO KNOWS

*It's been about three and a half years since most of us bought our PCjr's - just about the time when we might be having some mechanical problems. The reprint below first appeared in The Metro PCjr Journal, Vol. 2, No. 5, and was written by Bob Horan, dealing specifically with disk drive problems.*

With most of our PCjr's now two years old or more, the first "weak link" in the system has shown up for many of us. This is the failure of the internal floppy disk drive, which bears the IBM label, but is in fact a cheap Qume 142 disk drive.

Many owners have simply cleaned and lubricated the head rails and temporarily solved the problem. I decided to replace my drive with a better one. There are several that will fit into the Junior with very little effort or expense required. The Tandon 65-2L and the Fujitsu 2551 both are excellent replacement drives and are direct-drive floppies as opposed to belt-driven models. These cost a bit more than a Qume 142, but they are almost absolutely silent, which, when you are used to the Qume's characteristic grind and shudder during bootup, gives the impression at first that the computer is "locked up". Not so, and the absence of the usual drive noise makes the Junior seem more like one of its expensive cousins.

I have personally used both the Tandon and the Fujitsu as replacements in two different machines. Believe me, I found it very easy to do and, if I can do it, anyone can with a little patience and care.

There are, undoubtedly, other floppy drives that will fit as a replacement for the Junior internal drive. However, I found the Teac drives, for example,

have a lever that is too long for the Junior case, so it's worth checking to be sure someone has actually completed a replacement with a particular drive before you buy one.

Another word of caution, some of the early Tandon 65-2L models have had head alignment problems. I talked to Tandon in California about this problem and when I explained that I was using a tandon model 65-2L, part #211845-002, as a replacement drive, their staff member stated that I had an "immature" version of the disk drive. My thoughts at that moment are not printable. If you decide to buy a Tandon, their most "mature" versions are part #211845-208 or #211845-108, the 208 presumably being the latest version of the drive. These part numbers are for drives with a black bezel. You can also get a beige bezel, part #211845-228. Whatever you buy, check the measurements of both the drive lever and the rectangular size of the bezel. These measurements are critical to a workable replacement for the Junior internal floppy drive.

Remember to remove the terminal resistor (it's normally on the rear top and looks like an ordinary computer chip) and place the drive select jumper (it's a little piece of square plastic with two holes) in the second position. Some floppy drives number these positions zero to three while others number them one to four. The Qume drive uses zero to three, so you will notice that the jumper is in the "1" position on your old drive. Place the jumper in the comparable position on your replacement drive before installing it.

I personally like the direct drive motors and the almost silent condition that they provide for the PCjr. The extra cost amounts to twenty to thirty dollars, at most, but should buy you a superior piece of equipment.





By Dolores Jack

*Thank you for your letters and comments. We're sincerely sorry that we are not able to answer all letters personally, but will attempt to cover as many questions and topics as possible in this column. All letters become the property of The PCjr Club and are subject to editing for length and clarity.*

### PRINT SHOP VERSUS PRINTMASTER

I am writing about the program "Print Shop" which allows one to print greeting cards for all occasions. I have an IBM PCjr, double disk drive from Racore and memory to 640K. I was told by an IBM dealer that Print Shop will not run on the PCjr. If this is true, is there an alternative program for the jr that will do the same thing? Thank you for the help.

Hal Reisinger  
Pensacola, FL

*We have found that Print Shop works wonderfully on the PCjr. It is a great program that will become a mainstay in your software arsenal, and a program every member of your family will enjoy. If that program is unavailable, there is a very similar program called PrintMaster which mirrors the functions and features of the Print Shop - so much so that at one time Print Shop was thinking of taking legal action against the PrintMaster people long before the term "look and feel" was popular. Both programs have "art galleries" from which to choose additional artwork to spice up your card making; both have their own books out to improve your productivity (The Official Print Shop Handbook and The Creative PrintMas-*

*ter). These two are also found in the same price range, and from our standpoint it is a toss up as to which one you should buy.*

### TECMAR SUPPORT

I subscribe to The Junior Report and have read your ad about upgrading memory expansion. Therefore, I was wondering if you also repaired Tecmar units. I have tried several local repair shops but none of them want this type of work.

I have both the jrCaptain and the jrCadet which give me a total of 640K. But I can only power up to 128K of the main processing unit. The problem appears to be in the area of the auxiliary power port.

If you are interested in doing the repair work, please inform me as to when I may ship you the jrCaptain and its power supply.

Otherwise, I would appreciate the name and address of a service firm that does this type of work.

James McCutcheon  
Bayside, NY

*We do not repair jrCaptain boards, we upgrade them to 512K to increase your PCjr's total memory. Tecmar in Ohio still is the most reliable place to get the boards repaired if no one locally will do it for you. Tecmar has a toll-free number for information and tech support- 1-800-344-4463. Call there first and speak with one of their tech reps (it may save you a bundle if you don't have to send it in), and if it sounds like it is a hardware problem, you will be referred to Jill Barber who will give you an authorization number*

*and other important information to ship in the board. Either way, it's nice to see that Tecmar is still supporting PCjr owners.*

### DVORAK KEYBOARD

I have heard much praise about the Dvorak keyboard layout so with Borland's Superkey and a screwdriver I converted my keyboard to this more efficient layout. I am wondering if there is any software on the market that will teach the Dvorak layout.

Michael Scherotter  
Deerfield, MA

*The Dvorak keyboard is quite fascinating. To those who do not know anything about it - the Dvorak keyboard layout places 80% of the most frequently used keys under the "home" keys which dramatically increases the speed of typists. Almost all of the records in speed typing have been obtained under this unique design. It certainly makes sense for those Computerists concerned with typing speed to change over to this system since today's computers can keep up with the speed, and it is a great feature of Borland's Superkey to allow Junior owners the ability to switch. You have joined about 5% of the world who now use the Dvorak system.*

*We do not know of any computer programs that teach the system ourselves, but perhaps one of the Dvorakites out there might know of one, and can write to let one of his fellow PCjr owners know. We'd appreciate it.*



**DATADESK Jr KEYBOARD**

Thought I'd provide an "atta-boy" to a firm you plugged in your February issue: Data-Desk International. I just had warranty work done on my keyboard - 18 months into the 2-year warranty - a 6-key repeat problem. They gave rapid turn-around with the problem apparently fixed. Plus the return UPS was paid by them. Good outfit.

You people are doing a good job, too.

Bob Batty  
Hendersonville, NC

*Support is often just as important as the original product - we're glad to hear that you have been taken care of in a more than satisfactory manner.*

**KEYTRONICS KEYBOARD**

One man's experience concerning keyboard upgrades:

I use a Keytronics KB101 with a Racore adapter cable (available from PC Enterprises). An advantage to the 101 key layout is that the function keys are in a row at the top of the keyboard, where the Junior owner's fingers are already used to going. (I never did get used to the function keys on the left.) The KB101 can also be used if you upgrade to a PC or AT clone. The only compatibility problems I have had is that the keyboard can't be used with the David Cox version 1.2 keyboard buffer cartridge.

Bob Martin  
Milford, OH

*We also like the Keytronics PCjr keyboard - it is well built and has a nice touch. It is a very solid performer that will not disappoint any jr owner.*

**IMPROVING PRINTER OUTPUT**

I was one of those who took advan-

tage of the Christmas 1984 sale and have never looked back - although I could look back a little farther, but not much (I'm 67) than William Fitzgibbons, whose letter I enjoyed reading in the February issue of The Report.

I retired from Boeing Computer services in 1985 where most of my time had been spent as a team member developing various manufacturing systems. Most programming was in COBOL to provide system development standardization and relative ease of passing programs on from the developers to those who would be maintaining the systems.

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**The Epson FX-80 is a relatively inexpensive printer, but combined with the shareware program ImagePrint you may not have to upgrade your printer at all.**

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My PCjr system has just the one tape drive, color monitor, and IBM Personal Graphics Printer, but has been enhanced to 256K. I am thinking of upgrading to 640K in the near future.

For a number of years, I have been serving as a minister of a small church and I find that my printer just doesn't quite fill my needs. Primarily, as is obvious by the quality of this letter, I need a closer-to-letter-quality and the ability to handle single sheet letterheads. I have been considering the Epson LQ500, but don't know about compatibility. Do you have any information that might point me in the right

printer direction?

Hang on, we're nearing the end. Do you or any of your readers know where I might get hold of the various Escape codes that this printer (I believe that it was manufactured by Epson) uses for different type styles? There was no such thing as an owner's manual with the printer at the time of purchase. Any help in this direction would be greatly appreciated.

Thanks again for great publication. It has really been a great help to me as going from COBOL exclusively to the strange world of BASIC and DOS has been somewhat traumatic at times

Owen Barnes  
Federal Way, WA

*Instead of buying a new dot-matrix printer that has better near-letter quality output, why not buy an inexpensive, real letter-quality daisy-wheel printer to compliment your present dot-matrix? One that comes immediately to mind is the NEC ELF printer that has interchangeable print "thimbles" to change font styles, performs flawlessly, is compatible with the PCjr, and can be bought at many computer discount stores, chains, or mail order for about \$350. A switching device to toggle between the two printers would also be helpful.*

*If you are dead set on buying a new dot-matrix printer that has better near-letter quality output, we would recommend NEC's P2200 which features a 24-pin printing head to enhance its characters. This can also be bought for under \$400., and is compatible with the PCjr.*

*Finally, take a look at Mr. William Fogle's humorous letter on the next page which we have reproduced in its exact form so that you can examine the type quality. The Epson FX-80 is a relatively inexpensive printer, and combined with the share-*



# L E T T E R S

Dear Sirs:

While sitting around the breakfast table, the other day, my wife and I were reading our mail while discussing our bills and the issues of the day. Among the issues was the March *The Junior Report*. It served as a reminder that my PCjr, in the back bedroom, was about to lose its support. Should we let the subscription expire and save 20 bucks? That was the question. Then we came across a post card from *The Junior Report* staff telling about their recent luncheon meeting where they discussed why Bill Fogle hadn't renewed yet.

Well, we've been reading much of the hype, lately, about the PS/2, OS/2, souped up machines etc. Should we jump on the bandwagon, buy a clone or what?

Already we've enhanced this PCjr to 640K with Racore's DMA and second disk drive. We successfully use the Leading Edge word processor, the Integrated 7 (TWIN), PCWrite, PCFoil, Utah COBOL, Newsmaster, Flight Simulator and a host of other disks of graphics and other software, printing with an Epson FX80. This letter is printed on the Epson using *Image Print*. Then last night we took a spin in Chuck Yeager's Advance Flight Trainer in the PCjr mode. Chuck got mad at me a couple of times.

Heck! We'd rather fight than switch. Our check for renewal thru 3/89 is in the mail.

Sincerely,

*Bill* 3-30-88

W. H. FOGLE (Bill)

*ware program ImagePrint (Disk # 25), you may not have to upgrade your printer at all.*

*If you write to Epson with the exact model number, you may be able to obtain a technical manual for your particular printer. John Wilson will go into printer commands a bit in his last installment of DOS Revealed next month, and that should also help you.*

## **RACORE HARD DRIVE**

I have a Racore expansion with DMA. I would appreciate any information on the feasibility of adding a Seagate hard disk. I note that SPC DISKITjr will apparently not work.

Ray Rice

*According to our own experiences*

*and according to Racore, the only hard drive compatible with the Drive II Plus with or without DMA is Racore's own brand of hard drives.*

## **DOS 3.3 OK FOR JR**

In the March 15, 1988 issue of *The Junior Report*, it is mentioned (page 7, reply to letter from W.D. Roy) that some readers have encountered problems with PC DOS 3.3.

I too experienced problems when I first attempted to use DOS 3.3, but these problems quickly disappeared when I removed the KEYB command from the AUTOEXEC.BAT file.

If one follows IBM's procedures for initializing DOS 3.3, the KEYB command is included in the AUTOEXEC.BAT file, but it is not required

and it causes all sorts of headaches.

I have been using DOS 3.3 for several months now and am quite pleased with it. The ability to suppress the echoing of the ECHO OFF command, the ability to CALL other BAT files from within executing BAT files, and the ability to set the size of environment to just about anything you want, certainly add up to make this release of DOS an excellent buy.

I am running my PCjr with the Quadram second floppy drive, the Racore 20 Mg hard disk and the Racore memory expansion to 640K.

I enjoy *The Junior Report*. Keep up the good work!

Mark Wilton  
London, Ontario Canada



# L E T T E R S

*Provided you have enough memory and disk space, DOS 3.3 does provide a powerful operating environment, and your discovery of excluding the KEYB command may save a lot of Junior owners plenty of headaches. Thanks.*

## SECOND COM PORT FROM INTERNAL MODEM CARD

In your last issue someone inquired about additional COM ports for the Jr (serial ports). Instead of purchasing a second COM port as advised in your column, a fairly simple solution could be obtained by using the existing 8250 A chip on the IBM Internal Modem card and adding Driver (SN75189) and Receiver

(SN75188) chips on a small daughter board and unplugging Z3 on the modem card (or making it switchable so the modem could be used!!!)

Contrary to comments in your publication and IBM's as well, both COM 1 & 2 work flawlessly at 9600 baud. Quick BASIC 4 also supports 9600 baud.

I use Qume 101A terminals on both COM ports in any business applications - I have a need for COM ports 3 & 4, but have not resolved that problem yet. Anyone needing additional information on this change can call or write us.

R.M. Klippstein  
c/o Western Slope Computer Maintenance

1000 City Rd #252  
Rifle, CO 81650  
(303)625-2536

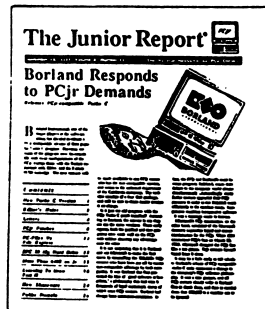
*We're always excited when someone comes up with an innovative idea, especially one that can save a fellow PCjr lover some money which yours seems to do. The ability to have multiple serial ports is a big advantage for any computer, and in this way, the PCjr remains just as productive as the other PC's. Thanks for the technical information - I'm sure many of our more advanced readers will be writing to you.*

*Make someone really happy: give a gift subscription to*

# The Junior Report

*The perfect gift for the PCjr owner who has everything. Give 12 months of The Junior Report. If you know someone who loves his PCjr as much as you do - the best way to show your love is with a gift subscription to The Junior Report. Your friend or relative will gain a year's worth of insights, reviews, and reports of the PCjr world. It's a PCjr survival kit for just \$19.97 a year. They'll love you for it.*

*And it's easy to do: just fill out the form to the right, include a check or money order, and mail it to The PCjr Club, Gift Subscriptions, P.O. Box 59067, Schaumburg, IL 60159-0067. We'll also send you attractive cards announcing your gift for you to send to your friends. Remember: It's 12 presents in one!*



TO: \_\_\_\_\_

\_\_\_\_\_

TO: \_\_\_\_\_

\_\_\_\_\_

FROM: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Of Mice & Memory

*The PCjr  
Booster is  
the memory  
add-on with  
something  
extra—a port  
for Microsoft's  
mouse.*

Interesting, isn't it, how quickly and easily our perspectives change. I remember micro-computers with 256 characters of main memory. Not 256K, just 256, period!

For years I used machines with a maximum main memory of 48K. I didn't switch to more than 48K RAM (random access memory) until I started using IBM's PC and PCjr. In the beginning, the standard memory with these machines seemed more than adequate. Now,

there's never enough RAM... especially with the PCjr.

But third-party vendors sometimes offer a fix.

The Microsoft name is on the latest PCjr memory module I'm using. The Microsoft PCjr Booster with Mouse is

a snap-on board the size of IBM's standard parallel printer interface. It offers up to 128,000 characters of additional memory, a hardware clock with battery power, and a mouse hole. There are other PCjr memory modules with clocks and printer ports, but Microsoft's is the first with a mouse connection. Having the mouse port on the Booster is a convenience for mousy PCjr people because the mouse doesn't tie up an on-board RS-232 (serial) port. However, you will need a separate printer attachment if yours is a parallel printer.

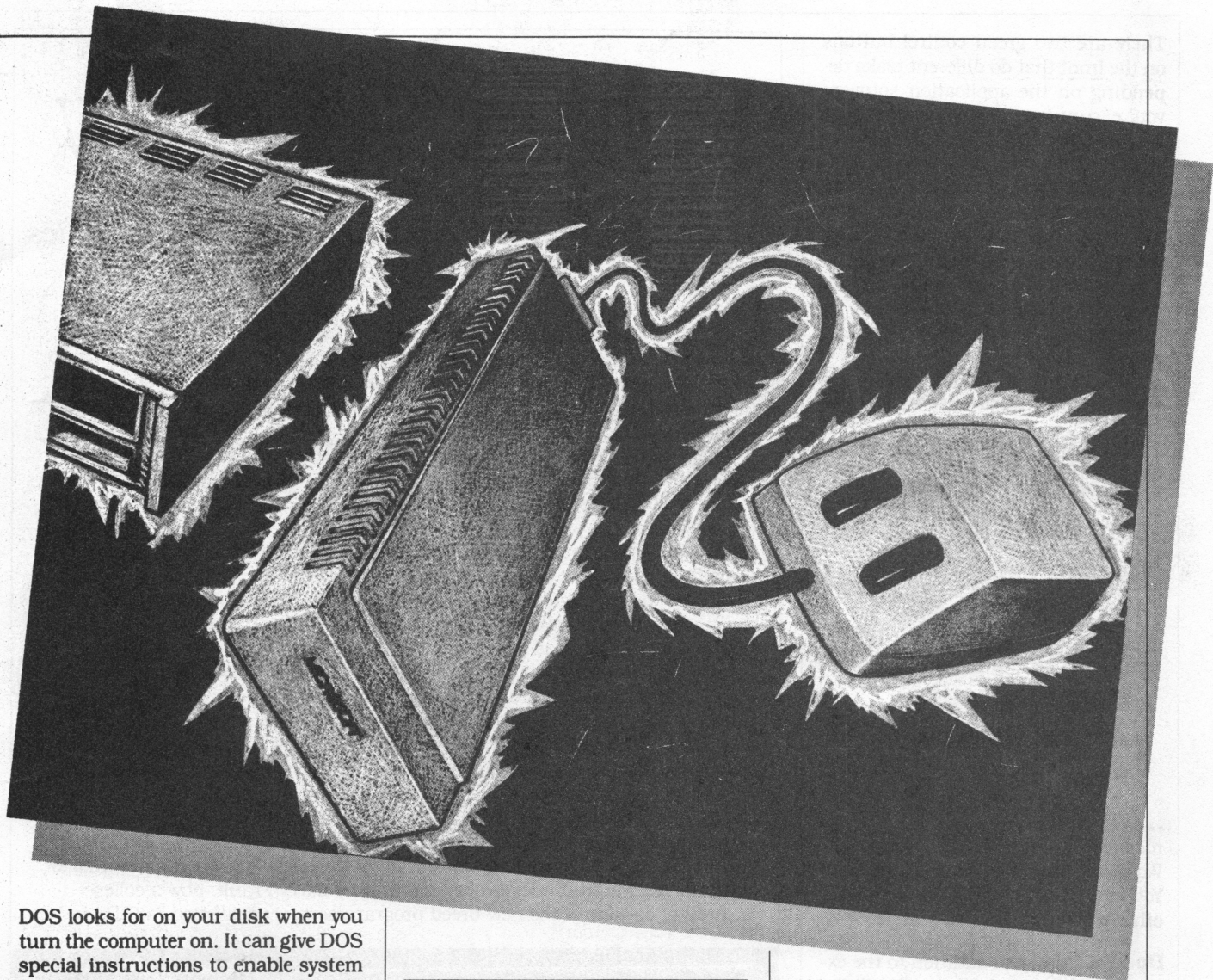
**Memory Lane** The clock and mouse features notwithstanding, for most users extra memory is what this add-on is all about. This article was written on a PCjr with *Perfect Writer*, a word processor that works best with two disks. But the Booster's MEMORY.SYS program lets you set aside 6K to 91K of RAM to act as the software equivalent of a disk drive. With the maximum thus allocated to a RAM drive, the *Perfect Writer* data files went to RAM and the program disk stayed in drive A.

*Perfect Writer* has an optional feature to update the disk file every 512 characters to guard against accidental loss of information. This normally means a wait for the write operation with the PCjr, but the RAM drive

transfer is so fast I hardly noticed it.

The Booster board will work in concert with other add-on memory and the Microsoft software will control it. But you're still limited to a 91K RAM drive with the Microsoft software, no matter how much memory you're actually using. Microsoft engineers say that's because they decided to use PCjr's "slow" on-board memory for the RAM drive, leaving the faster Booster memory for programs. That may speed up some program execution, but it is only enough RAM drive memory to whet your appetite, because most application packages with multiple programs take more than 91K. And storing data in RAM is a little risky. A power glitch could cost you whatever is in RAM. The usual procedure is to use a floppy disk for data and store your easily replaceable programs in RAM.

To make the Booster work, you'll need three programs Microsoft supplies on a disk: MEMORY.SYS, CLOCK.SYS, and MOUSE.SYS. Respectively, they tell PCjr about the extra memory you've added and how you want it used, set the system clock automatically from the hardware clock on the Booster board, and get the mouse ready to use. Just create a CONFIG.SYS file (or edit the one you're already using) to run the Microsoft software you need. CONFIG.SYS is one of the first things



DOS looks for on your disk when you turn the computer on. It can give DOS special instructions to enable system features such as the memory handler and mouse.

All of this is pretty well explained in the Booster manual. Notice particularly that you *must* install the memory management software (MEMORY.SYS) first. If you call up CLOCK.SYS or MOUSE.SYS first, the system dies when it tries to implement MEMORY.SYS. The sample CONFIG.SYS files Microsoft supplies show you how to install MEMORY.SYS and the other drivers. (Read Chapter 4 in the DOS 2.1 manual for more information on the CONFIG.SYS file.)

**BASIC Boost** One thing you might want to do with this new-found memory is use it in your BASIC programming. To help you with this application, Microsoft includes with the Booster disk a 5,500-byte .COM file named JBASIC (for Junior BASIC). It's a link for Cartridge BASIC that'll let you use more than IBM's present maximum of 112K of memory—64K for program-

---

### The Booster board will work, but you're limited to a 91K RAM drive, no matter how much memory you're actually using.

.....  
ming and 48K for the video screen.

That's not quite as amazing as it sounds. IBM's Cartridge BASIC can't address more than 64K of RAM for programming, no matter whose name is on the package. So you can't use this extra memory for programming per se. JBASIC moves BASIC into Microsoft's add-on memory. This leaves PCjr's on-board memory more or less free and, Microsoft says BASIC should run about 22 percent faster since the

add-on RAM isn't tied up storing information for the video screen. (With JBASIC freeing up the machine's RAM, you can set aside up to 96K there for video RAM, twice PCjr's normal 48K.)

But tests with JBASIC at *PCjr Magazine* found standard BASIC running up to 3 percent faster than BASIC with JBASIC, with programs that require regular printing on the video screen, and about 0.5 percent faster with no information printed to the screen. The JBASIC setup did seem to handle some non-numeric functions faster than standard BASIC when screen printing was eliminated.

Before using JBASIC, you should disable the RAM drive feature by giving the appropriate MEMORY.SYS command that's documented in the manual.

The mouse supplied with the Booster is the standard Microsoft mouse, a satisfyingly heavy, mechanical device that uses a ball bearing in its bottom for input into the computer.



There are two green control buttons on the front that do different tasks depending on the application software you're running with it. The mouse seems to work well on virtually any surface: a smooth desk top or one cluttered with the usual office junk; a magazine in your lap; even the palm of your hand. The only disturbing thing about the mouse is its rattle. When you roll it around, and especially when you pick it up, it sounds like its innermost workings are flopping around loose inside.

Software that provides pop-up

**DOODLE lets you draw lines, change colors, fill in the boxes, modify pictures and save them to disk—all using the mouse. And the detail is quite good.**

.....  
menus for Lotus 1-2-3, Multiplan, WordStar, and VisiCalc is included. You can develop your own menus for other packages.

**Doodle Dandy** In addition to the expected software to make use of all the goodies in the package, Microsoft has supplied three demo programs to show off the mouse features. One is DOODLE, which does about what you'd expect, and does it well. DOODLE lets you draw lines and boxes, change colors, fill in the boxes, modify pictures and save them to disk—all using the mouse. The screen detail is quite good and you have control over what you draw down to a single dot. A printer screen-dump is included so you can make fairly good printed copies of your art.

PIANO draws a piano keyboard on the screen. By moving a pointer around the keyboard with the mouse, you can play tunes just like on a real piano...assuming anyone can play a real piano with one finger. It's fun, though, and generates a lot of attention from fellow PCjr users.

LIFE is Microsoft's PCjr version of the perennially popular "Game of Life,"  
*continued on page 94*

# FAST ON THE DRAW

*Dot for dot, DOODLE is one of the easiest graphics programs available for the PCjr.*

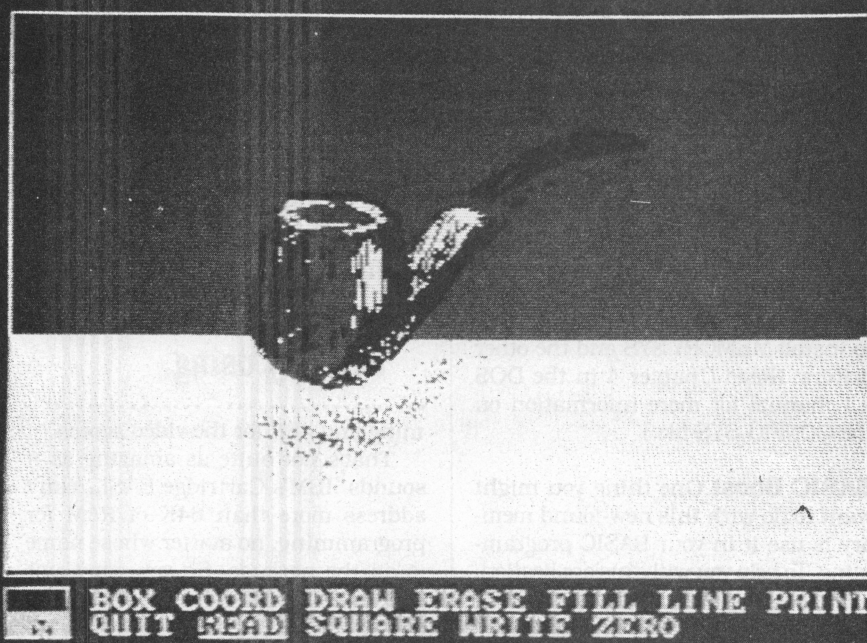
**H**ere's what you can do with Microsoft's Mouse and the DOODLE program. PCjr Magazine's graphics consultant, Tom Christopher, came up with this screen design (below) quickly and easily using only the on-screen menu. A separate DOODLE documentation package is available from Microsoft, but we didn't have it for this review.

Christopher called DOODLE "the easiest screen-draw program for the PCjr I've ever used." He particularly liked the smooth movement of the cursor as it draws or fills forms. And "the cursor is excellent," he says, "because the cross-hair pattern shows you exactly where the next dot will appear." The mouse is a "great improvement" over the keyboard or even a joystick as a drawing tool, he says.

He sees programs like this as the "future" for the graphics artist, replacing the current mechanical composition tools of scissors, rulers, wax, and glue. "But the technology has a long way to go."

Christopher says there are some idiosyncrasies with the program that make it sometimes hard to use. If you try to draw a line across a background/box boundary, for example, the color of the line changes inside the box. "I'd like a zoom feature for finer detail," Christopher says, "and other drawing fonts such as a brush or spray. But overall it is excellent. A fun program and easy to learn." A zoom feature allows the artist to enlarge a portion of the drawing for detailed work. A brush or spray feature allows larger sections to be colored with each move of the mouse.

Not bad for a program written by a high school student hired part-time for the summer. Microsoft describes programmer Larry Frank, now a college freshman, as "one of the new-breed programmers, very talented."—T.B.



**This sketch was created with DOODLE using a style similar to that often used in charcoal drawings.**

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## Is Your Junior An Artist?

The PCjr has its drawbacks, but it performs a lot of computer chores admirably, such as word processing and database management. Another strength is Junior's graphic abilities. With or without a mouse, there is an abundance of good to great drawing programs that run well on the PCjr, and the best part is that they are all coming down in price. Whether you draw for fun or for profit, we would like to see your work. Just send in a printout of your masterpiece to The Junior Report, The Guggenheim Collection, 1121 Tower Rd., Schaumburg, IL 60193, and we'll feature some of the best pieces during the year, and at the end of the year, we'll pick the very best drawing and award a first, second, and third place prize. Just send your masterpiece, a description of your PCjr setup, and the software you are using. So let's see how good your PCjr really is with a brush. You may surprise your Junior and yourself.

# Of Mice & Memory

*continued from page 60*

a grid game that simulates the growth and death of a culture of living cells.

**Flying Mouse** Fans of Microsoft's *Flight Simulator* may enjoy an additional benefit with the Booster package. New versions of the simulator know to look for the Microsoft board and will ask you if you'd like to use the mouse. For the mouse features to work, you'll have to use a version of your operating system that doesn't install Booster's memory manager or clock program. You'll need the mouse driver, of course. The *Flight Simulator* manual says to execute the program `MOUSE.COM` from the Booster disk; however, there's no such program on the disk we received. But `MOUSE.SYS` installed from `CONFIG.SYS` works just fine.

You can use the mouse for all program features except controlling the elevators, rudder, flaps, and ailerons. Experienced *PCjr Magazine* fliers seemed to prefer the keyboard for all functions, since it's necessary for directional control anyway. The simulator manual suggests using a joystick for direction and the mouse for everything else. This seems like a good idea. The mouse is relatively easy to use, but it is confusing when you can't actually fly the aircraft with the mouse.

The Booster is available optionally without memory for users who'd like the convenience of a clock and mouse without paying for the additional memory. This configuration saves you about \$200. With the no-memory option, you can't use the `MEMORY.SYS` memory handler. It locks up the system when it doesn't find the additional memory.

You can save \$75 to \$100 this way when you install the additional memory yourself. Just make sure you buy reasonably high-speed memory chips (150 nanoseconds preferred) from a reputable dealer. And if you haven't done this kind of chip installation before, it might be a good idea to get some help.

It is not a difficult task, but you can damage chips fairly easily with improper handling.

The PCjr Booster with Mouse works. I'm not altogether sold on mice for the usual computer applications, but they do make programs like *DOODLE* a lot of fun. Overall, though, a printer port might be a more useful addition. Or maybe both. Just for those times when there's a little time left and the computer's on anyway... □

### PCjr Booster with Mouse

.....

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# DOS Revealed:

## Part II

**Device drivers, ansi.sys, graphics.com, command.com, are DOS terms that are uncovered in Part II of this series**

We mentioned in the first article of this series last month that the duties of an operating system can be separated into three broad categories. The operating system manages devices, processes commands and controls and services programs. Let's look at each of these three duties, or functions, and see how DOS accomplishes them.

Strictly speaking, the computer consists only of a microprocessor and its support chips that are mounted on the system board. Everything else, even those things we consider essential such as disk drives, the keyboard and the display, are devices connected to the computer, and a very important

duty of any operating system is to connect these devices to the computer and coordinate their work. In addition to the basic standard devices, we may have printers, joy-sticks, a mouse, a modem or some other piece of hardware to make Junior more useful and fun. DOS must provide some means to manage these devices, and that is not easy since there is such a variety of them and, in fact, they are still being invented. The instructions, or programs, needed to manage hardware are usually called "drivers".

DOS handles the function of managing devices in several different ways. First, the most basic hardware drivers

which are located in Junior's Basic Input/Output System (BIOS) are read by DOS during boot-up and are placed into random access memory (RAM). This is done with the DOS system file named IBMBIO.COM which we mentioned in the previous article. These drivers, which are relatively crude, are used mostly for input from the keyboard, output to the display, input and output to the disks, some output to the printer, and access to the computer's clock.

The second method that DOS uses to manage devices is through installable device drivers, which have been a feature of DOS only since Version 2.0.

Earlier versions of DOS were not able to adapt to changing circumstances or to new equipment. Installable device drivers have had a big effect upon all PC type computers including PCjr. Almost everyone who has a PCjr has expanded their Junior beyond what IBM

**BY JOHN WILSON**

## DOS Revealed: Part II

ever envisioned, and invariably these expansion products are controlled by an installable device driver. These drivers are read into the computer's RAM during boot-up by means of the CONFIG.SYS file. In addition to loading device drivers into RAM, the CONFIG.SYS file can also modify the way DOS works on some standard device drivers so that programs may run more efficiently (Such as the allowable number of files which may be open or to modify the size of the disk buffer DOS uses to store data before it is written to a disk.).

Device drivers are programs, usually written by whoever makes the hardware which is to be controlled by the driver, which follow a standard format recognized by DOS in the CONFIG.SYS file. In the CONFIG.SYS file device drivers are identified by the command DEVICE=. For example, in my boot-up disk's CONFIG.SYS file is a line that reads:

```
DEVICE=JRVIDEO.COM
```

JRVIDEO.COM is a program supplied by Racore to set up expanded memory and video buffers. Usually device drivers have an extension of either COM or SYS.

Microsoft includes a device driver, named ANSI.SYS, on the DOS disk which can be used to control your computer's display and keyboard. The ANSI driver allows you to add color to the normally black and white DOS screen, to draw lines and boxes on the screen, move the prompt around on the screen and several other things that can enhance your DOS screen. It is mostly used in batch files for making menus on computers with hard disks.

ANSI.SYS can also be used as an awkward keyboard macro builder, where you can specify several characters to be produced with one keystroke or where you can change the character displayed by a key. I seldom use the ANSI driver since there are usually better ways to accomplish the same results. One exception is that in order to boot-up Junior with PC-DOS version 3.1 and my Racore memory expansion unit, ANSI must be called by the CONFIG.SYS file. I suspect that this is required because of the way Racore has written their memory management programs, and I have wondered if other PCjr memory expansions require this.

A third way that DOS manages devices is through some utility programs that are included on the DOS disk. The one most often used is MODE.COM which can be used to control the display (to specify either 40 or 80 columns of text), the printer (to specify either 80 or 132 characters per line and either 6 or 8 lines per inch) and the serial port. There are limitations on this utility and everything that MODE does can be done by other methods. For printer output control MODE only works on Epson and IBM Graphics compatible printers. Also, the commands in MODE which are for the printer and the serial port are memory resident and occupy about 250 bytes in memory.

Two other useful utility programs that DOS supplies are PRINT.COM and GRAPHICS.COM. Both of these programs are memory resident. That is, when you first run the program it just installs itself in memory to be used when needed. GRAPHICS.COM enables the Print-Screen function to

---

*I seldom use the  
ANSI driver  
since there are  
usually better ways  
to accomplish the  
same results.*

---

print graphic screens so that you can get a hard copy of a screen full of circles and lines and other graphic characters, and PRINT is a variety of a print spooler which enables the computer to work while printing. GRAPHICS.COM only works to get a print-screen while the display is in a graphics mode. If the display is in a text mode and has some lines, boxes or other characters in the extended character set displayed, GRAPHICS.COM will not print the extended characters unless your printer supports them.

As implied by the full name of DOS, the primary device that DOS handles is the disk operating system. To really go into the details of how DOS handles the disks and disk drives would require more words than we have room for in this article. Just explaining disks gets confusing because there are so many terms. There are tracks, and sectors, and clusters, and cylinders, and File Allocation Tables, and the list seems to go on and on. We'll look at just a few of these terms.

The fundamental unit of all disk management is the sector. A sector is a small physical area on a disk that is able to hold data and it has a specif-



## DOS Revealed: Part II

ic location on the disk and a specific size. IBM has always used a sector size of 512 bytes, and on standard disks used in the PCjr there are 720 sectors. Since 512 bytes is usually called 1/2 kilobyte, the 720 sectors can hold 360 K bytes. In order to manage the disk and the files on the disk DOS uses some sectors to store system control information. The very first sector (which is sector number zero) on every disk is the boot sector, which we have already discussed. The next four sectors (numbers 1 through 4) are called the file allocation table (or FAT), and contain information necessary for DOS to find files on the disk. Sectors 5 through 11 contain a directory of all files on the disk and the remainder of the disk (708 sectors) is free to hold data.

So far we have only talked about floppy disks. If your Junior has a hard disk, the hard disk is organized in the same way but the file allocation table and the directory require more sectors to hold their information.

In theory, the floppies we use with Junior can hold 360 K bytes and hard disks can hold 10 to 20 M bytes but there are a couple of characteristics in the way DOS sets up its disk management that affect how much data you can actually store on a disk. For one thing, a root directory can not hold more than 112 entries. This means that a floppy disk cannot have more than 112 files, unless you use subdirectories (and few of us do). Thus, if you have a bunch of short letters from your word processor that you are keeping on a disk, you will get a "Disk full" message when you try to save the 113th letter even though a DIR command will show plenty of room

left on the disk.

A second characteristic of DOS that affects storage space is in the way DOS stores files. In order to store and keep track of files, DOS groups several sectors into clusters. In DOS version 2.1 two sectors make up one cluster for floppy disks, but for a 10 M byte hard disk eight sectors make up a cluster while for a 20 M byte hard disk 16 sectors make up a cluster. DOS stores files by cluster. When a file fills up one cluster, DOS finds an empty cluster and begins to write the data there. If a file doesn't completely fill up a cluster, some

---

*...it is a good idea, if there is room, to have **COMMAND.COM** on the same disk as your program.*

---

disk space is wasted. Usually this isn't a problem, but if you have a hard disk (which have large cluster sizes) and a lot of small files, you end up with a lot of lost disk space.

DOS version 3 reduced the cluster size on 20 M byte hard disks to 2 K bytes (4 sectors). Thus, if you have a 20 M byte hard disk on your Junior you probably should use version 3.0 or 3.1 of DOS. If you have a 10 M byte hard disk you are stuck with the 4 K byte clusters (8 sectors).

### DOS as a Command Processor

The command processing function of DOS is very familiar to all of us. We use DOS commands to look at file directories, to copy files, to erase files and many other tasks. To most of us, command processing is really what DOS is all about. It is a very important function of DOS, so let's take a closer look at it.

Command processing is handled by DOS through the file named **COMMAND.COM**, which is one of the three files placed on every system (boot-up) disk (The other two, you will recall, are the hidden files **IBMBIO.COM** and **IBMDOS.COM**.) Within **COMMAND.COM** are three different sections: an initialization section, a resident section and a transient section. The main purpose of the initialization section is to look for an **AUTOEXEC.BAT** file during boot-up and if, one is present, to follow the list of commands in it. After that, this section of the command processor is discarded.

The resident section of **COMMAND.COM** stays in the lower portion of the computer's memory (where it won't be affected by an application program) and contains routines to process breaks (Ctrl-C and Fn-Break on Junior), the termination of application programs and handle errors. This section of DOS is the source of the beloved error messages we receive whenever we fail to correctly type in a command or try to get DOS to do something it can't do.

The transient section of **COMMAND.COM** is loaded into the high end of the computer's memory. Sometimes the application program uses this portion of memory and overwrites the transient section of the command pro-

## DOS Revealed: Part II

cessor. If this occurs, when the application program is ended, DOS will look for COMMAND.COM on the disk and reload it. If DOS can't find it you will get a message to "Insert COMMAND.COM and strike any key", and this is why it is a good idea, if there is room, to have COMMAND.COM on the same disk as your program.

Commands from the keyboard which are processed by the transient section are classified as either internal or external. Internal commands are embedded in COMMAND.COM and can be executed by the transient section of the command processor without outside help. Examples of this type of command are: COPY, ERASE, DIR and TYPE. External commands are based upon the names of other programs which must be loaded into the transient section of the command processor before they can be executed. Examples of external commands are FORMAT, CHKDSK and DISK-COPY. The transient section also contains an interpreter, which reads batch files (files with a .BAT extension) one line at a time and executes the specified command.

The command processor tries to carry out the users command in the following order. First it looks to see if the command is in COMMAND.COM; if it's not there it looks on for an external file with the same name as the command and a COM extension; if there is none, it looks for a file with the same name and a EXE extension; if such a file is not found, it looks for a file with the same name and a BAT extension, and failing that, the user will get an error message. You will notice that if two programs have the same name, but one has an EXE extension and the other a COM extension, the program with the COM extension will be the one loaded and run.

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ATTN: Brian Cook

## THE WRITING ASSISTANT AND RACORE DRIVE II ... "How Much Nicer It Is!"

*Louie Levy, Editor of The Eugene PCjr Newsletter has sent us the article below which outlines the steps to get The Writing Assistant up and running in a ramdisk with the Racore system. Thanks to Louie and the rest of the great club, which can be contacted at 1011 Valley River Way, Suite 220, Eugene, OR 97401. Due to space limitations, we will be printing how to unlock the Assistant programs once and for all in next month's issue. Look for it.*

When I finally was able to get my Drive II working, I didn't realize how much nicer having the 640K would be. It was when I was able to finally put Writing Assistant into a RAM drive that it all came home. My grade point at the U of O went up by at least one whole point and life in general was made much easier for both me and the family.

First, make a copy of Writing Assistant using either CopyWrite or Central Point Software's CopyIIjr. Make sure that you have run setup on this copy and that it works well with your printer. It should be noted that if you have Version 1.0 of Writing Assistant, it should be "patched" to 1.01. If you don't know how to do this, you should contact the nearest Junior User's Group. If you have Version 1.0, you should also read "Doctoring IBM Writing Assistant" in the February, 1986 issue of the Eugene PCjr Newsletter to make certain you are addressing the "256K or more" memory feature of Version 1.01.

Once setup is run, delete all files on this copy of Writing Assistant except **WRITE.EXE**, **WRITE.SWP**, **WORDPRF.WDL** and **WORDPRF.ADL**. You can now set this diskette aside; we'll get back to it later.

Using DOS, format a new diskette using the **FORMAT/S** command which will create a self-booting disk. Place this newly formatted diskette in your B: drive and your DOS diskette in the A: drive. At the A>, type **COPY MODE.COM B: <enter>**. Remove your DOS diskette and insert the RACORE Systems diskette into the A: drive. type the following:

```
COPY JRVIDEO.COM B: <enter>,  
COPY MDISK.COM B: <enter>, and  
COPY PCVIDEO.COM B: <enter>.
```

We are almost done now. Remove your RACORE Systems diskette from the A: drive and put it away. Remove the diskette from your B: drive and put it in A: drive. Now, type the following:

```
COPY CON A:CONFIG.SYS and press <enter>.  
Next, type DEVICE=JRVIDEO.COM and press <enter>,  
and then, DEVICE=MDISK.COM /298 <enter>. (note the space between  
.COM and /298)
```

After you have done this, press the <FN> key and the <6> key which will create the end-of-file character (^Z) and press <enter>. You have now created a 256K RAM drive.

Now, using the procedures on page 2-15 of your DOS 2.1 manual, at the A> type the following:

```
COPY CON A:AUTOEXEC.BAT and press <enter>.  
PCVIDEO <enter>  
MODE CO <enter>
```

(Continued on page 21)



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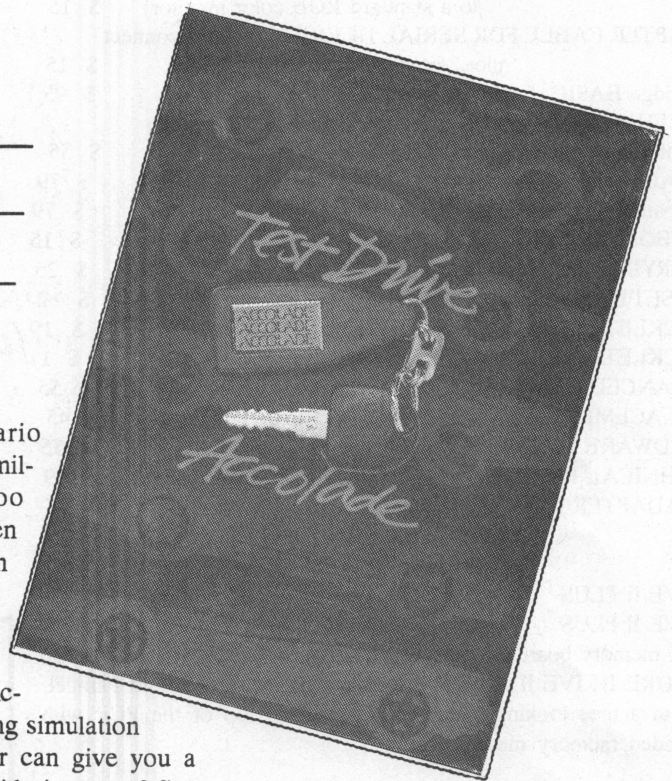
# Eat My Dust: PCjr Style

**So you wanna be cool, huh? How  
about sliding into your Ferrari or  
Lamborghini - PCjr style**

You are looking good in your sports jacket, Calvin Kleins, that imitation Rolex, a ton of gold-plated chains and those \$250 Rhino-hide boots your ex-father-in-law gave you. Sitting in the 65 'vette you borrowed on the sly from your brother's body shop, your confidence builds. So what if both Visa cards are over the limit, the bank account's dry and all you have in your pocket is seven dollars and fifty-one cents. They may have shot you down at Marconi's Sports Car Plaza, but this time you will make sure it is a turn key operation. It's time, drop down those Ray-Bans on the snout and head for the Porsche dealer's front door. We're going for a

test drive.

If that scenario sounds all too familiar or like all too much trouble, then maybe junior can offer you an alternate mode of transportation. With the help of Accolade's new driving simulation "Test Drive" junior can give you a seat of the pants ride in any of five fine road cars - the Ferrari Testarossa, the Lotus Turbo Esprit, the Porsche 911 Turbo, the Chevrolet Corvette and the Lamborghini Countach. Along with the sports cars Test Drive gives the user a good challenge and a



whole lot of fantasy enjoyment. The cost of this escapist package retails for \$39.95, but can be found for well under \$30.00 through mail order houses and select retailers. That's about the same as a cost of a tank or

**BY JIM PROSSICK**

two of hi test, so gentleman start your engines.

Test Drive is not a difficult game to understand or play. Its concept is rather simple, choose one of the "baddest" cars on the road and take that hummer to the top of the rock as fast as you can. Or to rephrase that statement, choose from a fine stable of sports cars and drive your auto to the top of the mountain as quickly as possible. Depending on your point of reference, this Pike's Peak-like adventure is either a gas or quite a bit of fun. Of course, there are many obstacles the driver must encounter in his race against time such as other vehicles, winding curves, potholes and, of course, radar traps. Two things that make this game so much better than real life are the ability to disregard your radar detector and just out run Smokie and the willingness to push your auto to the limit without fear of death or increased insurance premiums. Five mishaps are allowed in the driver's quest to reach the top of the heap, which is not quite as good as a cat but much better than real life.

Either a joystick or keyboard can be used to operate Test Drive. The use of a standard Junior keyboard may represent a problem, since the program requires the use of a full compliment of cursor keys. Keyboard use is rock steady, but painfully slow. The preferred mode of operation is definitely joystick control. Using the joystick adds to the realism of driving, especially when it comes to shifting. Operating the stick shift with the joystick is accomplished by holding down the fire button and moving the stick up or down. When the gears are being engaged a screen insert of the actual stick shift appears

in the lower right hand corner of the screen. That leaves the driver with no excuses for not getting out of third gear. The graphics in Test Drive are very good and the behind-the-wheel perspective of the game puts the player right in the driver's seat. The other autos and the mountain road scenery are quite realistic and very smooth. If there was something to add it would be a couple different driving scenarios. A winding mountain road is nice, but an urban setting and perhaps a rally race setting

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***Two other config systems that will let junior reach the red line are Microsoft's memory.sys and the now famous Jrconfig system***

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would be nice for a change. Also, it is unfortunate that the driver isn't afforded an overhead view of his car in action. The only screens available of these fine automobiles are when they are at rest. You only get a look at the beasts when you order from the exotic sports car menu at the beginning of the game or when you fuel up at the top of the mountain, provided you make it. Each vehicle has a different interior and gear shift and each comes equipped with all the accompaniments of the real thing. The color scheme for the program is

CGA only. EGA capabilities exist, but there is no way to utilize junior's sixteen colors.

Now for a check under junior's hood to make sure you have the horse power to run Test Drive. The program is not listed as PCjr compatible, but it will run with enough memory. Accolade recommends at least 256K to run Test Drive on PC's and compatibles. That amount of memory may work on junior, but 320K would be a safer bet. All those horses won't do you a bit of good unless junior's engine is in tune and that takes the proper memory configuration system. Two memory config systems that will make your engines stall are Junior Hotshot's memory system and Tecmar's Conpcjr. Two other config systems that will let junior reach the red line are Microsoft's memory.sys and the now famous Jrconfig system. Special thanks to Larry Newcomb for creating JrConfig.sys and to the Junior Report for distributing it to the PCjr public. Taking a slight detour, it would be nice to see some of the big boys like Microsoft and IBM drop their copyrights and circulate the software they developed for junior through the public domain.

Getting back on the right track, it came as a great surprise to the people at Accolade that Test Drive was PCjr compatible. Ken Kajikawa in Customer Service was amazed to find that Test Drive even ran on the PCjr and was even more excited about finding out how such miracles were performed. Hopefully, passing on the do's and don'ts of memory config systems will keep Accolade on the right track. The next project I leave to Accolade, let's get 16 colors back into the picture for junior. One tip Ken



## Eat My Dust

did pass along to the PCjr public is that Accolade's Mini-Putt and the PCjr are not getting along together. So, if you take a chance on the product do it at a retailer that has a liberal return policy.

Test Drive resembles a high class upgrade of the old arcade favorite Pit-stop. But Test Drive is a race against time, not against other computer operated cars. In Test Drive the driver has to combat vehicle traffic from both directions and battle the road as well. There is also the matter of selecting the different autos. Each car has its own personality. It is proba-

bly best to start with one of the four speed models, either the 'vette or the Porsche. Starting with four gears instead of five relieves a little of the shifting load and lets the driver concentrate on the road. For fast starts it's legitimate to rev it to red line and dump the clutch. Monitoring the speed and tach readings is imperative if the driver is to be at the right speed for the portion of the course he's on. Downshifting, which I find difficult, and proper use of the breaks will save you from some head on and rear end collisions. All and all the feel of the game is very realistic.

As a computer gamer I pride myself on the intellectual pursuit of computer gamesmanship. But occasionally an arcade game brings me down from my high horse. Test Drive is not a game that involves much strategy or thought.

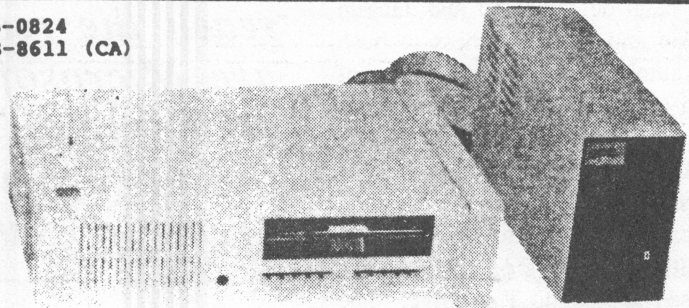
It is basically a hand-eye coordination game, where good keyboard or joystick control makes or breaks you. Test Drive is one of those action-arcade games that is highly addictive and fills a basic human need - look sharp and drive fast. It's a good ride and a lot of fun for the money.

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## Writing Assistant

(Continued from page 16)

```
B: <enter>
COPY *.* C: <enter>
C: <enter>
WRITE <enter>
A: <enter>
```

Now, press the <FN> and <6> key to create the end-of-file character (^Z) and press <enter>.

If everything has gone correctly, you should now be able to place this "boot" diskette in drive A: and the newly created Writing Assistant diskette in drive B: and reboot; you know, CTRL, ALT, DEL.

When you place this diskette in A: drive and have the Writing Assistant in B: drive whenever you boot Junior, Writing Assistant will be copied to C: drive. You will be able to remove the diskettes in A and B and replace them with data disks. Even your spell checker will be in C: drive. Should you leave Writing Assistant and want to return to it, all you have to do is type C: and then WRITE; just remember that you MUST have Writing Assistant in your B: drive and COMMAND.COM in the A: drive when you want to call it up as WA is a protected program; you must have the "real" copy in B: to invoke the "copied" one in C:.

I understand that one of our members has a much shorter method of making the AUTOEXEC.BAT file for use with the RACORE Drive Two with DMA. We hope to get him to write an article telling us what the difference is in the two RACORE systems, the shorter method for the RAM disk, and possibly give us a demo of it soon.

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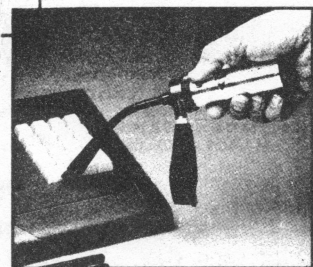
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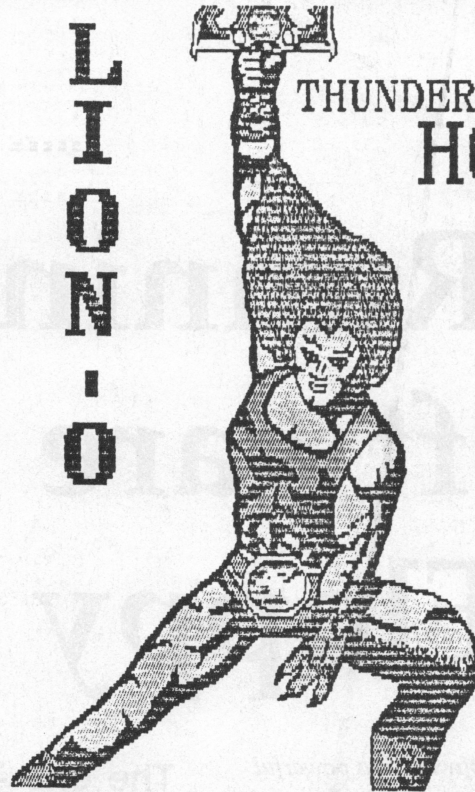
We have two selections from Alan Peters of Cleveland, Ohio this month which illustrates that all work and no play on the Junior makes a very boring day.

**HE-MAN**



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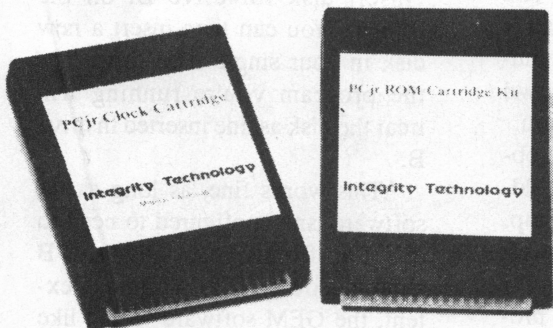
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# Running GEM Software on a One Floppy Junior

*The GEM software is a powerful family of programs that will run on the Junior. Below is a reprint from the newsletter of the SF PCjr Users Group in which Lenny Bailes outlines the procedures to match GEM and the 1-floppy PCjr.*

Digital Research makes several icon-based applications programs which make use of the Graphics Environment Manager software, or GEM Desktop. Those of you who attended our meeting last month already know that GEM Graph, GEM Draw+, GEM Paint and DeskTop Publisher will all run on a 640K Junior with two disk drives. You may also be interested in the fact that all of the latest versions of the GEM software can be run on a Junior with only one floppy, despite lack of support for one-floppy systems in the GEM documentation.

## The one - floppy jr doesn't have to take a backseat to any com- puter - if it has the 640K PCjr muscle.

The key to running all of the GEM applications is to install and boot up the GEM Desktop, which is a file manager and DOS Shell, emulating the MacIntosh's pull-down menu, graphic operating system. Although there may be some problems with one-drive systems and older versions of the GEM Desktop, specifically version 1.1, the newest version, 2.2, will run with no problem. The trick is to satisfy the pro-

gram's belief that it is really running on a system with two disk drives, even though you have only one.

### BACKGROUND

The PCjr's disk drive is set up on a vanilla boot to emulate two logical drives. If a program expects to find some data on drive b: and looks for it, your screen will halt program execution and display the message "Insert disk for drive B: on the screen. You can then insert a new disk in your single IBM drive, and the program you're running will treat the disk as one inserted in drive B.

This works fine, as long as the software isn't configured to need to read files from drive A and drive B simultaneously. To a limited extent, the GEM software would like

**BY LENNY BAILES OF THE SAN FRANCISCO PCJR USERS GROUP**

## GEM Software

to do this. If the Desktop looks for files on drive B and you remove the Desktop program disk, small parts of the screen will not be refreshed from the "A" drive, because your disk is no longer there. The "insert disk for drive b:" message may linger on the screen in a corner, partially obscuring some of the menu options. No functional part of the GEM applications is retarded, by using one drive which masquerades as two; if you move your mouse to where the menu should be, you can still execute commands. If the application needs to read data from your program disk, it displays an "insert disk for drive A:" message and allows you to swap disks.

The GEM software was not intended to work this way, however, and there is a method by which you can avoid disk swaps and continue to see a perfect screen unmarred by "insert disk" messages. This method consists of establishing a RAM disk in memory, and using that disk to contain either your program or data files. There are many ramdisk programs in circulation. The best one to use with GEM is AST's Superdrive, because of its ability to sustain the DOS DiskCopy command. You can use VDISK or SETRAM or MEMDISK, but will have to create and copy each subdirectory separately if you do. Most of the GEM applications contain files in a series of subdirectories on program and data disks, and the software is configured to search and store files in this manner. So if you want to use GEM PAINT you will have to copy your data files to a subdirectory on the ram disk called IMAGES. If you use the DESKTOP PUBLISH-

ER, you will have to create a subdirectory called GEMPAGES, etc. If you use Superdrive, you can simply Diskcopy all the subdirectories to your ram disk with one command instead of creating them separately and using the Copy command.

### PREPARATION

When each GEM Application is installed on a conventional two-floppy system, both an Applications disk and a Data disk are created, one in drive A and one in drive B. You can do this with one floppy imitating both drives A and B, but it will involve a horrendous amount of swapping. The first GEM installation which must take place is that of the DeskTop. The installation procedure creates a "Startup" and a "Desktop" disk. To do this quickly without swapping disks 30 times on a one floppy system, you will need to install a 360K ramdisk, and change your config.sys file so that the Junior recognizes that ramdisk as "Drive B:" instead of asking you to swap disks in your real disk drive. The shareware memory management software, JRCONFIG.DSK allows you to do this. Superdrive comes with a program called DISKNUMB, which will permit this. With other ramdisk software configure a "drive c:" and then use the DOS Assign command, Assign B=C. When Junior is configured in this way the disk drive will no longer prompt you to swap. Drive B will be your ramdisk.

Since GEM is going to create two new disks in "drive b:" for you (Startup and DeskTop), you will also need a way to temporarily exit

the installation procedure when the first disk is complete so that you can copy it onto a real floppy. Then you erase all the files from the ramdisk and allow the second disk to be created there.

There are several ways to temporarily exit from a batch file and resume. The shareware program HOTDOS2A lets you pause during the running of any program and escape to the A prompt, perform ordinary DOS file copying and exit back to the program in progress. Commercial programs like Double-Dos and Software Carousel let you suspend the execution of a program and perform file manipulations from the A prompt in a similar manner. The program I used to suspend GEM installation was one in our library called MC.COM (Multiple Choice). You may also be able to use DOSAMATIC to accomplish this.

### HOW TO INSTALL DESKTOP QUICKLY

In practice this works very simply. Boot up with your 360K ramdisk configured as drive b: and load your memory-resident file management program. Now begin the GEM installation by inserting the disk with GEMPREP.BAT in your real disk drive and typing GEMPREP. GEM will prompt you to make one or two disk swaps in your real disk drive while it copies necessary files for the GEMSTART disk onto "drive b:". Continue until GEM prompts you to remove the newly created GEMSTART disk from "drive b:" and insert a blank formatted disk for the DESKTOP disk. At this point, suspend the installation



## GEM Software

procedure by hitting your memory-resident file manager's hotkey. You will be given an A> prompt, and can remove the GEM software from your real floppy. Insert a formatted disk in your real floppy and copy all of the information which has been created on your ramdisk onto the real disk. (With Superdrive this can be done with the DiskCopy command. With other ramdisk software you may have to use the MakeDir command to make each directory and then Copy \*.\* from each directory on the ramdisk.)

Now erase all files from your ramdisk, replace the GEM software in your real floppy and hit the memory-resident hotkey again. GEM will now create the DESKTOP disk in drive b:. When the installation is complete, you may insert another formatted disk in the real disk drive and again copy all of the information from the ramdisk.

The entire installation procedure takes about 3 to 4 minutes, once you've chosen ramdisk software and a memory-resident file manager to install. If the procedure seems difficult, you can always go out and buy a second disk drive or a hard disk, but once you've gotten this far, you're home free! You now have a runnable version of GEM Desktop. To run it you insert the Startup disk and type GEM. It loads some files and prompts you to insert the DeskTop disk in drive A. You swap once and the DeskTop with its icons and menus appears. From the DeskTop you may now run or install any other GEM application. You probably will not have to pull the trick of suspending installation and copying from the ramdisk again, nor will you need your memory-resident program

interrupter again.

The GEM Application installation procedures are copied from the DeskTop into memory when invoked, and all you will have to do is insert a formatted disk into your real floppy and wait a few seconds. Then when the installation procedure is done you will be returned to the DeskTop and you can insert another blank disk into your drive to copy whatever information was written to "drive b:" (the ramdisk) Each GEM application will now have two disks, an Application disk and a Data disk. When you want to run one, all you do is copy the information for the Data disk onto your ramdisk. (You can create a simple batch file to do this). As some of you saw at our last meeting, from DeskTop any GEM program can be started by pointing the mouse at it and clicking twice.

### ADVANCED CONVENIENCE

If you prefer, you can copy the application disk onto the ramdisk instead of the data files. Then with the addition of a Path statement you can use your real floppy drive to store data files and run applications from the ramdisk. In fact, some applications are small enough so that more than one may be copied to the ramdisk. There is room, for instance to copy the DeskTop and the Paint program to "drive b:" If you do this, all you will have to do is invoke GEM from the Startup disk, and the Desktop will load automatically. You can then invoke PAINT (or GRAPH or DRAW+) from the ramdisk and use drive A: for data files. (If you have two real floppy drives, you can get the DeskTop to

***If the procedure seems difficult, you can always go out and buy a second disk drive or a hard disk, but once you've gotten this far, you're home free!***

---

run without swapping by entering a Path=B:\GEMDESK statement and putting the DeskTop disk in your second drive.) NOTE: The DeskTop PUBLISHER consumes more memory than the other GEM products. When you use it, rather than loading a full 360K ramdisk, you will want to make a partial 100-150K ramdisk for data files. This will give you room to edit and save a 5-10 page document on the ramdisk. More later on how to save larger documents.

*(Editor's note: The San Francisco PCjr Users Group can be contacted through John King, President, at 1194 Idleberry Rd., San Rafael, California 94903. If you live in the Bay area, write to John and join this very active club.)*

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**TELEDYNE** experimental "Beta" unit which never went into production. Unit incl 640K, parallel and game ports, ramdisk, 2-3.5 inch drives, and plenty of expansion area. DOS 2.1, BASIC cartridge, all manuals, IBM joystick, and lots of goodies(3 PCjr books, extra power supply, etc.)

Original R&D cost \$10,000. Will sell for \$1000.

Tim Britton

Rte 1, Box 141

Kinston, NC 28501

(919) 523-8631

### LOTUS 1-2-3 PCJR ROM

**VERSION 1A,** opened but never used, Original box and all documentation included. \$65.

Jack Ragland

1044 Alta Vista Rd.

Louisville, KY 40205

(502) 458- 3550

### PCJR PARALLEL PORT AND

**KEYBOARD** Connecting cord \$45.

John Betz

6802 Rainier Ave.

Gig Harbor, WA 98335

(206) 858-8914

### SOFTWARE: 1-2-3 ROM version

\$100., Managing Your Money ROM version \$50., Books: *The New Jr* by Winn Rosch, *Discovering the PCjr* and *Exploring the PCjr* by Peter Norton,

**IBM PC Programs** by William Barden \$10. each or \$35. all 4. Serial adapter cable \$10.

Jack Demkovich

7520 Magoun Ave.

Hammond, IN 46324

(219) 844-6821

### IBM PCjr, 128K + 128K sidecar

for total of 256K, single drive, color monitor, parallel printer port attachment, BASIC Cartridge, 300/1200 baud internal modem, DOS 2.1, Writing Assistant, dust cover. (\$700. or best offer.)

Cheryl or Cathy Teale

9416 S. Massasoit

Oak Lawn, IL 60453

(312) 425-4392 after 5PM week days.

### IBM PCjr 128K (repair needed)

\$50., color monitor \$100., Racore Drive II Plus w/o DMA \$130., keyboard \$15., joysticks \$15., 128K memory expansion sidecar \$75., printer attachment \$50., game cartridges: Mouser, Cross-fire, Mineshaft, Scuba Adventure \$8.

Fred Barrett

RR 1 Box 28

Rochester, IL 62563

(217) 498-8821

### PCjr COLOR MONITOR ADAPT-

**ER CABLE,** Use your PCjr monitor with a standard PC. Difficult to find, \$35.

Stephen Gruninger

6629 N. Whipple

Chicago, IL 60645

(312) 764-3113

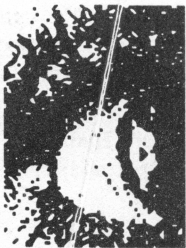
### MAGNAVOX COMPOSITE COLOR MONITOR, \$125.

Steve Felman

13 Hartman Dr.

Hamilton Sq, NJ 08690

(609) 587-9287



By D. Glanville

## Mom, apple pie, and astrology, too.

We have not often been accused of flag-waving here at Junior Report studios, but darn it, we're Americans and we're proud of it. And what better way for this column to exhibit this national pride than to offer shareware from two very American traditions - astrology and fast foods! That's right, you, too, can run an entire free world country with your own astrology forecaster (#126). And you all know that making executive decisions involving daily topics such as arms control, Middle East policies, and star wars can make a Commander-in-chief pretty hungry, so where else can he go but to a fast food restaurant? Disk #124 will allow even the busiest head of state to watch those fast food calories, whether you're the President of Monaco, or better yet, The United States of America.

For those of you who do not have presidential aspirations, we have some other great programs this month for you as well:

### ABC FUN KEYS (#123):

This program was written with imagination and aimed at children aged two to five. There are four programs intended to help you teach your child letter recognition and to encourage him to pick out, from your computer keyboard, the letter showing on the

screen. When he selects the correct key, he is rewarded with a lively tune. You have a choice of speed ranging from a slow browsing pace to a rapid flash-card mode. The color graphics are attractive and will be enjoyed by the very young child.

### FAST FOOD (#124):

Do you worry every time you eat a Big Mac, enjoy a banana split at Dairy Queen, nibble hushpuppies at Long John Silver's or pop in at Jack-in-the-Box? Even though more Americans than ever are watching their calories, sodium and cholesterol, fast food restaurants are springing up all over the country. We all use them. This disk lists the nutritional values of the menu items of fifteen of the most popular chains in the country. (A Big Mac has 570 calories-979 mgs. sodium and 83 mgs. cholesterol. A Dairy Queen banana split has 540 calories 150 mgs sodium and 30 mgs cholesterol. Two hushpuppies from Long John Silver's have 145 calories-405 mgs. sodium and 1 mg. cholesterol. One order of onion rings from Jack-in-the-Box has 382 calories-407 mgs. sodium and 27 mgs. cholesterol. This disk will tell you all that and much more about each item.) **256k req.**

### SPANISH FOR TRAVELLERS (#125):

Learning a language from a computer has its drawbacks, i.e., pronunciation for instance. The author of this program suggests an audio tape to learn the best accent. Even without an audio tape, you will find this disk a real help if you are planning a trip south of the border this summer. The program consists of eight formal lessons with a

few tests and quizzes thrown in, and an additional phrase/verb menu. Such phrases as "Ileveme a esta direccion por favor" (Please take me to this address), "un cuarto con bano" (a room with a bath) and "un tinto" (a glass of red wine) are a great help to any traveller. A second language -- you shouldn't leave home without one! **256k required.**

### ASTROLOGY (#126):

A full-featured astrology program for those of you who want to cast their horoscope. This program will help you calculate your chart and print out the results. Charts can be displayed in either graphic or cartwheel form. I don't know anything about astrology (I'm not even running as a presidential candidate) but many people who do follow the stars find this a useful program. I've been assured that this is propitious time for you to order the disk. This program **requires 256k** and two disk drives but it can be used with 640k using a RAM disk.

### FORM LETTERS (#127):

One hundred different forms and form letters for personal and business use. You will find a thank-you note, an absentee record, a demand for payment, a request for a refund, a letter of resignation and even a nasty letter cancelling an order placed with a pushy door-to-door salesman. All these letters are saved in ASCII form and can be imported to your word-processor. You can fill in the spaces or tailor the letters to your exact needs. A real time-saver for those of us that put off writing important letters.



**GAMES (#105):** Some really fun graphics on this disk include Aquarium (if you are tired of looking at an blank monitor you can turn it into an aquarium and watch the fish swim around), EYE if you'd like to have your computer look back at you, YAHT a colorful game of Yahtzee, Wizard is similar to Rogue and is addicting, MILLEBNS is a solitaire game of Millebournes.

**BAKER'S DOZEN (#106):** Fourteen of Jim Button's best utilities. BTTNCALC is a one page spread-sheet. CALENDAR a program-able date calendar, DISKUTIL with many HELP screens you can change files or directories-restore lost files-patch files and much more, FILECOMP compare two ASCII text files, GKEY provides all keyboard information, LOCATE find any file on disk or in which file(s) given string occurs, PRO90 prints files at 90 degrees, PC\_SORT sort files with up to four fields, PRN-FILE redirects all information normally sent to your printer to a disk file of your choice, RDIR remove subdirectory including all files and children directories, SNAP-SHOT take pictures of any 80 column screen (not graphics) in any program, SWCOM12 switch RS-232 ports for COM1 and COM2, SWLPT12 switch printer ports for LPT1 and LPT2. Some of these utilities require 256K of PCjr memory.

**PC-STOCK (#107):** PC-STOCK is a general purpose stock trend analysis program. It was developed with ease of use and graphic presentation of data as the primary objectives. PC-STOCK is entirely menu driven, making it very easy for the occasional user as well as the professional user to enter, modify, and obtain graphic trend analysis of stock data.

**XWORD (#108):** A crossword puzzle maker program. XWORD will enter your words, prompt you for clues and print out the completed puzzle, clues and solution. This is a great program for those who like to have puzzles that use special word lists (religious words, spelling words, family names etc). The printout looks very professional. Highly recommended

**WORLDX (#109):** This dandy little program will locate and print out maps of countries, states, cities and capitals from the whole globe. Just choose country, state or city you want to see then choose the map scale. Another option is POINTER. A mercator type projection of the world is displayed with a pointer located in the Atlantic Ocean. Use your cursor or number keys to position the cursor at the location you desire to examine. As the cursor moves its latitude and longitude will be indicated. When it is near where you want it, hit the enter key and the cursor will become the center of an expanded view. You can now reposition the cursor and expand again by hitting enter. Including the full world map you have five expansions. After a few expansions the names and locations of visible cities will be plotted. This program is not just instructional - it's fun!

**THE GAMBLER (#110):** Three different programs to help you choose your lottery numbers and a BINGO game. PLOTTO by member C. A. Bates, not only makes selections, it tells you which selection the program feels has a better chance of winning. When you've made your choice you can have PLOTTO print it. If the lottery doesn't appeal to you try BINGO. This program will print out Bingo cards, then choose the BINGO numbers. A nice program for Bingo addicts. All's that missing is the parish, the shouting, and the prizes. Well, you can't have everything.

**THE\*MENU (#111):** Menus make computing easier and faster, too bad they don't have them on all disks. THE\*MENU can do it for you. THE\*MENU is a user-oriented personal computer programs organizer that provides custom visibility and control of all your PC software. It is easily updated to include your particular software programs. It can display program choices and call any program with a single keystroke from nested menus. THE\*MENU is memory resident with step-by-step introduction, on-line help and instructions, using function keys F1 through F10 as keyboard keys to can call up your software programs. Highly recommended.

**BRIDGE PAL (#112):** A bridge game with instructions. There are three ways to play BridgePal. SOLO bridge is for one player. The SOLO game is the only one that lets you replay the hand, if you wish. TWO PLAYER bridge provides scoring for two people, who take turns playing random hands. Similarly, DUPLICATE scores for two, but deals the same sets of hands to both players. If you want help with your game, HELP is also available. Just push "H" and the computer will make your bid for you. Are you sure this is how Omar Shariff started?

To order any Shareware disk, please send \$5.90 (U.S. Currency drawn on a U.S. Bank) for each program (\$10.00 for non-members) which includes shipping and handling and send to: The PCjr Club, Public Domain, P.O. Box 59067, Schaumburg, IL 60159-0067. Please allow four weeks for delivery. All orders outside of the United States and Canada, please include \$10.00 (U.S.) per order.

Please circle one or more below

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32  
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Number of program disks wanted: \_\_\_\_\_ times \$5.90 = \_\_\_\_\_  
\_\_\_\_\_ times \$10.00 = \_\_\_\_\_  
Total enclosed : \_\_\_\_\_

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Must use before June 30, 1988.

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CITY \_\_\_\_\_ ST \_\_\_\_\_ ZIP \_\_\_\_\_

PHONE # \_\_\_\_\_

## ORDER FORM ON PAGE 29.

**Don't forget the new programs on page 28!!**

- PC FILE III (#1):** the classic, updated, full-featured database program that has set the standard for shareware programs. Considered by many to be better than most commercial programs. Version 4.
- PC WRITE (#2):** this best-selling shareware program is equal to or better than most word processors on the market. This is the latest version (2.55) and will run on the single drive, 128K PCjr.
- PC TALK (#3):** PCjr adapted version of one of the most popular communications programs.
- HOME MANAGEMENT (#4):** a reliable, general purpose financial manager.
- KIDS (#7):** a special children's disk composed of a kid's word processor, an intermediate math program, and a colorful counting game for the preschooler.
- PC-KEY-DRAW (#9):** the most powerful graphics program available in shareware. **Requires 256K.**
- GAMES (#10):** one of the best selling game disks has Combat, Dungeons & Dragons, & Global ThermoNuclear War.
- PC TUTORIAL (#12):** a course in computer and the PC-DOS environment.
- EDUCATIONAL GAMES (#18):** features math exercises, thinking programs, and the classic Flashcards.
- LABEL MASTER (#19):** the original label making program has a variety of uses. **Requires 256K.**
- GAMES (#24):** Poker games, Battleship, Land Mines, Fire, Grime, and Hostages.
- IMAGEPRINT (#25):** A must-have printer utility that makes your dot matrix into a lean, mean, quality text producing printing machine. Can proportionally space text. Requires an Epson or IBM compatible printer.
- QMODEMjr (#26):** a special PCjr version of the popular communications program, allows easy access to BBS's.
- PC-LEDGER & PC ACCOUNTS RECEIVABLE (#27):** A very good business manager for the small and home business. **256K.**
- EZ FORMS (#28):** Create and print custom forms to fit every need. A business necessity. **Requires 256K.**
- PC-STYLE (#29):** Written by Jim Button, helps improve your writing skills by analyzing your writing style. Easy to use, it wakes up your documents or prose, making your writing more readable and stylish.
- PC-CALC (#31):** A "visible" spreadsheet program that challenges those offered commercially. Income tax computations, calculating depreciation, computing loan interests, or just plain balancing your checkbook are just some of the chores this program can handle.
- DOSAMATIC (#35):** No, it doesn't slice and dice onions, but it is one heck of a DOS utility, that includes multi-tasking abilities, debugs, sorts, and much more.
- PC-DESKMATES (#36):** A memory resident that includes an alarm clock, phone book, calendar, notepad, and printer commands.
- GAMES (#38):** Frogger, Wa-Tor, R-Logic, and Zaxxon, among others.
- GAMES (#39):** Includes Yahtzee, Chess, Slot Machine, and Wizard.
- GAMES (#40):** How about a game of CoreWar, Keno, Othello, or Golf?
- GAMES (#41):** Features Striker, an arcade-style helicopter attack game that will make you swear you're in a real arcade. Also has Catacombs of Nemon, and JumpJoe.2 (A donkey Kong lookalike) **Requires 256K.**
- GENEALOGY (#42):** Contains both informal format and LDS format for you to see if you are related to the Czar of Russia.
- TRIVIAL TOWERS (#45):** Trivial Pursuit in a computer form, has six categories from which to choose, or write your own questions and answers. **TWO DISK SET - \$10.00. Also requires either RAMDISK or 2 drives.**
- ULTRA UTILITIES (#47):** features U-File, U-format, and U-Zap in a powerful collection of programs that will allow you complete access to the power of your PCjr DOS operating system and of your PCjr disk drive controller circuitry.
- CASHTRAC 5.15 (#48):** an excellent program intended for use by the household manager, club treasurer, small business, and expense account keepers. **Requires 256K.**
- PCjr UTILITIES (#49):** special utilities for Junior includes a print spooler, two text editors, and a program that can create special PCjr keyboard templates for WordPerfect 4.1, Reflex, PC-Write 2.55, and others.
- GOOD HEALTH (#50):** features PC-Recipe, a fun program that maintains recipe information, and allows you to display, update, add, change, and re-calculate recipes. Also has BioRhythm and ELIZA, the "artificial intelligent" companion.
- TUNE TRIVIA (#52):** Quick, for one thousand dollars, NAME THAT TUNE! For up to six players.
- PROCOMM 2.42 (#55):** This has become the new standard in Public Domain communications software. Powerful and easy-to-use, this version is the one that works well on the Junior. **Requires 192K. TWO DISKS - \$10.00.**
- GAMES (#56):** Includes three casino games led by Las Vegas Style Craps that includes its own tutorial, three text adventure games, and an assortment of other arcade games that should keep everyone busy.
- Jr MUSIC MACHINE (#57):** One of two music programs on this disk, this program lets you play and see music simultaneously, and utilizes Junior's special sound capabilities.
- GOLF HANDICAPPER (#58):** Allows you to compute, store, update and print golf stroke handicap information for up to 75 players, using the handicap formula established by the USGA.
- PC-FONT (#59):** A utility program which enables your Epson or IBM Graphics printer to print a variety of fonts that includes block graphic, engineering, scientific, foreign language, and other special characters.
- SLEUTH (#61):** A murder has just been committed, and your job is to mingle with houseguests, search the house, and solve the crime. Every game is different. If you like the game of CLUE, you'll love SLEUTH.
- SAN MATEO EDUCATION (#62):** Educational games for children 12 years and older. Includes scramble, states, nations, chemist, and many more.
- BUTTON GAMES (#63):** Includes Buttonware educational and adventure games SOUTH AMERICAN TREK (You are a special investigator for the Federal Geographical Magazine and you have been sent to gather information about each country in South America. Your travels will take you from one end of the continent to the other where you will be picked up by a friendly submarine), and CASTAWAY (You are shipwrecked in the Pacific, slowly drifting through the fog until you find a deserted island. There you find countless treasures, but they are worthless if you cannot return to civilization. Will you be able to get off the island?)
- PC WRITE 2.7 (#64):** Newest version of best selling Public Domain word processor. Now has Spelling checker. **Requires 256K. Two disks \$10.00.**

**THE DESIGNER (#65):** a fantastic programming tool for BASIC users working with animated graphics on the Junior. You can draw on the screen in color, store your work in either "screen" or "sprite" form, and recall it later to make changes.

**MR. LABEL (#66):** many business and home uses - can create everything from simple reports to custom labels, prints envelopes, letterheads, price tags, ID badges, file folder labels, name tags, inventory slips, and much more. Will also retrieve and print information from databases such as PC-File and dBase III+. **Requires 256K.**

**GAMES (#68):** includes PC BOWL, Backgammon, and NIM.

**SIDEWRITER (#69):** Prints text files sideways. A must for spreadsheets that cannot fit into 80 or 132 columns across.

**DUNGEONS AND DRAGONS (#70):** The most popular of all games in this genre, this will place you in a world where the fantastic is fact and magic really works.

**BEYOND THE TITANIC (#71):** Enthusiasts of Infocom's famous text-adventure games will find this as exciting as Zork or Planetfall.

**JAPANESE (#74):** An introduction to this fascinating language. May be important to the businessman or traveler.

**PC-FILE+ (#75):** Power-pack update for the most popular shareware program of all time. **2 Disks - \$10.00.**

**PINBALL II (#76):** For all pinball wizards and non-wizards. Provides hours of challenge. Requires a joystick.

**MAHJONG (#77):** One of the most popular games in the world, it employs extraordinary graphics, and has extensive documentation for the beginner. Color only for Racore owners.

**AMY'S FIRST PRIMER - PCjr Version (#78):** This is probably the best collection of educational games in the world of Shareware for the pre-school. Includes sing-a-long alphabet, letter-matching game, numbers-matching game, among others. Colors are spectacular.

**ORIGAMI (#79):** Brings the ancient art of paper folding to your Jr world. Create rabbits, jets, penguins, samurai helmets, etc.

**BIBLEQ (#80):** Bible trivia covers a wide range of topics such as geography, personalities, incidents, and teachings.

**JRCONFIG.SYS (#82):** Updated version of JrCONFIG.SYS & CONFIGJR.SYS. The only must have utility for ALL PCjr owners. The most powerful and flexible software for getting a PCjr to run with expanded memory and additional disk drives. The list of special PCjr features is too lengthy to print here.

**1-2-3 WORKSHEETS (#83):** Among others, loan amortization, check book manager, etc. **Req. 256K, 2 dr, & Lotus 1-2-3**

**WORLD STATISTICS (#84):** Simple, menu-driven database of statistical and demographic information about the nations.

**PHRAZE CRAZE (#85):** Like Wheel of Fortune gameshow, easy to learn and play. Great fun for the whole family.

**EXTRA SENSORY PERCEPTION (#87):** Tests your ESP quotient. It makes for a very interesting time as you test yourself or your friends. This disk also contains a couple of versions of the game PAC-MAN for both monochrome and color systems.

**PC-DOS HELP (#88):** Good instruction and provides an on-line help capability for those DOS commands - just type HELP and the selected command for doing something. Two level explanations plus special batch files demystify the learning and usage of DOS. Special attention is given to the PCjr owner.

**MAKE MY DAY (#89):** A complete, computerized time management system for the PCjr owner. It contains an appointment calendar, a job scheduler, a time log, and an expense account manager.

**MEALMATE and others (#90):** Mealmate is a planning aid for people preparing meals for someone on a carefully controlled diet. Mealmate is the indispensable guide for anyone preparing meals that have to meet strict dietary requirements.

**MATH TUTOR (#92):** This elementary grade level tutorial supplies age-graded exercises and tests for a variable student body, and can be redesigned for special problems. It is fun and easy. For grades 1-6. **BASIC required.**

**FOOTBALL POOL MANAGER (#94):** written by fellow PCjr owner and loyalist Andy Kunz. This software program performs all of the tedious work that is involved with running a football pool such as generating the weekly pick sheets (+ and - odds), summary spreadsheets showing everyone's picks, and standings reports, among others. This has good documentation.

**GALAXY (#95):** powerful, easy-to-use word processor with pull-down menus. Highly recommended for the novice Jr owner.

**AS EASY AS (#96):** Called the LOTUS 1-2-3 of the shareware world, just spreadsheet looks and acts just like its famous commercial cousin. One of the best-selling shareware programs. **Requires at least 320K.**

**MOVIES ON LINE (#97):** user-friendly movie cataloging program with thousands of movies on file. **Requires 256K.**

**FILE EXPRESS (#98):** reviewed in the November issue, this database has received great praise from everyone. Its ease of use, menu format, mailing features, and report generator has made it quite popular already. **Requires 192K, 2 drives or one floppy plus a ramdisk. TWO DISK SET - \$10.00.**

**PCjr PATCHES (#99):** Must have disk for all PCjr programmers. Contains fixes that will allow you to run Turbo BASIC, Double-DOS (early versions), QuickBASIC 3.0, and Turbo C on the PCjr. As an extra bonus, there is a fix to run Chuck Yeager's very hot selling program Advanced Flight Trainer on the PCjr.

**A86 Assembler 3.07 and D86 Debugger 2.24 (#100):** Both of these famous programs come on this diskette. Written by Eric Issacson, A86 is a full-featured, fast assembler and D86 is a full screen debugger with powerful commands and features.

**GAMES (#101):** two great new games: SKYRUNNER, a challenging arcade game with impressive graphics, and MONOPOLY, a new version which allows full viewing of the game board, good color, and better game play.

**AMANDA'S LETTER LOTTO (#102):** Quite possibly our best educational diskette in our library. Contains 12 games for the pre-school child and features dazzling colors and graphics.

**BUTTON GAMES 2 (#103):** BUTTON GAMES #1 are text adventure games designed for those who don't have much experience with this type of game. BUTTON GAMES #2 are a little more advanced. In NEBULA, you are a NASA explorer sent to investigate a newly discovered star system. In DARK CONTINENT you find yourself in Africa looking for King Solomon's Diamond. On the third day you awake to find your native bearers have deserted you and taken all your money and supplies. Will you make it?

**CITY DESK (#104):** If you always wanted to be a publisher try this Shareware publication program. Automatic indexing, merged text files, headers and footers, includes Banner headlines and Layout options.

(Continued on page 29)



## THE NEWEST IN THE SHAREWARE LIBRARY

**PIRATE (#113):** A graphic adventure game with over 30 different color graphic screens. You find yourself moving through tunnels, caves and rooms looking for the pirate's treasure. When you find it you have to bring it home. Very well done with graphics as good as a lot of games I've bought commercially.

**AMPLE NOTICE (#114):** An appointments calendar program. Appointments can automatically set up a 'pop-up alarm clock'. The disk also has alarm clock program and a utility which prints addresses sideways so that envelopes can be addressed from a standard dot matrix printer.

**DMAIL (#115):** A professional mailing list system that can create any number of lists, limited only by disk space. You can sort addresses on any of nine sort keys, copy selected addresses from one list to another, target your mail by city, zip code, area code, key word, etc. A powerful program. **512k required.**

**ENCHANTED CASTLE (#116):** Your adventure begins at midnight in the center of a medieval castle. You will search for the Star Diamond and escape with the handsome (beautiful) prince(ess). The Enchanted Castle is full of traps and dangers! The castle consists of over one hundred rooms and escape will require many hours of play. **256k required.**

**HAPPY GAMES (#117):** Four great educational games for the very young. The first three are an excellent aid to pattern perception for young children and WIGGLEWORM is a nice arcade style game for one or two children.. I highly recommend this disk. **Joystick required.**

**MEAN 18 COURSE DISKS (#118) and (#119):** Our first two offerings this month are meant to be used with ACCOLADE'S best-selling "MEAN 18" golf game. Each of these disks has three courses. Disk 118 has Eagle River, Bay Tree and Palmer courses. Disk 119 has Firestone, Bear Creek and Desert Inn Country Club courses. Those of you who have MEAN 18 will want to have these extra challenges; those who don't have MEAN 18 are missing a lot of fun.

**BY THE NUMBERS (#120):** A numerology program guaranteed to entertain even the skeptics among us. You can find your lucky numbers, your lucky colors and your destiny. We know this is all hogwash (isn't it?) but its still fun to read. After all it did say I was versatile, quick-minded and courageous, all of which is true. Of course it also said I might be irresponsible and and vulgar, but then no program can be right all the time. **384k required.**

**TYPING ASSISTANT (#121):** If you want to learn to type or if you can type but need to increase your speed, this is the program for you. This program was designed to help the beginning touch typist and to help experienced typists sharpen their skills. Written by a fellow PCjuniorite, so give it a try!

**BOWLING LEAGUE SECRETARY (#122):** So many of you requested a bowling program similar to our GOLF HANDICAPPER that we found this disk just for you. Spare yourself all the work. It looks like this program is right up your alley. (Sorry about that?) This system can handle 18 teams, up to 5 bowlers per team, and up to a 50 week season. Programs are provided to enter scores, print standings (weekly), prepare Book average listings, final team/bowler standings, and either display or print individual team/bowler record sheets. See you at the fifth frame.

**THE PCJR CLUB**  
1121 Tower Road  
Schaumburg, IL 60193

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