

# jr Newsletter

July, 1988

## jr Hotshot Creator Adds A New Product

Having created the very popular jr Hotshot memory expansion unit for PCjrs, Ed Strauss seems to want to increase his fame among PCjr users.

He noticed that the supply of IBM Parallel Printer Adapter has dried up, so he made one of his own. His printer adapter plugs into the side of a PCjr or a sidecar that may already be in place. It can be configured as LPT1 or LPT2, giving you the option of having two printers running on your PCjr. (Ed points out that he has six printers attached to the computer in his office -- five Proprinters and an HP LaserJet.)

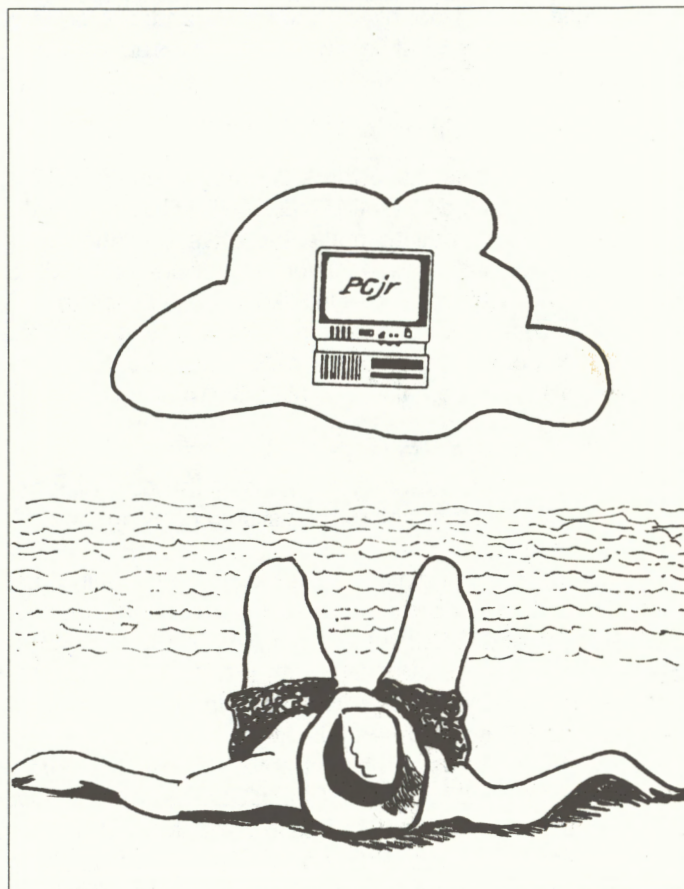
The printer adapter consists of a circuit board and a metal cover the same color as your PCjr. It's smaller in profile than a full sidecar, but since it is supposed to be last in line, it looks just fine. He calls the unit a "PCjr endcar."

The printer adapter comes with a small hex wrench for easy installation and accepts a standard parallel printer cable. The unit costs about \$85 and is available from Paul Rau Consulting, Computer Reset and Owl Software (check ads in this issue for ordering information).

### 6,300 jr Hotshots Sold

Ed Strauss says he has sold 6,300 jr Hotshots since he started making them in October 1986. Originally priced at

*(Continued on page 14)*



### INSIDE

Customize your Boot Disk .....	2.
Questions and Answers .....	3.
Use the Amazing PROMPT! .....	5.
Compatibility Tips .....	7.
PCjr Configurations Explained .....	8.
How to Use JRCONFIG .....	11.
Inspect Contents of Cartridges .....	15.
Fix Your Color Display .....	18.
PCjr Classifieds .....	19.
Software Store .....	21.

**PCjr Lives!**

## Orphan Support Company Enters PCjr Market

Triton Products, an experienced computer orphan support company, has taken over the marketing of Racore products for PCjrs and plans to provide a wide range of PCjr products in the coming years.

Racore, which says it has sold its expansion products to 40,000 PCjr owners, has turned over the marketing of its PCjr products, which include a second disk drive, PC ID Cartridge, memory expansion boards and a DMA option, to Triton. Triton has already started to advertise in national computer magazines and plans to publish a catalogue of PCjr products soon.

Terry Miller, vice president - operations, says Triton will not limit its PCjr offerings to Racore products, but will put

*(Continued on page 14)*



# Customize A Boot Disk To do What You Want

By John King

You just put a "boot disk" in the drive and turn on your PCjr. Sounds so easy, but I get many questions about setting up boot disks. OK! We'll build a good boot disk.

## Three Essential Files

A boot disk must have three files on it: IBMBIO.COM, IBMDOS.COM, and COMMAND.COM. These are the required "system" files to make the drive operational. Of course, other files are needed if you have more than 128K of RAM, or want a ramdisk, or would like to run a program.

The easiest way to create a boot disk is to use the FORMAT /S command. Place your DOS disk or a disk which is a boot disk and contains FORMAT.COM in the drive and type:

FORMAT A:/S <Enter>

FORMAT will prompt you to insert the new disk and strike a key before formatting the disk and copying the three system files to it.

If you used an original DOS 2.1 disk, you should patch IBMBIO.COM to keep the keyboard from locking up. Use PATCH.COM and DOS21 (on Disk #40 in the Jr Software Store). If you used a boot disk with IBMDOS.COM already patched, the new boot disk will not need to be patched. Later versions of DOS do not need this patch.

Part of the confusion about boot disks comes from the fact that IBMBIO.COM and IBMDOS.COM are "hidden" files. Although they are the first two files in the disk directory, they are not listed by the DIR command. Other directory programs show these files, and CHKDSK.COM will tell you they are there with the line "22528 bytes in 2 hidden files" for a DOS 2.1 disk. They are hidden so that they won't be erased by the ERASE or DEL commands. COMMAND.COM is not hidden, so it can be erased or copied by the COPY command. The hidden files can only be copied by the FORMAT /S or SYS commands.

SYS.COM copies the hidden system files to a purchased program disk to make it "bootable". This is not what we need to do here.

## Order of Reading Files

When you boot up your PCjr, after the memory check, the disk drive light comes on and the drive spins. First, the boot record which is placed on all disks by FORMAT.COM is read, then IBMBIO.COM and IBMDOS.COM are loaded into memory. Next if a CONFIG.SYS file exists, it is read, and all of the line entries are executed. Finally, COMMAND.COM is loaded, and the AUTOEXEC.BAT file is read. Each line in the

AUTOEXEC is executed in order. At the end, the DOS prompt appears unless a program was called.

The most efficient boot disk will have the files on the disk in the order in which they are read. This will minimize the time spent hunting for each file and speed up the process.

## CONFIG.SYS

A CONFIG.SYS file sets the configuration of your computer. See chapter 4 in your DOS manual. The file is an ASCII text file, so it can be written with any word processor which can create a pure ASCII file (PC-Write, for instance) or by simply typing at the A> prompt:

COPY CON CONFIG.SYS

and then typing in the contents of the config.sys file you want. You can use the DOS command TYPE to read any CONFIG.SYS file.

Here is an example of a CONFIG.SYS file for a PCjr with more than 128K of memory with IBM memory management (PCJRMEM.COM) and a ramdisk (PCJRDISK.COM). These two programs, called device drivers, are run using the device= line. The lines are explained in the following paragraphs.

```
device=PCJRMEM.COM
device=PCJRDISK.COM /72
buffers=10
files=20
```

Be sure to copy both PCJRMEM.COM and PCJRDISK.COM from the disk which came with the IBM memory expansion to the boot disk. If you do not have the IBM programs, you can use the programs that came with your memory expansion unit (Racore, Jr Hotshot, Tecmar, etc.) or JRCONFIG (which is on Jr Newsletter's JR POWER PACK disks).

With PCJRMEM.COM or JRVIDEO.COM ignore the /E and /C options unless you are using a PCjr specific program

(Continued on page 17.)

*Jr Newsletter is published monthly by Crider Associates, P.O. Box 163, Southbury, CT 06488. Tom Crider, Editor. Subscriptions are \$18 per year. Although every attempt has been made to insure that statements contained in this publication are accurate, neither the publisher, editor, or writers assume any responsibility for their accuracy. PCjr is a trademark of the International Business Machine Corp., which has no connection with this publication.*





# Questions and Answers

By Rene Waldron



**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

**Q. How do I know when to clean the heads on my disk drive and how do I do it?**

A. Buy any wet-and-dry disk cleaning kit from your local supplier. The information for how often drives should be cleaned is included with each kit. The answer to the 'how to do it' is a program on Disk #52 (**JR POWER PACK**) from the Software Store. The program is in BASIC, and is fully menu-driven. It will not only run the drive while the head cleaning disk is in place, it will move the head in and out, making a complete job of it. A bonus when using this program is that you get more cleansings per disk, as the head does not simply sit on one track during the cleaning procedure.

**Q. How can I reduce or eliminate the loud beep from the built-in speaker when turning on or re-booting?**

A. Though this question has almost been answered before, we have not covered the problem of the beep during the boot process. First, **TURN OFF AND UNPLUG** the computer from the wall! Take the cover off your jr. See your red Guide to Operations manual for how to do this. Find the beeper (we refuse to call it a speaker and so does IBM) by booting and listening. **UNPLUG THE COMPUTER AGAIN!** Now take a piece of cardboard or poster board, (1/8 or 1/16 in. sheet foam plastic will also do) and cut square(s) to match the size of the beeper frame and tape one or two layers snugly to the front of this. If you have taped it tightly enough, you should appreciate the muffled peep! Remember, the keyboard clicks will also be softer, but you can adjust the volume on your monitor to take care of this after you boot up.

**Q. I would like to receive information about successful use of any CAD/CADD (Computer Aided Design /**

**Drawing) programs which use a mouse which will plug into my jr.**

A. There are many programs which successfully do what you want. The only presumptions are that you have a free serial port with the usual PCjr-to-RS 232 plug and plenty of memory. (512k and up) The first, but not only, combination which comes to mind is the very inexpensive **Logitech Mouse** and **Generic Cad**. The Logitech Mice usually are packaged with **Dr. Halo III**, which works on PCjrs if you select the PS/2 option when installing it. Check with the advertisers in this issue for this and other mouse/draw/CAD packages. PC Enterprises, for example has an excellent optical mouse with **PC Paint Plus** combination and the adapter cable isn't needed. We have used Generic Cad with its built-in 8087 emulator and the **Generic Dot-Plot** supplement for actual design, and it works perfectly on the jr. Check with the supplier or the manufacturer of any software to try to get a test run and be sure it can be returned if it turns out to be incompatible. The **Genius** serial mouse also works, but be sure that you get the drivers software for the jr. and that the CAD software supports the mouse. There are any number of other compatible and fine programs listed on Disk #60 (**PCjr Compatibility Disk**) from the Software Store for CAD and painting/drawing.

**Q. Though my external 3.5" disk drive will read and write 1.44 MB when installed in a PC AT or XT, it will not do either when in my jr. Is there a way to utilize the available power and density of this drive? (This reader was very complete in his description of his set-up and equipment, which was impressive, including DOS 3.30. Referring to the previous question and answer, he runs AutoCad version 2.52 in a professional environment.)**

A. Apparently, information about the new higher density disk storage systems has been overlooked by us and we apologize. Here it is: The Quad-Density and High-Density (i.e 1.2 MB and 1.44 MB) drives must have a special High-Density controller card. The problem is not the drive nor the hardware mounted on the drive, nor is it software. It is the disk drive controller card in the computer which must be considered for these devices. As of this writing, we do not know of any replacement disk drive controller cards for the jr which match the performance parameters of the card in the AT, for example. There may be a genuine DMA conflict, making this a tough one to design. Don't despair! There is a

*(Continued on page 4.)*



# Questions and Answers

(Continued from page 3.)

way to read/write the 1.2 MB AT diskettes! A special drive (yes, a drive, and not a controller card) has been developed by PC Enterprises to format and read/write to AT diskettes with a density of 1.2 MB. What's more, it operates with DOS version 2.1 or higher and uses your standard, existing controller card. The diskettes can then be interchanged with, and used in, XT's, AT's and PCs if they handle 1.2 MB drives. The only limitation, if it really is one, is that this drive will not read or write to a 360k disk format. This system backs up a hard disk beautifully. The cost is about the same as a standard replacement 3.5" drive and comes with software which is needed only with DOS versions earlier than 3.2.

**Q. I would like to connect my PCjr to a VCR to make tapes for training purposes. How can I do this?**

A. Here are two methods you might use; the second is our preferred way. 1) If you have the IBM connector for TV (the box about the size of a cigarette pack with a couple of cables dangling from it) you should refer to pgs. 4 - 9 of the red Guide to Operations that came with your PCjr. This explains connections to a normal TV set when you don't have a monitor capable of direct RGB input. Plug the multi-pin end into the receptacle marked "T" on the rear of the jr but instead of connecting the other end to a TV set as the instructions indicate, just connect to the VCR input (antenna terminals on the VCR) and select either channel 3 or 4 on both the IBM TV connector and the VCR. You will have both audio and video. 2) Make a direct connection from the Composite Video Receptacle on the rear of the jr (it is marked "V") to the "Dubbing" or "Direct" input of the VCR. You must use a shielded video cable which has RCA type plugs on both ends. Another cable with RCA type plugs, this time an audio or hi-fi type should be connected between the rear receptacle marked "A" on the rear of the jr and the audio input of the VCR in order to include sound. Both cables are available at Video rental stores, hobby electronics shops, Hi-Fi centers, etc.

**Q. Will the NEC V 20-10 work on the jr? I currently have the NEC V 20-8 installed.**

A. The simple answer is "Yes." An additional comment is "It won't make any difference." Here's why: Inherent in this question is the matter of speed. The computer's internal clock chip and its crystal are the determining factors for the rate (speed) of cycles in any computer. Put another way, the NEC V20-10 is CAPABLE and TUNED to operate at the higher speed, IF the computer's internal clock chip/crystal generates it. The NEC V20-10 would be mandatory if a turbo board which actually changes the clock speed is installed in the jr. At least one of our advertisers sells such a board. Remember, all of the other chips in the jr such as RAM etc.

should also be able to handle the higher speed. If you intend to turbo-charge your jr, be sure that you check with the supplier, and describe exactly what kind of expansion and set-up you already have. Some memory expansion boards cannot handle the increased speed in an error-free manner.

While on the subject of NEC V20s, we have read that these chips support 80286 instructions! We are just starting tests to try to find out. This gets curiouser and curiouser. Does anyone out there have any more information about this?

**Q. I have 640k with Tecmar Captain and Cadet. I also have the Microsoft board w/mouse. Can I connect this third board to my jr? It would bring me up to 768k and give me the use of the mouse. Will I have enough power to do this?**

A. You will have enough power. The Tecmar boards have their own power. The usual count of three expansion boards only includes additional plug-ins which rely entirely on the internal power supply. You will need software to recognize the additional memory (up to 738k), though. JRCONFIG.DSK, which is on JR POWER PACK II will do this for you. You also must reset the switches in your Microsoft jr Booster as follows: Switch #1 OFF, #2 ON, #3 OFF.

**Q. Are there any easy to use word processing programs available which could facilitate preparation of a book in chapter format?**

A. Most word processors will allow writing and saving on a chapter-by-chapter basis, especially those which use files limited to 64k per document. Just use file names such as NOV-CH1.DOC, NOV-CH2.DOC, etc. (for Novel, Chapter 1 and Novel, Chapter 2, etc.) for each file when saving to disk. When you are ready to print it all out you can write a simple "control" file within the word processor which does nothing more than call for the above named individual files (chapters) to be printed out, one after the other. One immediate advantage of this technique is that all your formatting, such as page numbers and headers, footnotes, etc. will be correct and uniform throughout, as they are usually set up by you right in the control file. We find PC-Write to be ideal for just this purpose, and it is a Shareware program available from the Software Store.

**Q. Is it possible to upgrade the jr to accommodate EGA or better graphics?**

A. Better graphics? Well, in a limited way. The PC Enterprises Video Cartridge allows limited access to some EGA screens with your present set-up. Remember, the monitor is an important determining hardware factor. Changing the number of vertical scan lines, retrace rate, etc. usually means an expensive multi-scan monitor to handle the increased scan rates if more than this is wanted.

(Continued on page 20)



# It's Amazing What the Magic PROMPT Can Do!

By Curtis Marten

Have you ever wanted to change the color of your screen or wish that you could just press a function key to get a dir listing or some other often used command? Well you can do all that and more with the DOS PROMPT command. First, though, you must have a config.sys file and ansi.sys on your boot up disk. The config.sys file at the very least must have a line in it that contains device=ansi.sys or one of the other drivers such as Fansi Console or Nansi. The config.sys file can be created by typing:

```
A> COPY CON CONFIG.SYS <enter>
```

```
DEVICE=ANSI.SYS <enter>
```

```
[F6] <enter>
```

If you already have a config.sys file it can be modified by retyping the config.sys file or in any word processor that has the capability of saving text in ASCII format. My config.sys file looks like this:

```
DEVICE=MOUSE.SYS
```

```
STACK=64,128
```

```
DEVICE=FCONSOLE.DEV /X=4 /R=100 /L=1 /H=0 /  
B=1 /W=0
```

```
BUFFERS=18
```

```
FILES=20
```

The computer must now be reset to make use of this config.sys file as it only loads when the computer boots up. Now that we have a device driver installed we can create some prompts. The one prompt that should be in everyone's autoexec.bat file is:

```
PROMPT $p$p
```

This prompt does not require a device driver and displays the current directory of the current drive and the greater than symbol. To cancel this prompt just enter PROMPT again.

Most of the other prompts require the use of a device driver. Some of the pit falls to look out for are trying to change colors without a device driver installed and creating an autoexec.bat file that contains a prompt command with instructions and then at the end of the file issuing another prompt command without instructions, this will cancel out the first prompt command. If you use the \$p parameter in a prompt and change logged drives to a drive that does not have a disk in it you will get the error message:

```
Not ready error reading drive A
```

```
Abort, Retry, Ignore?
```

DOS is looking for the current path on an empty drive to put in the DOS prompt. The best way to get out of this is to press the I key to ignore the message. DOS responds with:

```
Current drive is no longer valid >
```

You can then enter a new drive letter to switch to. Another common problem is using the ECHO OFF command

in an autoexec.bat file before the prompt command to change color. If ECHO is set to off it will not be displayed and the device driver wouldn't get the message to change color.

Some prompt commands require the use of {ESC} character. This character can be entered in some word processors and editors by typing <CTRL><V>, then <[>. This {[} is in addition to the {} character which has to follow the {ESC} character. Some other word processors allow you to enter control characters by holding down the <ALT> key, typing 27 on the numeric keypad, then releasing the <ALT> key. DOS will also recognize the "\$e[" sequence as the "{ESC}[" sequence. ANSI.SYS is case sensitive so use only small letters for the command sequences.

You can put almost anything you want in a prompt, but certain characters have special meanings when preceded by the dollar sign:

\$t displays the time

\$p displays the current path (directory of the current drive)

\$n displays the current drive

\$d displays the date

\$v displays the MS-DOS version number

(Continued on page 6.)

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## The Amazing Prompt

(Continued from page 5.)

Several characters have codes to represent them when included in prompting strings:

- `$$` displays the \$ character
- `$q` displays the = character
- `$g` displays the > character
- `$l` displays the < character
- `$b` displays the | character
- `$s` indicates a leading space
- `$h` indicates a backspace
- `$_` indicates a carriage return, line feed
- `$e` indicates an escape (ASCII 27)

ANSI.SYS commands can be entered through the use of the prompt command. Each ANSI.SYS command begins with {ESC}[the Escape character (code 27) followed by a left bracket.

The terms shown in angle brackets (<>) in the following list are used in the command descriptions that follow:

- <ATTR> specifies a display attribute such as high intensity, blink, or color.
- <COL> specifies the column to which the cursor is to be moved. This is a number from 1 through 80.
- <COLS> specifies how many columns the cursor is to be moved. This is a number from 1 through 79.
- <KEY CODE> specifies the key to be defined. If the key

is one of the standard ASCII characters, <KEY CODE> is a number from 1 to 127. If the key is a function key, keypad key, or a combination of the shift, ctrl, or alt key and some other key, <KEY CODE> is two numbers separated by a semicolon, the first number is 0 and the second from the Table 1.

<MODE> specifies the display mode. it can be a number from 0 to 7.

<RESULT> is the character or characters to be produced when a key is pressed. It can be specified as an ASCII code, an extended key code, a string enclosed in quotation marks, or any combination of codes and strings separated by semicolons.

<ROW> specifies the row to which the cursor is to be moved. This is a number from 1 through 25.

<ROWS> specifies how many rows the cursor is to be moved. This is a number from 1 through 24.

### CURSOR COMMANDS

#### Cursor Up {ESC}[<ROWS>A

Moves the cursor up the specified number of rows without changing the column. Enter a number from 1 to 24 for <ROWS>. If you omit <ROWS>, DOS will move the cursor up one row. Example: {ESC}[15A Moves the cursor up 15 rows. {ESC}[A Moves the cursor up 1 row.

#### Cursor Down {ESC}[<ROWS>B

Moves the cursor down the specified number of rows without changing the column. Enter a number from 1 to 24 for <ROWS>. If you omit <ROWS>, DOS will move the cursor down one row. Example: {ESC}[15B Moves the cursor down 15 rows. {ESC}[B Moves the cursor down 1 row.

#### Cursor Right {ESC}[<COLS>C

Moves the cursor right the specified number of columns without changing the row. Enter a number from 1 to 79 for <COLS>. If you omit <COLS>, DOS will move the cursor right one column. Example: {ESC}[15C Moves the cursor right 15 columns. {ESC}[C Moves the cursor right 1 column.

#### Cursor Left {ESC}[<COLS>D

Moves the cursor left the specified number of columns without changing the row. Enter a number from 1 to 79 for <COLS>. If you omit <COLS>, DOS will move the cursor left one column. Example: {ESC}[15D Moves the cursor left 15 columns. {ESC}[D Moves the cursor left 1 column.

#### Move Cursor {ESC}[<ROW>;<COL>H or {ESC}[<ROW>;<COL>F

Moves the cursor to the specified row and column. <ROW> is a number from 1 to 25 that specifies the row to move to. If you omit <ROW>, DOS will move the cursor to row 1. To omit <ROW> but specify <COL>, enter the

(Continued on Page 16.)

## EXPAND YOUR PCJR

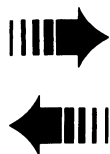
jr. Hotshot 512K Memory .....	Call.
Racore Drive II Plus w/DMA & 512 K Memory .....	\$500.
Quick Silver Cartridge .....	\$ 30.
jr Datadesk Keyboard .....	\$130.
20 Meg External Hard Drive System ....	\$579.
1200 Baud External Modem .....	\$ 99.
JR-RS232 Modem Cable .....	\$ 19.
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# READER FEEDBACK



## Reader Recommends Shareware Spreadsheet

In your April issue you indicated that you were interested in receiving comments on new programs that your readers had used. I was about to write to you on my use of a spreadsheet clone called **As Easy As**, but you beat me to it with the May issue. I have been using **As Easy As** for over two years and have seen it develop into a first class spreadsheet that compares extremely well with that other spreadsheet. I can highly recommend that jrNewsletter readers obtain a copy of the program for everyday use. I would also suggest that they purchase the latest edition 3.10A which has several new features. I hear that the program is being used at several Universities as well as in other countries.

In closing may I ask you to keep up the good work in keeping jr alive and well. With jr around who wants a clone!

*Hal Oliver, Norfolk, MA*

**EDITOR'S NOTE:** For those who want to try **As Easy As** V 3.10A, it is on disk #67, page 23.

## Reader Shares Compatibility Tips And Software Preferences

Just a quick note on a few software and hardware compatibilities for the jr. My system is a 640K w/**Tecmar jrCaptain** and **jrCadet** boards, Nec V-20, PC Enterprises second drive, Keytronic keyboard and an Avatex 1200 external modem.

**Lucid 3-D** runs on the jr; however, I didn't think that it would load in the memory resident mode. It would hang up the keyboard and require a reboot. I recently read the description of **INT9JR.COM** and tried it with **Lucid**. **INT9JR** fixes the problem completely. **Lucid** is a natural for the jr as it is colorful and uses nested spreadsheets, each which can be small and compact. (**INT9JR.COM** is on JR PATCHES (Disk #56), page 22.)

**Genius Mouse GM-6** does not work on my machine. The software loads fine but can not recognize the signal from the mouse. It appears that the mouse needs power from the serial port which jr does not provide. The **Kraft Micro Mouse**, on the other hand, works just fine. It has a connection on the serial plug for an external power supply.

**DrHalo III** will run on my machine if properly configured. The driver loaded by the PC/XT option in the setup program will not work. I selected the PS/2 option and it worked! I also modified the **HALO.CNF** file and used the generic device driver **HALOIBMG.DEV** which works and is the one I am using now. An interesting question is "just how close to the PS/2 are the junior's video modes?" Using either of these methods, I was able only to get **DrHalo III** to use the standard two pallets of four colors. Does anyone know how to access the 16 color mode? I know that jr can do 320x200 16 color graphics, it does it in the selftest.

**GetOrganized 2.0** will run on an expanded jr if you use Larry Newcomb's **JRCONFIG.SYS**. When I first upgraded to 2.0, the program would not load because it would not recognize expanded memory. Tecmar's **CONPCJR** caused an error that said that "DOS was too big". Electronic Arts declined to help me or provide a program to recognize the needed memory. Larry's program has fixed all that. GO! now runs just great and is my wife's word processor of choice.

**WordStar 4.0** has all other versions beat by a mile! It runs just great on my system. Besides the many added capabilities, a feature that I like is that it loads the whole program into memory and does not have to do all the disk accesses like in the previous versions. If you have extra memory and only one drive this is the program for you. It includes a good spell checker and thesaurus.

Thanks for the great newsletter.

*Gary K. English, San Diego, CA*

*(Continued on Page 8)*

## 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.



# Reader Feedback

(Continued from Page 7.)

## Reader Asks For Clarification Of PCjr "Configurations"

I have a stupid question to ask, which just may be a question that many other neophyte computer owners have in mind - exactly what do you mean when you refer to "other configurations" with respect to trying to get certain software to run on jr? I still have a problem trying to get **SideKick** to load, in spite of having "rebuilt" one of my IBM sidecars to bring me up to 640K and installing **JRCONFIG.SYS** from your #52 diskette. What other means can I use to "reconfigure" my system? Last winter I received a note from you stating that the note had been written with **SideKick** installed, and that I should "try other configurations". Perhaps others are as confused about this as I am. Would you consider a reply to this in the newsletter in the near future?

So far I have found **JRCONFIG.SYS** to work beautifully for my normal needs. I do 90% of my tasks with **Lotus 1-2-3**, release 1. Since I only have a single drive so far, I set up a 360K ramdisk. This allows me to copy an entire data diskette to "C", assign B=C, then work on the various files one at a time, or combine as required, reading them back to ramdisk when each is finished. Then I copy each of the revised files back to my original data diskette. I can't get over how much this speeds up the whole process. The ramdisk is like greased lightning compared to reading and writing to and from 1-2-3 from a disk drive. Incidentally, I have never had a problem so far with losing data this way. Our power in this area seems very reliable, I use two surge protectors piggy-backed on my dedicated line, and I try to never work with the computer if there are thunderstorms in the area. I'll probably get it sometime, but I've been fortunate for almost two years now.

Keep up the good work with jrNewsletter, Tom. I've enjoyed it very much, and it might even get a 70 year old codger like me educated to the finer points of computer usage and manipulation yet.

*W.E. Hester, Endicott, NY*

**EDITOR'S NOTE:** No question is "stupid" if it is something you just don't have enough knowledge or information to answer for yourself. Please don't hesitate to ask "stupid" questions. They are usually questions that bother a lot of PCjr users (as well as other computer users, we might add).

Your question about "other configurations" is a legitimate one. Maybe we should define our terms a little more precisely. In the context you mention, "other configurations" means other types of config.sys files and autoexec.bat files, in addition to, perhaps the installation of a PCjr cartridge such as the jr Video Cartridge, or other

addition to the PCjr that can affect its ability to run certain software. If you consider the things just mentioned, you will realize that many combinations of these things -- "configurations" -- are possible.

One example: the game **Thexder**, will run with jrconfig.dsk (which is on JR POWER PACK II) set as follows:

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

The same program will not run on PCjrs with no config.sys file installed, or with some other memory expansion software. Those "other configurations" don't work. If you have been reading jr Newsletter for a few months you will have seen many specific configurations mentioned, particularly in reference to getting so-called "incompatible" software to run on PCjrs.

So, understanding the meaning of "other configurations" can help you to deal with software incompatibilities. Although there isn't much software that PCjrs have trouble with, if you happen to purchase one of the ones that do cause problems, trying some of the "other configurations" can often make those problems disappear like magic. The **Thexder** example we gave above is a good example.

## JRCONFIG.NRD Saps Memory

You and Mr. Newcomb may or may not be aware that when **JRCONFIG.NRD** is used to boot my Rapport Drive Two (Model 1200) enhanced 512K, NEC V-20 jr with the PCjr switch in the PC position, I am left with a scant 375 odd K of user RAM. A total of 512 is acknowledged but a good portion of it seems to have been stashed away somewhere DOS never goes. With the switch in the jr position 499 + K is said to be available but the system hangs when application software tries to rewrite the screen - I suspect this is another consequence of jr's peculiar video memory allocation scheme. Use of **JRCONFIG.DSK** seems to straighten things out, but I'd like to wring the last ounce of available memory out of my machine for some RAM-hungry (Q&A's intelligent assistant) applications, including, if possible, releasing some of the normal 16K video RAM for applications with the -V switch in the jrconfig software.

Any comments from you or Mr. N.? Perhaps the new V 2.14 will fix things, perhaps **PCjrXTRA** will? By the way, what kind of problems does the int 9 bug cause and is it possible to recognize them when they occur? Is this why I can't run **Symphony** under **DOS 2.1**?

*Michael Larime, Dexter, MI*

**EDITOR'S NOTE:** Yes, **JRCONFIG.NRD** does take some of your memory. We have not been able to find out why this happens, but we'll report back when we have some answers. The int 9 problem usually causes characters to be typed twice with each keystroke. (On the "make" and the "break") problems with **Symphony** using **DOS 2.1** are usually caused



## Reader Feedback

(Continued from page 8.)

by bugs in DOS 2.1 itself, which are fixed by the patches on **DOS 2.1 FIX** (Disk #40).

### Power Pack Comes In Handy Even On The Office PC

Please rush me a copy of the new **jr Power Pack II**. The first one was so useful; I can hardly wait for the new goodies.

I have been using many of the utilities on my office PC. I just set up a hard drive on the PC with DOS 3.2. As I was finding things to fill all that wonderful space, I looked at the **jr Power Pack** and discovered **HUSH.COM**. It really did the job on those noisy disk drives. I find that I have grown to depend on the spinning character in the upper right hand corner of my screen on my **jr** with **JRCONFIG.SYS**. I have installed **RAM.SYS** on the PC and now have confirmation that the RAM disk is really doing something on the PC, too. This is very helpful with programs like **Managing Your Money**.

The **Ford Simulator** hangs up on the **jr**, But works just fine on the PC. Has anyone produced a patch for Ford?

A utility called **Staydown** is offered by PC Magazine. It's great for the non-typist. Staydown permits entering two-key Ctrl-, Alt- and Shift-key combinations as separate keystrokes. It works well on the **jr**.

**Rightwriter** is another great one that works well on the **jr**. I use it with **PFS Write** and place it in the RAM disk with the spell checker. It really improves your writing style.

Keep up the good work and rush **jr Power Pack II** to me; I can hardly wait.

*Willis Gray, Andover, MA*

### Psychologist On A Disk-- Dr. Shrink Is "Funny & Exciting"

This letter is to inform you of another program I purchased. The program is called **Dr. Shrink**, and it works flawlessly on the **PCjr**. The minimum memory requirement is 256K.

The program is amazingly accurate in its psychological analysis. Accurate, that is, to the extent of how truthful you input the information on your particular subject. The program will give you detailed answers about:

- (1)"Their hidden self."
- (2)"Their deepest loves and hates."
- (3)"Their top secret sex fantasies."
- (4)"How to make friends with them."
- (5)"How to make them do what you want."

How you decide to use the information you get is entirely up to you. It certainly gives you an edge over anyone you want (your secretary, spouse or special friend).

**Dr. Shrink** isn't sold at the stores yet, but it can be

purchased direct from the company who developed it. The program costs \$36.95 plus \$3.00 shipping and handling. Telephone orders are acceptable by calling 800-323-1776. Mail orders by writing to: Neuralytic Systems, 66 Bovet Rd. Suite 325, San Mateo, CA 94402.

In my opinion this program is a must have. For your information I have no stock in this company, and I'm not receiving any sort of commission for this review. This is just my opinion about the program, called **Dr. Shrink**. Very happy to help the growing list of programs that will work on the **PCjr**.

Thanks, and keep up the good work with your magazine, **jrNewsletter**.

*Dan McConnell, Cedar Springs, MI*

### Reader Criticizes Disk Prices, Suggests Printing of Patches

Please renew my subscription for another year. Your efforts to keep us well informed on recent products and software for the **PCjr** is well worth the price, but allow me to make some suggestions that I feel would improve your services.

First of all, I applaud your expanding the number of pages in the newsletter.

Secondly, I thank you for your free disk offer for

*(Continued on Page 10)*

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## Reader Feedback

(Continued from page 9.)

renewals. I will surely take advantage of it. I am glad that you have reduced the price of your disks, but I feel that they are still too high for PD and shareware software when the handling charge of \$3.00 is taken into account. I suggest that charging for the classified ads would be a better way to make money if that is your object.

I haven't bought any PD software in over a year, but I have been burned by some that were plagued with bugs, and have been reluctant to test the waters since. I wonder how thoroughly you test the products you offer. For instance, I see that your disk #55 has **Monopoly** requiring 256K. I assume that it is the same program that I bought and liked, but was so full of bugs that it wasn't enjoyable to play. If you are selling a bug free (TESTED) program, please let me know because I would like to buy it. Sometimes a fix can be quite simple (I corrected one in a PD program called **SQUARE** myself), but I no longer have the time or inclination to debug another's program myself.

The idea of "fixes" brings me to my final suggestion, and that deals with the area of patches. I can't believe that you feel you must charge your readers for a patch. Why not just print one an issue in your magazine? The disks can still be made available for those not inclined to get involved with **DEBUG**, but many of us can perform a patch ourselves. (I got the patch for DOS 2.1 from a newsletter much like yours and got it to work even though I had never used **DEBUG** before.) I feel that this service could be easily added to your monthly coverage, and that it would be greatly appreciated by your readers.

And finally, I would like to recommend Big Blue Disk to you. It requires 256K to run, but all its programs run well on a jr, and with its extra disk of shareware programs in every issue, it's a great buy. Check it out.

*Jerry Burns, Lake Wales, FL*

**EDITOR'S NOTE:** Although it sometimes hurts a little, we do welcome criticism as well as praise for what we do with jr Newsletter. As for our disk prices, we feel they are reasonable. Even though some companies offer lower prices, we do not have the high volume of orders that they most likely have. Even so, our prices are below PC-SIG's, which is probably the largest public domain and shareware distributor in the country. Also, the income we receive from the disks in our "Software Store" helps us to keep on publishing jr Newsletter. The subscription price alone would not be enough to keep us going.

We do test all the software we distribute by making sure that it runs well on our PCjrs and that it does what it is intended to do. In fact, we try to do better than that. We try to seek out the very best public domain software and shareware which we try out ourselves and then offer to readers. That way you don't have to sift through a lot of the junk that exists. Our list of disks has an excellent selection of software that is

worth many times the price charged. In some cases, we do miss bugs in software and we are grateful to readers for calling them to our attention. Often, however, what is thought to be a problem with the software is a problem with the user, or with the instructions (which we then try to clarify). When there is a real bug, we try to fix it, or we refer the information to the software authors so the bug can be corrected in the next update.

As for patches, we have published a few of the shorter ones in jr Newsletter, but many of them are too involved and would take up too much space. We feel that assembling all the PCjr patches on one disk, as we have done on Disk #56, was the most useful way we could offer them to our readers. We now have 12 different patches on that disk, which works out to about 50 cents apiece.

And finally, thanks for the recommendation about Big Blue Disk. We tried and we liked, as you will see when you read our review.

## Reader Lists Software Titles That Fail To Cite PCjr Compatibility

For your information here is a list of software I have found compatible on my jr even though no mention was made by the manufacturer:

**Jeopardy, Wheel of Fortune and Family Feud** by Sharedata

**Land Your Dream Job** and various game disks by Key Punch Software

**Ghosts N' Goblins** by Capcom (512K required)

**Seemore** by Personics

**Labelwriter** by Software Direct

**Rock N' Roll Trivia Volumes I & III** by Thunder Mountain

**The Chase on Tom Sawyer's Island** by Walt Disney Software

**Winter Games** by Epyx

*Phillip Schwartz, Parsippany, NJ*

## Horse Racing And The PCjr

I enjoy your jrNewsletter immensely. It has helped me quite a bit. Especially with the patches.

I have **Lotus 1-2-3** cartridges and keep them in the slots all the time to avoid wear and tear on the contacts.

Your patch enabled me to still use **Basic** without the Jr. **Basic** cartridge.

I am at present working on a handicapping program for horse racing. Rather than trying to write a program in Basic or machine language, I use Lotus 1-2-3 to perform calculations for each race. I haven't made any money yet, but it has been a very good excuse for getting into computing.

*William H. Delp, Hatboro, PA*

(Continued on page 17)

# All Your PCjr Needs to Know

By Carl Haub

Larry Newcomb's JRCONFIG program has become the configuration system of choice for PCjr's with expanded memory, and with good reason. The program can be used on jr's with 256K of RAM, but really comes into its own with 640K or 736K machines. JRCONFIG is an excellent example of a "better mousetrap" shareware program. This package offers significant improvements on the software included with jr expansion boards such as Tecmar, Microsoft, Racore, or IBM. JRCONFIG's value lies in its quick boot time and the large number of options it will initialize each time you boot your PCjr.

What is JRCONFIG and why do you need it? To begin with, one of the more important differences between the PCjr and the "big" PC is that, on the PCjr, expanded memory and added disk drives cannot be recognized via hardware switches on the motherboard - because there aren't any. That is, one cannot install an expansion memory board, set a DIP switch, and be done with it, the way you can on a PC. The PCjr must be told at each bootup that some extra memory is present or that additional disk drives have been added. Lacking hardware switches to do that, software must obviously be called upon to do the job. This unhappy situation is probably due to IBM's very early notion that the PCjr would not be expanded beyond 128K or one disk drive.

Expansion board makers were then saddled with the task of providing software to do a relatively simple task. RACORE provided JRVIDEO.COM, Tecmar CONPCJR.COM, IBM JRMEM.COM, etc. All of those programs worked well, but Larry Newcomb saw many holes in them and set out to produce the "ultimate" PCjr config system. He succeeded.

At boot time, any PC looks for two important files on your boot disk: AUTOEXEC.BAT and CONFIG.SYS. These two files do just what their names imply. AUTOEXEC "automatically" executes a series of commands that the user would normally need to type in by hand: MODE 80, to change the display to 80 columns, a utility such as SETPRINT to give memory resident printer control, or any command normally executed at a DOS prompt (i.e., A>). An AUTOEXEC.BAT file can be used with any command to boot the computer in a particular configuration AND that configuration can be changed at any time at a DOS prompt by just typing in the command. If, for example, your AUTOEXEC boots the machine in 80 column with "MODE 80," but you now want 40 column mode, just type "MODE 40" at a DOS prompt. In short, any command in AUTOEXEC can be overridden manually; all AUTOEXEC did is type it for you.

CONFIG.SYS is a little different and here is where JRCONFIG comes in. CONFIG.SYS sets up system parameters for the computer - memory, number of disk

drives, etc. - but only at boot time. Once brought up in a certain way by CONFIG.SYS, the machine stays that way until rebooted. For that reason, you may want to have several boot disks available, each of which brings up PCjr in a different way.

To use JRCONFIG.SYS, do the following. Copy the files on the JRCONFIG disk to a bootable disk, i.e., one formatted as a system disk using the /s command. Then, using DOS EDLIN, or any wordprocessor that produces clean ASCII output, such as PC-Write or Wordstar in "nondocument" mode, write a CONFIG.SYS file to the disk. It will be most helpful to print out the documentation for JRCONFIG first by typing "TYPE JRCONFIG.DOC>PRN." Using DOS EDLIN, type "EDLIN CONFIG.SYS," and begin typing the file. (See pp. 6-1 through 6-44 in the DOS 2.1 manual for details on EDLIN.)

To jump ahead, a typical CONFIG.SYS file for a 640K PCjr with two floppy disk drives will look like this:

```
device=JRCONFIG.DSK -c -d2 -g -t3 -w78 -v32
device=ansi.sys
device=ram.sys
files=20
buffers=20
```

This CONFIG.SYS file tells the system to load a device

*(Continued on Page 12)*

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# The Great JRCONFIG

*Continued from page 11*

driver, JRCONFIG in this case, and to execute the options specified. In order, the options are:

- c turn on "keyboard click" (this can also be turned off and on with the Ctrl-Alt-Caps Lock key combination at any time).

- d2 causes DOS to recognize two floppy drives

- g reads the date and time from a battery-backed clock (works with Tecmar jrCaptain, may not work with some expansion boards)

- t3 sets display mode for 80 x 25 color

- w78 sets the spinning ram disk indicator in screen column 78

- v32 reserves 32K of RAM for video memory

The above parameters are generally self-explanatory, except perhaps for the reason for the -w option. JRCONFIG.DSK automatically installs a "ramdisk" of about 91K in low memory. A ramdisk is an electronic disk which, in a sense, fools DOS into thinking that the machine has another floppy drive attached. JRCONFIG assigns this drive a letter one higher than the number of disk drives actually attached. If your machine has two floppies, a: and b:, the ramdisk with be c: If you have a single floppy, it will STILL be c:, however; this allows you to use the single floppy drive as both a: and the "phantom" drive b:, something single floppy owners (and their wrists) are very familiar with.

---

## This is the ultimate utility for PCjrs

---

JRCONFIG creates the ramdisk in the first 128K of memory for a good reason. This process of filling up "low memory" causes your programs to load above 128K where they run noticeably faster! This happy result is due to the fact that your programs no longer must share memory with the PCjr's video. With most programs, this feature is only of practical use on PCjr's with 640K of RAM since filling up the lower 128K, when you only have 256K to begin with leaves little room for anything else. Other expansion software filled low memory to cause a PCjr to run in "compatible mode," but the lower memory was unused. JRCONFIG, sensibly, uses it for a ramdisk. My PCjr runs at 5.5 Mhz in this configuration, 4.28 without it. The -w option, mentioned above, adds a neat feature: a spinning indicator shows whenever the ramdisk is being accessed by DOS; the "78" simply places it in column 78 in the top right corner of the screen.

The ramdisk created is 91K (in DOS 2.1, 79K with 3.1),

but that's only by default. If you want a larger one, the -snnn option will change the size at boot. Using "-s360" will set up a 360K ramdisk. The size is only limited by memory. To maximize available memory, you could make it as small as 10K, but that will cause the gained speed advantage to be lost.

The JRCONFIG package contains a number of other goodies, among them a utility to create a resettable ramdisk without reboot. This is the reason for the line "device=ram.sys" in the above CONFIG.SYS file. This installs a "high ramdisk" driver in memory which, in turn, takes the next higher drive letter. On a one or two drive system, it's d:, on a three drive system e:. The size of this drive is set by typing "setram d 250" for a 250K ramdrive d:, for example. To change the size, type "setram d" and then specify a new size. But BEWARE: any files not saved to a ramdisk first will be lost.

The difference between the ramdisks available can be a bit confusing at first. Some users (not the writer, of course!) do not immediately realize that "device=ram.sys" installs a second ramdisk beyond the one initially set up by JRCONFIG. And, "device=ram.sys" can be used more than once to set up even more ramdisks, a capability that can come in handy at times. Experiment with different combinations: you may want to use the -s option to create only a small 10K ramdisk and use the resettable one to fill lower lower memory.

JRCONFIG contains another version for hard disks which insist upon being drive c:, JRCONFIG.NRD (not nerd, the NRD means no ramdisk) will not install the low ramdisk. (It does install the code to operate it, however. The included device driver LOWRD.SYS can be used to access the ramdisk code installed by JRCONFIG.NRD with "device=lowrd.sys.") One good reason to use JRCONFIG.NRD in conjunction with "device=ram.sys" is that the ramdisk installed to fill low memory will also be

resettable.

### Some other JRCONFIG options:

*(a condensed version of the program documentation)*

- |        |                                                                                                          |
|--------|----------------------------------------------------------------------------------------------------------|
| "n"    | indicates a user-specified value)                                                                        |
| -an or |                                                                                                          |
| -bn    | moves the screen position n spaces left or right                                                         |
| -fnnn  | changes screen color where nnn is 0 to 255.<br>The included program COLOR.COM shows the three digit code |
| -e     | changes directory entries allowed on ramdisk from the default of 16 to 32, 64, or 128                    |
| -j     | helps some communications programs find COM2 correctly with an external modem                            |
| -k     | sets Caps-Lock (keyboard lights NOT turned on)                                                           |
| -l     | accesses RAM above 640K (for 736K                                                                        |

- equipped PCjr's)
- m turns off internal speaker (programs may turn it back on)
- vnn sets amount of memory reserved for the video RAM. This important option can determine if certain graphic programs will run. Programs which use "two-page" memory, such as Reflex, will need a full 32K. This is analogous to the -p2 option used with Tecmar's CONPCJR program. If you do not use graphics at all, you could use -v4 to maximize available RAM
- xnn quiets 3.5" disk drives
- y installs the jrSynchro cartridge

---

### an excellent example of a "better mousetrap"

---

The current version of JRCONFIG includes even more bonuses. STATLIN.COM, a public domain utility, will place a "status line" at the bottom of the screen in line 26 (by shrinking the other 25 slightly) and show the status of Caps, Num, and Scroll Lock, date and time, and spinning ramdisk indicators. It will also install a screen blanker with selectable delay to save the life of your screen phosphors.

Finally, the package includes the utility COMSPEC.COM which enables you to redirect DOS to look on a ram disk for COMMAND.COM. Why would you want to do this? If you often get the annoying message "Insert COMMAND.COM disk in drive a:," you'll know why. When exiting a program, DOS often looks to the disk drive for COMMAND.COM and, if unfound, forces you to swap disks. By telling DOS to look for it on a ram disk, you will rarely have that annoyance again. The following lines in your AUTOEXEC.BAT will do the trick:

```
set comspec=c:\command.com
comspec c:\command.com
copy command.com c:
```

This assumes your ram disk is c:, if not, use the appropriate letter. As long as COMSPEC.COM is on your boot disk, you're all set.

One difficulty with this arrangement, however, can arise with programs that contain a "DOS shell" which allow one to "jump" to DOS temporarily. GALAXY wordprocessor, for example, cannot find the redirected COMMAND.COM and that feature of the program is lost. Here, again, you may wish to have several boot disks, one which redirects COMMAND.COM and one that does not.

It must be clear from all of the above that JRCONFIG is the "compleat" config program for the PCjr. And that it is. If you use it - and it would be difficult to imagine any PCjr owner with expanded memory who wouldn't - be a good egg and send Larry the requested \$10 shareware donation. Who knows what marvels he may be thinking of next?

## Big Blue Disk -- Full of Fun News and Useful Utilities

One of the better buys in commercial software these days is Big Blue Disk. On the recommendation of a reader responding to our reader survey, we tried issue No. 20, which we found in a bookstore for \$9.95.

The first pleasant surprise is that there are two disks in the package, which contained an entertaining game called Kingdom of Kroz, another game which tests your knowledge of state capitals, software for designing forms (Invoices, bowling scores, etc.), Easy Menu, a good menu creating program; a utility called Grep, which locates files and strings quickly and easily, a template for Express Calc, and a few other goodies. The package tells you what's inside of each issue, so you can skip the ones that don't appeal to you.

Not bad for \$9.95. Even if you don't like everything on Big Blue Disk(s), you're going to get your money's worth.

## Solve That Joystick Problem!

If you find you can't use a joystick with a new game you just purchased, don't toss it in the trash. Make sure the diskette has a write protect notch on it. Some of them don't. This can disable your joystick.

To put a notch on a diskette, put a diskette with a notch on it over the one that doesn't have the notch. Using the notch on the first diskette as a guide, cut a notch with a razor blade or sharp knife.

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## CB Style Chats Via Your PCjr

You can now use your PCjr to chat with people around the nation, much like people do on their CB radios. Thanks to public systems such as Compuserve, The Source and Genie, people are getting together to chat about almost everything you can imagine, using their computers and modems.

Simply log on to one of these services and roam the bands, viewing the conversations in progress. Jump in with your own comments or questions whenever you please. Or ask someone for a private talk that can't be seen by others.

If you want to join one of these systems, call Compuserve 800-848-8199; Genie 800-638-9636; The Source 800-336-3366.

## Stumped by Your Favorite Game?

If you bought a game such as Ancient Art of War or King's Quest III for the "challenge", but found it a little too challenging, you might be relieved to find Quest for Clues in your local bookstore.

Published by Origin Systems, this book contains clues to 50 of the most popular of the "challenging" games. Quest for Clues costs \$25, but it might be worth it if you're losing sleep over your failures in gameland.

If you can't find it at your local store, you can call Origin Systems (603) 644-3360.

Are you reading a friend's copy of jr Newsletter? Make it easy on yourself - send \$18 for a year's subscription to jr Newsletter, Box 163, Southbury, CT 06488.

## Solid Rock Electronics Goes Out of Business

Solid Rock Electronics, one of the better PCjr support companies, has ceased business. At press time for this issue, we were unable to get any details about why this has happened, or whether there will be any problems with unfulfilled orders.

Based upon the company's excellent record, we believe they will live up to any obligations they have made. We will attempt to obtain more information by the time our next issue is published. Until then, however, do not order any new PCjr products from Solid Rock Electronics.

## New Parallel Port

*Continued from page 1*

\$189 for 512K, the jr Hotshot has proved to be a very popular way to boost PCjr's total memory to 640K. Although prices have increased recently due to a threefold increase in memory chip prices, the jr Hotshot should maintain its popularity with PCjr owners looking to expand their computers.

Unlike other expansion units, the jr Hotshot plugs into the CPU socket, rather than attaching to the side of the PCjr. It is sold with or without a clock/calendar option and also can include a disk controller for either a 5.25" or a 3.5" drive.

With chip prices skyrocketing, some PCjr users are buying jr Hotshots without memory chips installed so they can shop around for the lowest chip prices. This may result in a bargain to the PCjr user, but those who plan on doing this should make sure to get a list of acceptable chips when they purchase their jr Hotshot. The chips must support CAS-before-RAS refresh or they will not operate properly.

## New PCjr Company

*Continued from page 1*

together a variety of PCjr hardware and software from several manufacturers. The additional products will include hard drives, joysticks, modems and "anything the PCjr customer may want," Miller said.

Racore will continue to manufacture its PCjr products, but will no longer market those products directly to PCjr users. That's Triton's job now. "We specialize in installed user bases," Miller said, pointing out that Texas Instruments made a similar arrangement with Triton after TI discontinued its TI 99/4A computers -- which, by the way, have been orphaned longer than PCjrs have been. Triton publishes full color catalogues of TI 99 products twice a year. The latest one has 20 pages full of hardware and software for TI 99 users.

Miller said Triton will provide technical support for the products it sells "up to a point." He said persons knowledgeable about installation and operating procedures will be available to customers through Triton's toll free number. "Customer service is important to us," he said.

Racore has stopped making its hard drives, keyboards and adapter cables for PCjrs, but its other products will continue to be available through Triton as well as other PCjr support companies, including several of the advertisers in jr Newsletter.

The fact that a company with Triton's record of support for discontinued computers is entering the PCjr market is good news for PCjr users. It means there will be another reputable company offering support and products as we continue to use our computers in the coming years.

For more information about Triton's PCjr products, call (800) 227-6900.

# A BASIC Program To Inspect Contents of PCjr Cartridges

By René Waldron

You can inspect certain cartridges plugged into your PCjr's cartridge slots if they are not the type which "take over" the operating system. By this we mean that you must still be able to run DOS with either Cartridge or Disk BASICA. The following program extracts instructive and useful information from the cartridge(s) installed. For those of you who have BASIC compilers, this program will compile and link as-is. This is not an example of polished programming; it is meant to be instructional in nature and we invite our readers to change and improve it. We also invite comments of any kind.

Now, let's see what it's all about.

Lines 10 through 120 merely set up the choice of screens for the user. They were included for those PCjr owners who have monitors which do not allow 80 column screens, though color is assumed. If color is not available, simply delete from line 130 everything except the 'CLS.'

Line 140 sets up some constants for use later. 'L\$', like 'CTR\$' in line 110 is a quick way to set up a sequence of characters using the 'STRING\$' statement. L\$, for example becomes 36 repetitions of the double lines extended character (CHR\$ 205) whenever it is called with a PRINT statement.

Now we can get to the beginning of the check-out loop at line 160. line 180 is of interest because it sets up the program to address the segment in memory where the cartridge slots are logically positioned. Lines 190 through 240 look for the standard header which is burned into the ROM of the cartridge to prove that it is actually plugged in. DOS and IBM have established that AA55 or 55AA hex will be the 'trigger' to show that cartridges are indeed there. If these cannot be found during boot-up there is, to DOS, no cartridge and booting continues. This could hold for other ROMs elsewhere in the system as well, but we need go no further into that for our purposes. If the standard header (AA55 or 55AA) is found, then we go to line 260. If our program tells us otherwise, we go to the end via line 250.

Line 270 peeks into the address where the length of the ROM program has been set. It is a little like a disk file allocation table, telling DOS how long this "file" is, so DOS won't need an end-of-file marker when it allocates memory. This number (length in units of 512 bytes, or 1/2k) is divided by 2 before being printed out in order to make sense to us humans and to present the size in proper blocks of 1K which also happens to be the standard boundary in these ROMs.

The next three words (6 bytes) are for the ROM to either take control or to pass control back to DOS to continue with the booting. In the ROM, in assembly language, it is the equivalent of a JMP instruction to the beginning of the ROM program or a JMP back to DOS. Our line 260 sets us just past these instructions for the next inspection step.

Lines 310 through 460 peek into the next 20 addresses byte by byte, for any standard ASCII characters which could become a string. These are the header commands which may be in the ROM. Loosely, these can be considered in the same way as the file names of .EXE or .COM programs on a disk. They are the names which start the program running. Line 400 prints these out for you. When you run this program with the BASIC cartridge installed, you will see why the DOS command BASIC or BASICA allows the cartridge take over!

Line 470 simply tells you how many of these commands (headers) were found and line 490 sends us back to go through the whole procedure again to check out the second slot in the same way.

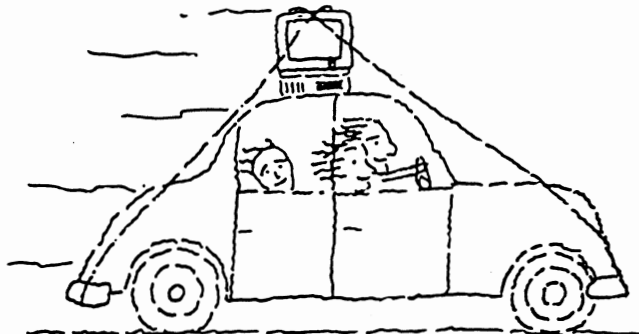
It might be possible to extend this program or to develop a new one which writes the data from the ROM to disk, byte by byte. After all, we have the starting addresses (lines 180 and/or 310) and the length (line 270). Please be warned however, the information in ROM is surely copyrighted or patented. What's more, it may be in some sort of protected format and could use information stored only in the ROM itself. The program in ROM might be set up to access this data directly by address pointers and your copies won't work at all. Remember, copying **MUST ONLY** be done for your own personal use, i.e back-ups or convenience. Please, do **NOT** share any copies you are able to make.

Here is the BASIC program for you to try:

- 10 \* Program to check size and Command information in cartridges, if present.
- 20 \* Note: This program can be compiled with QuickBASIC, as-is.

(Continued on Page 16)

## Moving?



**Please send your new address to us at least one month before you move. The Post Office will not forward your newsletters.**



## Program to Inspect Cartridges

(Continued from page 16.)

```
30  '*
40  SCREEN 0, 0, 0: WIDTH 40: KEY OFF: CLS : CTR$ =
    CHR$(32)
50  PRINT : PRINT CTR$: "PCjr slot Check-out.": PRINT
60  PRINT : PRINT CTR$: "Enter your choice:"
70  PRINT : PRINT CTR$: "    (1) 40 Column screen"
80  PRINT : PRINT CTR$: "    (2) 80 Column screen"
90  PRINT : INPUT " ", SC$
100 IF SC$ = "1" THEN GOTO 130
110 IF SC$ = "2" THEN WIDTH 80: CTR$ = STRING$(19,
    32): GOTO 130
120 BEEP: GOTO 40
130 COLOR 14, 1, 7: CLS
140 TRUE = 1: FALSE = 0: L$ = STRING$(36, 205)
150 PRINT CTR$: "  Cartridge Check-out pgm."
160 FOR SLOT = 1 TO 2
170 PRINT CTR$: "Checking slot num.": SLOT: PRINT
180 SLOTSEG = &HE000 - &H1000 * (SLOT - 1)
190 FOR K = 0 TO 63
200 DEF SEG = SLOTSEG + K * 64
210 SIGNATURE = FALSE
220 IF ((PEEK(0) = &H55) AND (PEEK(1) = &HAA))
    THEN GOTO 260
230 IF ((PEEK(0) = &HAA) AND (PEEK(1) = &H55))
    THEN GOTO 260
240 NEXT K
250 PRINT CTR$: "No cartridge in slot": SLOT: PRINT
    CTR$: L$: GOTO 500
260 PRINT CTR$: "Cartridge num.": SLOT: " has ";
270 PRINT PEEK(2) / 2; "K of ROM."
280 OFFSET = 6
290 HDRNUM = 0
300 PRINT CTR$: "The following headers are found:"
310 WHILE PEEK(OFFSET) > 0
320 HDRNAME = PEEK(OFFSET)
330 OFFSET = OFFSET + 1
340 HDRNUM = HDRNUM + 1
350 IF HDRNAME < 20 THEN GOTO 380
360 PRINT CTR$: "Cartridge not coded as expected.."
370 GOTO 500
380 PRINT CTR$: STRING$(9, 32);
390 WHILE HDRNAME > 0
400 PRINT CHR$(PEEK(OFFSET));
410 OFFSET = OFFSET + 1
420 HDRNAME = HDRNAME - 1
430 WEND
440 PRINT
450 OFFSET = OFFSET + 3
460 WEND
470 PRINT CTR$: HDRNUM; "headers (commands) were
    found."
480 PRINT CTR$: L$
```

```
490 NEXT SLOT
500 PRINT
510 PRINT CTR$: "End of check-out."
520 PRINT
530 PRINT CTR$: "  Press 'D' to return to DOS, or"
540 PRINT CTR$: "  any other key to get to BASIC."
550 K$ = INKEY$
560 IF K$ = "" THEN GOTO 550
570 IF (K$ = "D") OR (K$ = "d") THEN GOTO 590
580 KEY ON : CLS : END
590 CLS : SYSTEM
```

## The Amazing Prompt

(Continued from page 6.)

semicolon then <COL>. <COL> is a number from 1 to 80 that specifies the column to move to. If you omit <COL>, DOS will move the cursor to column 1. To omit <COL> but specify <ROW>, enter <COL> then the semicolon. If you omit both <ROW> and <COL>, DOS moves the cursor to row 1 column 1, the upper left corner of the screen. Example: {ESC}[10;10H Moves the cursor to row 10, column 10. {ESC}[:,10H Moves the cursor to row 1, column 10. {ESC}[H Moves the cursor to row 1, column 1.

Save Cursor {ESC}[s

Stores the current row, column position of the cursor. You can later move the cursor back to this position with the Restore Cursor Position command. Example: {ESC}[s Saves the current cursor position.

Restore Cursor {ESC}[u

Moves the cursor to the row and column position most recently saved with a Save Cursor Position command. Example: {ESC}[u Move the cursor to the row and column last saved with a Save Cursor Position command.

*(This article will continue next month. Part II will contain some examples for you to try out. The article was originally published in the IBM-Humbolt PC User's Group Newsletter.)*

## Boyan Disk Altered For Easier Uncrunching

We apologize to readers who purchased Disk #61 and found it difficult to uncrunch the arced files. The problem was that one of the files, when uncrunched was too big to fit on a floppy disk. There was a way around this problem -- use a hard disk, or a ram disk of 400K, but we failed to warn you of this.

So, we have split the arced files into more manageable sizes and provided more information on how to uncrunch them using floppy disks.

Anyone who purchased Disk #61 and could not uncrunch the files should either try the remedies above (hard disk or 400K ram disk) or return your disk to us. We will send you the new disk with its easier to uncrunch files.



# Customize Your Boot Disk

*(Continued from page 2.)*

such as Junior Music Machine. If the program will run on a regular IBM PC, you will only waste memory with these switches.

PCJRDISK.COM /72 or MDISK.COM /72 will create a 72 K ramdisk as drive C to fill the first 128K of RAM. This will allow all programs to run in expansion memory, so they will execute 50% faster. Uses for this ramdisk will be covered later.

If you want two ramdisks, just put the device = PCJRDISK.COM /nnn line in twice (nnn = 359 makes a standard size disk). The first ramdisk is C; the second is D.

The BUFFERS command will allocate about 5K of RAM to store data from the disk. This speeds up reading and writing to the disk.

The FILES command only consumes about one-half K, but will guarantee that programs such as PC-File+, PROCOMM, and others never have problems.

If you have an Impulse memory expansion unit, get the Racore software. It will allow you to use the BUFFERS line which Impulse software won't permit.

After the CONFIG.SYS, PCJRMEM.COM and PCJRDISK.COM files have been read, COMMAND.COM is loaded and the AUTOEXEC executed.

## AUTOEXEC.BAT

The AUTOEXEC.BAT is a text file like the CONFIG.SYS and can be created the same way. Once an AUTOEXEC.BAT file is on your boot disk, the commands in the file will be automatically executed every time you use the boot disk to start up your PCjr. Here is an example AUTOEXEC file.

```
mode co80
copy command.com c:
comspec4 C:\COMMAND.COM
set comspec=C:\COMMAND.COM
path c:\
swapcom2
date
time
```

MODE.COM from your DOS disk is used to switch to the 80 column screen; co80 is specified because some programs such as WordPerfect distinguish between MODE 80 and MODE co80 in setting screen colors.

We copy COMMAND.COM to the ramdisk and use COMSPEC4.COM and the SET command to tell programs that it is there. This will eliminate the irritating "Insert disk with command.com" message. DOSPATH or another utility can be substituted for COMSPEC4. SET is an internal DOS command.

The PATH to the ramdisk C will allow programs residing there to run without specifying the C drive even when the current drive is A.

SWAPCOM.COM or SWAPCOM2.COM should be used if you plan to use an external modem. These correct the RS232 port designation to COM2.

DATE and TIME are used so that new files you create will be correctly dated for reference purposes. A utility such as IPLTIME.COM can be used instead of DATE and TIME.

Of course, for these AUTOEXEC commands to work, MODE.COM, COMSPEC4.COM, and SWAPCOM.COM must be copied to the boot disk.

If you have an Impulse memory expansion, you should call IMPFIX.COM from your AUTOEXEC. This corrects for a nasty bug in the Impulse ROM chip which will lock up your computer when trying to load a second command processor.

At this point you have a working boot disk with 303 K bytes free. In another article, I'll discuss some additional files to include on the disk, more commands for the AUTOEXEC, and how to deal with BASIC when you have a ramdisk.

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*(The above article was originally published  
in the San Francisco PCjr User's Group Newsletter,  
John King, president of the SFPCjrUG  
can be reached at (415) 472-7035.)*

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## Reader Feedback

*(Continued from page 10.)*

### Tips on Using Symphony Plus Other Favorite Software

You and your readers seem to have an insatiable appetite for information on program compatibility so, since I've benefited from my passive readership for so long, I thought I'd contribute my two bytes worth and discharge a moral obligation to my fellow orphan owners.

Although I long for a PS/2 -50 system (VGA is a blessing), I can neither justify nor afford such a machine at home, so for the while I'll remain loyal to my 512K, Racore enhanced, dual drive jr. Addition of the NEC V-20, Keyboard Buffer and JrVideo cartridges from PC Enterprises combined with bypassing, when possible, the first slooow 128K enable me to get acceptable response speed from my mini-mite jr. The Mouse Systems optical mouse, a high end CH joy stick and HP's Thinkjet printer complete the picture.

I do a lot of number crunching at home and, for me, nothing beats **Symphony** (I use V 1.2) or **Lotus 1-2-3**. There is a lot of aftermarket documentation and auxiliary software written for these programs which greatly enhances their utility. Two good examples of the software are **Sideways**, which enables font enhanced, sideways printing of spreadsheets, and **See More** which modifies Jr's CGA display to show more of the spreadsheet than the normal 80x25

*(Continued on page 18.)*



## Reader Feedback

(Continued from page 17.)

character matrix. This can easily allow one to view a whole year's data on screen at once, something that is frequently difficult with a standard 80x25 screen. In these days of powerful, multidisk software a major benefit for me is the compact nature of Symphony with its many modules on one main disk. I put the help file on my primary data disk and then offload worksheet files as I finish with them. Additional benefits include Symphony's minimal recalculation capability which minimizes jr's disadvantages in the speed department and it's ability to use more than 640 K which may allow jr owners with memory in excess of 640 to work with quite large spreadsheets. I've never been able to get Symphony to run reliably under DOS 2.1, patched or not. I use DOS 3.1 or 3.3 and suffer the available memory loss due to increased DOS size.

A program I find very useful is **Harvard Graphics**, a presentation graphics program. It produces excellent quality output on low end dot matrix printers and has capabilities that far exceed most user's needs for intermediate level charts and graphs. The program does too much to try and describe -- go browse through the documentation and be amazed. Performance on the jr is snappy and satisfying, especially the 16 color slide show presentations you can do on screen if you wish. The custom fades and segues are right out of Hollywood! Suffice it to say that this program runs on jr with but a few compromises (there is not room to hold all the art and symbol files at once on a dual 360K floppy machine) and no other graphics program is likely to wring out as much high quality output from your hardware. It has drivers for printers, plotters and slide making hardware; and, it will very easily queue your files for sequential printing. Bonus: it's easy to use without spending much time in the documentation. Again, I've not been able to run this program under DOS 2.1 (it can't remember which overlay files are on which disk) but it runs smoothly under 3.1.

All of us probably have favorite housekeeping programs but I encourage you to look at **PCTools Deluxe**. It easily out does DOS, includes a little editor so you don't have to COPY CON or use Sidekick to create or modify batch files and includes safety and recovery tools that are a lot easier to decode and use than Norton's stuff. It works within and between sub-directories and, plus, in 16 colors it looks great on screen.

Want a data base that is genuinely easy and fast to learn yet almost as powerful as dBase? Try **Q & A**. Fast, forgiving, flexible, networks, programmable, does math and is semi-relational. The AI based intelligent assistant module will interrogate your data base for you, in english, if you don't want to create your own reports - it really works, I use it a lot for casual queries of my recorded music data base. (This

impresses even the resident office Power Users.) In the office we use it to support a 2000 client telemarketing data base, an application I developed at home and transplanted to the XT's & PS/2's at work.

You may even find yourself tempted by Q&A's integral word processor module. Moderately full featured, it's attraction for light WP users is legend due to its simple interface and well executed on-line help scheme. It also makes the most of whatever printer you have and does so in a most painless fashion that will make you loath to leave its cozy caring command structure.

*Michael W. Larime, Dexter, MIa*

## Detailed Instructions For Fixing Horizontal Sync

The PCjr color display horizontal sync problem so many of us have experienced is due to a simple manufacturing decision made when IBM instructed the Japanese manufacturers of the monitor to install a volume control. The manufacturer did this by replacing the horizontal hold, i.e., replacing a visible, easily accessible horizontal hold. Where did they put it? Inside, to the left of the picture tube's yoke. It is important to NOTE that before anyone does ANYTHING inside the monitor casing, the monitor MUST BE UNPLUGGED and UNHOOKED from the CPU. You could get electrocuted if you don't.

Six screws - three pairs of two - must be unscrewed to free the monitor casing. Two are up top, two on the bottom, and two on either side of the cord outlets at the back. The horizontal hold pot will be marked either H. Hold, or H. Freq. Using a long thin Phillips screwdriver, the pot should be turned between a 1/16th and an 1/8th of an inch left (it seems most loss of horizontal hold throws everything off to the right).

My **STRONG ADVICE** is to put the cover **BACK ON** before testing anything.

Getting the monitor back on can seem difficult, until you realize the inside of the cover has, on either side, a slotted kind of flange. Putting the monitor face down on a towel, you clearly see that it has a shiny metal sheet, then a greenish "card" about the same size as the metal sheet, and then a larger tannish "card" or "board." Fit the cover back so this largest of "boards," the tan one, slides up into the flanges (or "guides"). Put the screws back. **ONLY THEN** test the monitor. You may have to turn that horizontal hold a little more, or try the other direction, and again ... I **strongly** urge that no power be restored each time until you have the cover securely back on. So what if it takes a couple of minutes longer; we're few of us technicians. We just want our PCjrs to work as well as possible.

*George Malko, New York, NY*



# \* \* \* PCjr CLASSIFIEDS \* \* \*

**PARALLEL PRINTER PORT** - for PCjr - \$35. Robert Peck, 230 Straitsville Rd., Prospect, CT 06712 (203) 758-5850 (6)

**IBM PCjr - Color monitor, 640K**, power & parallel sidecars, two joysticks, internal modem, keyboard cord, DOS 2.1, BASIC, Mine Shaft and Crossfire cartridges:\$650. Second drive controller with external case but no drive:\$100. W/ original boxes and manuals. Will sell parts seaterately. Jay Hofacker, 1584 Wellelsey Dr. S, Lexington, KY 40513-9401 (606) 231-0258 after 4pm. (6)

**IBM PCjr - 2 Disk Drives - 640K/ 2nd Drive is Racore w/** clock-calendar, PCjr Color Display, Keyboard w/cable, one CH Joystick. BASIC, DOS 1.1, WordPerfect Jr., SuperCalc 3, Fantasy V2, List & Mail, Jet, King's Quest III, PC Pool, Sargon III. M.C./Visa/AM. Exp. \$479 (includes shipping), 1-800-548-8050, Attention: Lou (6)

**IBM PARALLEL PRINTER PORT - & 120K Memory** Expansion: with original software, both units for \$110. M.E. Dollar, 2751 Walker Lee, Los Alamitos, CA 90720, (213) 430-1569 (6)

**IBM PCjr ColorPaint** - (less than 5 hrs use) with joystick driver to allow use of an IBM compatible joystick rather than a mouse. Also, Quadram's version of Dr. Halo for the PCjr. All for \$85. I will pay UPS shipping. Call (206) 545-5748 No collect calls. (6)

**FOR SALE** - Wordstar Professional 4.0 \$75. Many games. Send SASE for list. John Eustis, 1245 Tonti St., LaSalle, IL 61301. (7)

**IBM PCjr - 128K memory sidecar.** Manual and software for installing sidecar and configuring DOS included. Asking \$50, I pay shipping. Anthony Zoccola, 413 Tyson Ave., Phila., PA 19111 (215) 342-5325. (7)

*Classified Ads are free to subscribers of jr Newsletter. Just send us your typewritten ad (no more than five lines on an 8 1/2 X 11 typed page) and we'll run it for you for two months. Ads are \$10 per issue for non-subscribers. Send to jr Newsletter, Box 163, Southbury, CT 06488*

**OKIMATE 20 COLOR PRINTER** - IBM Plug 'n' Print module, Serial cable, 10 extra ribbons. In excellent condition and in original box all for \$150. Nancy Blair, P.O. Box 548, Truckee, CA 95734 (916) 587-4821 after 5 pm PDT. (7)

**IBM PCjr 128K** - IBM color monitor, cartridge BASIC, 2 PCjr joysticks (1 never used) and compact printer. Software - Filing Assistant, WordPerfect, Kings Quest, Flight Simulator, Mine Shaft, Zork III, Touchdown Football and many more. All in excellent condition, never repaired, hardly used. Make offer - Chuck Boyer, 1812 Effingham, Fort Collins, CO 81526 (303) 226-1109. (7)

**DESPERATELY SEEKING** - IBM's Writing To Read program to send to missionary friends overseas who are teaching their young children at home. I already have the speech attachment. Now what I need is the program. Please Contact Kathleen C. Jaeger, 712 Sedgfield Dr., Newport News, VA 23605 (804) 595-5764. (7)

**PCjr 640K** - Tecmar jr Captain, IBM color monitor & Graphics Printer, Basic Cartridge, 2 keyboards with cord, PC-DOS 2.1, PCjr Newsletter back issues, Executive Writer, Number Works, Tecmar utilities, tech documentation. Superb condition. Was \$1988.91 new. Will accept best reasonable offer. Call after 7 pm, Eastern time (201) 838-5010. (7)

## Metro PCjr Group Defies Odds -- Forms Clone in D.C. Area

The Metro PCjr Users Group has done it again -- achieving a new breakthrough in PCjr Group history. Due to widespread demand from an expanding membership, the MPCjrUG has divided in two, forming a Southern Chapter for members living in Virginia and Southern Maryland.

The first meeting of the new group was held May 24 at the Belle Haven Country Club in Alexandria, VA. Meetings of the MPCjr UG usually include a demonstration of software or hardware, a question and answer session when members share PCjr info, a buy and sell table, and group business.

For further information about the MPCjrUG, call (301) 869-4874, Carl Haub, President. Or contact their BBS at (301) 468-0984. The BBS is full of PCjr info and software. In fact, they have filled a 40MB hard drive already and are trying to raise funds for a second one.

Anyone wishing to contribute to this purchase, which will serve to spread PCjr information, is asked to send a check for \$10 made out to the MPCjrUG to Jeff Perriens, 12115 Portree Dr., Rockville, MD 20852.

# Questions and Answers

(Continued from page 4.)

## Q. Does DOS 3.3 work on the jr?

A. Yes, it works like a charm, with these caveats to be considered: It takes up more memory when installed and if this is of no concern to you the additional convenience of such a command as XCOPY and others may make it worthwhile. The other problem, easily corrected, is that the default disk drive head seek time (steprate) with DOS 3.3 is wrong for the standard disk drives in both PCjr's and PCs and it makes them sound like coffee-grinders. Additionally, there are occasions when disk read or write errors occur. We included one program on **JR POWER PACK II** (Disk #65) which allows you to adjust the steprate for whatever drive(s) you have installed.

## Q. Can you recommend some books to learn about DOS which explain operations more clearly than the standard manuals, namely COMMAND.COM?

A. Books by the following publishers are worth looking into: McGraw-Hill, Microsoft Press, The Waite Group, Sybex, and Hayden Press. Be sure to check any book written by Peter Norton.

Go to your local Walden Books or Dalton Bookseller and look through the offerings; the range of coverage will be from simple primers to quite sophisticated applications and the language will reflect the degree of complication of the material. You should find something relating to your own level of expertise and needs.

The second part of the question is a bit more difficult, because even in most books about DOS, COMMAND.COM is not covered as it might be. First, become familiar with SHELL statements and commands, if only to try to gain a little more insight as to what makes it different from the other DOS statements and commands. COMMAND.COM itself is a kind SHELL program tied to the operating system though it sometimes remains fully in memory. One important thing it does is to check to see if it is already in memory, and has not been disturbed. COMMAND.COM will reload if the "transient" part of it has been written over by some other program. Some of the operations of COMMAND.COM which we think of as being "internal", having to do with memory management and keyboard commands such as DIR or COPY need, in effect, to be re-loaded in order to be used in batch files or from the keyboard. COMMAND.COM might be thought of as a slew of other commands, some of which we are all familiar with which we normally use from the keyboard. You see, COMMAND.COM is not just another command. If you type "COMMAND", then press <Enter> at the DOS prompt and then check your memory with a program such as Peter Norton's SI.EXE or simply use CHKDSK, which is included with DOS on your Supplementary Diskette, you will see approx. 3k to 4k less

available RAM memory, depending on your version of DOS. COMMAND.COM has loaded another copy of itself above the existing program! Do it again and again and you lose another 3k to 4k each time. You didn't check to see if it was already loaded and you loaded it again, but DOS checks every time it exits a program and loads itself only if necessary. Now that we have got you into this fix, how do we get out? Simple, (and it shows that we are in a SHELL.) Type "EXIT" <Enter> and the last load of COMMAND.COM is removed. Do it again, or as many times as you entered "COMMAND" at the DOS prompt and you will get off this ladder of shells and back to the single copy of COMMAND.COM which does belong in memory. Don't worry, if you EXIT too many times, nothing crashes. COMMAND.COM is smart enough not to commit suicide by removing itself entirely.

## Q. What is the best CAD program of these; Prodesign II, EasyCad, CCC Cad, Generic Cad, or Autosketch?

A. We cannot make direct recommendations of this kind for the simple reason that software that we find is ideal for our purposes may lack specialized and important features for other users. Some examples: Will you be dot-matrix, laser printing or line plotting your drawings, in color or black and white and at what resolution? Do you need special lettering, are fonts available and easily loaded, do you have enough memory? What other peripheral hardware do you have in mind? Hard disk, mouse driven, digitizer pad, with or without menus? How large are the finished drawings? What speed of re-draw do you require with or without an undo? What automatic features are necessary; filleting, arcs, three dimensional, separate automatic dimensioning and scaling in two or more axes with and without viewpoint and/or perspective changes? Free-hand sketching, previews and paint/fill? Oh, la la! This hardly touches it! A feature that we might never consider could be the one important feature which is the deciding factor for purchasing one program but not another. A list of useful and compatible programs is on Disk #60 to help you decide which software companies to contact regarding your specific needs.

## Missing Address in May Issue

We apologize for omitting the last line of an address for IBM's Sales and Service Center in our May issue. Several readers wrote to us reminding us that without the city, state and zip, very few letters get to their destinations.

The omission was at the end of an article suggesting that if you wish to order PCjr port protectors or a fan shroud, you should contact: IBM Personal Computer Sales & Service, P.O. Box 1328-C, Boca Raton, FL, 33432.



# jr Newsletter Software Store



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 \* DOUBLE TROUBLE.** Two of the most challenging, highest quality arcade style games we've seen -- Amazing Mazes and Willy the Worm. Ten different mazes and five levels of play will tie your brain in knots. And Willy, who is the fastest, jumpingest worm you'll ever see, will beat you for sure! You can even modify Willy to give yourself more (or less) trouble. 128K ok. (Disk #68)

**\* NEW \* GALAXY.** One of the easiest to use word processors we've ever seen, Galaxy has all the features you need to write letters and do most word processing. It has many, but not all, advanced features. Its strength is its simplicity, with help menus always ready to assist you. You probably won't even have to read the manual. 128K ok. (Disk #69)

**\* NEW \* NAMEPAL.** An excellent utility program for maintaining and printing name and address lists, address books or mailing labels. Keeps business and personal references and allows user to maintain free-form notes as well. Requires 128K Memory. (Disk #70)

**\* NEW \* CROSSWORD CREATOR.** Helps crossword fans design their own puzzles. Handles puzzles up to 200 words and clues. Makes a standard cross-word puzzle print-out, or can save the puzzles for solution on disk. Requires 256K and Epson or IBM compatible printer for printouts. (Disk #71)

**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)

**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)

**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)

(Continues on Page 22)



**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.

**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, Epsoms 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 Overreact, 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 a 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)

## jr Software Order Form

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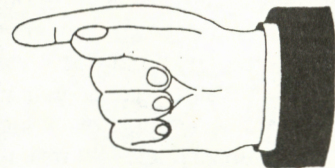
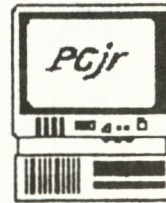
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