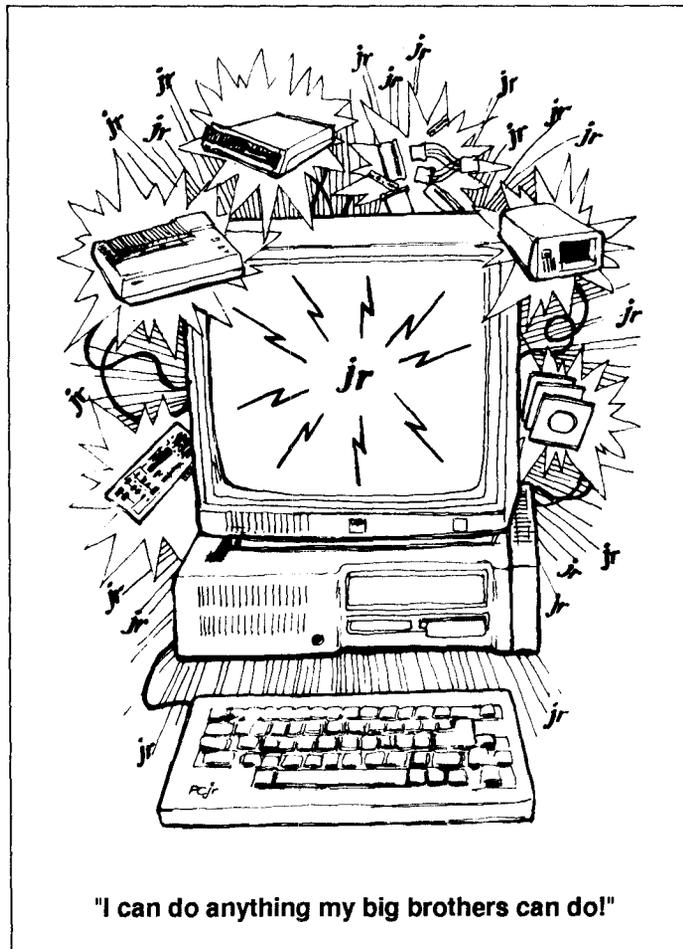## More Help For PCjr Users Now On Jr Power Pack II

The latest feature-packed version of jrconfig, a nice little word processor made especially for PCjrs, the updated version of list.com, help for adding 3.5 inch drives to your jr, a very classy arced file handler -- and more. We're talking about JR POWER PACK II, the new disk full of programs to help PCjr users get more out of their computers.

Last July we put together JR POWER PACK (Disk #52). Ever since then we have received a steady stream of letters from readers who have found it extremely useful. JR POWER PACK II should be just as helpful. Here's why:

Larry Newcomb, the author of jrconfig.sys, the powerful PCjr specific utility that thousands of PCjr users now use to boot their machines with, has come up with a new, enhanced version, which he calls jrconfig.dsk. In the past year Larry has updated jrconfig several times. The version on JR POWER PACK II is the latest, V. 2.14.

With jrconfig installed on your boot disk your PCjr will do a remarkable number of things while booting. Once installed, your computer will, if you desire, set the keyboard click, create a ram drive of any size, set your screen color, set the step rate (for 3.5" drives), install the int9 patch which fixes a major incompatibility problem, select the number of entries for your ram disk, cause DOS to recognize up to four disk drives, set the video display mode, reserve any amount from



**"I can do anything my big brothers can do!"**

**PCjr Lives!**

4K to 96K for video ram, and ..... Yes, there is more it can do, too!

In this new version Larry has also provided a program called statlin.com, which displays the status of your Caps Lock, Num Lock, Scroll Lock keys along with the date and time. This information is located on Line 26, at the bottom of your screen. It will also show, if you want, a spinning character to indicate your ram disk(s) are in use. Statlin also blanks your screen after it hasn't been used for a while. This saves your monitor's video display.

With jrconfig, PCjr users can easily set their computers up in the most efficient manner possible. With different config.sys files for different tasks, you can save yourself time and hassle. Jrconfig can replace the memory expansion software that came with the memory expansion unit you have installed in your PCjr. (It is not useful unless you have

# Notes on PCjr Compatibility

As you may have gathered by now, this column is becoming a regular feature of jr Newsletter. Here is our chance to report the latest information we have received on software compatibility. It's just bits and pieces of information, but we hope you find it useful and continue to send us tips you've learned, based upon your own experiences.

\* \* \* \*

First of all, everyone who is interested in running a variety of software on their PCjr should have the patch called int9jr.com, which is included on Disk #56 Jr PATCHES. It is simple to install and it solves a very common compatibility problem. The latest one we've become aware of involves ChessMaster 2000 version 1.2. Version 1.08 of Chessmaster would run on PCjrs without a patch, but Version 1.2, which we believe is the latest version, needs the int9jr.com patch or another fix, such as the Quicksilver Cartridge or PCjrXTRA, which we have included on the new Jr POWER PACK II. As we have reported before, the int9h problem crops up in Quick C, Quick BASIC, Microsoft Works, and probably another program or two that are supposedly incompatible, but with this simple fix will run just fine on PCjrs.

\* \* \* \*

How to use a patch ? That's a question we get every now and then from a confused reader. It's usually very simple. In the case of int9jr.com all you have to do is copy int9jr.com to your boot disk (the DOS disk you use to start up your computer). Then add the line
### INT9JR
to your autoexec.bat file. This will put the patch into effect every time you start up your PCjr. Of course, this means you have to boot your computer with the disk that has int9jr.com on it BEFORE you start the software that has that compatibility problem.

Other patches, such as the one for DOS 2.1 ( another one that every serious PCjr user should have) need to be installed by following several steps which actually modify the software in question. These patches take a little longer to install, but they are easy to do and once done, it's done forever. By the way, the DOS 2.1 patch is required, not because of your PCjr, but because there are bugs in DOS 2.1 itself. The bugs were eliminated in later versions of DOS, which are also compatible with PCjrs, but very few PCjr owners need to move up to these versions of DOS unless you intend to add 3.5 inch drives to your system or use some of the advanced features provided by later DOS versions.

\* \* \* \*

128K jr users take heart! Response to our recent Reader Survey shows that there are many of you out there still getting good use out of your PCjrs with the original (enhanced) memory of 128K. Here's a example: Rick Keating of Bridgeton, MO, says he's operating with 128K, one drive,

two joysticks, a parallel printer port and an Epson MX 80 printer. Most of the time he uses his PCjr for word processing and his pre-school kids for education. He lists his favorite software as PC-Write, Bradford and Bradcon (for fonts), Kindercomp, Kidwriter and Flight Simulator (especially the San Francisco Star scenery disk).

\* \* \* \*

Jim Nugent of Peoria, IL reported to us recently that Framework II is his favorite program on his 640K PCjr, which has a Tecmar jr Captain that Jim expanded himself, soldering new chips and changing the jumper on the circuit board. Here's what he says about Framework II: "Once you learn it's ins and outs, it's powerful for text and communications. Framework will upload and download files from memory or from disk on the jr with no problems."

Jim also reports that he solved a problem with Paperback Software's VP-INFO Version 1.0, which intermittently bombed until he added the line buffers=99 to his config.sys file, forcing the software to load above the lower 128K and video buffer. This is automatically accomplished when you use Larry Newcomb's jrconfig.sys or the latest version jrconfig.dsk, which is on our new JR POWER PACK II (Disk #65).

\* \* \* \*

Quicken Version 2, the latest version, was listed as a favorite by many jr Newsletter readers who responded to our recent reader survey. (It's not too late to send yours in if you've been procrastinating -- we'd like to hear from you. Because Quicken was listed by PCjr users as a top choice, you can be sure it's compatible. Quicken writes checks, keeps financial records, helps you keep up with income and expenses, make budgets and is easy to use because it works in much the same way as you work with a checkbook. Written in C, Quicken is fast. Example: You can look up a check you wrote 1,000 checks ago in 1 second. Stella Delaney a PCjr user from Stanhope, NJ says, "Very forgiving program -- I really like it!" Quicken retails for $49.95, but Stella reports she got it for less from Telemart (1-800-426-6659).

\* \* \* \*

Dan McConnell of Cedar Springs, MI says his favorite

software list includes Writing Assistant, Newsmaster, Print Shop, Super Calc, Silent Service, Flight Simulator, Wizardry nd Jet. His 640K PCjr, expanded with Racore Drive II Plus, works "flawlessly." He installed the DOS 2.1 fix and uses the jr Video Cartridge, which have together solved any incompatibility problems he's run up against.

Dan reports therefore, that he was disappointed in Personal Computing Magazine, which published a column recently with a reference to PCjrs as "glorified bookends."

"My computer system can do word processing, spreadsheets, telecommunications and games. So why should I go out and spend money for a new updated system that will do the same thing my PCjr does?"

* * * *

Another good point about compatibility is made by Skipp Fichter of Redondo Beach, CA. Skipp says his PCjr runs dBase III Plus, Lotus 123 V.2 and WordPerfect just fine and the only problems he has had have been copy protected versions. "I have sent software back for not letting me know it was copy protected in the first place," Skipp says. It's true, copy protection schemes can cause some software to fail on PCjrs, whereas the non-copy protected versions of the same software run without a hitch.

* * * *

As you can tell from the items in this column and others we have published, there are many tools at your disposal to overcome software compatibility problems. Int9jr.com, pecial jr cartridges, avoid copy protected versions, PCjrXTRA, and jrconfig, which easily solved one PCjr user's problem with Thexdar. (We've published a complete letter on this in the Reader Feedback section of this issue.) We believe that with one, or a combination of these "compatibility tools" you can get just about any software to run on your PCjr.

More on PCjr compatibility next month. Keep those letters and surveys coming.

# Fun With BASIC

By Ray Stroud

With the introduction of Advanced Basic (BASICA), many new statements were created to make it easier for the programmer to draw circles, squares, and other designs as well as to color and add titles.

Here is a short program which plays with the CIRCLE and PAINT commands.

```
10  CLS: KEY OFF
20  SCREEN 1
25  COLOR 0,0
30  CIRCLE (50,100),40
```

In line 20, we selected the medium resolution graphics mode. Line 25 selects a black background and the 0 palette r a choice of 4 foreground colors. Line 30 locates the enter of the circle. The 50 will be approximately one-sixth of the screen width and the 100 will be in the vertical middle of the screen. The 40 is the radius of the circle - 40 pixels.

Watch closely as the circle is created and you will see that it has four starting points that come together to form the circle.

This is a step to increase the speed of the program and is inherent in BASICA. Now add the rest of the program.

```
40  PAINT (50,100),2,3
```

Any point within the circle will actuate the PAINT statement. I simply chose the center of the circle. Remember, we are using palette #0; therefore, the 2 will give us a red circle and the 3 will give us a yellow border. Now we will make a couple of ellipses. The first one will have a long X axis and the second will have a long Y axis. This is accomplished by entering the aspect ration at the end of the CIRCLE statement. The aspect ratio is obtained by dividing the Y axis by the X axis. If the aspect ratio is less that 1, the circle will be flattened vertically, and if the aspect ratio is greater than 1, the circle will be squeezed horizontally.

```
50  CIRCLE (150,100),40,,,,5
```

Center the screen with a radius of 40.

```
60  PAINT (150,100)
```

The default color of the palette which is always 3.

```
70  CIRCLE (250,100),40,,,,1.3
```

We did not paint or specify a color, so the default value of 3 was used to color the border.

```
80  END
```

*(The Above Article Was Originally Published in the OKC Jr. Orphan's Chronicle.)*

# Be Careful Before You 'Retry'

WARNING: Answer "Abort, Retry, Ignore" Messages CAREFULLY.

If you get this message from DOS when attempting to copy files from one drive to another, DO NOT switch disks in the target drive and hit R for Retry. You will end up with a hopelessly scrambled mess on the disk.

Such a situation can occur if you tried to copy onto a disk with the write-protect notch covered. The temptation would be to just insert a different disk and "Retry". DON'T DO IT! When DOS prepares to copy files, it first reads the directory from the target disk. If you switch disks, it will write the in-memory copy of the directory onto the new disk that you inserted. Your new disk will erroneously list the directory of the other disk and be unable to access those files. This is because those files aren't really on the new disk, just the directory is there.

There are several other ways that a wrong response to "Abort, Retry, Ignore" will produce scrambled contents on a disk. The safest method (if copying files is involved) is to Abort all such operations, correct the problem, and then key in the necessary commands once again. Retry is safe for simple operations like DIR that do not involve moving data from one disk to another.

EDITOR'S NOTE: jr Newsletter gets questions in the mail from PCjr owners every day. So many, in fact, that we apologize for not being able to answer them personally. This Questions and Answers column is our way of responding to the questions readers ask about their PCjrs. We can't answer all of the questions we receive, but we try to answer those that are either asked by several readers or those we feel will be of interest to PCjr owners in general. If you have a question that you do not see answered here, or elsewhere in this newsletter, please feel free to write to us at jr Newsletter, Box 163, Southbury, CT 06488

### By Rene Waldron

**Q.I have long since passed the days of a 128k PCjr. I now have 640k and for all practical purposes have a PC. My question is this; I have a lot of programs that are cartridge based, but I'm annoyed at having the system reset every time a new cartridge is inserted or taken out. Is there any way to transfer the programs that are on the ROM cartridge to disk? This would be much more** convenient and allow for their use from a hard disk with a good menu system, or for that matter, just a floppy disk swap.

A. Though there are programs which do exactly that for some other computers, we have not heard of any for the jr which work for all the cartridges. There are at least three completely different cartridge systems. Cartridges don't even have to be operating under DOS! They may set up their own operating systems which precludes using your disk drive. The ROMs can be programmed to rely on the physical presence of the cartridge itself and the makers can prevent the programs from operating unless the cartridge is physically present. The easiest, yet most difficult to by-pass is to have a code IN the cartridge, at a specific address, and to have the program check for this periodically.

Resetting: Many programs leave "garbage" in memory when they exit. The system reset (a warm boot) upon inserting and removing a cartridge insures that this is all cleared from memory.

Note: If there's enough interest in this subject, I m write a short BASIC program to allow our readers to poke around in the cartridges to see what's there. Perhaps someone else will carry it from there.

**Q. What network systems work with the jr, other than the IBM Cluster system? Will a 128k jr. work well as a "terminal" for a larger, perhaps 808386 computer and at what relative speed?**

A. All networking should be installed and made to work by a firm which specializes in this area. It's possible that some standard software supplied by these consultants will work fine. Software / hardware combinations intended for the PC won't make it. Although 128k is not much memory for the complexity of connecting to a network, some "dumb" terminals have less. One reason is that a version of DOS later than 2.1 should be loaded to take advantage of the enhanced file management and all of them including DOS 3.3 take up more memory. Another problem arises because the jr doesn't have true DMA along with some other memory-management differences, but it can be configured as a dumb terminal.

A pseudo-network may be set up with almost any other compatible microcomputer by using one of the communications software programs available. The host computer becomes a "file server" and the jr will operate at its normal speed using the files of the host. If the host compu can be configured to run the programs from a remote

dumb terminal as well, then the speed will be directly related to the amount of jr keyboard interaction with the host and the baud rate. (In the jr, 4800 max. without error.) It would be a bit e connecting to a BBS or a commercial service such as the Source or Compuserve.

**Q. Does DOS 3.2 work on jr.?**

A. Yes, but remember DOS 3.2 has reported bugs even when running on other compatibles. For speed, complicated batch files and other specialized needs, such as locking out files, etc., DOS 3.3 is the preferred choice. It is really bug-free and works beautifully. Even version 3.3 needs the patch for some disk drives though. It seems that certain brands of drives cannot handle the head step rate that this version sets up and they are very noisy whenever a disk access is made and may cause read / write errors. A program for all DOS versions and any brand of drive called "STEPRATE.COM" which is now available from the jr Newsletter Software Store (it's included on the new JR POWER PACK II) automatically adjusts the step rate, quiets the drive and solves the problem nicely.

**Q. How much would the Legacy 8087 co-processor help a CAD program?**

A. An 8087 will help tremendously, but only if the 8087 co-processor board is specially made for the jr. You MUST check with the manufacturer. The speed-up is dramatic if the CAD software recommends a math co-processor. A series of tests made with standard PCs, XTs, ATs, Crays, VAXs and ers, using the "Savage Benchmark" for both speed and accuracy tells it all. (Go to your local library, request a copy of Sky & Telescope, March 1987 and do the tests yourself. There is a BASIC version for you to use on the jr.) The article summarizes the tests by remarking that adding an 8087 chip is much more cost and speed effective than upgrading to an AT! The test runs in Turbo Pascal showed a 95% reduction in run time with an accuracy of 1 part per million with the 8087 chip installed. QuickBASIC ver. 3.0 and 4.0 showed phenomenal differences.

**Q. The 64k internal slot appears to be a standard card slot. Is there a possibility that an "AT" type accelerator card can be used in this slot?**

A. No. The pin-outs (ie. the pin connections) are not the same as on a PC or an AT and the card would not be compatible on this basis alone. Memory lines, clock lines, speed and address differences make it a near impossibility. The nearest you can come to 16-bit which is "AT" type processing is with the inexpensive NEC V-20 chip. It uses the normal 8-bit addressing but internally uses 16-bit processing for quicker operations and is totally compatible with the instruction set of the 8088. The speed increase that is apparent to the user is in the neighborhood of 10% - 30% depending on the type of processing being done. You can also install the Nickel Express jr Turbo-Board being sold by J Rau Consulting (290) 745-9284, which allows you to

switch between the PCjr's normal speed and up to 8 MHz, depending upon the type of memory expansion unit you have. IBM side-cars work at the top speed of 8MHz, but other expansion units run at between 6.77 and 7.37MHz. All of these are substantial increases in speed. Combining the above methods results in real power for your PCjr!

**Q. I find your publication very helpful. My system was crashing until I installed your DOS patch (Disk #40). I have another problem that I hope somebody else has already solved. When I re-boot the system whether with <Ctrl-Alt-Del> or I power down and up again, my screen breaks up in broken lines. I have to power down the computer for a few minutes and then it starts normally. I thought the problem was the monitor so I bought a re-built one and the problem seemed to disappear but it reappeared again. I re-installed the old monitor and things were better for a few days. Then we went back to the old problem. (The writer goes on to describe his complete set-up including boot software, autoexec.bat etc.)**

A. This kind of problem cries out for an easy fix. There may not be one, but here are some suggestions for you to try whenever you encounter erratic behavior from your computer. These steps assume you have ruled out software as the source of your difficulties and that you have already tried a simpler booting disk arrangement to see if some part of the booting software, perhaps in the autoexec.bat is at fault. Heat combined with a poor connection or a failing chip may be the culprit. Turn off the power and remove the plug from the wall receptacle. Now go inside and check to be sure that all the internal and external boards, plugs and cables for the jr are firmly seated. Pull them part way out and re-seat them; this should wipe clean the contact areas. With the cover(s) back in place, turn the power back on and flex any cables where they are clamped by plugs while watching the monitor; a broken or bad connection could show up.

If you have a Tecmar jr Captain you should know that some of them have an inexpensive receptacle (white nylon, I think) inside, near the jack for the power input at the rear which seems to lose contact with age. Removing this receptacle and soldering the three legs of the transistor directly into the board solves innumerable heat related problems. (An experienced technician familiar with printed circuit work ought to be the only one to attempt this.)

# DOS Tips For New Users

**By Doug & Betty Bullman**

First, for the very, very new beginners, lets answer the questions, "What is DOS?" and "What can it do for you?"

DOS stands for Disk Operating System and is absolutely necessary to make your computer work. It is the input/output system that lets your computer "talk" to you and lets you enter data. It automates repetitive tasks through BATCH files. It controls the way information is displayed on the screen and the way your computer interprets commands. Finally, it provides file management utilities for disk preparation (formatting, disk copying, etc.) and file operations (file copying, renaming, etc.).

There are two kinds of DOS commands. (1) Internal commands which stay resident in memory when DOS is booted, and (2) external commands (utility or program files) which stay resident on the DOS diskette. In order to use an external command, DOS must be in one of your drives or the command file must be on the diskette in use.

The following exercise uses the external command FORMAT (prepares a blank diskette to receive information and to analyze it for defective tracks) and the internal commands, COPY (copies files) and DIR (lists a directory of file names). The exercise is designed to use two disk drives, A and B. *

1. Insert DOS in drive A and close the gate. Turn on the computer and enter the date and time, pressing RETURN after each entry.

2. Place and unformatted disk in drive B and close the gate. At the A prompt type the following command: Format B:/s and press the RETURN. This will prepare the blank disk to receive information and put the system (hidden files) on the disk which makes it bootable. At the end of the formatting period the question "Format another (Y/N)?" will appear. Type N and the A prompt will return.

3. At the A prompt type, COPY *.* B: and press RETURN. This command will transfer all the files on the disk in drive A to the disk in drive B one at a time.

4. At the A prompt type DIR and press RETURN. A list of the files in drive A will appear. To list the files in drive B type DIR B: and press the RETURN key. The list should be identical to the one in drive A.

The following exercise is concerned with the following internal DOS commands:

DIR (lists a directory of file names)
CLS (clears the screen)
DEL or ERASE (deletes files)
COPY (copies files)
REN (renames files)
TYPE (displays a named file on the screen)
PROMPT (changes the system prompt)

Place another blank disk in drive B and format it using the procedure given in #2 above, and place it in drive A. From now on <cr> stands for pressing the RETURN key and Ctrl-Z<cr> stands for holding the Control key while pressing th Z key (same as F6 key). You will now create your own file.

1. Type the following command:
COPY CON:A:TESTFILE.ONE<cr>.
Here is a short file written by me.<cr>
I will call it Testfile.<cr>
I will give it an extension named "one".<cr>
Ctrl-Z<cr>

2. Display your file. At the A prompt type the following:
TYPE TESTFILE.ONE<cr>.

3. Make a copy of your file by typing:
COPY TESTFILE.ONE    TESTFILE.TWO<cr>.

4. Combine the two files by typing:
TESTFILE.ONE+TESTFILE.TWO TESTFILE.#3

5. Display a directory by typing:
DIR<cr>

6. Clear the screen by typing:
CLS<cr>

7. Display TESTFILE.#3 by typing:
TYPE TESTFILE.#3<cr>

8. Rename TESTFILE.TWO by typing:
REN TESTFILE.TWO TESTTWO.TXT<cr>

9. Use a wildcard * by typing: DIR TEST*.*<cr>

10. CLS

11. Delete a file by typing:
DEL TESTFILE.ONE<cr>

12. Display the directory. You should know how to do ᴛ by now.

13. Delete all the files:
DEL TEST*.*

14. Run a directory. All the files should be deleted.

Tired of the A prompt? Change it by typing:
PROMPT HELLO THERE<cr>.
Have fun.

*(This Article Was Originally Published
In The Bytes Of Las Vegas Newsletter.)*

* EDITOR"S NOTE: You can do this with only one drive, too. Dos will ask you to switch diskettes at the proper times.

## Is Your Break On or Off?

If you find you are unable to stop a program by typing your break keys, you may not have set break on. Break is an internal DOS command, so you can type break on or off at the DOS prompt at any time.

When break is on, DOS checks every time it performs a function to see if you have pressed the break keys. Otherwise, it only checks when working with the scre~ keyboard, printer, or serial port.

# Why 128K is Really 106K

If you want to figure out exactly how much memory your jr has available to run software programs, don't rely on the advertised totals - 64K for the entry level jr, 128K for the enhanced, plus whatever you may have added. You may try to boot up a program that really does take 128K and find, to your unpleasant surprise, that you jr will choke on too large a mouthful.

That's because, although your jr has all the memory it's said to have, all of it is not available to run programs. For instance, the video display takes 16K, **cassette BASIC** (which is permanently installed in jr's read-only memory) takes 4K, and **Cartridge BASIC** takes another 2K.

In addition, if you are using DOS, or it is built into your software, you will use up another 10K to 30K. DOS 2.1, for instance, takes up 24K.

## PC Enterprises Catalogues
## Finally On Their Way

Many PCjr owners have been waiting for catalogues from PC Enterprises for months, but they should be getting their copies very soon, according to Pat Calabria, PC Enterprises chief engineer.

Printing problems, along with an unusually large number ⌐f requests for catalogues caused the delay, Calabria says.

￼e new catalogues consist of 44 pages of PCjr hardware and software products. They are available free of charge by calling 1-800-922-PCJR.

## How To Figure Out When Your
## jr Newsletter Subscription Expires

If you want to figure out when you will stop receiving your favorite computer publication, it's easy.

Just look at the figure on the top of your mailing label. You will see a figure, such as 8809. This figure refers to the last issue of jr Newsletter you are scheduled to receive. Thus, 8809 means your subscription will expire with the September 1988 issue. That will be the last issue you will get -- unless you renew.

Unlike most of the biggies in the magazine publishing world, we don't try to get you to renew many months ahead of when you actually have to. We send a business reply envelope attached to your newsletter one month before your last issue and also with your last issue.

If you let those two reminders pass by, you'll be on your own, without the friendly support of jr Newsletter.

(As an incentive, and also as thanks for your past support, we are now offering those who renew a FREE DISK COUPON. It is enclosed in the business reply envelope ￼ched to your final copies, and it allows you to select any ￼k you want from the jr Newsletter Software Store when you send in your renewal.)

# New Chip Prices Skyrocket
# Boosting Costs of Memory Boards

The prices of drams, the chips installed in memory expansion units for PCjrs and other computers has increased dramatically in the past few months, causing manufacturers of these units to raise their prices.

Whereas a year ago manufacturers could purchase large quantities of drams for under $3 each, they now have to pay in the neighborhood of $9 each -- and often have difficulty obtaining as many of them as they need.

A 512K memory board, which will bring your PCjrs total memory up to 640K, requires 16 drams. This means manufacturers costs for these boards have risen almost $100.

Most computer industry forecasts we've seen indicate that the prices will continue to rise before they level off sometime later this year.

## PCjr User Loves Compuserve, Writes Textbooks With WordPerfect

I have found **Compuserve** very helpful in expanding the use of my PCjr. Recently I downloaded an excellent Polynomial Regression work sheet for **Lotus 1-2-3** (By D. Graiver). I checked it out with regression program in a math book and it verified the results. The neat thing about this program is that it runs automatically with a lattice of macros. In addition, you can add other features to it and save the modified program.

Presently, I am writing two engineering textbooks on my PCjr using **WordPerfect.** The "end note" feature in WordPerfect is great for listing references. You can put them in as you develop and edit text and they all wind up on the last page which I title "References," all correctly numbered. The text saved to floppy disk can be printed out on a laser printer at work. This system works so well that it has made writing a pleasure rather than a chore.

*William Glaeser*
*Columbus, OH*

## Procomm User Uses RAM Disk For Faster Downloading

One reader commented in the March issue that **Procomm** downloads slow to disk. This is true, but I have found a way around this: download to a RAM disk. By using a RAM disk, I have even used Zmodem, the fastest protocol I know about.

The new Procomm, **Procomm Plus V.1**, is wonderful! It has a 200 number dialing directory with multiple directories available. It supports many more protocols plus you can install your own. Making auto logon script files is even easier with the Record function that writes one for you! The host mode now supports individual password protection and doesn't allow an unverified user drop to DOS. You can also define your own file lister and editor.

Procomm Plus requires 192K memory free. It should run on a 256K jr, but I know it runs on a 640K jr with a 200K RAM disk.

*Jay Hofacker*
*Lexington, KY*

## Reader Benefits from Newsletter's Easy to Follow Articles

I've read issues of Personal Computing and other similar magazines and sometimes feel overwhelmed by the amounts of information provided.

With your newsletter, I inevitably read something where I say "That's exactly the problem I experienced" or "That's the

### JrNewsletter Welcomes Questions

We enjoy hearing from fellow PCjr owners and will do our best to answer questions and help solve any problems you may have. Please, however, send your questions in writing. We are a part-time organization and are not set up to handle telephone calls. Please write to: jrNewsletter, Box 163, Southbury, CT 06488.

same question I had."

I have an advanced degree in business and am used to reading various manuals and textbooks, and I still find no better substitute for articles that are succinct and easy to follow, which is exactly the format of your newsletter.

Enough of the flattery. In the future how about some comments on accounting software or educational software for the kids in the family.

*Bruno Dacanay*
*Chicago, IL*

EDITOR'S NOTE: We don't usually publish letters that are flattering to us because we doubt you want to read them, but we thought many readers might take heart from the fact that even a person with an advanced degree finds it difficult to follow some of the writing on computers that appears in most computer magazines. And, yes, we will try to review more accounting software and educational programs.

## Here's How to Shatter
## The 2400 Baud Barrier

In a recent issue of jr Newsletter, you indicated that people have not been able to get the serial ports on PCjrs to operate reliably at more than 2400 baud. I had the same problem until I remembered that the jr steals cycles to do sk input and output.

So I set up a memory disk and routed the data being received by the jr to the memory disk. My communications software does no disk I/O during data transfer and thus did not have to be on the memory disk.

As a result, my jr transfers data reliably at 9600 baud. It is also important to eliminate any other software that might steal the CPU, such as a reminder program which regularly wakes up to check the time, or a program which updates the time on the corner of the jr's screen.

*Wayne Stevens*
*Fairfield, CT*

## Thexder DOES Run
## On PCjrs With Legacy

Just a note on compatibility. A reader of jr Newsletter said that he could not run **Thexder** on his jr with **Legacy** expansion. I have Legacy II expansion, upgraded to Legacy III, with 640K, two 360K floppies, one 1.2MB floppy, two hard drives (20 & 30MB), plus.

I have run Thexder for over a month several times a week, when not several times a day, and never had any problem whatsoever, in 16 colors and three voice sound.

I usually use DOS 3.3 with my config.sys set to:

device=jrconfig.dsk -c -d2 -j -p -t3 -w79 -x
(This requires using the latest version of jrconfig, which is on JR POWER PACK II (Disk #65)) Sometimes I boot from drive A using DOS 2.1 and config.sys set to:

device=jrconfig.dsk -c -d2 -t3 -w79

Same excellent result every time. As you see, there is no -vxx (no memory for video) and I do not run any other program that does.

Conclusion: Thexder will run using Larry Newcomb's **jrconfig.dsk**. It does not run on my computer when I just boot with no config setting and does not run using legacy.com either, which is to set the jr to PC mode or equivalent. Better said, it relocated the video memory, but no luck with this either, as I said.

Since I use jr config.sys and later jrconfig.dsk it seems that my jr overcame many conpatibility problems.

Thanks for publishing jr Newsletter. I am very satisfied with it. Very informative, especially if you have a PCjr.

*Antonio D. F. Martins*
*Bridgeport, CT*

## More on Speeding Up
## Writing Assistant

Your July '87 issue contained an aswer to a reader's question about speedup up the **IBM Writing Assistant** program. I followed your advice and it made a world of difference. (The writer is referring to substituting the version of WRITE.EXE that's on the sampler disk for the original version on your workdisk, then deleting WRITE.SWP from the workdisk and copying WRITE.NON to the workdisk from the sampler. See July issue for details. -ED)

I followed your advice and it made a world of difference. However, I found recently that the change does not permit you to print to a disk. I wanted to convert some files to ASCII text for transfer to another system and each time I tried to print I received the message "wrong file name."

After exhausting all the other ideas, I used my original program disk and it worked fine. Something must happen when you substitute the sampler programs for the originals. I don't print to disk very often, so it's no big deal. Just thought you'd like to know. The speed of operation with the changes is well worth a minor inconvenience once in a great while.

Your publication is great. I've learned so much from your articles -- particularly during the past six months. I'm semi-retired and work out of my home. Hence the use of my jr for business and financial matters. Couldn't do without **Lotus 1-2-3**, utilities like **Sidekick** and those from jr Newsletter's Software Store, like JR POWER PACK that makes my system more flexible and work faster.

I enjoy playing around with resident programs and utilities and only wish I had a hard disk so I could do more with DOS and file management programs. Hope to get a hard

disk one of these days.

What I'd really like is to speed up the processor. Is the **V20** chip the only way? A clock speed of 7MHz and a memory of 1 MB or more would put me in jr heaven.

*Walter K. Neubauer, P.E.*
*Fayetteville, NY*

EDITOR'S NOTE: The V20 chip is certainly the least expensive way to boost your PCjr's processing speed (under $20). But greater speed is available with the **Nickel Express,** from Paul Rau Consulting (see ad in this issue). With IBM expanded PCjrs a clock speed of 8MHz is possible with the Nickel Express. Others will go to 6.77 or 7.37MHz, which is still heaven, if you place a high value on computing speed.

## PCjr User States Opinions
## of Software, PCjr Life

What follows includes passionate opinions of the state of personal computerdom and various kudos and critiques of products I've used.

As a public school teacher, I have wondered for years why the computer industry is so neglectful of the largest group of professionals in the USA. I'm not talking about the many and varied teaching programs on the market, most of which I don't know much about, but machines and software for the use of teachers. The industry seems to think that low resolution display, small RAM, single or double floppy machines designed to run simple repetitive teaching programs should do just fine for us. In reality I need a high resolution, graphics oriented, large RAM (no 640K limits, please), hard drive machine driven by software conceived by enlightened professionals who can write programs that have an interface virtually without learning curve and are fast and efficient. Hardest of all, this must be achieved at a low cost, given teachers salaries. Here and there, hints of such things exist.

To be more specific, I solved my problem of finding a program with which to develop worksheets, tests, etc.; its name is **First Publisher** by Software Publishing. Along with a **Logitech C7** mouse it gives me those capabilities and runs just fine on my jr. The interface (which looks suspiciously like some other machine's) is easy to use, but to call the program quick, or efficient would be unjustified flattery, and the resolution is not high. On the other hand, Jon Kane's **Grade Guide** gradebook program is very impressive and I can't wait for the latest upgrade; ironically, it is freeware with a minimal registration fee - a genuine rarity in the education world.

For that matter, why confine such goodies to the education business? Everyday tasks can benefit from similar advances in the technology. Which of us really needed (before we bought one) a microwave oven, dishwasher, vcr, or other such denizen of the present era? I believe that if you can develop a product that people will use regularly and

convince them of its worth, sales will take care of themselves. The very lack of "home" computers is the result of an industry constantly saying "they don't really need that", or "how can the average person understand such advance: technology?"

Further cases in point: The wordprocessor I'm using is your highly recommended **PC Write**. I bought it from you after giving **Word Perfect** a try but declining to pay the tab. Its capabilities are extensive, but the interface and non-intuitive nature of its operation drive me bats. Since I don't use it every day, relearning its idiosyncracies becomes very tiring and defeats whatever advantages it may have for such usage. **TurboTax**, which I've just put to good use is on the other end of the scale. For about the same price, it offers extensive capabilities, an easy-to-learn interface closely related to **Lotus 1-2-3**, and efficient use of my time. Such should be the rule, not the exception. Another recent purchase of merit is **Calendar Creator Plus** from Power Up! I used it immediately and our church is about to add it to their hard disk system. Simple does not mean simplistic!

I appreciate your publication but consider its existence to be inglorious. I mean that you are a constant reminder of jr's obsolescence which infers a potential inability to take advantage of the most recent advances of the art. Without jrNewsletter, however, I wouldn't be doing as well as I am with my own jr, and for that I am grateful. Tips, hints, advice - all these are why I read it. Balancing the desire to add a hard drive, 8 meg clock and other goodies with cold hard reality (cash) is easier with the facts gleaned from jrNewsletter Keep up the good work.

Finally, some glitches as yet unsolved. My mouse will not work with cartridge **Lotus**, and its cursor appears in **Flight Simulator**'s window instead of the instrument panel! DAC refuses to patch or rewrite accounting v.2, and I paid too much for First Publisher and the mouse. I didn't know whether they would work on the jr and sought out a jr specialist instead of PC Connection, whom I have yet to fault. As yet, there is still no reasonably priced capable music (word)processor which can meet my needs. Such is the jr life.

*Norm Ashley*
*Grand Junction, CO*

## Compatibility And Other
## Tips From Avid PCjr User

Since you asked for reports on software compatibility for the jr, I thought I would pass along some info on some recent trial and errors on my jr which is 640K, 2-drive (PC Enterprises).

Epyx, **Create A Calendar** , even though the box that the program comes in states that it will not work on the IBM PCjr, it does work on the jr and prints out a very good calendar if you have sufficient time to wait for the printout as it will t

15 to 18 minutes to print each copy. I do not recommend trying to get any information from Epyx as I wrote them when the program was first advertised last summer and several times thereafter but never received the sample disk or any other information on the program; however, my local Waldenbook Store finally got me a copy on a special order.

**Showmaster II** by CW Communications/Petersborough will not work on my jr, but the people at Petersborough were extremely prompt and courteous to both written and telephone inquiries about my problems in attempting to run the program. In fact they even put me in contact with John Wolfskill who wrote the program and Mr. Wolfskill not only was courteous in answering all my dumb questions, but offered to rewrite the program to make it jr compatible if I can get a list of the differences in the video addressed between the jr and the IBM PC. If this becomes an accomplished fact, I'll be glad to file an up-date report on the results.

Several of us have reported on the use of **Radio Shack's Realistic Amplified Speaker System**. However, I don't believe that anyone has mentioned using the **Archer Mini-Amplifier Speaker**, which is also available from Radio Shack. The Archer version requires a couple of cords with RCA connectors which the dealer can supply for whatever lengths your system will require. The beauty of using the Archer is that you can get a much superior sound system by plugging in the expensive stereo speakers that you "borrow" from your kids or your wife as I did. The amplifier and cords ran about 16 or 17 bucks with tax.

My configuration, like a great many other jr systems includes the **IBM Proprinter**. For a long time everyone I contacted told me that it was not possible to obtain color ribbons for the Proprinter; however, Ribbonland, P.O. Box 506, Exton, PA 19341, carries red, blue, green, purple, yellow and brown for the Proprinter as well as matrix color ribbons for dozens of other brands. Often the ribbons are on sale for as little as $3.50 each, which is what I paid for my last shipment. The color ribbons are a good adjunct to the good old **Fontasy** program which I obtained through jr Newsletter and which remains one of my favorite programs. I frequently use Fontasy as a word processor. Enclosed is an imperfect copy of a family newsletter which was prepared with Fontasy and printed in 5 colors on the Proprinter. All of the final draft copies were mailed out or given away, but you can see that it's a lot of fun trying to work the bugs out.

Keep up the good work, the info you carry in the Newsletter has really been a big help to this amateur. I hope some of the readers who have experience with Mice (Mouses?) will file a report.

*William G. Mullins, Versailles, KY*

**EDITOR'S NOTE**: We're sorry we can't reprint Mr. Mullins' family newsletter, but we can tell you it was a great example of what you can do with Fontasy - it was colorful, humorous, and full of graphics.

# Why I Chose PC-Write
# As My Word Processor

By Bob Magnuson

The primary reason why I have made **PC-Write** my main word processing program is printer support. Finally, after fighting with **WordStar**, **WordStar 2000**, **Microsoft Word**, **PC Writer** (IBM product), two versions of **Word Perfect**, **Writing Assistant**, **Brief**, **Personal Editor**, and perhaps two more products, I have found an editor that FULLY supports my Smith Corona D-100 printer.

Now, I don't hate my printer... It's just that all the above "fancy" programs just don't include my D-100 in their printer list. And, I NEVER thought my 'ole printer actually did do superscripts (1/2 above the line, like a footnote number) and subscripts (1/2 below the line).

But, I run a test file that exercises all the print fonts through PC-Write and I see things I never thought my printer could do.

PC-Write gives you printer flexibility in an easy way, and a "not-so-easy" way. You will run a program on your PC-Write program disk (MENUPRT.EXE) to view the list of supported printers, and then you pick yours out of the list, then you have a "PR.DEF" definition for printer file created. If your printer is not on PC-Write's list, good luck with the above mentioned "fancy" programs! I found that my "italics"

## Why I chose PC Write

mode was not working after I selected my D-100 printer, but it took only fifteen minutes to text-edit the appropriate italics code into the "PR.DEF" file. From then on, every time I use PC-Write it fully supports my printer.

The "not-so-easy" way of getting all those fonts is including "dot commands" into your text. While PC-Write has TONS of on-line help screens, you still must place dot ·commands, such as ".R:I" at certain positions in your text to tell the printer print program ("PR.EXE") you want a specific font style in your document. That is, ".R:I" placed on a line by itself tells the printer program to make "the regular font style Italics (I)"

Thus, if under ".R:I" on another separate line you place ".R:B", you have added boldface to your italics mode, for the entire document, or at least until another ".R:?" entry is added.

For isolated highlighting, underlining, or other effects, PC-Write allows you to mark words and sentences for temporary font changes. This is the way I'd wish to see it done, by marking text rather than adding "dot commands" into the document. These dot commands break the visual flow of my text, and until I get the commands memorized, I have to flip back to on-line help quite a bit.

### Other Great Features

I do want to point out some other elements of PC-Write that I absolutely love and use heavily. Many times I have a text file that I'm editing currently, and I need to read-in another text file, merging the two. A simple "Ctrl-F3" keystroke, and then supply the filename to "get" for merging, and PC-Write inserts the second file at the present cursor location.

And when it comes to marking, moving, deleting, copying blocks of text, I find PC-Write is tops in the market. While it can't do desktop publishing stuff that looks like newspaper columns, these block commands are simplicity

surpassed by none.

Finally, I enjoy PC-Write's ability to use "ruler lines" that form a library of tab and margin formats for certain document types. If I write a "C" program using PC-Write, the "C" ruler line sets up my "C" programming tab stops and screen colors (even!). If I write an assembler program, the "asm" ruler is used.

So, if you're having a tough time finding a word processor to support your printer, or you'd like a change in the block processing features in your editing, give PC-Write a try. Consider the fact that as Shareware, it is very reasonable in cost if you decide to purchase a registered copy of the program.

## PCjr Trivia

By Jack Ender

**Where were the PCjrs manufactured? How were they made?**

The PCjr was contracted to be built by Teledyne Corporation in Louisburg, Tennessee. There were 450,000 PCjrs manufactured by Teledyne. (We can only suppose that some of these were scrapped as sales began to dwindle.)

**What was the "L PORT" on the back of the Junior intended for?**

That "L" stands for "Language." It was the intention of IBM to market other keyboards in languages such as Spanish, German, Italian, and French. Coded in the BIOS is support for foreign languages. These languages are now supported by DOS 3.10.

**Did IBM ever design the Junior to accept a hard disk?**

It is now known that IBM had a number of designs and proto-types of hard disks for the PCjr. These designs used the side-port into which slipped a sidecar to drive the hard disk. Such a novel idea quickly lost appeal when it appeared that the Junior might compete with the newest release, the PCXT.

**Was the Junior Keyboard the only keyboard planned for the Junior?**

The Junior Keyboard was the first keyboard released by IBM, but deep in the dark closets of engineering, was a second model which was identical to the PC keyboard. Which brings us to the next question.

**When diagnostics are booted, what does the "KB" mean under the Keyboard?**

The "K" relates to the Junior keyboard test. The "B" is for the PC Keyboard test. If you are using a PC Keyboard, t· it!

**Why are some of the chips on the Junior motherboard socketed and later releases were not socketed?**

IBM wanted to save money when they realized that the Junior's days were numbered. During the last six months of production, you will find yellow lines painted on the motherboard where the chips were to be placed. In the earlier motherboards, white lines were used. You can determine the precise date of your board by knowing that the first seven digits printed on your board was the part number; the next two digits was the week in the year; and the next digit was the year manufactured.

**Were the last Juniors poorer in quality than the first?**

Some of you are in luck! The last Juniors had some real improvements. The last Juniors had a "fan housing shroud" to divert the air out the back of the Junior. (Most of the older Juniors just have an inefficient draft blowing around on the inside.)

Another improvement was the "ALPS" used in the final release of the Junior. This was a big improvement over the Qume 142. Finally, IBM offered what was called "Port Protectors" for the ports in the back of the Junior. This assisted the user in the insertion of external devices.

Although it is not widely publicized, IBM will provide the "Port Protectors" free to anyone requesting them. One other thought: the fan housing shroud cannot be bought separately from your Junior fan motor. The shroud does have its own part number and should be offered to Junior users. Consider making a request for the fan shroud; it will improve the cooling of the Junior, increasing the life of your components.

IBM PERSONAL COMPUTER
SALES & SERVICE
P.O. BOX 1328-C

# Maintenance For Your Dot Matrix Printer

**By George Gyan**

One of the most irritating things is to get some dot matrix printout from someone and have to struggle to read it because the print is almost invisible. It takes three things to get a good, dark, crisp print: (1) a properly adjusted printer, (2) a good ribbon, and (3) a clean printhead.

What happens is that the guide for the very fine pin wires gradually gets clogged with dirty gunk, a mixture of lint, ink, and oils from the ribbon. As this builds up and dries out, the pin wires "drag" in the guide. That takes energy from the solenoids that drive the pins, and then the pins don't hit the ribbon very hard, resulting in a light, low-contrast print. Even a new ribbon can appear dried out with a gummed up printhead.

Improperly adjusted printers are almost never a problem, and new ribbons are cheap to buy. But people cleaning their printhead on a regular basis is almost unheard of. However, the following method is so quick and simple that you can do it once a month.

At any electronics store, such as Radio Shack, pick up a spray can of something called "Contact Cleaner". Make sure that the label states that it contains silicone and won't harm plastic. Also make sure that the can comes with a plastic tube to plug into the cap.

Next, cut up a lint-free cotton handkerchief into a square about two inches on a side. Shut off the printer. To clean the printhead, leave paper in the printer, but remove the ribbon. Gently move the printhead to the middle of the carriage. Fold the cut cloth over on top of itself a couple of times, until it is about the width of the printer ribbon, and has about four layers. It should be carefully inserted in (against) the printhead exactly in the place that the ribbon was, between the pin guide and the ribbon shield. The cloth should only be wide enough for you to be able to load it, but not so wide that it might catch on anything.

Insert this tube into the spray can head. Next, put the end of the tube in contact with the cloth next to the printhead pin guide. Give a short, quick press on the spray. All you want to do is wet the cloth in the printhead. You do not want to cloth to be so wet that it drips; you just want it so that the fluid can get in contact with the printhead and soak up into the pin guide. You also do not want to squirt the juice on any other parts of the printer. Be careful.

Let it soak for about a minute, then turn on the printer and dump about a page of copy to the printer. Then move the cloth a hair to the side so the pins have a new, clean section to it. If needed, give it another shot of spray and print out another page.

Finally, remove the cloth from the printhead and print some more copy. When the garbage stops coming out of the print guide (and the printer stops printing like it had a ribbon in it), the job is almost done.

If you printed a couple of pages without the ribbon and see anything on the paper, put the cloth back in the printhead and repeat the process. That may be necessary if you've used your printer for some time and have been through many ribbons.

When you're through with the printhead cleaning process, squirt a little of the cleaner on what's left of your handkerchief and wipe the dirt off the guide rails or rods.

This procedure works and does not require the removal of the printhead. It has worked on both the Epson and also the IBM ProPrinter. Contact cleaner is also an excellent material for getting ink stains off of the printer case, and hands too. Of course, you should wash your hands as soon as you're done.

Lastly, plug in that new ribbon you just bought, and print something. You should be pleased with the improved print quality.

*(The Above Article Was Originally Printed In
The Northeast Indiana PC Users Group Newsletter.)*

# New Help for PCjr Users

*Continued from page 1.*

expanded your PCjr beyond 128K.)

Instructions on how to use jrconfig are included on the disk.

## Easy DOS Commands

Popsicle Version 3.00J, a pop-up program especially designed for PCjrs, allows you to perform the most common DOS commands quickly and easily.

When memory resident, you can invoke it any time you want to do any number of things, such as copy or rename a file, type it (to your screen or your printer), send printer codes, save a screen to a file, check the free space on a disk, or even change the size of your cursor.

Popsicle pops on to your screen with a colorful assortment of menus. Just pick the category you want, use the arrow key to move the highlight to the function you want to perform, and press Enter.

There are seven categories to choose from: Disk, Files, Utilities, Printer, Directory, Clock, and Miscellaneous. No instructions are required to use Popsicle since the categories are self-evident.

## Turbo Script

This nice little word processor is very handy. It takes only 31K, so it may be placed in a ram disk for easy access while you are performing other tasks. It will also run well on a 128K PCjr, which is what Kevin Menninger, the author, used to write it.

Turbo Script doesn't have all the features of full fledged word processors, but you can type a letter and print it in a flash (with bold, italic, underlining and superscript if you wish).

.A help file jumps on screen when you type F1, so you don't have to keep all the commands in your memory. But if you use Turbo Script often, you won't need the help screen much.

Although it has a maximum capacity of 500 lines of text, Turbo Script is fast, easy to use, and can probably do most of the word processing that you require, without forcing you to boot up that massive word processor with the 400 page manual sitting on your shelf.

## Incompatibility Solutions

PCjrXTRA, by Randy Van Dyke, takes care of several PCjr incompatibility problems. Like jrconfig, when installed, this is done automatically each time you boot up your computer.

It allows you to run QuickBASIC 3.0 and 4.0 as well as Turbo C 1.0, both of which are "incompatible" with PCjrs,

and it should allow you to run other software that PCjrs have trouble with. Randy points out that software written with Turbo C should all run with PCjrXTRA installed.

Another plus with PCjrXTRA is that Cartridge BASIC will run with ALL of its advanced features, including the seven screens. This is not normally possible on expanded PCjrs. It also allows the SHELL command to work properly. Instructions are located in a .DOC file on the disk.

SWAPCOM2, an improved version of SWAPCOM, makes it much easier to install and use telecommunications programs on your PCjr. Like the earlier version, SWAPCOM2 switches the COM1 and COM2 ports when you are using an external modem with no internal modem installed. This is necessary because the serial port on PCjrs is at a different address than those on PCs. When no internal modem is installed SWAPCOM2 makes the RS232 serial port COM2 both physically and logically, just as it is on PCs.

This new version is both easier to use and more informative. It provides on screen messages that tell you what it has done, and it adjusts to the proper setup for your computer and the software you are using.

## Powerful File Management

In addition to Popsicle, we've provided Filer, another, more powerful file management utility. Filer allows you to mark files and then execute a command such as copy, delete, backup, rename, protect, or unprotect, on all those files with just a keystroke.

Filer, a shareware program written by Bill Neidert, allows you to display a directory in one window while a subdirectory, or the help file is displayed in the other. With Filer you can also sort the files on a disk by name or extension.

Another file management program called Direx also allows you to mark files and execute DOS commands quickly and easily. The virtue of this one is that it takes up only 2K, whereas Filer takes 40K.

The other file management utility on JR POWER PACK II is called Delbut. As you might infer from the name, Delbut allows you to delete all files from a disk except for those you specify. This comes in handy if you want to wipe out, say, 32 files on a disk, while saving only 4.

Another nice utility that you will probably find yourself using often is Sdir. The command sdir a: will display all the files on drive a: listed by filename in alphabetical order along with their sizes in bytes, in four columns across your screen. Sdir allows you to sort by number, size, date, or extension as well.

In addition, one of Sdir's most useful features is that by typing sdir a:/w you get a nice printout of all the files on your disk, printed in compressed type and just the right size to put on the disk envelope so you can tell just which files are on that disk.

## And More, More, More!

JR POWER PACK II also has a utility called Clean2, which 's designed for use with disk drive cleaning kits. If you try to use one of thise kits by using the dir or some other command to move the cleaning disk, you will never move beyond track 0. This means you will leave 98% of your cleaning disk untouched. Clean2 moves the head to different locations on the cleaning disk, providing for more effective cleaning even after many uses.

Koalaprt, another program on our new disk, allows you to print pictures that you draw on your Koalapad. Normally you can't do this. We know many PCjr users have Koalapads, so this should be a popular and useful addition to this disk. The author, Mike Berscheid, has put this program in the public domain for the benefit of all users. He provides clear instructions for the use of his program on this disk.

Narc, an excellent, colorful, slick program allows you to deal easily with arced software. It's a nifty tool for PCjr users who do a lot of downloading from bulletin board systems.

JRCOLOR allows you adjust the color on your screen, both border and background colors can be adjusted to your favorite hues at any time. It works within most software except those, such as XYWrite, that grab the keyboard interrupt.

Well, that's about it. JR POWER PACK II is about as full as we could pack it of the best programs we could find to help you and your PCjr keep up with the XT clones. JR POWER PACK II is Disk #65 in the jr Newsletter Software Store, page 21.

# PCjr Info, Tips, Articles Available on New Diskette

All the major articles that have appeared in the last 12 issues of jr Newsletter are available on a new diskette, along with a utility that enables you to quickly search the articles for the subject you're interested in.

THE BEST OF JR NEWSLETTER II, Disk #66 in the jr Newsletter Software Store, contains articles from the June 1987 through May 1988 issues. The first disk of this kind (Disk #54) contained articles from June 1986 through May 1987.

Since we do not have past issues for sale, these diskettes offer the only means of obtaining information that has appeared in issues which you may have missed.

The diskette contains the file scrolling and search utility LIST.COM V. 6.01, an excellent utility that enables you to quickly find any subject you want. Simply type F (for Find) and then the word, or words you want, and LIST will quickly find them. We believe this method is better than having an index to jr Newsletter because it is quicker and it allows you to choose any subject you are interested in. With both BEST OF JR NEWSLETTER DISKS in your collection you have an

excellent PCjr research library at your fingertips.

Some of the major articles in the past 12 issues covered PCjr cartridges, using major software titles such as WordPerfect and Lotus, tips on using printers, PCjr compatibility fixes, PCjr user groups, expanding to 736K, maintenance tips, telecommunicating with your PCjr, and many others. This disk also contains the letters from readers and the Questions and Answers column that appears in every issue.

# When DOS Growls, Don't Panic

DOS has a lot of error messages, such as "Disk Boot Failure," "File not found," "Bad Command or Filename," and other depressing statements. But 90 per cent of the time, the problem indicated by the error message is minor.

For example, unless you're perfect (in which care, please let us know, we'll do an article on you in our next issue), you may have simply made a typing error. Your PCjr is VERY particular about which keys you press when communicating with it.

Or some slight misalignment, dust particle, flea, or gnome may have caused the problem and then disappeared. In which case simply trying again will do the trick.

# More On Batch Files

By John King

Last month we started programming with batch files. This month we'll continue using the new commands, ECHO, IF, GOTO, etc. to write more batch programs. You might want to review these in your DOS manual or in last month's column.

Batch files are a lot like keyboard macros which are a feature of programs such as **Lotus 1-2-3**, **WordPerfect**, and **Procomm**. A macro captures key strokes so that they don't have to be repeated each time but can be called up by running the macro. A batch file "captures" DOS commands in an analogous fashion. Since they operate at the DOS level, batch files are used frequently to load programs or manipulate files.

I have a philosophy about batch files. I like them to be fairly short and not too complex. Long batch files are slow, especially if they write lots of screen text or call external programs such as SORT.EXE, FIND.EXE, and MORE.EXE. Of course, a slow batch file can be more efficient than making errors. Especially if you or someone else using your Jr. can't quickly correct them.

With that introduction, the first topic for this article is how to make batch files as fast as possible. We'll look first at an easy way to time how long it takes to execute a batch file. Then we'll use this to time several ways of displaying text since text display is the slowest part of many batch files.

Here is the batch file timer. You can create TIMER.BAT with your word processor (save the file as ASCII text), with EDLIN, or as shown here with the COPY CON command to write it directly from the keyboard. TIMER.BAT uses all the DOS redirection symbols, ">", ">>", and "<" to write a file, add to it, and use a file as input.

```
COPY CON TIMER.BAT
ECHO Start > %0.tim
TIME <CR > > %0.TIM
REM Other lines go here.
TIME <CR  > > %0.TIM
ECHO End > > %0.TIM
TYPE %0.TIM
Ctrl-Z
```

To end the file, hold the Ctrl key down and hit Z followed by the Enter key. DOS will report "1 File(s) copied". and TIMER.BAT will be written to disk.

Now, doesn't that look weird! With all the ">%0>%" stuff, it looks more like comic book swearing than anything useful. Lets see what each line does.

"ECHO Start > %0.TIM" uses the ">" redirection out symbol to create a file on disk called TIMER.TIM and write "Start" as its first line. Remember, in batch files, %0 is always the filename without the .BAT extension. Therefore, %0.TIM will be a file of the same name with the .TIM extension.

"TIME <CR > > %0.TIM" uses the ">>" append symbol to add the screen output of the TIME command as the second line of %0.TIM. This is the line "Current time is ..." which you see if you just type TIME at the DOS prompt.

We have also used the "<" redirection symbol to bring the contents of a file named CR into the TIME command. CR contains a carriage return, so you won't have to press the Enter key to proceed after TIME requests "Enter new time:".

You can create CR most easily with the COPY CON command.

```
COPY CON CR
(blank line, just hit Enter)
Ctrl-Z
```

When you run TIMER.BAT, TIMER.TIM will be TYPED to the screen, and the display will include lines like the following:

```
Start
Current time is 20:15:10.00
Current time is 20:15:11.70
End
```

Subtracting the Start from the End time shows that execution from floppy disk on my PCjr took 1.70sec. With all the files on a ramdisk, execution took only 0.83sec.

You can place all the lines of a new batch file between the two TIME commands and measure their execution time automatically. By timing different versions of your new batch file, you can determine the order of commands which executes fastest.

To test text display speed, insert these lines after the REM statement in a new batch file called ECHO-IT.BAT.

```
ECHO OFF
ECHO This is a file which uses
ECHO the ECHO command for all
ECHO screen output. These lines
ECHO could be our instructions.
```

Now run ECHO-IT.BAT with all the files on a floppy disk and again with all the files on a ramdisk. On my PCjr it took 3.19 sec from a floppy but only 2.14 sec from the ramdisk.

Another way to display text is to TYPE it to the screen. Create TYPE-IT.BAT by inserting the following line in TIMER.BAT after the REM line.

```
TYPE TEXT.SCR
```

TEXT.SCR is the same message which we ECHOed to the screen with ECHO-IT.BAT. Create this file as follows.

```
COPY CON TEXT.SCR
This is a file which uses
the ECHO command for all
screen output. These lines
could be our instructions.
Ctrl-Z
```

Now run TYPE-IT.BAT with all the files on a floppy disk and again with all the files on a ramdisk. It took 2.77sec from the floppy but 1.48sec from the ramdisk on my machine.

In both cases batch files ran significantly faster from the ramdisk, and TYPE was faster than ECHO. The differences are small for such a short message, but using a ramdisk and TYPE can cut the execution time to less than half... worth remembering for longer batch files.

I have a batch file and several screens of instructions to help my wife get WordPerfect running at home. The AUTOEXEC.BAT file on the boot disk copies the batch file and text file to a ramdisk and starts it. The batch file then explains the sequence of disks to be inserted and the commands to type. By running it from a ramdisk, the text is displayed much faster and the whole process is more efficient.

When several disks are involved, the batch file can be run from a ramdisk, or a copy of the batch file can be placed on each of the disks. This way the process can continue through disk changes without a request to reinsert the original disk with the batch file.

If you want the computer to beep to attract attention during a batch file, say for a disk change, include a Ctrl-G in an ECHO line. Place these after the REM line. Place these after the REM line in TIMER.BAT:

    ECHO OFF
    ECHO Ctrl-G The beginning.
    ECHO The end.Ctrl-G

The Ctrl-G is entered by holding the Ctrl key down and hitting G. You can also enter Alt-7 (hold the Alt key down and type 7 on the number pad if you have a standard PC keyboard. On the Jr keyboard hit Alt-Fn-N to get into NumLock mode, then Alt-7 using the number on the top row of the keyboard.) The Alt-7 method works in some word processors when Ctrl-G doesn't.

Changing topics now, suppose you want to use different size ramdisks with different programs. A different CONFIG.SYS file is needed for each one. Normally, you would write each file separately, but we can create a batch file which uses redirection symbols to write the necessary CONFIG.SYS files as easily as needed. This example assumes you are using the IBM memory management and ramdisk software. Substitute the appropriate names if you use other software.

    COPY CON MAKECFG.BAT
    ECHO DEVICE = PCJRMEM.COM > CONFIG.SYS
    ECHO DEVICE = RAMDISK.COM /%1 > > CONFIG.SYS
    ECHO BUFFERS = 10 > > CONFIG.SYS
    Ctrl-Z

When you enter the command MAKECFG 100 for a 100K ramdisk, your new CONFIG.SYS file will be as follows.

    DEVICE = PCJRMEM.COM
    DEVICE = RAMDISK.COM /100
    BUFFERS = 10

As soon as you reboot with Ctrl-Alt-Del, the 100K ramdisk will be there. You could also have replaceable parameters for the PCJRMEM.COM /C and /E options or number of buffers.

The next batch file for this month is one to load a program which uses overlay files. Overlays are often used for help screens, printer configuration, etc. The program must start from the default drive otherwise the overlays cannot be found under DOS 2.1. Our batch file will check for this, and not start the program unless it is on the default drive.

MYWP.BAT assumes the program to load is a word processor called WP.EXE. You will have to substitute the real name of your program. With most word processors if a filename is included on the command line, that file will be loaded automatically. We will use a replaceable parameter to keep this feature.

    COPY CON MYWP.BAT
    IF NOT EXIST WP.EXE GOTO
    ERROR
    WP %1
    GOTO END
    :ERROR
    REM WP not on the default drive
    :END

The first line uses the IF NOT EXIST construction. This reads in English: if the file WP.EXE does not exist on the default drive (since no drive letter was specified), go to the label called :ERROR.

If WP.EXE is not found, we jump to :ERROR. The program doesn't start, and the error message is displayed instead. If WP.EXE is found on the default drive, the IF NOT is false, and the command on the next line is executed instead of GOTO ERROR. This starts WP and loads %1 if it was specified. When we quit the program, GOTO END will jump to :END, and the message will not be displayed.

Any program, especially one with overlay files, will load and run faster from a ramdisk. A batch file can copy the program files to a ramdisk, change the default drive to the ramdisk and start the program. Of course, there is always the possibility that other files are already on the ramdisk, so... here is a way to check and delete them to make room for the new program. The program WP.EXE and its overlay file WP.OVL are used along with MYWP.BAT for this example.

    COPY CON WP2C.BAT
    IF NOT EXIST C:*.* GOTO COPY
    DIR C:
    REM Files will be deleted, or
    REM Press Fn-Break to STOP.
    PAUSE
    DEL C:*.*
    :COPY
    COPY MYWP.BAT C:
    COPY WP.EXE C:
    COPY WP.OVL C:
    C:
    WP %1
    Ctrl-Z

Enough for this month. It's time for dinner.

*(The Above Article Was Originally Published In The San Francisco PCjr Users Group Newsletter. John can be reached at (415) 472-7035)*

# PCjr Lives!

# How I Became A jr. Fanatic

By Brit Hume

Few people can enter the basement room that houses my home computer system without gasping at the rat's nest of wires that hangs from the rear of it. This is not what IBM had in mind when it designed the PCjr: a 736K system with two floppy disk drives (one a 3 1/2-inch), a 20 Megabyte hard disk (it boots the system), an 84-key AT style keyboard and a NEC P6 printer. The monitor is a Sears model that is also a very good 13-inch TV.

This is not what I had in mind either, when I bought the computer during IBM's Christmas promotion of the PCjr nearly four years ago. I just wanted a system that my kids and I could learn on, and that could be expanded to meet greater needs if anybody ever had any greater needs.

For a while, it didn't appear that anybody would. After spending weeks researching the question of which computer to buy, I bought the PCjr, set it up, and forgot about it. My son played games on it, but that was the only use it got. Then I read in the paper in March, 1985, that IBM had decided to stop making it.

I was furious. One of the main reasons for buying a PCjr, instead of an Apple II or a Macintosh or a Tandy, was the IBM name and the insurance it implied that the computer would have lasting support. IBM promised to continue to support the PCjr, but didn't. Everybody else unceremoniously dropped it immediately. Two magazines devoted to it immediately ceased publication. Software development specifically for the jr stopped overnight.

Now I was interested. There was something about trying to make something of this orphaned computer that appealed to me. When I started trying to expand the system and realized all that IBM had done to make that difficult, the project became even more appealing. And the one benefit to IBM's announcement was the PCjr products were selling at fire-sale prices.

I got an internal modem for $67, down from $200. A 128K Tecmar memory board with clock-calendar and printer port was only $129, down from $399. I got it expanded to 512K for only $90 more. (Tecmar and IBM said you couldn't expand these boards, that you had to buy more.) Another disk drive cost $230, but that came later.

First I had to find software for the modem because IBM's offerings were expensive and not very powerful and most commercial programs didn't work with my modem. Somebody gave me a copy of **PC-Talk III**, patched to work with the PCjr modem. The dialing directory had a PCjr bulletin board. I was on it constantly for months and reaped a harvest of technical knowledge about the PCjr, plus some useful software downloaded (gradually) at 300-baud.

I also found out about the Metro PCjr Users Group and went to a meeting. A guy was passing around a copy, with bound documentation, of a word processor called **PC-Write**.

I'd heard about it on the bulletin board. You could get it, like PC-Talk, free and pay for it if you liked it. I got it, liked it, paid for it and have been using it ever since.

## I Joined The Computer Underworld

I didn't know it, but I had joined what might be called the computer underground. Its inhabitants are people who paid for hardware and software with their own money and were eager to share their knowledge with others. They might use their computers to make money by day, but at night they just wanted to indulge their passion for the technology.

At the PCjr user group, there was another common passion. An intense distrust and dislike of IBM for its abandonment of the PCjr and its generally arrogant attitude toward individual users. As I continued to expand my jr, I kept having visions of uniformed men in IBM blue banging on my door in the middle of the night, demanding to inspect my computer system, then charging me with getting the PCjr to do things IBM never intended.

Certainly no one at IBM ever told me that the PCjr's DOS-addressable memory could be expanded to 736K (IBM said 516K was the limit), or that it could be outfitted with a hard drive that would boot the computer or that its sluggish video routines could be greatly accelerated with a little ROM cartridge designed for the purpose. Or that, with enough memory, it would run virtually any business application written for the PC.

Those are discoveries made during my adventure with the PCjr. No doubt I have spent more money than if I had simply waited a while and bought a PC clone. But it has been a thoroughly enjoyable and satisfying experience. While I have since bought a more powerful system that I use at work, the jr still serves me well at home. As for the monitor and other spare parts left over when I replaced all those PCjr originals, they enabled me to take a barebones PCjr bought at a clearance sale for $110 and convert it into a two-drive 640K system with color monitor for about $500 total. I keep it at one of my offices. It works fine.

My next project is installing a new $79 accelerator board that will boost the PCjr's processing speed to as high as 8 MHz, depending on what kind of memory expansion board is in use. That will make my PCjr the equal of any of the XT clones that continue to sell briskly. Somebody also brought out an inexpensive new cartridge that helps out the jr's boot time dramatically by speeding the memory test. I'm a little short on cartridge slots these days, but I'll figure something out.

I'm also looking forward to the next update of JRCONFIG, a program written by Larry Newcomb of the jr user group to get the PCjr to recognize added memory and disk drives. It also does all sorts of other useful things. My adventure with the PCjr, it seems, is not over.

*(The Above Article Was Originally Published in the Metro PCjr Journal.)*

*jr Newsletter*

# * * * PCjr CLASSIFIEDS * * *

**IBM PCjr 256K** - IBM color monitor, cart. Basic, Epson wide printer, joystick. Excellent condition. Software - Lotus, GATO, PFS Write w/ spellch'ker, Kings Quest, Flight Simulator, Sargon III, Football, Print Master, MasterType, Mindprober, Filing Ass't, Pool, Managing your Money, Norton Utilities, and games. $750. Ted Semmel (203) 847-5559 (4)

**IBM PCjr 640K** - Quadram 2nd Drive IBMjr Color Display, jrHOTSHOT with V20 Chip, 20Meg External Hard Drive (Paul Rau System), PC.ID. and jrVIDEO Cartridges, Many PCjr Books, DOS 2.1, Cartridge BASIC, IBM PC Keyboard, Koala Pad, Documentation for all, MORE.....$995 Dennis J. Primavera, 38 Partridge Lane, Burlington, CT 06103, (203) 586-4207 (4)

**IBM PCjr** - 2 disk drives; 640K, clock/calendar, and parallel port via Tecmar jrCaptain & jrCadet; keyboard w/cable; Cartridge BASIC; 2 PCjr joysticks; PCjr Color Display (only 1 year old); NEC V20 Chip; serial port adapter cable; all manuals and cables; many games utilities, and business programs. Asking $750. Mike Bowles, (214) 783-9268 or 783-9263. (4)

**PCjr Numeric Keypad**, Keytronic KB5149jr-Never used, with manual and coiled cable. $20, you pay shipping. John Fulan, 1230 N. Poplar, Fresno, CA 93728. (209) 485-4724. (4)

**IBM PCjr computer $285** - PCjr joysticks $15, PCjr keyboard $39, I pay UPS shipping. Mike McMillan, 149 Appaloosa, Pocatello, ID 83201, (208) 237-0682 between 7pm and 10pm MST. (4)

**TECMAR JR CAPTAIN** - 128K expansion board, software, and manuals. In excellent condition. $75. Call Tom (412) 367-9045 (5)

**MEMORY UPGRADE** - Impulse side car w/512K, Calendar/clock, parallel port, software & manual $230. Parallel Port sidecar $45. Call Bob (617) 533-4307 from 6PM to 9PM EST. (5)

**IBM PCjr 256K** - one drive, color monitor, jr. Captain Sidecar, Executive Writer, Numberworks, Lots of Software. $750 - Will Negotiate. Tom Hosea (713) 499-6351 (5)

**SUPER CALC3 FOR THE PCjr** - Unopened copies of this integrated spreadsheet with data management and graphics, requires only 128K and one disk drive, originally retailed for $195, now only $13.95 (incl. shipping). Norm Shatz, Pres. Puget Sound PCjr Users Group, 6021 140th SW, Edmonds, WA 98020 (206) 745-9685 (5)

**EXPAND IBM PCjr TO 640K** - Tecmar Captain, Cadet, & jr. 128 Expansion Board will bring PCjr's memory to 640K. All manuals & software for install. & config. included. Orig. price over $500. Asking $200. M.W. Root (714) 974-6084 (5)

**FOR SALE - IBM PCjr** parallel printer attachment. Virtually unused. Asking $30. Call (609) 728-0747 (5)

**MAGNAVOX COMPOSITE COLOR MONITOR** - $125. Steve, nights, (609) 587-9287 (5)

**WANTED** - Tecmar jr. Captain expansion board for the PCjr, which includes the parallel printer port. Also, interested in an IBM parallel printer port, if I can not locate a used expansion board. Call Frank at (618) 345-0174 after 6 p.m. (5)

## PCjr Classifieds

**PARALLEL printer** attachment ($20) serial adapter cable ($10) both with instructions. Rollin Golden, 2232 Pyramid Wy., Sacramento, CA 95821. (5)

**PCjr Clock Cartridge & Rom** Cartridge Kits. - INTEGRITY TECHNOLOGY, 105 Serra Way, Suite 230, Milpitas, CA 95035. (408) 262-8640 (P)

**jr ATTACHMENTS** - 1 IBM Internal Modem, 1 IBM Speech Attachment, 1 IBM PCjr Joystick, 1 IBM Cassette Cable, 1 Video Speedup Cartridge, 1 Keyboard Cartridge; All in excellent condition and all for $99 plus shipping. Alan Dias (401) 277-2442 during the day or (401) 434-1992 after 5:00 pm EST. (5)

**FOR SALE - MicroSoft Sidecar** w/128K & Mouse (can be upgraded to 512K) $75; AT style keyboard w/adapter for PCjr $85; IBM Parallel printer port side car $50. Joe Chouquette, 16 Waterford Ct., Staten Island, NY 10305 (718) 317-9124 (5)

**IBM PCjr 256K** - 2 jr. Joy Sticks, Parallel Printer Port, without monitor, $250. Contact Mike Timms, 2818 McManaway Rd., Midlothian, VA 23112, (804) 744-2501 (5)

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# Shareware Spreadsheet Clone For 1-2-3 Users

AsEasyAs is a Lotus 1-2-3 clone, which mimics the spreadsheet giant exceptionally well. If you use Lotus 1-2-3 at work, you'll find this program easy to use. In fact, you can load Lotus files directly into AsEasyAs if they fit.

The spreadsheet handles formulas with addition, subtraction, multiplication, division, exponentiation and negation. Symbols allowed include > (greater than), < (less than), = (equal to), < = (less than or equal), > = (greater than or equal), and < > (not equal to).

AsEasyAs also has 1-2-3 functions--predefined formulas which save time for common and complex formulas. Using these functions, your spreadsheet can automatically calculate an absolute value, an integer value, square root, and logarithms.

It also has a function for pi, sine, cosine, tangents, and arcs. It also will calculate by exponents, generate random numbers, and can perform modulo division, calculating a whole number and a remainder, instead of an answer with decimals or fractions.

AsEasyAs has about half the working cell space as Lotus 1-2-3. However, since most spreadsheets don't need 1-2-3's full work area, the smaller size isn't often a problem.

For the user familiar with 1-2-3, this program is easy to learn. The formatting process, the function codes, and the general menus follow the same conventions.

However, if you're not proficient in 1-2-3, don't look to an unregistered copy of this software help you. You'll need to either get a book of Lotus 1-2-3 instructions, or register your copy of AsEasyAs.

The distribution diskette's help menu is almost useless. The publisher encourages copying and sharing of the program itself. However, the manual is copyrighted and not available on the distribution diskette. To obtain the manual and the working help screen feature, users must register their diskette.

If it's not easy enough to learn from screen prompts, is it worth the effort? For very casual users, maybe not. But for anyone who has regular reports or repetitious calculations, a spreadsheet saves so much time, learning the program is a good investment. Not only will it save countless hours, it will increase your accuracy.

To test this program, Lotus 1-2-3 worksheets were loaded into AsEasyAs. Spreadsheets loaded and operated well.

Those who want to run 1-2-3 spreadsheets, or who want an economical program with lots of power and versatility, will like AsEasyAs. The program uses 140K for the program code and the internal pointers it uses. Spreadsheet data takes additional memory. It operates best with a minimum system of 256K. A program overlay can be used to allow use with less memory, but the technique limits the program some.

(AsEasyAs is Disk #67 in the Software Store, page 21.)

# Is This Diskette Bad? Or Is Junior Acting Up?

It's a good habit to format a couple of diskettes, using the DOS format command now and then -- just to have on hand to make backup copies of data disks. You do make backups regularly, don't you?

But sometimes, when formatting, DOS will tell you that there are x number of bytes in bad sectors. Does this mean you should throw that diskette out? Or return it to the manufacturer? Not necessarily.

Sometimes junior just acts up. It could be there was a dust particle on the diskette. Or a slight imperfection in the way the drive head moved as it was formatting. Or, as we often say, "Junior is acting up again." We have often found that if you put a diskette that DOS said has bad sectors back in the drive and try to format it again, it formats perfectly.

The moral of the story is that, like most people, junior should be given a second chance.

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This software is the best public domain and user-supported software for the PCjr we've been able to find. All the programs in this collection have been tested on our PCjrs and are highly recommended. Some of these programs are equal to or better than commercial programs costing hundreds of dollars. The programs in this collection are available for $5.95 per disk.

**\* NEW \*** **JR POWER PACK II.** Disk full of programs to make your PCjr more useful and powerful. Fix compatibility problems, set up ram disks, tiny wordprocessor, set up 3.5" drives, use DOS easily, and more. Need 256K for some, 128K ok for most. (Disk #65)

**\* NEW \*** **BEST OF JR NEWSLETTER II.** All the major articles and columns from June 1987 through May 1988 issues of jr Newsletter. Subjects cover most aspects of PCjr operations with tips on compatibility, DOS, expanding and speeding up PCjrs, best software, etc. Easy search function finds subjects quickly. 128K ok. (Disk #66)

**\* NEW \*** **AS EASY AS.** Excellent, easy to use, spreadsheet program. Works like Lotus 1-2-3, with all spreadsheet functions. Can load and operate 1-2-3 files. 256K ok (Disk #67)

**THE BEST OF JR NEWSLETTER.** The best and most informative articles from twelve issues of jr Newsletter (June 1986 through May 1987 issues) are contained on this disk. More than 50 articles on compatability, problem solving, software, maintenance, memory expansion, how-to projects, tips on using DOS, and more! 128K (Disk #54)

**PC-WRITE.** This extremely popular word processing program is both powerful and easy to use. A review in PC World said " PC-Write may well be more versatile than WordStar; it's certainly more straightforward." Version 2.5 runs well on 128K. Version 2.7 has more features, comes on two diskettes and requires 256K to run without the spelling checker, which requires 384K. (Order Disk #1 for 128K V2.5. Order Disks #2A and 2B for V2.7)

**PC-FILE III.** This excellent database manager will handle up to 9,999 records, such as names and addresses, notes, product descriptions, etc. Uses generic, embedded, soundex and wildcard searches. Global updates and deletes. Sorts on any field. Too many features to mention. (Disk #3 runs on 128K, Disk #4 needs 256K)

**PC-CALC.** A versatile spreadsheet program that can do up to 26 columns of adjustable size and 256 lines. Features on-screen prompts, many math and statistical functions, hidden column capability, many formatting options, 64 character cells, automatic global recalculation, and more. Has some limits on 128K, but still very useful. (Disk #5 runs on 128K, Disk #6 requires 320K and two drives )

**CHECK PROCESSOR** - Easy to use software for financial record keeping. Balance checkbook, print expenses by category, etc. 128K (Disk #59)

**PROCOMM.** This powerful, yet easy to use telecommunications program has become the one favored by more PCjr users than any other. Dialing directory, auto redial, XMODEM, Kermit and other file transfer protocols, auto logon, DOS gateway, keyboard macros, exploding windows and many other features. The editor of PC Magazine called Procomm "competitive with the best comm programs on the market." Manual on disk. 256K (Disk #15)

**PC-TOUCH.** Designed to teach and practice touch typing. As you type, an on- screen line shows the number of erroneous keystrokes, and your accuracy rating as a percentage of keystrokes. 128K. (Disk #18)

**3 X 5.** An information management program that works just like a 3 x 5 card file. It offers speed, versatility and simplicity in entering, indexing and retrieving data. Has an integrated word processor, powerful search commands, multiple windows so you can edit in one and search in another, etc. Requires 256K. (Disk #19)

**PC-DESKTEAM.** Enables you to have an alarm clock, calendar, typewriter, calculator, and phone book accessible from your keyboard. Can be a resident program while you are using other software if you have the memory. 128K will run it alone. Need more to run it with other software. (Disk #22)

**PC-PROMPT.** A memory resident program that provides the format for DOS commands in an on-line mode. Help screen toggles on and off Also help screens for BASICA, Turbo Pascal, Debug and EDLIN. 128K. (Disk #23)

**PC DOS HELP.** Similar to PC-Prompt, but takes up less memory (16K) as a resident program. Geared to DOS 2.1 with special PCjr commands included. 128K. (Disk #24)

**PC-CHECK MANAGER.** A menu-driven program that can handle multiple checkbooks, unlimited payees and ledger account assignments. Requires 256K. (Disk #25)

**FAMILY HISTORY.** Includes complete manual on disk with how-to info on tracing and setting up your family tree with detailed genealogical information. Easy to use and modify as you gather more data. New compiled version runs faster than previous version. 128K order Disk #33 alone. 256K order #33 and #33A.

**NEW KEY.** Powerful popular program that allows you to redefine keystrokes and assign series of keystrokes to one or two keys. Customize software to meet your needs. Many other useful features included. 128K. (Disk #35)

**PIANOMAN.** A great music program! Allows you to write your own music, store it and play it on jr's terrific sound system. 128K. (Disk #36)

**JR MUSIC MACHINE.** If you want to write and play music on your PCjr, this program allows you to do it. Displays music as you write it using jr's 16 colors, and plays music back in three voice harmony. Features allow you to adjust key, tempo, note values, etc. Color Display required. 128K ok. (Disk #62)

**PC-KEY DRAW.** A powerful graphics program that allows you to draw, paint, produce slide shows, store and print your work. 256K, two drives. (Disk #37)

**PC-KEY DRAW DEMO.** Contains a slide show demonstration which allows you to see the amazing results you can get with PC-KEY DRAW. Helps to learn the many graphic capabilities of PC-KEY DRAW. (Disk #38)

**IMAGEPRINT.** Produces letter quality print on dot matrix printers. IBM Graphics Printers, Proprinters, Epsons and compatibles. Contains many format features, three quality levels, interfaces with word processors. 128K ok. (Disk #50)

**JR POWER PACK.** A collection of particularly useful programs for PCjr owners. Set up RAM disks, address memory to 736K, turn a joystick into a mouse, set screen colors, keyboard click, scan and search text files, screenblanker, print spooler, and more. 128K. (Disk # 52)

**PCjr COMPATIBILITY DISK.** lists over 500 software titles, along with info on how they run (or don't run) on PCjrs. Also tips on how to make software PCjr compatible. 128K. (Disk #60)

**BOYAN.** Selected Best of the Year by PC Magazine, this outstanding telecommunications program will astound you with its smooth functioning and innovative features. Supports all protocols. Need 384K. (Disk #61)

**DOS 2.1 FIX.** Patches to fix the bugs in DOS 2.1. Cures most problems encountered when running memory intensive programs. Also patches to run BASIC and BASICA on DOS 2.1 without having Cartridge BASIC installed. 128K ok. (Disk #40)

**DOSAMATIC.** A nifty way to view the contents of disks, easily manipulate files and carry out DOS commands. Features a Mac-like "point and press interface which allows you to select the commands you want from pull down menus. Also permits loading several programs at once and jumping from one to the other. 128K ok, but more memory needed for "multi-tasking." (Disk #49)

**PCJR PATCHES.** Many patches to fix software that ordinarily won't run on PCjrs. Includes patches for Starflight, Advanced Flight Simulator, Quick Basic, Turbo Basic, Double DOS, and Bard's Tale (16 colors). (Disk #56)

**HOME BUDGET MANAGEMENT SYSTEM.** Easy-to-use system for keeping track of income and expenses. Create separate accounts for income tax categories and get a summary at end of year. Provides chart of accounts, transaction reports, sorted ledger entries, etc. 128K. (Disk #57)

**HOME INVENTORY.** Taking an inventory of your home might even be fun with this easy-to-use software that takes you through the process step by step. Gives a complete record for insurance purposes. Also good for listing collections. 128K. (Disk #58)

## GAMES

**GAMES.** An assortment of games for hours of fun and excitement. Includes Spacewar, Airtrax, life, Wumpus, Wizard and more. All good with 128K. Need Cartridge BASIC (Disk #8)

**PINBALL RALLY.** A colorful collection of amazingly realistic pinball games. Using the Shift keys as flippers, the games get more and more complex until you get to Twilight Zone, which is the hardest because some parts are invisible. Runs on 128K. (Disk #10)

**ARCADE GAMES.** Includes Kong, Pango, PC-Golf, Pyramid and other exciting, colorful games for hours of fun. 128K. (Disk #30)

**GAMES, GAMES, GAMES.** A wild assortment of games to test your wits and skills. Includes Slither, Xwing, Torpedo, ABM2 and Overeact, where you are in charge of a nuclear plant. 128K. Need Cartridge BASIC (Disk #34)

**PC-CHESS.** A full color many-featured chess program, with four levels of play. You can play against the computer or another human, save games to disk, set up the board yourself and switch sides if you want. It has two clocks for elapsed time for each player, allows castling, en passant and pawn promotion with validity checking, plus other features. 128K. (Disk #44)

**ZAXXON/GALAXY TREK.** Two exciting high tech shoot-em-up games. In Zaxxon you fly through an obstacle course,

shooting while you go, up and over walls, and eventually through space. Galaxy Trek makes you the commander of Star Ship which you maneuver through the universe seeking to destroy a fleet of Megaton warships before they conquer the planets. 128K. (Disk #45)

**PHRASE CRAZE.** Based on the TV show Wheel of Fortune, you get to be the guest who guesses the mystery phrases and wins piles of money! The wheel spins to select the amount of money you win for correct guesses. It gets harder with each round you play. You can add your own phrases to this game or try to guess the ones provided on the disk. Lot of fun for adults as well as older kids. 128K. (Disk #46)

**GOLF/SAILING.** Two great games for sailors and golfers! The golf game has three courses, user definable club ranges and a swing control that determines whether you hit a slice, hook or straight shot. Three nine hole courses (Novice, Pro, and Sadistic). In the other game, you try to sail the three legs of the Bermuda Triangle avoiding, if you can, the creeping mists, alien crystals, vortexes and storms. Your boat is equipped with radar, rudder and sail (all of which you control) and an engine for emergencies. 128K ok for sailing. Need 256K for golf. (Disk #47)

**BOARD GAMES.** Eleven different games on one disk! Hours of fun with Monopoly, Yahtzee, Cribbage, Backgammon, Othello, and others. All run great on your PCjr! 128K. Need Cartridge BASIC (Disk #31)

**CASTAWAY/S. AMERICAN TREK.** Test your survival skills as the survivor of a shipwreck in the South Pacific. Or as an explorer of South America. Two novice text adventures from Jim Button. Ages 12 and up. 128K. (Disk #53)

**SUPER BOARD GAMES.** Excellent versions of two popular board games Monopoly and Risk. Very much like the board versions, except your computer keeps track of everything for you. All you have to do is make the right moves and have fun. 256K. Need Cartridge BASIC (Disk #55)

**COMPUTER JOKER.** Disk full of jokes, wisdom, and visual tricks to play on your computing friends. 128K ok (Disk # 64)

## EDUCATIONAL SOFTWARE

**ORIGAMI.** Learn the art of Japanese paper folding. This program shows you how, step-by-step, to create amazing animals and other objects just by folding paper. Fun for kids and adults, too. 128K. (Disk #39)

**PLAY AND LEARN.** Educational games for kids 5-12. Word match games, find-a-word puzzles, word scrambles, and many more made by teachers. 128K, need Cartridge Basic. (Disk #32)

**WORD PROCESSING FOR KIDS.** Simple, fun and easy-to-use word processor designed especially for beginning writers. Allows children to express their ideas easily and then print them out in large type on your printer. Colorful opening menus make learning the simple commands very easy. Parents/teachers manual is on the disk. 128K. (Disk#41)

**MATH FUN!** A great way to get kids learning how to add, subtract, multiply and divide. Includes a program called Math Tutor which has cleverly designed exercises for kids in Grades 1-6. Also Funnels and Buckets, a nifty math game that makes learning math fun. 128K. Need Cartridge BASIC (Disk #42)

**EARLY LEARNING.** A collection of colorful educational games for ages 6-8. Sing-along alphabet, letter match, counting game, maze, pattern matching and more. 128K, need Cartridge Basic. (Disk #48)

**GAMES FOR EARLY LEARNERS** Young children like Teach Tot's alphabet and counting games. Other activities teach spelling and telling time. For Preschool through grade 3. Cartridge BASIC, 128K. (Disk #63)

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