jr Newsletter

Sept.-Oct., 1989

jr Newsletter Welcomes Junior Report Readers

Jr Newsletter is now the one and only publication exclusively for PCjr users.

We welcome the subscribers of The Junior Report, the other excellent newsletter for PCjr users, which published its last issue in March. And we welcome the additional input we'll be receiving from The Junior Report's writers and from its editor/publisher, Harrison Day.

Jr Newsletter is now the central source of PCjr information in the .....well, yes, in the world! Big deal, huh? Maybe not, from the point of view of the larger computer universe. But to PCjr users it's essential to have a place where information about our orphaned computers can be shared. Perhaps even more than those who own more popular computers, we need to know about new PCjr hardware, and about compatibility with new software titles, and we need to hear when someone solves a problem that may also face other PCjr users.

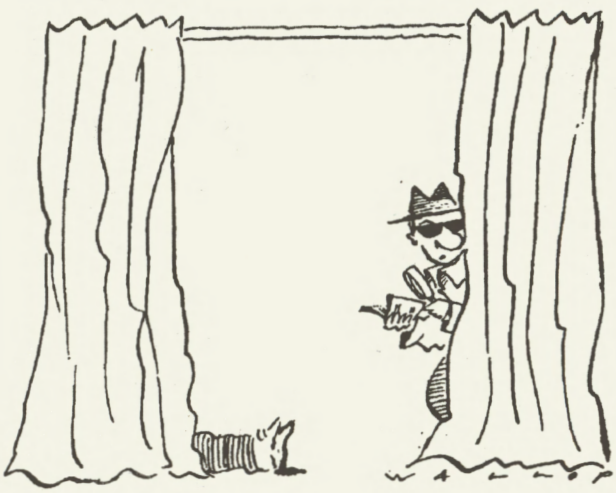
So that's what jr Newsletter is about -- news, tips and solutions to problems. And since a lot of that information comes from our readers (the PCjr family you might say) the addition of readers from Junior Report will greatly

(Continued on page 16)

INSIDE

Questions and Answers ..... 3.
Reader Feedback ..... 5.
Cookbook Software ..... 12.
Flight Simulator Scenery Disks ..... 13.
Beginner's Corner ..... 14.
PC Calc Plus ..... 15.
How to Start a PCjr Users Group ..... 17.
PCjr User Group Listing ..... 20.
Fix Disk Drive Problems ..... 22.
PCjr Compatibility Guidelines ..... 24.
Battlechess Review ..... 32.
Install DOS on PCjr Hard Drive ..... 35.
How PCjr Memory Works (Part 4) ..... 36.
Software Compatibility Notes ..... 40.
Software Store ..... 43.

PCjr Lives!



"Victim died of shock when someone told him PCjrs are still popular."

PCjr 286 Boards Now On The Shelves

The Mesa 286j, brainchild of jr Hotshot's inventor Ed Strauss, is now being sold by most of the companies who specialize in PCjr products.

This board performs the amazing feat of transforming a PCjr into (virtually) an AT. When we first reported on it in our June 1989 issue, Ed was not able to get it to work with the jr Hotshot memory expansion board, which seemed an ironic flaw. But the Mesa 286j is now compatible with jr Hotshot, as well as IBM, Tecmar, Racore, and Microsoft PCjr memory expansion units.

The only reported problems are with Racore DMA units. Software must be used to deactivate the DMA in order to work with the Mesa 286j. It also won't work with Cartridge BASIC, although it runs fine with disk based forms of BASIC.

The Mesa plugs into the PCjr's 8088 socket, replacing the CPU with an 80286 CPU, just as in an AT. A cord runs from the Mesa out the back of the PCjr systems unit to an external box. Running at 12 MHz with zero wait state read and write, the Mesa achieves a Norton SI of 11.5.

Features include onboard cache memory of 16k, an 80287 math co-processor socket, EMS/EEMS driver to

(Continued on page 16)

PCjr Compatibility Guidelines Distributed to Software Companies

Detailed guidelines showing software developers how to include PCjr compatibility in their software are being distributed far and wide by jr Newsletter.

The bottom line of the guidelines is that it is quite easy to provide PCjr compatibility, especially when software is intended for use by Tandy 1000s. Another theme running through the guidelines is that good programming practices, rather than shortcuts, will make software more likely to run on PCjrs.

Jr Newsletter has distributed the guidelines to several interested software companies in order to encourage PCjr compatibility in future titles. We are also publishing the guidelines on page 24 of this issue so that other PCjr users can help spread the word.

Notice: You Are Now Holding A Double Issue In Your Hands

As we did last year, we've combined the September and the October issues of jr Newsletter into one double issue. This allows most of our hard working staff, your loyal servants, to take a vacation.

We say "most of our staff" because there will still be one person on hand to handle software orders. We'll draw straws to see who that's going to be.

We hope you all had an enjoyable vacation this summer, and we're sure we'll enjoy ours, in spite of the fact that we won't be taking our PCjrs along (they're not quite laptops).

Prodigy Official Offers Hope For Future PCjr Compatibility

Les Briney, director of system development for Prodigy Services Company, says the new version of Prodigy software will have greatly improved PCjr compatibility.

The flashy on-line service being touted nationwide by IBM and Sears has caused problems on PCjrs. On a PCjr with 640K and using a modem capable of 1200 baud, it is possible to log onto and use Prodigy in four colors. However, after several minutes of use it is likely that you will not be able to enter any more information from your keyboard and will have to hang up.

The problem of running in only four colors can be solved by the modified Tandy screen driver, which is available on the Jr Patches Disk #56. And with the use of nobeep.com, also on Disk #56, you can use Prodigy without keyboard freeze-ups. But we were hoping that Prodigy would make it possible for PCjr users to enjoy the service without having to go through these extra steps. So we called and talked with Mr. Briney.

"We're not forgetting about PCjrs," he said. In fact, he said, in a new version of the Prodigy software they have changed the Tandy driver to allow PCjrs to operate in 16 colors and have eliminated the problems which require the use of nobeep.com. However, the new version is not scheduled for release until January 1990.

Mr. Briney said he did not know whether Prodigy would promise PCjr compatibility in its advertising and packaging. "With all the different memory configurations, we can't test them all," he said. He was referring to the many types of memory expansion units that have been installed on PCjrs -- IBM, Racore, Tecmar, Impulse, Microsoft, jr Hotshot, PC Enterprises, and others.

So we may have to be satisfied knowing Prodigy is removing all known obstacles to PCjr compatibility, while we continue to use the modified screen driver and nobeep.com until next year.

Printing Directories

The simplest way to make a copy of the directory on a disk is to type at the A> prompt:

DIR >PRN (ENTER)

This will give you a copy of the current directory without displaying it on your screen. If you want to see the directory as it is being copied, first press the Fn and the E (echo) keys on your PCjr keyboard and then type at the A> prompt:

DIR (ENTER)

jr Newsletter is published monthly by Crider Associates, P.O. Box 163, Southbury, CT 06488. Tom Crider, Editor. Subscriptions are $20 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. Is there any "patch or some way to run Grand Slam Bridge Electronic Arts) on the jr? I have 256k and the Accolade Mean 18 Golf Game which requires 256k runs fine. Will more memory do the trick? G. Olsen, Camano Island, WA.

A. Nope. No one we know of has been able to make this program run on a PCjr. So we have listed it as not compatible. Is there someone out there who has made this game run?

We would like to remind our readers that they really should have the Compatibility Disk Version 2, #60 before going out to purchase software. Order this from the Software Store and peruse it for the other enlightening information, too. You can really save time and money. But we should also point out that the information on the Compatibility Disk is not infallible. It is the best information we have, but occasionally differences in software versions or the way your PCjr is set up can cause some programs not to run on your computer even though it may run on someone else's PCjr. So, in addition to the data on this disk, when in doubt about whether a certain program will run on your PCjr, you should get the software dealer you buy it from to agree to take it back if it won't operate on your computer. Many software dealers will do this, so you shouldn't be shy about demanding it from your dealer.

Q. What kinds of printers will work with my jr? Various Readers.

A. Just about anything at all, Ink-Jet, Thermal, Daisy-Wheel or Dot-Matrix! Laser printers are a separate problem, usually because of the memory requirements of software to take full advantage of their features. If the printer works with IBM PCs or clones, it works for you.

The requirements are that your jr (and the printer) have either a standard RS 232-C Serial port or Parallel port. Your jr has a serial port in the back. To get a parallel port, you need a sidecar. Most memory expansion sidecars for PCjrs come with a parallel port in the back.

We recommend using the parallel port connection because most printers are available this way and it will leave the existing Serial port free for other uses (external modem, scanner, digitizer pad, rodent, etc.)

Now, your jr already has the proper Serial port, so any printer with a standard Serial port will work. Just get a standard Serial cable (it should be supplied with the printer for IBM) to connect them to run. The "run" part requires a little explanation, however. You will need to do a little delving into the requirements for this kind of printer. The information should be found in the printer manual under "setting up your Serial port parameters." When the numbers are found, you will have to add a statement to your AUTOEXEC.BAT file. It will be something like this: MODE COM1: 48,N,8,1,P (MODE COM2: 48,N,8,P if you have the internal modem installed.) This information on setting the COM port (which is the Serial port) must be in the manual accompanying Serial printers.

One other thing, programs (software) sometimes send printer output only to LPT1. If this is the case you will also need a SECOND statement in the AUTOEXEC.BAT file; MODE LPT1:=COM1 or MODE LPT1:=COM2 if the internal modem is installed in your PCjr. Remember to use the same COM numbers in both statements and make sure they are put in the AUTOEXEC.BAT file in the order given here. You will have to look in your DOS manual for more details about modifying an AUTOEXEC.BAT file.

For a Parallel printer, just connect it to the attachment and go, nothing else. See why we recommend the Parallel route to printer connections? It's not only the easiest for you, the PCjr user, but it's the way most printers are attached to PCs, XTs and ATs as well.

Q. On a particular disk the program read to press Fn-Q (pause) to slow up the instructions in order to read them which works fine but we cannot get the instructions to continue again once we hit pause... Help! D. Andrews, Pleasantville, NY.

(Continued on page 4)

Questions and Answers

(Continued from page 3)

A. You failed to mention the specific software, but we'll do our best. If this is the DOS pause which is used to stop the scrolling, then pressing ANY key gets it going again, even Fn-Q. It is simply a DOS "toggle", that is "on" or "off." The scroll is "off" when you press Fn-Q (or Ctrl-Num Lock on other keyboards) and it's "on" again when you press any other key. This way you can read through a long document one screen at a time. Many of the disks in our Software Store suggest using this toggle to read instructions. That is probably what you are talking about, but if this is a pause actually written into the software, the software may be at fault.

Try this: Put a disk in A: which has a lengthy text file on it. At the DOS prompt type TYPE FILENAME.EXT <Enter>. Use the WHOLE name of the text file, including the extension after the period. The file will then fly up the screen too fast to read. Repeat the command by typing Fn-3 <Enter>, but this time, while it is scrolling, press Fn-Q and it should stop. Press any key at all and it should start scrolling again. If it doesn't, try a new booting disk, which sets up these "toggles." If this also fails the jr or keyboard may need service (but we doubt it!) If the jr passes this test, the particular program you are trying to use seems to have a built-in glitch.

Q. Is there a program which will write or change the volume label on a disk AFTER it is formatted? The TI 99/4A I owned had a disk manager which came with the operating system. Is there anything similar for the jr? J. W. Dilley, Bonner Springs, KS

A. Peter Norton's Utilities is an excellent set of programs, including the ability to change or write volume labels at any time and more, much more! We have a shareware utility that will perform this function which we plan to include on a new utility disk in the Software Store soon. If you're in a hurry, though, try calling some BBSs and look for the utility called VOLSER, which will enable you to write your own volume label.

Q. If the jr-to-Tandy hardware change is made, will it affect programs which are written for the jr? In other words is the jr always like a Tandy after the modification? Various readers, again!

A. The additional chip causes the jr to be BOTH a Tandy compatible AND a standard PCjr at the same time. We have found NO problems running jr-specific software since making the change. The video RAM banks are effectively put in sequential order instead of alternate order. The jr sets up AND reads them this way, no matter the software, therefore, no change. The Tandy always did this. You will see NO difference with your present programs, graphics or otherwise. You will, however be able to run many more programs, especially with graphics which are specifically compatible with the Tandy 1000 series. This is truly a remarkable modification -- and it's inexpensive, too. Several of the advertisers in jr Newsletter will do the modification for you, or sell you the replacement chip with installation instructions.

Q. I am unclear why external modems are always the focus of articles on modems. I much prefer the notion of an internal modem since I already have my serial port connected to my mouse. Can you give a run-down on the relative merits of external vs. internal? R. M. White, Austin TX.

A. The original internal modem was designed to have a command set which is not compatible with the industry-standard Hayes command set and is set at a maximum of 300 Baud. Instead of the Hayes AT command prefix for modem control, the IBM PCjr internal modem uses Control-N. Some communications software is not flexible enough to even allow this part of the command set to be changed. QMODEM, PC Talk, JrTele, and Procomm are some notable exceptions and we congratulate and thank them. There are other commands which are also different in the internal. Some examples are; the "initialization" string, "follow DTR and RTS" plus a whole string of Hayes "switch" settings, such as ~~~ AT S0=0, X4, &D2, etc. The flexibility of the latter method was realized by the programmers of software and they wrote communications programs accordingly. Other manufacturers use the Hayes command set for both internal and external versions of their products, and as you know, the standard PC internals do not fit in the jr, hence the external by default for the jr. The normal communications software runs with little if any adjustment and the external modem can be unplugged and used with ANY other computer with a serial port, so the investment is flexible. There are usually lights or LEDs on externals to indicate the status of the signals and most include a speaker so you can hear the call(s) going through. There are often push buttons so you can switch to voice without losing the connection if the other modem is also equipped to do this. Externals can have more sophisticated error checking and filtering of "noise" on the telephone line. An external modem does not add any additional load to the internal power supply of the jr. and this often contributes heavily to the decision.

If the mouse problem cannot be solved to your satisfaction with a serial A - B switch because you have mouse-driven communications software, you should know that internal modems for the jr with faster Baud rates than the original IBM internal are now being distributed. These do use the Hayes command set and are available from some of our advertisers.

(Continued on page 38)

Reader Feedback

PCjr User Cites Software He's Tried And Has Tips for Astrologers

This survey form has been sitting here waiting for me to answer. I would like to give a complete report of my work with a PCjr, but I am in a developmental stage which is not complete; therefore, a complete report is not possible at this time.

I have been a PCjr sysop since Jan. 10, 1989. I have had a minimum of unresolved problems on my 640K, single disk drive, in part because of the help provided by the jrNewsletter and the PCjr club. I am presently in the process of software sorting and selecting, which is not a simple thing, for as I put together a system, all parts of the system must be inter-related and compatible. I have reviewed a lot of software, but selected very little.

At the present time this is what I use in my main configuration JRCONFIG.SYS, RAM.SYS, QWIKMODE.COM, FASTDISK.COM SPEEDUP.COM, COMSPEC.COM, COMMAND.COM, FORMAT.COM, MODE.COM, PAD.COM (a small pop-up note pad), SETRAM.EXE, KOLOR.COM, I use color to help me keep track of which directory, function or configuration I am working with), ODISK.COM (the best directory aid I have found - I am preparing myself and my system for when I get a hard drive). All of the above is activated by CONFIG.SYS or AUTOEXEC.BAT. I then manually install (from CON) DESKTEAM (I use calendar, calculator and printer setup functions, but not much else - I haven't adopted this one yet. I will have to see what else is available). I use QEDIT (a fast, 8 window, full-featured--with DOS shell--text and program editor) for most of my wordprocessing, letter writing, file writing, and general system maintenance; this is my general workhorse. I use EXSPELL as a spelling checker, but it's not easy for me. What I want is a spelling checker that shows words that are similar or close to a mis-spelled word so I have a reference and can make a quick choice - I am still looking.

Much of my work is in astrology anmd astronomy. Two programs, **Astronomy** and **Planets** work on a PCjr and are helpful. **Astrology2.9** is somewhat useful to me, but not complete for what I do. A commercial program by Matrix Software, 315 Marion Ave., Big Rapids, MI, 49307, does most of my astrological computations. I had some problems getting a copy, so here is a little story.

When I first called MATRIX, I was told that they had some programs that worked on a PCjr so I ordered **Blue Star**, a general astrological computation program. My order was returned by the sales manager--stating that they did not support the PCjr anymore. I called, well-armed with information on compatibility and market potential obtained from articles in jrNewslettter, and spoke with Joel in customer service. He listened and sent me **Blue Star jr** and stated that Matrix will continue to support the PCjr. The program works fine for me and I have called for assistance. They have been very helpful.

I am still looking for additional programs in astrology, some of what I want to do I will have to write (Pascal or C) because it hasn't been done yet.

World2.9 is a mapping program that, although slow (compiled Basic) I find useful and works well on a PCjr.

I have been involved with graphics for many years (pre-computer) as a draftsman, engineer and artist. My search for programs that do what I want has met with little success in this area. I use **PC-KEY Draw**, but I am not satisfied with it. **DANCAD3D** 640k ver. works on a PCjr with 640K contiguous memory (I configure with Tecmar CONPCJR -P2). It works but doesn't leave much work space. There is a 512K version available. I will get it and check it out. I am starting to gather graphics orientated .COM files (modules) and will probably put together a system that meets my needs. I sure could use a program that allows my IBM compact thermal printer to print graphics, but I may buy a different printer before I find one.

I have looked at various data base programs (**PC-File+**, **File Express**) but haven't found what I am looking for. I have looked at **As Easy As**, **T-Calc**, **Express Calc**, **U-Mind Basic** and others, but haven't found a spread sheet that I like well enough to take the time to learn (EXPRESS CALC comes close). I have recently received a program called **Quickcat.com** (a disk catalog program that catalogs files from the directory). After I get this working, I will be in a better position to know just what software I do have and what it can do.

In closing, one of the wisest things I did was to buy my IBM PCjr. Though we have been orphaned, I find support in many places. When you consider the number of programers that have come up with patches and aids; the number

(Continued on page 6)

Reader Feedback

(Continued from page 5)

of independent companies that still make "stuff" for the PCjr; the performance capabilities of the machine; the number of creative, intelligent, independent people in the computer market with the time, developing skills and knowledge to "figure it ALL out" -- well in my personal opinion -- the IBM PCjr is the very best buy on the 1989 computer marker. The jrNewsletter sure does help us to figure it all out.

Thomas Naumann, Eureka Springs, AR

How Can a Tecmar jrCadet Provide a Total of 736K?

I have been reading the jrNewsletter for about three years now, and have put a lot of the information obtained from it to good use in my PCjr. This PCjr has a Racore expansion to 640K and a 10 meg hard disk drive with DMA, uses JRCONFIG.NRD -1 to locate expanded memory. Recently I found a good buy on a Tecmar jrCadet with all the memory installed. (I don't have the jrWave or jrCaptain). Is it possible to altar this side card so it can be used for expanded memory? If so, can anyone on the staff or any of the other readers tell me how to do this or put me on to someone who can do it for me.

Robert Randolph, Cincinnati, OH

EDITOR'S NOTE: To our knowledge, only IBM memory expansion sidecars can be modified to give PCjrs a total of 736K. Oowl Software (800)-322-0219 will do this modification for $19.95 plus shipping, but it must be on an IBM sidecar, not a Tecmar.

Typerite User Gets Unwanted Form Feed

I have a PCjr with 640K Hotshot, and a Star NP 10 Dot Matrix printer. I use Typerite a lot, but find that when I first enter Typerite, it advances the paper one page (as if I had a top tractor feed). I then must back the paper up one page, or throw away a page. Is there any way to avoid this?

Love the jrNewsletter. It is by far my most useful source of information.

Thanks for any information you can provide me.

William Jenkins, Sumter, SC

Editor's Note: For some reason, your printer seems to be getting a form feed command. Disk #93, in our software store, which has Typerite, also contains a program called SETPRN. Try using this first to toggle Form Feed OFF (You just press H when viewing the SETPRN screen.)

Canadian Pcjr User Is Happy with His Computer

I've been entirely happy with my Jr (and jrNewsletter). My only fear is that it will wear out and it will be too difficult to repair. (Sending to U.S. through customs is a pain--time-consuming, difficult, and expensive.)

As a writer, the keyboard suits me fine--good feel, small footprint, though pushing FN is a slight nuisance.

I've done (for me) wonderful things with this computer (and I'd never even seen one when I bought it and had no expert to talk to), because of your magazine--adding memory sidecar and second drive, sorting out RAM, creating a fancy autoexec.bat file. I really enjoy software you offer and have found it helpful and trustworthy.

Peri McQuay, Westport, Ont.

PCjr Hard Drive User Finds Solutions to Problems

Like many of your readers, I have found it more than worthwhile to upgrade my jr with 640K memory and a 20 megabyte hard disk. I bought both the memory upgrade (to a Microsoft sidecar) and then the hard disk from one of your advertisers, Solid Rock Electronics, some years ago. Although I literally have boxes of floppies filled with various demo programs, earlier releases of application software and backed up to files, it takes some time to fill a hard disk. Recently I encountered some problems and found some solutions which may help other PCjr users.

The hard disk unit sold to me consists of a Seagate ST225 drive, its power supply and a Diskit PCjr controller card which is a side car attachment to the PCjr. A floppy disk is also included which contains the important hard disk driver, format, head park, and drive configuration data files.

To shorten my story, I began to see problems after 12 to 13 megabytes were full on the disk. Using utilities like PC Tools and Norton, I found increasing numbers of "bad sectors" when verifying the entire disk. I tried PC Tools Deluxe surface scan which showed the same results.

At this point, anyone with these problems should have copied their data files to floppies, made sure they had their program software disks, and then reformated the hard disk. Hard disk heads can go out of alignment from extreme shocks, etc. My hard disk requires the format program supplied with the unit, SHDFMT.COM which also reads the

configuration file for a Seagate ST225, which I have to specify from a list of other drives during the procedure. (The PC-DOS FORMAT.COM and FDISK.COM will not work on the PCjr and this controller.)

Back to my chronology of events. After reformatting and initializing, I ran my utility software again. The same problems existed! Did I really have a defective hard disk?

I read in the jrNewsletter that "problems" could be encountered with DOS 2.1 and hard disks with partitions greater than 10 megabytes. Maybe that was my problem. But how can I make two 10 megabyte partitions on my hard disk if the DOS FDISK.COM doesn't work?

I called another jrNewsletter advertiser, Systems Peripherals Consultants, who sell the Diskit Jr, and I learned that I could edit the configuration file to specify a second or third partition for my particular drive. (The first real discovery.)

I used the DOS EDLIN program to edit the file and made two 9 megabyte and a third 2 megabyte partition, and then I reformatted and initialized my hard disk again.

I ran my software utilities again and ... the same problems existed! Did I really have a defective hard disk? It seemed so because the incidences of bad sectors followed the same increasingly worse pattern regardless of how the disk was partitioned.

One of my colleagues at work had a spare hard drive, so I brought it home and opened up my hard disk unit. Inside, affixed to the top of the Seagate drive was the factory test printout for the drive. It referred to the same parameters I was now familiar with since editing the Diskit configuration file: the total number of cylinders, the first cylinder requiring write precompensation, and the cylinder to park the heads. I looked at it and .. two of them were different from the configuration file I've been using! (The second real discovery).

Now an expert at this thing, I put the factory parameters in the configuration file (PHDISKS.CNF) and ran the format and initialize routines again and then used my utilities to test. Total success. Not one bad sector on the disk, whether in three smaller partitions or in one 20 megabyte partition - which I'm using today.

The write precompensation parameter seems to be critical. If wrong, it obviously causes even the best software utility programs to analyze the hard disk incorrectly, and causes DOS to misinterpret many sectors as unusable. The cylinder to park the heads also has an adverse effect if it is too close to a cylinder with data, such as the alternator sector table.

Anyone who has the same hardware unit as mine and is running into the same problems should try the following in the PHDISKS.CNF configuration file:

```
Seagate ST225      : 614 : 256 : 670 : 3 : 0 : 6
                   -1 : 0 : 6
                   0
```

Remember to copy the updated hard disk driver and head park files to your boot disks. They are SHDIO.BIN and SPD.COM respectively. Sorry about the length of this letter. I've tried to compress the sequential events of the past ten months. I'm a happy camper again today.

Henry S. Imada, Broomfield, CO

Reader Seeks Good Desktop Publisher for Jr

I am looking for the best Desktop Publishing program for the PCjr. I have many brochures but am unable to make a decision for the best for jr. I am unable to determine which will be compatible with the jr without buying and trying them all which is, of course, impossible for the average home computer hobbyist.

I have a jr with a 640K, single drive and at present use an Okidata Okimate 20. My needs are for a family newsletter to share my most recent genealogical discoveries. I would like to expand to possibly do some layout work for local printers so a laser printer is somewhere in the future if I can do the kind of work that will bring in the revenue to pay for the addition.

Do you have any advice?

Marilou Grant, Villa Park, IL

EDITOR'S NOTE; We highly recommend PFS: First Publisher. It's relatively easy to use, has many features and runs well on PCjrs., but you need a large hard drive.

Tracing a Problem to the VGA On the PCjr Motherboard

I would like to start my subscription to the jrNewsletter again. I terminated my newsletter near the end of 1988 foreseeing a lull in new products and information about the PCjr. I didn't realize how much I would miss the newsletter. I realize now that your newsletter is not just a source of information, but also a source of support from a bunch of people who believe in the PCjr. And I'm proud to be one of them. One thing I did miss in your publication that I would like to see is a technical section. The way I see it, is you have to have something more upstairs than the average Joe to have stuck with the jr this long. I would like to compliment those people and say that you are a part of an elite group.

I also have a question for you or the readers. My PCjr

(Continued on page 8)

Reader Feedback

(Continued from page 7)

just recently broke, and I traced the problem to the VGA chip on the motherboard. I took it to someone who could verify the problem and has the equipment to remove the chip. He has been having a problem locating a new IBM PCjr VGA chip. Do you know where we can get one or order one? I do not want to replace the whole motherboard if I can avoid it.

I learned from this little episode with the jr, that PCjr support is scarce, and it is hard to find parts. But out of over five years of use this is the first time anything has gone wrong. I really appreciate the built-in diagnostics in the jr. Within 10 minutes I had the problem nailed down to something on the motherboard. And what's better, anyone could have done the same.

Dave Olson, Minneapolis, MN 55407

EDITOR'S NOTE: If your problem is really the Video Gate Array, you'll need to replace your motherboard. No VGAs are available anywhere. However, it's easy to get misled into thinking it's the VGA when the problem may be in one of the other video chips, in which case you may have an easier fix.

As for having a technical section in jr Newsletter, we will start one if enough readers express an interest in it. But the results of our Reader Survey earlier this year indicated that our current policy of providing a mixture of beginner level articles and more advanced (technical) articles each month is the one most readers prefer.

We Can Fight But We Can't Punch

I have kept every issue of jrNewsletter, but they are now too big for my 3-hole punch. Please have them punched to fit a 3-ring binder. Thank you.

When we brought the PCjr, I was a complete computer novice. Thanks to your newsletter, I can now understand about 75-90% of the information in each issue. (That's up from 25% or less in June, 1986.) I can also write a .BAT file. Talk about a sense of accomplishment!

Your publication does a great job of providing information in a lot of areas, as well as information about products. Keep up the good work.

P.S.: Namepal (Disk #70 in the Software Store) is a wonderful program, but the documentation is a little skimpy., Trial and error overcame most of the shortcomings. I will soon register the program and write to the author for further explanation of a couple of items.

Leslie Anderson, St. Petersburg, FL

EDITOR'S NOTE: We are happy to hear that you save all your issues of jrNewsletter, but our printer does not offer the hole-punch option you are requesting.

A Good Replacement Drive and a Mighty Math Co-Processor

Your publication is the most eagerly awaited item in my mailbox and I have over 25 of your shareware disks which I have been delighted with. There a few things you could help me with at this point if you have the time.

Since one of my drives is starting to act up, I think it would be a good idea to have a spare. Somewhere I have seen an article or ad about 5 1/4 360K drives at a good price. I looked all through my catalogs and back issues but couldn't find the information. I am also interested in an 8087 co-processor but don't know if I could install one with my Jr. Hotshot memory expansion in place. Could you please tell me where I might obtain a spare 5 1/4 drive at a reasonable price and whether I could install an 8087 with my Jr. Hotshot.

Michael T. Roger, Jasper, GA

EDITOR'S NOTE: A good, inexpensive replacement drive is the Fujitsu 2551. No, you can't install a 8087 math co-processor with a jr Hotshot in your PCjr. But, if you get the new MESA 286J accelerator board, which is made by Ed Strauss, who makes jrHotshots, you will have a socket for an 80287-8 co-processor and you'll really be cooking!

PCjr User's Tips & Suggestions Include Handy 2 Drive Disk Formater

I continue to enjoy your newsletter and look forward to receiving my copy of it each month. It's been extremely helpful and informative. It also reduces my feelings of alienation from the "mainstream of the personal computer world" and allays anxieties that are engendered when I encounter high powered PC's at the workplace or in some of my friends' houses. The latter are astonished that I haven't upgraded to a "real PC" and were surprised to learn that I acquired my present degree of computer literacy (somewhat superior to theirs, right now) by "hacking" on the junior!!!

My junior has a Racore drive two plus with DMA and 640K of memory. The jr. keyboard was replaced with a datadesk model which I like very much. I recently obtained a program which takes the drudgery out of formatting disks

in a two drive system like mine and ensures that I'll have a good supply of formatted disks at hand. The program appeared in the September 1988 issue of PC Report which is the newsletter of the Boston Computer Society's IBM PC Group. I've tried several other programs which purport to do the same thing but this is the only one that worked consistently and well for me under DOS 2.1. I'm submitting it to you and hope it will be useful to other jr. friends and lovers.

Also, Mr. Blair M. Bieser, has written several fine programs for PCjr owners and users. I recently obtained his screen saver program (SAVERJR). It's the very best one I've used to date. It doesn't interfere with other resident programs or throw up weird patterns on the screen as some others do. He also has written a fine patch for Microsoft's Quick C version 1.0 which got me out of a terrible bind. I was taking a C programming course and the patch which Microsoft reluctantly agreed to send me never arrived!!. I think it would be nice if these and other programs by Mr. Bieser were available in the Software Store. (We will be adding some of Blair Bieser's programs to a new disk in our Software Store soon. - -ED) <Subhead10>A Two Disk Formatting Program <Body> I created the two files required by the program using the COPY CON method. However, they can be written with any text editor or word processor (in ASCII text mode).

The first file is FORMAT2.BAT and contains the following lines:

```
ECHO OFF
CLS
ECHO ^g Put disk to be formatted in A:
FORMAT A: <FORMAT2.INP >nul
CLS
ECHO ^G Put disk to be formatted in B:
FORMAT B: <FORMAT2.INP >NUL
FORMAT2
```

The second file, FORMAT2.INP, contains two lines. The first line is blank and the second contains the letter N followed by a carriage return.

Copy these two files to a RAM disk along with the disk format program FORMAT.COM (on the DOS disk). Place a diskette in drive A and type (assuming your RAM disk is C drive) C>FORMAT2. The batch file will begin formatting the diskette in drive A and prompt you to insert a diskette in drive B. As soon as the diskette in A is finished formatting, the diskette in B will begin and you will be prompted to insert a new diskette in A.

The cycle will continue until you stop the batch file by pressing CTRL-BREAK. The ^G at the two echo commands can be left out of the program if you don't like the bell or beeping sound it causes to be produced (^G = CTRI G = bell or beep). However, I found it very useful for it allows me to do something else while each diskette is formatting.

Audrey Evans, Cleveland, OH

Racore User Gets "Great Results" from PCjr to Tandy Modification

I'm writing in response to Bob Kienle's letter in the July Newsletter. I performed the Tandy Mod with the advertised results. I have a Racore Drive II Plus (no DMA) with 512K. The Tandy Mod posed no problem at all. I also found Tetris to run in 16 colors and 688 Attack Sub will also work if you use a 128K video buffer. Other combinations may work, but I use a PC Enterprises Combo Cartridge with 128K in the video buffer. This gives great results.

A friend and I have also used the null modem cable to play a jr against an AT. There are some problems with the link dropping out but it can usually be re-established with minimal effort.

Doug Hase, Tacoma, WA

On Resisting the 286 Temptation

I read every issue of the jrNewsletter in detail. I find it fascinating. On occasion, I get to use somebody else's 286 with great graphics and an EGA monitor and I begin to real all the ads about the great deals I can get on a new machine. Then in my saner moments, I peruse recent issues of jrNewsletter (I keep every one I get), run a couple of programs in Lotus (I have one I use every week that takes 225K to store), and decide that I am much better off with jrNewsletter and my old, and now very familiar PCjr. When jrNewsletter goes out of business, then I will buy my 286 (If they still make them).

Roger Stenig, Doylestown, PA

Help! Wrong Tandy Mod Chips, Some Tips, and Some Questions

Help! I modified my jr per your instructions in the April '89 issue. No boot, no cassette basic, nothing; just a white screen. Pressing the reset switch results in a blank, dark screen. I get no POST, no attempt to load DOS. I checked and rechecked the admittedly simple instructions. The only think I am unsure of is the chip I used which is a DM74S86M. Is this an acceptable substitute? I have returned the board to its original state, jumpering the cut trace, but the unit is still dead. I am no novice at circuit board work,but this has me buffaloed. Any suggestions would be appreciated.

I own 3 jrs. My 16-year-old son has a 640K (via Tecmar Jr Captain) machine which is mostly used for games and

(Continued on page 10)

Reader Feedback

(Continued from page 9)

accessing bulletin boards. My 10-year-old daughter has a 640 K Jr (Microsoft Booster) which is used for games and painting. She also pays at word processing and basic programming. I have a third Jr which I use in the garage to test modifications. When the bugs are worked out I exchange it with the ones in the house until they are all modified. I also have two Tandy 3000's and a 1200. If I could get the Jr graphics (or Tandy 1000) with the speed of an AT,my favorite simulator (Falcon) would be much more enjoyable. I use PC's at home and at work. Until about a year ago I printed all the sales flyers and promotional literature for my two auto parts stores and for the warehouse distributors I work for on two jrs. I use Lotus, PC-Write, PFS; Professional File, Falcon, and Dr. Halo most often.

I read somewhere that the IBM Cluster sidecars could be used with Novell Software to network Jrs with other Pcs. Could this be possible? I am very interested in networking my Jrs with other PC compatibles. I am sure other jr owners out there also have newer Pcs they would like to connect to. A cluster attachment, software, and an Ethernet card would be cheaper thana hard-disk for a Jr, yet would allow the sharing of the storage on hard-drive PC. Sure would like you guys to research this for us. I'd hate to see all those $29.95 Cluster Attachments go to the scrapyard.

My next project after I get this jr resurrected is to install standard plugs in the rear of the cpu for joystick, 9 or 25-pin serial, RGB, and parallel printer connection (by fitting an inexpensive serial-parallel converter in the case). You could save me some time by diagramming these in a future issue. There appears to be ample room in the enclosure, and the hookup seems to be a matter of wiring the sockets in parallel with the originals. Can you see any problems with this approach?

Is there a way to use a 9-pin TTL monitor with a Good? I have a composite green monitor but the characters just aren't as crisp as a standard monochrome unit.

I inadvertently let my subscription expire. Please restart my subscription with the June issue so my collection will be complete. I subscribe to a wide variety of periodicals but yours is the only one that I immediately read cover to cover upon receiving it. I enjoy it immensely. I particularly like hardware-related articles and how-to's. The Tandy 1000 mod was right up my alley, despite the above-mentioned problems.

Thanks again for the years of enjoyment your mag has given me.

Rex Burkheimer, Fort Worth TX

Editor's Note: The modification Rex talks about at the start of this letter is the PCjr to Tandy 1000 modification. We printed detailed instructions for performing this modification in our April, 1989 issue. The chip number is OK. The problem sounds like either a damaged chip (from static), or the wrong trace was cut. We advise a careful check of the circuitry.

As for the question about using the cluster attachments to network PCjrs with other computers, we know it is being done, but we don't have specific on the software being used. If any readers would like to provide this information, we'd appreciate it.

For rewiring the rear of your PCjr systems unit, you should use the diagrams in Appendix B of the PCjr Technical Reference Manual.

To use a TTL monitor, you need a jr adaptor cable to connect from the "T" receptacle. Correct pin connections are A1, A2, A3, and A8. TTL drive levels are standard. Audio output is 1 V. peak to peak, biased at 0 V. (2 V. swing into 10 K ohm or greater impedance.)

Hope this helps. And thanks for the compliments.

Reader Likes Q&A

If you would like to know, I've been using Q&A by Symantec on my PCjr. We have it enhanced to 640K. This has really helped in my job to be able to do some at home on my PCjr.

June Garretson, Plantation, FL

The Most Underrated Computer

I am not a computer person (age 73) but I enjoy using my PCjr. I am as loyal to the little fellow as most are and enjoy the challenges of getting it to work where and when it is not supposed to. I don't need anything faster or more user-friendly. I feel it just may be the most under-rated of all little computers.

W. Spencer, Mobile, AL

Preschool Children Love "Happy Games"

Games that teach colors, shapes, logic and eye-hand skills can turn your PCjr into a nifty educational playmate for your preschool age youngster. Written by a mother on her PCjr, these games were actually created in a PCjr home. See HAPPY GAMES, Disk #88 in the jr Newsletter Software Store.

IBM Blasted for PCjr "Crippling" And Other Marketing Blunders

The August issue of PC Computing Magazine featured a humorous list entitled "10 Decisions That Will Live in Infamy."

IBM was lambasted for a series of three of these "little decisions that grew into great big mistakes." Since PCjr users are intimately involved in one of these, we thought you'd be interested in the following excerpt from the article:

Crippledown Theory, Part I

IBM's 1983 decision to cripple the PCjr protected sales of its PC and XT, as intended, but it spelled doom for jr and handed Apple five more years of dominance in the educational and home markets.

Crippledown Theory, Part II

In 1984, IBM applied the same logic to the luggable-PC market. The resulting Portable Computer quickly rolled over and died while Compaq held on to the market.

Crippledown Theory, Part III

Never one to give up on a bad idea, IBM decided in 1986 that laptop users didn't need luxuries like readable screens, decent modems, and hard disks. Users decided they didn't need the IBM PC Convertible, either.

PC Computing may have carried its IBM bashing a little too far in the above excerpt, but it raises a question that has intrigued many PCjr aficionados: What exactly did IBM do when it discovered that the PCjr was too good for its own good?

It appears that at some point the marketing people were horrified by the prospect of the PCjr cutting into sales of the PC and XT. So they insisted on "crippling" the PCjr by using an inferior keyboard, limiting initial memory to 128K, and generally making PCjrs difficult to expand. But, as you know, PCjr users and the small companies that specialize in supporting them found ways around most of these attempts to keep our PCjrs from reaching their full potential.

Do You Want To Read Faster?

Amaze your friends and family with your vast knowledge after you learn to read three books in the time it used to take you to read one. A few easily learned techniques can help you double or triple your current reading speed. Instruction and exercises in these techniques are provided on SPEED READ, Disk #90 in the jr Newsletter Software Store.

OOwl Software

1435 Burnley Sq. N.
Columbus, Ohio 43229
800-322-0219

COMPLETE 2ND DISK DRIVE ADDITIONS - CALL, new lower prices!

2ND DISK DRIVE ADDITION KITS - $34.95. Drive hardware also available.

jrHOTSHOT MEMORY UPGRADES -
256K or 512K w/Clock and Cal (CALL)
256K or 512K Memory Alone (CALL)
Combination Drive and Memory PRICES (CALL)
RAM-DISK Software included **FREE.**
SPECIAL - FREE software packages included with memory purchase.

STAR NX-1000 PRINTERS 144 cps draft, 35 cps NLQ- $189.95 plus shipping.

MODEMS 300/1200 BAUD HAYES COMPATIBLE - $99.95 plus shipping, cables are available.

IBM CARTRIDGE BASIC - $79.95 plus $4.50 shipping. (LIMITED SUPPLY)

***NEW* PARALLEL PRINTER PORT** - $79.95 plus $3.50 shipping.

KEYBOARD ADAPTER with Keystroke buffer - $45.95 plus $3.50 shipping. w/101 Keyboard $114.95, w/84 Keyboard $109.95 plus $4.50 shipping.

SIAMESE SLOTS - TWO cartridges in one slot $24.95 plus $3.50 shipping.

QUICKSILVER CARTRIDGE - $29.95 plus $3.50 shipping.

CLOCK/CALENDAR CARTRIDGE - $38.95 plus $3.50 shipping.

PCjr JOYSTICKS - $27.95 or 2 for $54.00 plus $4.00 shipping.

V20 CHIPS w/INSTRUCTIONS just $15.00 plus $3.00 shipping.

MOTHERBOARD MODIFICATION - Remove soldered in 8088 and replace with socket. $29.95 plus $6.00 shipping.

IBM SIDECAR MODIFICATION - Modify 128K sidecar to give memory to 736K. $19.95 plus $4.00 shipping.

IBM TO TANDY MODIFICATION - Modify to allow Tandy full 16 colors. We do $24.95 plus $6.00 shipping. Kit with instructions $9.95 plus $2.50 shipping.

■ **MUCH SOFTWARE AVAILABLE** ■

Many specials each month, plus much more hardware and software

Call or Write for your **FREE** 1989 Catalog

Organize Those Recipes, Or Make Your Own Cookbook

Cookbooks are always popular, so why not use jr to make your own cookbook? Edna's Cookbook is a recipe program which includes a number of special features. It records, saves, lists and prints recipes as well as other cookbook programs. It allows you to:

* List all recipes, sorted by category and subcategory
* List all recipes, sorted by name, and listing category and subcategory
* Encrypt those "secret" family recipes which you don't want anyone to see.

These features make this a serviceable program for keeping together household recipes.

Make A Cookbook You Can Share

But what makes this program especially valuable is its potential to help in the publication of a cookbook. Publishing cookbooks has become a popular activity for organizations seeking a different fund-raising approach. Some families have published cookbooks consisting of favorite recipes from various family members, collecting recipes in advance of a family reunion. And with the help of PCjr and Edna's Cookbook, this can be an enjoyable project.

Edna's Cookbook allows you to:

* Create a cookbook for printing directly to your printer, or for saving as an ASCII text file.
* Create a sorted file of names of all recipes (which can be used as an index for your recipe book.

The program is easy to operate, with entry of recipes (ingredients and instructions) flowing smoothly, just as if you were writing the information on an index card. Of course, Edna's Cookbook allows you more writing space than a 3 x 5 card, and once the recipe is written, Edna will file it for you where you can find it when you want it.

When recipes are entered, you are asked to classify each recipe into a category (appetizers, soups, salads, vegetables, breads, pasta & rice, meats, poultry, seafood, eggs & cheese, gravies & sauces, desserts, beverages, canning, or freezing, are the default categories) and then into a subcategory. This information enables Edna's Cookbook to print your recipes sorted into categories when you are ready to print a book.

At printing time you can specify either one recipe per page or as many recipes as will fit on each page. Each recipe is printed out neatly with the ingredients in two columns on the top, the source of the recipe (if desired), followed by a double-width column of directions. When the program is used to produce a series of recipes, they appear in this nice uniform format, giving the publication a truly professional appearance.

After testing this program, we highly recommend it for

individuals for home use, and for individuals and groups who are considering publishing a cookbook.

Edna's Cookbook is Disk # 96 in the Software Store. It requires at 128K and two disk drives.

Poor Man's Screen Blanker

If you have wished for a screen blanking function but none of the programs you use has one built in, do not despair because you can do a pretty good job with DOS itself. Unknown to many people, the ECHO OFF command which is normally used only in batch files (to suppress screen display) also works directly from the DOS command line. So, to blank your screen all you have to do is type at the DOS prompt:

```
ECHO OFF
CLS
```

The only thing left on your screen will be the cursor. Later, when you return to your computer, just type ECHO ON and your DOS prompt will return to the screen. All of this can also be automated in a batch file called BLANK.BAT:

```
ECHO OFF
CLS
PAUSE > > NUL
ECHO ON
```

Notice that BLANK.BAT has one extra line - the Pause. Here DOS waits for any key to be pressed - which you do later to restore the screen. The > > NUL part of that line instructs DOS to throw away the screen message "Strike any key when ready ..." that is normally displayed during the PAUSE.

What's Your Serial Port Good For?

The serial port in the back of your PCjr is, in fact, a serial port like the one in the PC, but the connector is different. Adapters are available to connect your jr to most RS232 serial devices, such as external modems, mice and so forth. Many of the advertisers in jr Newsletter can supply you with an RS232 adapter.

Flight Simulator Scenery Disks Add New Areas and Features

By Carl Haub

The latest generation of scenery disks for Flight Simulator have done more than add new areas for you to explore. Sublogic, the company that actually produces Flight Simulator and the scenery disks (although Microsoft markets FS), keeps adding new features to each disk of new areas to fly. The latest disk available is Chicago/Cincinnati/St. Louis, disk #9. This disk covers three full NOAA "sectional" charts with geography ranging east from Virginia, west to St. Louis, north to Oshkosh, Wis., and south to Nashville. That's enough to keep you flying for months!

This FS scenery disk follows on the tradition of the newer disks which began with the San Francisco "Star" disk, and disk #7, which features scenery from New Jersey to Washington and its monuments to the Bahamas, and #8, Detroit/Lake Huron, which has a tricky passage through the Niagara River Canyon to the Falls. "International" disks feature the beautiful scenery of Japan and the "Western Europe" disk which covers the area from southern England to Germany with side trips to Moscow and Helsinki.

The new disk, #9, adds a feature that makes both precision or visual approaches more fun, VASI, or Visual Approach Slope Indicator, not seen on prior disks. This landing aid consists of two horizontal bars on the left side of the runway threshold. When the rear bar is red and the forward bar white, you're right on the glidepath. Both white and you're too high, both red, and guess what. Time to buy the farm. This is a fun feature, BUT, it's only usable with FS 3.0, which runs fine on PCjrs with the patch available on Disk #56 in the jr Newsletter Software Store. No problem running the scenery disk with the original FS 2.x, but you won't see the VASI.

This disk is a lot of fun. On many airports, runway details have been enhanced with touchdown zone markers, threshold markers, and the like to FAA specs. The Mississippi is featured in good detail from La Crosse, Wis. as far as Tennessee. You can even fly through the Arch in St. Louis. There's a good bit more on the disk, but it's more fun to find out yourself.

The fact that this scenery disk requires the use of FS 3.0 for the VASI is a bit of an annoyance since FS 3.0, while it does run on the jr, requires its own overhead. This version runs more slowly, although it's certainly acceptable unless you have a large number of options such as thunderstorms and multiple windows running at the same time. The original FS recognizes jr's with added memory and runs much more smoothly. Scenery disks are also problematic on one-drive machines. They CAN be loaded by going through menu "5" and specifying that the scenery in disk a: is to be used, but the use of additional features such as the map will be restricted. The program will look for certain files, such as the map, and a disk swap will be needed. If you have great patience, you can figure this out.

Another bummer is that Sublogic has stopped providing copies of the "approach plates" which are most useful during instrument landings. These are particularly valuable when setting up instrument approaches; runways labelled "31," for example, may actually be laid out on a heading of 314 or 306. This is not unimportant on a precision, low ceiling, approach.

A fix for that problem is the availability of all needed charts from Sporty's Pilot Shop of Batavia, Ohio, sort of the L.L. Bean of aviation. Sporty's sells all sectional charts - FS scenery disks follow these exactly - and approach plates. Sectionals cost $5.00 each and approach plate books $3.00. Call 1-800-543-8633 for a free catalog.

Sublogic's scenery disks really add to the fun of using FS, but they seem to take forever to wind up in stores. Forget looking in your local shop. Call Sublogic directly and order them. Each disk now costs $29.95 (up $10 from the earlier versions), so you won't save very much by mail order. Call Sublogic at 1-800-637-4983.

The next scenery disk will be: Hawaii! It's already three months late, but, on my last call, I was told that it WILL be out at the end of August '89. This disk is said to show erupting volcanoes and includes a game of some kind to find a hidden treasure. Are we pilots or pirates?

EXPAND YOUR PCJR

Mesa 286J Accelerator	$325
jr. Hotshot 512K Memory	CALL
Racore Drive II Plus w/DMA & 512K Memory	$509
Quick Silver Cartridge	$ 30
AT Style 84 key Keyboard, w/adaptor	$ 88
20 Meg External Hard Drive System	$579
1200 Baud External Modem	$ 99
JR-RS232 Modem Cable	$ 19
3.5" External Disk Drive	$219
Siamese Slots (cartridge expansion)	$ 25

For a complete list with monthly specials
send a stamped, self-addressed envelope to:

Paul Rau Consulting

260 N. Lincoln Way * Galt, CA 95632
(209) 745-9284 (pst)
voice 9 a.m. - 4 p.m. / data 5 p.m. to 8 a.m.

Beginner's Corner

Viewing Files On Your Screen

There are several easy ways to tell your PCjr to show you the contents of a file on your screen. This is a very basic computing skill that will come in handy for everyone.

OK, this is a column for beginners, so lets go back and define a term which we've already used, but some readers may not know. File. What's a file? Without getting too technical, files can be defined as groups of computer instructions each given a heading which appears when you type the command DIR. Files are generally of two kinds. One is the kind that tell your computer to do something, like play a game, or dial your phone. These are generally referred to as programs. The second kind is a text file. That's a file that contains words. It is this kind of file that you will most likely want to display on your screen in order to read.

A fast, easy way to bring the contents of any file up on your screen is to use the DOS TYPE command. This command comes in handy when you want to read text from a file on a word processing program disk or a disk containing file extensions such as .DOC or .TXT which are unfamiliar to you. When you use the DIR command to see a list of files on a disk, you see words followed by a period and then three letters or numbers. These three letters or numbers are called the file extension. For example, a file might be called LETTER1.TXT. Extensions such as .DOC, .TXT or .ASC are usually text files. If you enter TYPE (filename and extension) you will see on your screen the words contained in the file. They will move upward at a rate faster than most people can read, so you will have to use the Fn S key to stop the upward movement, which is called "scrolling".

If the file does not contain text, you will see a lot of strange symbols on your screen. Try using the DOS TYPE command to display a file with an .EXE or .COM extension and you'll see plenty of weird stuff going by. When you get tired of looking at it, you can press and hold the Ctrl key and the C key. This key combination will stop DOS from carrying out the TYPE command or any other command, for that matter. (By the way, we are using upper case letters for the word TYPE just because it's a command and we want to make it stand out in this printed column. But you do not have to use upper case letters when giving DOS a command. Lower case is fine.

Use of the TYPE command comes in handy when first reviewing some public domain or user supported programs. Files such as READ.ME or MANUAL.DOC can be read to give you the information you will need to understand the program.

The TYPE command is also useful for reviewing the contents of text files you have stored on disks with a word processor. Sometimes you forget what is in a file and the file name is not enough to remind you.

Many people confuse the TYPE command with various printing commands -- probably because the word TYPE suggests that it will cause your printer to do just that. But it won't. If you want to print out a text file with a DOS command, type:

COPY (filename) PRN

This will cause DOS to "copy" the file to the printer. Or you can press the Fn Echo combination (or Shift and Prt Sc keys on other keyboards) before entering the TYPE command. This will cause DOS to bring the words up on the screen as they are being sent to your printer.

One final note: With the PCjr keyboard, when using the Fn key in combination with another key, you should not hold the Fn key down while pressing the second key. Just press it and release it and then press the next key. The keyboard "remembers" that you've just pressed the Fn key.

Suspend Call Waiting When Using A Modem

Ever lost a large download from a long distance BBS? Even if that hasn't happened to you yet, you'd better try to keep it from happening.

If your modem is connected to a phone line that has call waiting, your modem use can be rudely interrupted by an incoming call at any time. Fortunately there's a way to prevent this, at least with most telephone systems.

Usually this way out is to send a *70 before you dial out. You can test whether your system allows this by picking up your receiver and manually entering *70. If you hear a second dial tone this call waiting override works on your system.

The way to do this automatically is to insert a *70 into your dialing codes. You should also insert a comma, or whatever the appropriate two second pause character is, directly after the *70 in order to provide time for the switch to take place before dialing starts. The comma is the appropriate character in Procomm, and most other telecommunications software.

If You Like Word Puzzles .....

Make and print your own word search puzzles, challenge your brain with the unique Quotefall, or play the toughest version of Hangman you've ever seen. They're all on WORDCRAZE, Disk #87 in the jr Newsletter Software Store.

PC-Calc + -- A Serious Spreadsheet

By Barbara Duey

PC-Calc + (Disk Set # 2 in the Software Store) is a math-oriented spreadsheet, fully compatible with PC-File, which handles the heavy duty text manipulations. It has a maximum of 256 columns, with rows limited by available memory. If you run out of rows, you can reconfigure the spreadsheet to contain fewer columns, thus obtaining additional rows if needed. This is an example of the kind of flexibility that is built in. To run the program, you need a minimum configuration of 280K of ram, two floppy drives and a monochrome monitor with graphics capability. I had difficulty running on two 360K floppies and eventually went to my hard disk before I could get the graph feature to work properly. The program has its awkward moments and the graphing feature is one of them.

Before you get to see the graph on screen, you must go through a definition process which saves a file called graph.me to the system drive. (If you have the help files plus the main program on a 360K floppy, there is no room for this file.) Then you must save your current worksheet. There is good reason for that: when you leave the graph procedure, you exit to DOS. The graph feature itself is adequate. It produces bar, line, scatter, and pie graphs. They are printed fairly easily, but with few options.

"If you need a spreadsheet and don't want to pay megabucks... give this spreadsheet a try."

PC-Calc + has a fairly good range of functions. There are a total of 78 functions in all, in the following categories: math, statistics, financial, date and time, trig, logical, "special" (includes Bessel), and formatting (a nice addition; it includes ability to insert page breaks and printer attributes. The general help screen (F2 is general help) contains a listing of all the functions that is concise and very useful--almost better than the manual.

What is a Bessel function? The manual is terse, so if you don't know, you may need to look it up in a book on statistics or differential equations. Given the "kind, order, and value, this function will come up with a valid computation. The manual states: "Kind indicates whether the function is a Bessel function of the first kind or a Bessel function of the second kind. The value of 'kind' must be 1 or 2. Order is the order of the Bessel function of the given kind." It goes on to say that ERROR will be returned if 'kind' is any value other than 1 or 2, or if 'value' is negative for a Bessel function of the second kind. All I found out from my statistics book is that it is a least squares method of determining random distribution.

Unique to PC-Calc+, in addition to the Bessel function, are some hyperbolic trig functions (soch, sinh, and tanh), perm(utations), comb(inations), and several formatting functions that allow printing options not available on other spreadsheets. PC-Calc+ has a sideways printing feature, although it works only on IBM and Epson FX series printers (and their clones--my Citizen did a very good job on this).

PC-Calc+ is a serious, valuable spreadsheet. This is version 1.0 (Ver2.0 is now in the jr Newsletter Software Store), and there are a few little things that need to be changed (graphing is one of them), and these awkward moments will surely be smoothed out in later updates. There is also a bug in the program which will not permit overwriting of cells in copying or moving operations. It asks you if you really want to overwrite, but if you say yes, it ignores the response. PC-Calc+ is not a Lotus "clone." Sometimes a Lotus-oriented operator will become irritated at its little inconsistencies. However, there are many user-

(Continued on page 16)

PCjr Owners

Everything you'll ever need!

- Memory sidecars which increase memory to 736K
- Second & third disk drives which snap on top
- Disk drives which read & write 1.2 MB AT diskettes
- 3 1/2" disk drives which store up to 813K
- 20 MB hard disk drives which are DOS compatible
- ROM's which make your display easier to read
- Upgrades which expand 128K sidecars to 512K
- Speed up & pseudo DMA cartridges
- Clock modules, printer ports & speech attachments
- Joysticks, optical mice & light pens
- Adaptors to use your PCjr monitor with a PC
- Switching boxes for monitors and/or serial devices
- Full size keyboards & numeric keypads
- Keyboard, modem, printer & monitor cables
- Basic manuals & other PCjr books
- Game cartridges & other PCjr software

PLUS MUCH, MUCH MORE!!

Write to us or call our toll free number to receive a FREE catalog of PCjr add-on products.

PC ENTERPRISES

"The jrProducts Group"

P.O.Box 292, Belmar, NJ 07719

Order Line
(800) 922-PCJR

Customer Service
(201) 280-0025

We Are Now THE Source!

(Continued from page 1)

strengthen our role because it broadens our information base.

PCjr users now have one, central clearinghouse for information about computers -- and this is it. We hope you will continue to support us by participating in the exchange of useful PCjr information. Send in your tips on new software, tell us about a problem you solved, write a description of how you put your PCjr to use. These are the kinds of things that help us all continue to get the most from our fine computers.

Future Plans

As the primary source of PCjr support, we feel we have a special responsibility to PCjr users. So we plan to try to increase the support we provide. One example of this is the creation of the PCjr Compatibility Code for software developers and the distribution of this code to software companies. We hope this will encourage them to provide PCjr compatibility in future software titles. You will see this code reproduced in full elsewhere in this issue. Distribution of this code, making sure it gets into the hands of software developers interested in providing PCjr compatibility, and providing further PCjr data and/or beta testing of software, is a service we plan to continue providing in the years to come.

We are also discussing the possibility of forming an umbrella organization to represent the interests of PCjr users. This may take the form of a group comprised of representatives from several existing PCjr user groups.

As for the continued existence of jr Newsletter, don't worry. We plan to carry on for as long as we are needed and supported by PCjr users. The way things look now, that will be for quite a few more years.

Junior Report subscriptions

Jr Newsletter has agreed to fulfill the subscriptions of Junior Report subscribers. This means we will send subscribers of Junior Report the number of issues that remained on their subscriptions after receiving the last issue of Junior Report in March. We have brought all Junior Report subscribers into the jr Newsletter database and updated their subscription codes to reflect their new expiration dates with jr Newsletter.

How to Read Your Subscription code

Along with your name and address, the label on this newsletter also has a code number. The number is simply the year and the month of the last issue you are scheduled to receive. For example, if the code number is 8911, the last issue you will get is the November 1989 issue.

Here's how we updated Junior Report subscribers: Since the last issue of Junior Report was the March issue, if your Junior Report subscription was to expire in June 1989, you missed three issues of Junior Report -- April, May and June. Your subscription to jr Newsletter started with the August issue. So if your expiration date was June 1989 with Junior Report, you would have a new expiration date of October 1989 with jr Newsletter. Your jr Newsletter subscription code would be 8910. We simply added the number of months you had left on your Junior Report subscription to your subscription code starting with the August issue.

Please check your subscription code to be sure it's correct and report any problems to us in writing. We'll correct them immediately.

Turn A PCjr Into A 286

(Continued from page 1)

enable and disable cache, and low power consumption CMOS RAMs.

The Mesa 286j costs under $350. Check with advertisers in this issue for more details and current price.

PC-Calc +

(Continued from page 15)

friendly options throughout the program, including a prompt line always present at the bottom of the screen. There are also over 200 context-sensitive help screens under the F1 key. It took a while, but I learned to like it.

If you need a spreadsheet and don't want to pay megabucks, or if you have need for some of the statistical and trig features that do not exist in Lotus, give this spreadsheet a try. It is well worth the price of registration to obtain the manual. Incidentally, there is a convert program to bring in your Lotus (1A or 2) or DIF or old PC-Calc files into PCC+. However, the macros will have to be re-written. Macros may be recorded "in action" (while typing the keystrokes) rather than in the old Lotus way of writing the commands out. And don't forget the sideways printing! This program is a valuable addition to the shareware library.

Wondering how to run new software on your PCjr?

Get the latest version of the PCjr COMPATIBILITY DISK -- Disk #60, page 47. It has compatibility info on more than 800 titles!

User Groups Are Made, Not Found

By Carl Haub

EDITOR'S NOTE: The writer is the President of the Metro PCjr Users Group in the Washington, D.C. area.

Where can I find a PCjr user group in my area? This is a question we receive fairly often in our organization and, happily, can sometimes refer the caller to just such a group. Our user group recently published the most complete list of PCjr user groups around the country we possibly could (in the May '89 issue of the Metro PCjr Journal) in order to help in this endeavor. But, all to often, PCjr users are stuck without any local contact when solid PCjr knowledge and advice are likely to be available from another friendly jr user right there in town or perhaps only a block away.

But how does one contact other jr folks locally? The simple answer is: form a user group. This "simple answer" may at first seem daunting, an overkill solution to a basic problem. Hey, I don't want to found a bureaucracy, I just want to exchange some information on the jr! Good point.

Anyone who has ever been connected with any kind of volunteer organization is already aware of the downside: two percent of the members do 150% of the work. That's the way it is in Scout groups, neighborhood organizations, and committees to ban nuclear waste from litter boxes.

That sort of thing is the bad news. The good news is -- a user group can be as little or as much as you want it to be. Let's say, for example, that you are a PCjr user and think that it would be beneficial to have a PCjr group in your area. How to start?

Modest Start

To begin with, a user group need be nothing more than a group of people who get together to chew the fat about PCjr. Can you get Bard's Tale to run in 16 colors? How do I get it to recognize the extra memory I bought? Answers to questions such as these are usually available even in groups of 5 to 10 attendees. A user group exists primarily to exchange information and that's something that can be done with a minimum of organizational trappings.

How to start one? First off, the group has two immediate needs: a meeting place and a way to spread the news about its existence. In the very beginning, the meeting place problem can be easily solved by using your family room, rec room, or patio. (It is always good to at least mention this idea to your spouse, when applicable.) Getting the word out is not difficult, but it does require a few hours of work. Most newspapers have sections where volunteer groups can list meeting notices.

In our area, we place a monthly notice in the Washington Post's "Computer Calendar" which appears on Mondays. Most major dailies have such listings and virtually all local newspapers have some sort of "Community Happenings" list. Look for the submission instructions in the paper and note the deadlines - many are several weeks in advance. Another valuable route is through local computer/software stores. Most are quite willing to pass your flyer or meeting schedule to customers who have jr inquiries or to post notices on a bulletin board (the cork kind). Speaking of bulletin boards, computer BBS's are excellent places to put your notices.

Want a PCjr Users Group?
--Then Start Your Own!

That done, sit back and wait -- someone will show up for your first meeting. And that's all a user group needs to be, a group of people who meet once a month, or every other month, and trade news on the PCjr. Some members will be subscribers to publications such as jr Newsletter or other group newsletters; at least one will be an electronics whiz and will be able to fix things; another will have just added a 3.5" drive and can explain the mysteries of DRIVER.SYS, etc., etc. The number of people who do turn out may surprise you, particularly if your town is of any size at all. There are jr users EVERYWHERE.

So that's it. A viable user group need not place major administrative burdens on anyone. There WILL be the ne-

(Continued on page 18)

*** Special! ***

SPC DISKITjr HARD DRIVE

DISKITjR 22H (now 29ms)	~~$695~~	$595
DISKITjR 33H (now 29ms)	~~$795~~	$695
DISKITjR 42H (25ms)		* $795 *
DISKITjR Hard Disk Interface		$245

Features: Works with all other add-ons, including Tecmar, Racore,, jrHotshot, etc.
ST506 Compatible Controller
1 yr. warranty, customer references available.
$15 shipping charge - None if prepaid.

Systems Peripherals Consultants
7950 Silverton Ave., #107, San Diego, CA 92126
1-800-345-0824 or (619) 693-8611 CA

How To Start A Users Group

(Continued from page 17)

cessity to remember to place the notice in the paper and to have duplicated some sort of flyer, but that's about it. Some groups even take the summer off! The meetings themselves need not even have a formal structure. They can vary from free-for-all question and answer sessions to a meeting with periods allotted for Q&A's and a demonstration of some software or add-on device for the jr. In fact, less structure may even be better, so no one goes away with some burning question unanswered.

Answering "Dumb Questions"

In particular, it is very important that all users feel comfortable asking any question, even if they think it's "dumb." As most of us know, there's no such thing as a dumb computer question, since the same thing was in the back of our minds, too. A fair number of people who call to inquire about our user group evidence some timidity about joining a bunch of "techies." We always emphasize that we are all beginners in one way or another and, not only are novices welcome, that's one of the main reasons the group exists. Make sure that your flyer emphasizes "novices welcome."

Another route to form a PCjr, by the way, is to become a "Special Interest Group," or SIG of a larger PC umbrella organization. Most large groups have SIG's, and, if you're a member, you can set up such a group. The advantage here is that you may very well have a free meeting site at your disposal or receive good advice on how to find one -- and have the support of a bigger group at the same time. But, this article primarily addresses those who may wish set up an independent group.

And so, as we recall, the Pine Tree PCjr U.G. has been founded. It's a few months old, consists of 5, 10, or 20 members, and meets in someone's house (or rotates that duty among the members). Since some organizational structure is needed, officers have been elected and a small treasury exists to cover whatever postage might be needed and the duplication of flyers. Or, modest dues have been established.

Reacting To Growth

Depending upon the size of the group and the willingness of members to host meetings, no other changes may be needed. But, if success causes membership to grow, attendance may overwhelm the family room. Time to find a meeting place. This may be fairly simple or it may not be. Many county or city library systems provide free meeting rooms, as do some local, state, or Federal government installations. These usually require advance notice since they tend to operate on an annual schedule. One's place of work might be willing to provide a conference room or a local church may allow nonprofit clubs to meet. Other possibilities are fraternal organizations and even country clubs. (Always helps if a group member is a member of some other organization, too!) Best of all, most of these facilities usually free or they charge very small fees.

A "remote" meeting place represents a bit of a step for Pine Tree PCjr UG. It may have been easily found, but now some items must be transported to the meeting. If it's decided that a plugged-in PCjr will always be at the meeting, someone will have to bring one. So the meeting will require a tad more organization and a few more phone calls.

But, again, that's all a group need be. There need be no more "bells and whistles" added. But, speaking of those...

There seems to be a natural tendency in any group these days to start a newsletter. They are wonderful devices, to be sure, but take varying degrees of work on somebody's part. Why start a newsletter? Simple: to keep members who can't attend every meeting up-to-date; circulate information that can't be easily passed on at busy group meetings; and enhance the group's prestige. A newsletter can be a simply-produced and xeroxed affair with only a few pages -- even one page -- and that will often suffice. It need not be produced in a grand fashion with clipart illustrations. The point of a newsletter is to get information out, not necessarily impress with one's desktop publishing capabilities. So, the Pine Tree PCjr U.G. Times need not be a rival to PC Magazine and -- it doesn't even have to appear on a regular basis. Could be a monthly, quarterly, or a random thing. The principle once again applies that each addition to the group needs only be as time-consuming and complex as you want it to be.

Next--A Software Library

The other major addition is a software library. This becomes desirable as the group grows. It's a lot easier to have pre-copied disks of public domain/shareware software handy when a member needs it than to copy it every time. This feature also requires a software librarian, a willing member who makes the needed disk copies and can be counted upon to have the library at every meeting. A perk of the job, at least, is that the librarian gets to have a full set of the disks, as do any assistants. A library also acts as a very good fundraiser, since 5.25" disks can be had for about 27 cents bulk from MEI Micro and sold for about $2 each. This "profit" will come in handy for newsletter expenses, to say the least.

Starting a software library, however, is not so easy, since it requires a fair amount of time to set up disks, figure out what goes on what. But other PCjr groups will be happy to get your library going with a free supply of good

PCjr software, sort of a "seed" library. The Metro PCjr U.G. is one of those.

Since Pine Tree has now grown to 50 members who meet in the town library and also publishes a newsletter, serious dues now become a necessity. Financing a group of this size will certainly call for annual dues of at least $10, $15 to get a cushion, and $20 for a group with heavier expenses.

Start BBSing

If the group gets sufficiently large and has a willing member to act as sysop (System Operator), the biggest step of them all can be taken: the group's own computer board system (BBS). A BBS is a major undertaking, but one well worth the effort, if you can afford it. A BBS requires a hard disk and a separate phone line, at minimum. A PCjr can be used, in fact one of the best BBS in the D.C. area, Cliff Kendall's "Battleship Pennsylvania" ran on one for years. In all likelihood, though, you'll need to buy(!) a dedicated machine and PCjr's are not always cost-effective here.

Our group was able to purchase an XT clone with a monochrome monitor, 2400 baud modem, and a 40 meg hard disk from a local store at a large user group discount. We have since added a second 40 meg hard drive as well as a tape backup system since it didn't seem fair that our sysop had to sit there and swap 60 floppies each time he needed to make backups. The whole thing ran about $1,800 when we were done. A sign-off message that requests a voluntary donation of $10 from frequent users has raised about $500 toward the cost, however. Granted, a BBS is a bit of a financial pill to swallow. But, if you can do it, what an asset! Communication and file exchange among jr users takes a quantum leap.

There are other features a user group might add as membership grows and new volunteers to help appear. Some makers of PCjr add-ons offer discounts on hardware and other products. Group buying programs pass those discounts on to members. Meetings can feature "swap shops" where members bring items to sell. These additions do more than just make things available at a good price -- they also introduce members to things they may not have seen otherwise (and they're a lot of fun).

The list of things a user group might or might not get into could go on forever. Things like that will depend far more upon the interest or enthusiasm of individual members. BUT, the main point of all of this is: no matter the possibilities, a user group need be no larger nor complex than you want to be of great value to PCjr fans in your town. Follow the "Kiss" principle, keep it simple, stupid.

But, if you've ever thought of trying it, do. You can always quit it, it's a free country. But, one of the nice things is the fun and the friends one makes in such a group.

If you're giving some thought to your own group and would like to investigate these uncharted waters further, my group, the Metro PCjr Users Group, is quite willing to assist. In addition to advice (free), we will also be happy to supply a very good selection of PCjr software from our library (also free). Can't beat that deal.

There, that's it. User groups can vary from an informal setup to a "mega-group." The group of which I happen to be President falls in the latter category, I would think. This group has swelled to 260 members, runs a large BBS, maintains a supply of software and hardware that has hit $2,000 in value, has a ten page newsletter, a 125 disk software library, and three meeting locations. The odd thing is that most of that came about almost by accident. Someone was willing to do something, did it, and that was that.

The Metro PCjr Users Group, and other jr group, I'm sure, would be happy to render any assistance possible to those of you who are thinking about a PCjr club. The key to those initial fears is that it doesn't have to be any larger hassle than you want. And the salary's no problem.

Readers who have now been convinced that they have been remiss in not forming a group may contact the following for some free, and realistic, advice:

Metro PCjr Users Group
11732 Cherry Grove Dr.
Gaithersburg, MD 20878

PCjr Specials

* Memory Expansions
* Second Disk Drives
* Parallel Printer Attachments
* Serial Adapter Cables
* PCjr Joystick & Mice
* Large Keyboards for PCjr
* BASIC Cartridge & Manual
* IBM PCjr Repair Service

**** More PCjr Accessories Available ****
Call, Write or FAX for PCjr Catalog
CALL for Monthly Specials

COMPUTER RESET

P.O. BOX 461782
Garland, Texas 75046-1782

(214) 276-8072
FAX (214) 272-7920

PCjr User Groups

EDITOR'S NOTE: The following list of PCjr User Groups has been gathered from many sources. Some groups may not still be operating, while there are probably others that we have not heard of and therefore may not be on this list. But if you live in one of these areas it's worth trying to contact the group in your area since a user group can be a great source of PCjr support.

Please let us know if you have information, changes or deletions for this list, which we publish periodically as a service to PCjr users across the country.

PCjr Group of Alabama
132 Stratford Circle
Birmingham, AL 35209

Jr Users of Monterey Peninsula
George Layton, VP
2075 Hacienda Seaside, CA 93955
BBS (408) 394-8842

San Diego PCjr Users Grp
9474 Whaton Rd.
Santee, CA 92071

San Francisco PCjrUG
John King, President
2336 Market St. - #20
San Francisco, CA 94114
For info call (415) 472-7035 (eves.)
BBS (415) 997-4874

PCjr Users Group
4615 Valley Hi Drive
Sacramento, CA 95823

Mike Regan
Ventura City PCjr User Grp
301 Dana Point
Ventura, CA 93004

Bob Gauthler
Central CT PC/PCjr Group
781 Main St.
Coventry, CT 06238

John A Manges
Pensacola PCjr Users Grp
2870 Godwin Ln
Pensacola, FL 32506

Hunter Medney
Atlanta PCjr Users Group
6575 Amberglades Ln.
Atlanta, GA 30328
BBS:(404) 728-0166

IBM PCjr Users Group
PO Box 8012
Alton, IL 62002

Bill Zimmerman - PCjr SIG
Fox Valley PCjr Assoc.
4022 Fox Valley Center Dr
Aurora, IL 60505

Don Newell
Central Illinois PC Users Group
PCjr SIG
PO Box 4162
Springfield, IL 62708

Bud Alexander
Jr Puters
1161 26th St.
Moline, IL 61265

Don Donian
Indianapolis PC Users Group
PCjr SIG
PO Box 2532
Indianapolis, IN 46206

Harry Hodson
Wichita PCjr Users Group
4818 Ethel
Wichita, KS 67220

Ron Nutter
Blue Grass PCjr Group
500-15 Hollow Creek Rd.
Lexington, KY 40511

Carl Haub, President
Metro PCjr Users Group
11732 Cherry Grove Dr.
Gaithersburg, MD 20878
BBS (301) 468-0984

John Benjamin
Twin City PC User Group
PCjr SIG
Box 10360
Minneapolis, MN 55458-3360

Tom Soloman
PCjr Users Grp - #202
1619 NE Clubhouse Dr.
N Kansas City, MO 64112

R Thurston Clark
PCjr SIG of New York
33 Reid Ave.
Rockville Ctr, NY 11570

Mohawk PCjr Users Grp
P.O. Box 12305
Albany, NY 12212

Roger Dennis
PCjr SIG
64 Old Erie Trail
Rochester, NY 14626

Eric Jeltrup
Charlotte PCjr Society
7431 Timber Ridge Dr.
Charlotte, NC 28227

Charles V. Brown, Jr.
Raleigh PCjr Club
800 Chatham La.
Raleigh, NC 27610

IBM PC User Grp - PCjr Grp
P.O. Box 3047
Cincinatti, OH 45230

Fred Traue
OK City PCjr Users Grp
420 Showalter
Midwest City, OK 73110

N.W OKC Jr Orphans Group
Colin Tuttle, President
6912 Talbot Court
Oklahoma City, OK 73162

Eugene PCjr Club
1011 Valley River Way #220
Eugene, OR 97401

Irv Gellman
PCjr User Group
7703 Oak Lane Rd.
Cheltenham, PA 19012

Palmetto PC Club -- PCjr
Box 3200
W Columbia, SC 29171

PCjr SIG Fort Worth PC Users Grp
1525 Airway Blvd.
Roanoke, TX 76262

Norm Schatz, President
Puget Sound PCjr Users Grp
P.O. Box 6551
Lynwood, WA 98036

How to Run IBM Assistant Series Software on a PCjr RAMDisk

Running the IBM Assistant series software from a ramdisk speeds up the program dramatically, particularly the spelling checker on Writing Assistant. Unfortunately, the disks are write protected and can't be loaded onto the ramdisk in the usual fashion. The following will outline how you can get around the writing protection problem.

Create the following two batch files on a working disk in drive A: as shown below.

```
A>COPY CON:ASST.BAT<RET>
ECHO OFF<RET>
CLS<RET>
COPY GBAT.BAT D: >NUL<RET>
D:GBAT<RET>
^Z<RET>

A>COPY CON:GBAT.BAT<RET>
ECHO Insert Assistant disk. When main menu<RET>
ECHO appears, insert working disk.<RET>
ECHO <RET>
PAUSE<RET>
COPY *.* D: >NUL<RET>
D:<RET>
G<RET>
^Z<RET>
```

NOTES: Where ever D: appears above, substitute the letter of your ramdisk. <RET> means press return key.

To run, boot your system and create your ramdisk (the ramdisk must be at least 320K). Then insert the working disk with the two batch files from above in drive a: and type "ASST". When the message appears to insert the Assistant disk, do so and then hit any key. When the main menu of the Assistant program appears you can remove the Assistant disk and insert your working disk.

IMPORTANT: When specifying a filename to save or get, you must use the prefix A: or the file will get saved on the ramdisk and lost when you shut off the machine.

How To Solve Disk Drive Troubles

Editor's Note: Jr Newsletter has previously published an article on lubricating disk drive rails as a means of making PCjr drives run more quietly and also as a way of eliminating problems caused by "sticky" drive movements. The lubrication process, as you will see from the article below, is not the only way to solve these problems. In fact, some people believe the following cleaning process is better. Since even the experts disagree, we leave it up to you to decide.

SYMPTOMS:

If you notice any of the symptoms listed below, your drive may be due for a little cleaning.

* Intermittent failures from a cold start or when in a cold environment.

* PCjr hangs on boot (start-up), with the drive light lit and typical drive noise.

* Does not boot DOS and the drive may or may not fail diagnostic test.

* Drive formats diskettes single sided instead of double sided. (This usually indicates the read/write heads need cleaning.)

* Drive is noisier than you remember it to be when new.

* Many "sector not found" error messages.

* Weird error messages like "Missing/Dev/Con", "Bad or Missing Command Interpreter", "Disk Bootstrap", or "Disk Boot failure".

* ERROR H may sometimes be caused by a "stuck" head due to dirty rails.

CLEANING THE GUIDE RODS OF
THE READ/WRITE HEAD CARRIAGE

Supplies:

Get 10 good firm swabs. Cotton swabs are preferred over foam swabs. (the foam sheds particles) A Q-tip swab will work, but then you must pick out the fibers as they are very loosely wound to the 'stick'.

Cleaning agents:

You have many choices of cleaners, but be safe by only using isopropyl alcohol. Normal flammability precautions apply.

Cleaning Procedure:

1) Remove the cover of the PCjr so you can see what you are doing.

2) Generously soak your swab in the cleaning agent (Alcohol), so that it is ready to drip.

3) Wipe the swab on the rails that the Head/carriage asm moves along. There are two rails, round steel rods, one above the other. See accompanying diagram. Be sure to do both. (Use care to keep the swab away from the heads, as heads don't like yukky stuff on them).

4) Throw away the used swab, and start with a fresh clean swab. Follow the above steps until you are satisfied that both of the guide rods are clean.

5) Allow the alcohol to run into the gap between the rail and head carriage. Then (be gentle of the Read/Write heads) run the head carriage assembly back and forth by hand in an attempt to flush the yukky stuff out and onto the rails where it can be cleaned off.

NOTE: when sliding the head/carriag along the guide rods, it should feel "raspy" or "jerky". This is a normal condition caused by the stepping action of the stepper motor that moves (steps) the head/carriage to the next track on the diskette.

6) Replace the cover, and clean up your mess.

If repeated cleaning of the rails helps, but does not eliminate your drive problem, you may need to perform the following "tough rail" cleaning.

1) Apply a small screwdriver to the top of each bearing (two-nylon) with moderate downward pressure.

2) Work the head/carriage assembly back and forth several times.

3) Follow normal cleaning instructions 2 through 6 above.The "tough rail" cleaning apparently serves to dislodge trapped debris, or burnish the nylon bushing and railing to overcome a burr. No additional attention is warranted for the hidden short right rail, as it is only a follower and not a bearing.

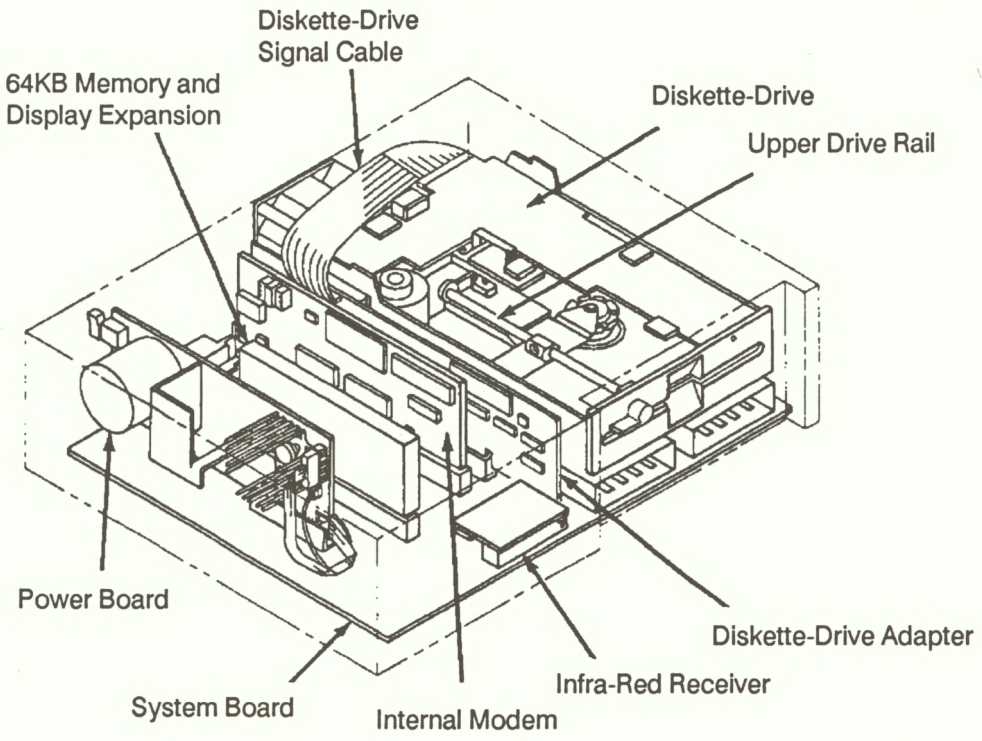
Last words of caution:

THE HEAD CARRIAGE HAS SELF
LUBRICATING BEARINGS IN IT.
DO NOT USE OIL ON THE GUIDE RODS !!!

You can tell if your drive has been factory lubed. Look at the rods that the head slides along, and look at the carriage that slides on the rods. If you see what appears to be a very thin grease, then more than likely the rails were lubed by the factory. If you can't see anything, then the rods were probably not lubed by the factory. If you find "dust balls" on the head carriage or rods...please take the time to clean the rods. Your drive will appreciate it.

Conventional OILS AND GREASE COLLECT DUST. BOTH WILL DRY OUT AND BECOME GOOEY WITH TIME. The use of thin oil may dissolve gooey residues and sometimes clean rather than lubricate. But the lighter hydrocarbons in the thin oil that acted like a cleaner, will eventually evaporate away again, leaving you with the original prob-

System Unit, Internal



lem. A clean surface with light oil may work indefinitely, depending on the type of oil that is used.

We do not recommend using silicone lubricants, as the carrier (solvent) in pure silicone MELTS plastic!

Lubricating the Guide rods with a high quality oil (such as Radio Shack's Teflon Oil) will initially make a drive run smoother and quieter. Then dust, and aging take their toll, making the head access time take longer and longer, until errors occur once again.

Special words of thought for those who may have OILED the head carriage guide rods in their PCjr diskette drive: Depending on the environment the drive is in, you may never experience a problem with the oil. Or, you may start to see some problems appear as soon as 1 year after the oil was added.

Managing Your Memory With Autoexec.bats

Many software programs these days are memory hogs. You have to feed them till their bellies are full. No point in putting them on a diet. They'll just run slowly or not at all. So here's a solution:

Create one autoexec.bat file which loads your favorite memory resident software (Deskteam, Sidekick, utilities, etc.), and make another autoexec.bat file that does not load these utilities, or that loads only tiny ones you can't live without.

When you're about to use one of those memory hogs, reboot with the autoexec.bat that provides the most usable memory. Here's how to set it up for convenient switching between the two:

You probably already have the one that loads your favorite TSRs. If so, just rename it AUTOEXEC.TSR. Then make a bare bones version, without most, if not all, the TSRs left out. Call this one AUTOEXEC.NOT.

Next, create two small batch files. TSR.BAT should have one line, which reads:

```
copy autoexec.tsr autoexec.bat
```

The second batch file, called NOT.BAT, should say:

```
copy autoexec.not autoexec.bat
```

Now, when you want to run memory hogging software, first run NOT.BAT, and then reboot. You'll have maximum memory available.

When you're done and you want your TSRs back, just run TSR.BAT and reboot.

PCjr Compatibility Guidelines

EDITOR'S NOTE: These guidelines were written in order to provide detailed information for software developers, showing them exactly how to include PCjr compatibility in software. We are printing the complete set of guidelines here for two reasons:

1. So that PCjr users can inform themselves on these points, even though they may not be programmers, and therefore may not understand it completely.

2. So that PCjr users can send copies to software companies who tell them it's "impossible" for them to provide PCjr compatibility in their software. These guidelines show that, far from being impossible, it's relatively easy.

Section 1 - General Programming Compatibility on the IBM PCjr

* There are between 300,000 and 500,000 PCjr's currently in use, many with a full 640K of memory and multiple diskette drives (including 3.5").

* Support for 320 x 200 16 color video and 3 voice sound can be the deciding factor when a PCjr owner is deciding which software package to buy.

* There are several software packages which include support for the TANDY 1000 which have had very small, simple atches applied to obtain PCjr support.

* Any PCjr with more than 128K of memory uses an extended memory device driver to reconfigure memory properly and to define the size of the video buffer. Documentation should specify what size video buffer is required to run the program on the PCjr (some specific examples of what CONFIG.SYS should look like for the more popular device drivers would be very nice).

* The PCjr and TANDY 1000 video and sound subsystems are almost identical as is outlined in the sections that follow. If a program already supports the TANDY 1000 320 x 200 16 color video or 3 voice sound chip, then it probably could be adapted to the PCjr very easily. In fact, the same routines could be used to support both systems by using the identcation byte to branch through the parts of the code where there are minor differences.

* In general avoid making updates by directly accessing a port address, use the equivalent BIOS interrupt function where ever possible. This is especially true with the video display, diskette drive and keyboard. Since all IBM PCs and IBM Compatibles (such as the TANDY 1000) are compatible down to the BIOS call level, doing so will not effect your support of other systems in any way and will add the PCjr to your list of supported systems.

* If a program must modify the contents of a port, then it should always...

```
in      reg,port    ;read current settings from port
or      reg,data    ;OR in the required modification
out     port,reg    ;write new settings back to port
```

This makes sure any bits in the port other than the ones being modified are not accidentally changed causing problems with other hardware components.

Section 2 - Programming Compatibility Summary on the IBM PCjr

(01) Avoid direct updates to the MODE SELECT REGISTER port 3D8h. Instead use the equivalent INT 10h function 00h to change video modes (see the next section for more details and a simple coding example).

(02) Avoid direct updates to the COLOR SELECT REGISTER port 3D9h. Instead use the equivalent INT 10h function 0Bh to change color palettes (see the next section for more details and a simple coding example).

(03) Avoid hard coding B800h as the video buffer segment address in video modes requiring a 32K video buffer. This would include the 320 x 200 16 color and 640 x 200 4 color graphics modes. The PCjr relocates its video buffer during start up via an extended memory device driver. While the hardware translates any writes to the original B800h address to the new location, it will wrap the second 16K of data on top of the first 16K of data, leaving a series of horizontal stripes on the display. The PCjr supports a special set of BIOS video functions (the TANDY 1000 also supports these functions) to help programs to overcome this problem (see the next section for more details and a simple codng example).

(04) Include the following code to tell the PCjr to use the TI sound chip:

```
in      al,061h     ;read current settings from port 61h
or      al,060h     ;set switches to select TI sound chip
out     061h,al     ;write new settings back to port 61h
```

After initialization, both the TI sound chip and 8253 timer chip function exactly alike in the PCjr and TANDY 1000. All programs should always "OR" modifications with the previous contents of the port. Bit 4 of port 61h can be used to disable the internal speaker when set to 1. Bits 5-6 of port 61h select the sound source for the PCjr as follows:

BIT 6	BIT 5	SOUND SOURCE
0	0	8253 Timer (Standard IBM Sound Source)
1	0	Cassette Tape Interface
0	1	I/O Channel (Line B30h)
1	1	TI Sound Chip

(05) The PCjr keyboard generates an interrupt 02h, the non-maskable interrupt (NMI). The NMI in turn calls interrupt 48h, which translates the 62-key PCjr scan codes into their corresponding 83-key PC scan codes. Interrupt 48h then generates a simulated PC keyboard interrupt 09h to complete the process. There are two major points that should be noted:

(a) Do NOT change the NMI vector at 0000:0008 on the PCjr.

(b) The interrupt 09h routine on the IBM PC expects the scan code to be contained in port 60h while the interrupt 09h routine on the PCjr expects the scan code to be contained in register AL. Therefore, if any application program is going to hook interrupt vector 09h, it must make sure it's routine preserves (PUSH / POP) or replaces (IN AL,060h) the scan code in register AL prior to passing control to the original interrupt 09h routine.

For Example...

```
i9   proc   near          ;start of new interrupt 09h routine
     push   ax            ;save contents of reg ax onto stack
     .                    ;
     .                    ;logic for application program...
     .                    ;
     in     al,060h       ;obtain copy of scan code in reg al
     pushf                ;simulate BIOS interrupt flag push
     call   far ptr bios9 ;call to BIOS interrupt 09h routine
     pop    ax            ;restore contents back into reg ax
     iret                 ;return from interrupt 09h routine
i9   endp                 ;end of new interrupt 09h routine
```

(06) Verify memory is configured correctly via the PCjr extended memory device driver. Simply follow all INT 10h function 00h video mode change requests with an INT 10h function 0Fh video mode return request and then verify the contents of register AL before proceeding.

For Example...

```
mov     al,009h      ;request 640x200 16 color graphics mode
mov     ah,000h      ;request the BIOS mode change function
int     10h          ;make mode change via a BIOS interrupt

mov     ah,00Fh      ;request the BIOS mode return function
int     10h          ;make mode return via a BIOS interrupt

cmp     al,009h      ;was video mode change request accepted?
jnz     viderror     ;no, branch to appropriate error routine
```

(07) The PCjr default BIOS video mode at start up is 00h (40 x 25 B&W). Programs should not make assumptions about the default video mode and should issue a INT 10h function 00h video mode set to ensure the display is in the proper video mode prior to using the video display.

(08) There is a mistake in the PCjr Technical Reference manual BIOS comments section for the INT 10h function 1002h. Registers DS:DX should contain the pointer to the palette register list, NOT registers ES:DX as shown.

(09) The PCjr does NOT have Direct Memory Access (DMA). One of the bad side effects of this is that keyboard input is locked out during any diskette access. Another side effect is that copy protection schemes that depend upon the speed of the diskette drive tend not to work properly.

(10) If bit 7 of register AL to 1 when requesting an INT 10h video mode change then the video buffer will not be cleared when the video mode is changed.

(11) The PCjr does NOT generate a BREAK scan code for its function keys.

(12) The PCjr identification byte is FDh found at location F000:FFFE.

(13) Port compatibility between the IBM PCjr and TANDY 1000 video subsystems:

Port	IBM PCjr	TANDY 1000
3D4 (3D0)	6845 Index Register	Same as PCjr
3D5 (3D1)	6845 Data Register	Same as PCjr
3D8	Mode Select Register on PC that does NOT exist on PCjr, it is replaced by multiple registers which are accessed via the Video Gate Array at port 3DA	Different!!!
3D9	Color Select Register on PC that does NOT exist on PCjr, it is replaced by multiple registers which are accessed via the Video Gate Array at port 3DA	Different!!!
3DA	Gate Array Address Register (for OUTs) Video Status Register (for INs)	Different!!! Different!!!
3DE	Does NOT Exist	Unknown Use?
3DF	CPU / CRT Page Registers	Same as PCjr

Section 3 - Programming Compatibility Details on the IBM PCjr

DON'T:

The following code will <u>not</u> work on a PCjr. The reference to 3D8 is invalid.

```
;
mov     al,00Ah         ;request 320x200 4 color graphics mode
mov     dx,003D8h       ;point at assumed Mode Select Register
out     dx,al           ;send mode change directly to hardware
```

DO:

The following code <u>will</u> work on a PCjr and all other IBM compatible systems

```
mov     al,004h         ;request 320x200 4 color graphics mode
mov     ah,000h         ;request the BIOS mode change function
int     10h             ;make mode change via a BIOS interrupt
```

DON'T:

The following code will not work on a PCjr. The reference to 3D9 is invalid.

```
mov     al,030h         ;request change over to color palette 1
mov     dx,003D9h       ;point at assumed Color Select Register
out     dx,al           ;send color change directly to hardware
```

DO:

The following code will work on a PCjr and all other IBM compatible systems

```
mov     bx,00001h       ;request change over to color palette 1
mov     ah,00Bh         ;request the BIOS color change function
int     10h             ;make color change via a BIOS interrupt
```

Avoid hard coding the segment address B800h in "MOV REG,0B800h" instructions.Instead use a variable to hold the segment address and then initialize it to B800h. If a program determines it's running on a PCjr via the identification byte and changes to video mode 09h or 0Ah, then use INT 10h function 0580h to update the variable with the actual segment address of the video buffer.

Some background information on this "problem" might help explain why you must do this. The PCjr contains a special hardware circuit called the Video Gate Array (VGA) which performs a wide variety of functions in managing the PCjr's video subsystem. One of the functions that the VGA handles is redirecting program references to the B800h address range to the appropriate address range in low memory. The VGA makes the PCjr CGA compatible. Since the CGA only contains 16K of physical memory, it is programmed to map the 16K address range from B8000h - BBFFFh and BC000h - BFFFFh in to the same 16K of memory (B8000h - BBFFFh). In maintaining CGA compatibility, the VGA does the exact same thing in the PCjr.

This is not a problem on the PCjr when selecting a video mode that requires a video buffer that uses 16K or less of memory, but is a problem when selecting a video mode that requires a video buffer that uses 32K of memory. Although the PCjr supports a 32K buffer, as outlined above the VGA maps the second 16K of data into the same physical memory locations as the first 16K of data. This produces a display image with several blank lines running through it. The best way to eliminate this problem is to remove all direct references to B800h and thus eliminate the VGA address translation. This can easily be accomplished by issuing the appropriate video function call and determining the actual address of the video buffer inside the PCjr.

The next couple pages contain a detailed summary of the special PCjr BIOS video functions and a simple coding example of how to use the functions to calculate the proper segment address. The important thing to remember is that the CPU/CRT page registers on the PCjr and TANDY 1000 return the memory page that contains the video buffer, not the segment address itself. You must multiply the value returned by the BIOS video function by 1K (1024) in order to obtain the segment address. Since the video buffer must be located in the first 128K of memory, of which memory pages 0 and 1 are used by the operating system, the available video buffer configurations can be summarized as follows:

Memory Page	Segment Address
0	RESERVED!
1	RESERVED!
2	0800h
3	0C00h
4	1000h
5	1400h
6	1800h
7	1C00h

BIOS Video Services - INT 10H

AH = 05 - Select Active Display Page
AL = New Display Page Number

On PCjr Only:

AL = 80 - Get CPU/CRT Page Registers

AL = 81 - Set CPU Page Register
BL = New CPU Page Register

AL = 82 - Set CRT Page Register
BH = New CRT Page Register

AL = 83 - Set CPU/CRT Page Registers
BL = New CPU Page Register
BH = New CRT Page Register

The CPU Page Register contains the memory page which the system is currently writing video information in to, multiply it by 1024 to get the appropriate video buffer segment address.

The CRT Page Register contains the memory page which the display is currently reading video information out of. Multiply it by 1024 to get the appropriate video buffer segment address.

Bits 0-2 of port 3DFh contain the CRT Page Register, bits 3-5 contain the CPU Page Register, while bits 6-7 contain the Video Address Mode as shown below.

BIT 7	BIT 6	VIDEO ADDRESS MODE
0	0	All Alpha Modes
0	1	Low Resolution Graphics Modes
1	1	High Resolution Graphics Modes
1	0	Unused - Reserved

BIOS stores a copy of the CPU/CRT page register 3DFh at location 0040:008A. It is the data in this memory location that is used to respond to the above video functions 058xh. The data is stored as XXCPUCRT, where XX represents the Video Address Mode setting.

Notes:

* This is a documented function in the PCjr Technical Reference!

* Do the desired mode change before issuing the get registers request!

* If a program uses multiple graphics pages, then the best way to change display pages is via the INT 10h functions 058xh. If it must do direct OUTs to port 3DFh, then it should also update the data stored at memory location 0040:008A!

DON'T:

This program appears to be right, but the VGA will map the 32K buffer wrong

```
;    Code Section...

             mov     al,009h          ;request 320x200 16 color graphics mode
             mov     ah,000h          ;request the BIOS mode change function
             int     10h              ;make mode change via a BIOS interrupt
;
bypass       label   near             ;continue processing at this point...
               .
               .
               .
             mov     ax,0B800h        ;load in segment address of video buffer
             mov     es,ax            ;save address in extra segment register
               .
               .
               .
```

DO:

This code can turn a TANDY 1000 video driver in to an IBM PCjr video driver

```
; Data Section...

buffaddr        dw      0B800h          ;this variable contains buffer address

; Code Section...

                cmp     id_byte,0FDh    ;is this system identified as a PCjr?
                jne     bypass          ;no, bypass finding the buffer address
;
                mov     al,009h         ;request 320x200 16 color graphics mode
                mov     ah,000h         ;request the BIOS mode change function
                int     10h             ;make mode change via a BIOS interrupt
;
                mov     al,080h         ;request copy of CPU/CRT page registers
                mov     ah,005h         ;request to select active display page
                int     10h             ;obtain registers via a BIOS interrupt
                xchg    bl,bh           ;exchange bytes to isolate CRT register
                xor     bh,bh           ;clear CPU register in high order byte
                mov     ax,00400h       ;prepare to multiply register by 1024
                mul     bx              ;multiply by 1024 for segment address
                mov     buffaddr,ax     ;save buffer address into the variable
;
bypass          label   near            ;continue processing at this point...
                 .
                 .
                 .
                mov     ax,buffaddr     ;load in segment address of video buffer
                mov     es,ax           ;save address in extra segment register
                 .
                 .
                 .
```

* END OF PCJR GUIDELINES *

For questions/comments, contact:
Tom Crider, Editor
jr Newsletter
Box 163
Southbury, CT 06488

Watch Those Chess Pieces Fight!

By Michael Chandler

Chess has long been one of the most popular games worldwide. It is definitely a thinker's game, for to excel it is essential to foresee at least three moves ahead

The popularity of chess, the board game, led to its conception as a computer game when the home computer market began its initial assault on the world in the early 1980's. Several different public domain versions surfaced at this time, and while they were intriguing, most users invariably turned away and went back to the conventional format

Then, shortly thereafter, the first of the very successful "Sargon" series was introduced

This program gained great acclaim (and attention) mainly because it was so advanced that it had actually defeated a chess master (one of the world's very best players), making it the first computer program to do such. The next chess game to receive the critics' recommendations and the public's approval was "Chessmaster 2000", said to be capable of defeating the world's best player

This, like the Sargon series, was impressive, but it was the vast amount of options to the user that made this game a huge seller

All of these programs utilized two-dimensional views of the board and chess pieces in an attempt to make it like the board game, so it was basically just a matter of time until someone out there in the programming world took note of this and decided to "break the mold". Those people were the ever-original software creators at Interplay, the people who created such software classics as the "Bard's Tale" series and "Deja-vu". They decided to create a game that incorporated all of the fundamentals of chess, but add some pleasantly surprising, graphic(s) differences. Their creation : " BATTLECHESS ". Battlechess is one of the most fascinating games I have come across, for any computer. The premise and goal is always the same: get the other side's King in a position from which he cannot escape. The pieces on the screen, however, show up as real pawns, knights, bishops, etc., rather than the traditional-looking ones, and better yet, when two opposing characters meet on the same square, they engage in a full-fledged fight to the finish for control of the space. Of course, the side that moved onto the square previously occupied by other always wins; in other words, the battles are pre-determined and not arcade sequences

Incredible Graphics and Sound These little battles are by far the best part of the game. The graphics and sounds are incredible, and are in my opinion better than any other graphics or sound in any IBM game on the market. For instance, when a red Queen lands on a space occupied by a blue pawn, the Queen casts a series of fireball spells at the pawn. The poor little pawn successfully dodges two of the flaming spheres, and jumps all the way off the square onto another adjacent one in an attempt to escape! Finally, with no where left to run, he is nailed by the Queen and reduced to a pile of ashes that quickly disintegrates on the screen

When two knights square off, the sounds of real metal clashing together can be heard when the swords meet, and when one is wounded, he gasps desperately. The loud trampling of feet can be heard when a character advances, especially when the massive Rook moves (this character bears a striking resemblance to " The Thing " of comic book and cartoon fame). All of the graphics are in three dimensions, but for those traditionalists out there who would rather just play the game than get all caught up in the scenery there is a two dimensional option that sets up the board with the usual chess pieces. But even these pieces are drawn with great graphics and resemble red and blue marble pieces on the screen and look far better than the 2-D graphics supported by the other popular chess games on the market. Another thing about Battlechess that makes it a good game is its many options. The user has the chance to save the game at any time and then load it again, or has the option of starting a new game if the current game seems lost. The game can be played person vs. person, person vs. computer, or computer vs. computer, and supports modem players. Imagine one computer taking on another via a modem thousands of miles apart. Talk about home computer bragging rights!

A Tough Challenge

There are ten levels in the game, from Novice to Level 9. Not only is this game a visual attraction, but it can be a major brain strain as well. I don't profess to be a chess master, but I do know the fundamentals fairly well, and I have yet to put up a close match with the computer at the novice level

This makes it good for the more experienced chess players because it offers a good challenge, but it does make it necessary for the less experienced to improve their strategy to avoid a sure defeat. The "set time" option comes in handy for those who want to speed up a match. Remember, chess can be extremely time consuming, even in Battlechess' colorful format. There are three other options that make this game good from a strict chess critic's standpoint, and a fourth that appeals mainly to the gamer in each of us. The "force move" option allows you to speed up the play of the computer if it seems to be taking too long on any particular move (or just to keep it from making its best possible move!). The "take back" option does just that; it allows you to go back and choose a different move

My personal favorite, however, is the "suggest move" option. The computer will assist you at any time when it is your move in selecting what it has deduced to be your best possible course of action, even if you are competing against the computer! I have found this to also be a good teacher, for it gives one experience with the different strategies in chess and can be useful in later moves. The "replay" option is mainly for those who want to watch a particularly good battle again, which could be any of the many outstanding duels.

Computer Requirements

Battlechess supports EGA, CGA, and Tandy 16-colors graphics modes. PCjrs with the Tandy 1000 hardware modification installed support the 16-color mode, and it's this game makes it well worth the trouble of getting it installed. Once again, the difference between the CGA and 16-color modes is like night and day. The game also supports three-voice sound, but it is not activated when the game is loaded up unless the Jr's speaker has already been activated. This can be done by loading up any game utilizing the Jr's external speaker through DOS (such as Sierra games), and then returning back to DOS without cutting off the power. The realistic sound adds immensely to the game and shouldn't be missed to get the total effect of the game

At most software stores, the game sells for between $40 and $50, but can be bought for much less through Computability (1-800-558-0003) and Microtyme (1-800-255-5835).

Sending Controls to the Printer

You can generate several DOS batch files with your text editor or DOS's EDLIN containing your printer codes. Name each batch file with a name reflecting the code's function. The batch file CONDENSE.BAT, shown below, sets an IBM Proprinter to the Compressed mode.

ECHO (Alt-15) >LPT1

This file echoes the printer code decimal value 15 (Alt-15) to the printer LPT! by use of the DOS I/O redirection (>). This decimal value is entered by holding down the ALT key and pressing 15 from the numeric keypad. The graphic character of the code will appear on the screen.

Note: The value for Escape is Alt-27.

Use Your PCjr To Get Better Grades!

Three different software programs, each designed to help students improve their learning efficiency are on STUDY AIDS, Disk #92 in the jr Newsletter Software Store.

A Label Program for Everybody

Many public domain or shareware labelling programs are pretty basic, uncomplicated programs which create basic, uncomplicated labels, and that's that. Many high-priced, and high-powered spreadsheets and database programs can make labels which are better, but they can be complicated to set up and costly to buy. Mr. Label is a program which suits many needs.

It can be used as a very simple (almost primitive) label maker, where the user types three lines on the computer screen, and then sends it directly to the printer. Sometimes, that will be just the ticket. Other times, the user may want to do more, and Mr. Label does so much, that owners of high-priced spreadsheets and database programs will want to use it too. It does a lot. It will

* produce labels for any Avery label or form, coming with these templates set up,
* print in any font supported by your dot matrix printer,
* automatically number your copies in sequence,
* automatically center labels when requested,
* allow you to vary the fonts used in labels,
* address envelopes either individually or in tractor feed,
* print labels in a variety of formats, up to nine up,
* accept information from the keyboard or any ASCII file as input to the labels
* take database information and re-arrange it to make a new input file for labels
* allow you to enter into a DOS shell and then return to the program
* use a variety of label formats provided with the program or allow you to revise them or create your own formats.

Mr. Label comes with adequate documentation, which will allow even the beginner user to use the program. The basic features of the program are straight-forward, and menus help the user through the steps. Beginners may want to input their data from the keyboard. Others may want to use ascii files created in word processors for input files. Either way, the Mr. Label makes a nice-looking label which you'll be proud to use.

Mr. Label is Disk #97 in the Software Store. The program requires 128K of memory and one disk drive.

Are you reading a friend's copy of jr Newsletter?

Make it easy on yourself - send $20 for a year's subscription to *jr Newsletter*, Box 163, Southbury, CT 06488.

Crossword Creator Goes "Professional"

Professional Crossword Creator, Version 3.30, is an outstanding program for the creation of cross-word puzzles. This version is a complete revision of the program offering many new professional features, including:

* Improved layout of printed puzzle clues conforming to AP\UPI standards
* Automatic puzzle creation
* Ability to display text from any foreign language using the Arabic alphabet.
* A utility to make puzzles printed to disk compatible with desktop publishing programs is available to registered users.
* Expanded printer support for Panasonics, Epson LX and LQ series and Hewlett-Packard Deskjet and LaserJets

Using Professional Crossword Creator, you can make puzzles of up to 36 columns by 22 rows. You specify clues for each word, which can be up to 33 characters in length. The puzzles are individually named and the format, clues and solution are all saved individually to allow for recall.

Making Puzzles

Crossword Creator provides two ways to create puzzles. For those who like to design a puzzle a word at a time, CWC allows entry of words (up and down) on the screen, a letter at a time. For those who have a list of words and want the computer to design the arrangement of the words, Professional CWC now allows for automatic placement. After pressing the F7 or F8 key (Across word or down word, respectively), the user is prompted to enter a word. The program will try to place the word within the puzzle. If it cannot place it, the user may try placing it in the opposite direction. If that fails, don't give up. Keep on entering more words. After other words have been added to the puzzle, try it again, and CWC may be able to find a new place to "hang" the word.

Solving Puzzles

CWC provides two ways to solve puzzles. They may be printed to a printer and solved in the traditional paper and pencil method. Or they may be recalled on screen, providing an intellectual computer game which can be designed for any level of crossword puzzle user.

Who Can Use Crossword Creator?

* Parents and teachers will want to use Crossword Creator to make puzzles of vocabulary words or of key concepts in preparation for a test. The crossword puzzle, with its clues geared to a particular subject area, is an excellent educational tool--certainly superior to the Search-A-Word puzzles commonly used as activity handouts in schools today.
* Puzzle fans will enjoy the opportunity to create advanced puzzles or highly personalized puzzles for friends and relatives.
* Desktop publishers can use the new Professional Crossword Creator to make puzzles whose content matches their subject material and whose quality meets today's increasing standards in desktop publishing.

Professional Crossword Creator is Disk #71 in the Software Store. The program requires 256K of memory and one floppy disk drive. This version replaces the older version on Disk #71.

Give Your Disk A Check-up Using the CHKDSK Command

It's a good idea to give the disks you use often for storage of files a check-up in order to see whether the disk is beginning to deteriorate and how the files are being stored.

The DOS command CHKDSK will give you a report on whether it found errors, noncontiguous file storage, how much disk space is being used by hidden files, bad sectors and your files, and the amount of storage space remaining on the disk. It will also tell you the total memory of your jr and the amount of that memory available for use by programs.

The CHKDSK command is an external command, so in order to use it for a disk other than your DOS disk, you must put DOS in a drive and specify the drive that contains the disk you want checked: CHKDSK B: will check the disk in drive B. Or you can copy the CHKDSK.COM file from DOS to the disk you want to check and then simply type CHKDSK whenever you want to check the disk.

Reporting Storage Problems

One of the most useful things that CHKDSK does is to report whether the files on your disk are stored contiguously in sectors that follow one after the other. When you first use a disk, the individual 512 byte sections are stored contiguously. But after many erasures of files and the storage of new ones, DOS stores files wherever it finds an open spot. Thus a file may be stored in sectors that are not together. Then, in order to read these files, DOS must move the recording heads of your disk drive to several places. This situation is not recommended for data of any importance to you, because it can lead to errors.

When CHKDSK reports noncontiguous blocks, the best thing to do is format a new diskette and copy the files individually to the new disk, using the COPY (filename) or the COPY *.* command. Don't use DISKCOPY or you may get the same contiguity problems on your new disk.

Installing DOS on PCjr Hard Drive

By Walt Sherrill

When installing DOS on an SPC hard disk for the PCjr, the following approach seems to "fool" the system into thinking DOS is on the hard disk. It never looks to the floppy for DOS after the boot. Here are the steps:

1) Use the SPC SHDFMT.COM program to start the hard disk format, using it to INIT the disk.

2) Use any of several free-ware utility programs to remove the "hidden" file attributes from the DOS IBMBIO.COM and IBMDOS.COM files on your DOS (or a copy) disk.

(I used ALTER.EXE to change the file attributes; both ALTER.EXE and the Forbin File Manager, called FFM.EXE of FFM.ARC can do the job and are available on many BBSs around the country.)

3) Copy IBMBIO.COM to the hard disk, followed by IBMDOS.COM and COMMAND.COM in that order. (This is their order on the DOS disk.)

4) Change the file attributes back to "hidden" on the hard disk and your source DOS diskette.

5) Include the following lines in the AUTOEXEC.BAT file on the floppy disk used to boot the system. (The SET COMSPEC command below, because of DOS bugs, will only work in DOS versions greater than 2.1.)

```
set comspec=c:\command.com     {greater
than DOS 2.1 only}
c:
{make c: the default drive}
```

While the DOS SYS C: command won't work, these steps do essentially the same thing; if you perform them as listed, the system should act as though DOS is installed on the hard disk -- and it is! No more floppies until you have to power-up again.

Is This Diskette Bad? Or Is Junior Acting Up?

It's a good habit to format a couple of diskettes, using the DOS format command now and then just to have on hand to make backup copies of data disks. You do make backups regularly, don't you? But sometimes, when formatting, DOS will tell you that there are x number of bytes in bad sectors. Does this mean you should throw that diskette out? Or return it to the manufacturer? Not necessarily.

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

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

Do You Sometimes Wish Your PCjr Was A Typewriter?

There are times when you want to write something quickly and easily on your computer without getting involved in your word processor. That's when you need TYPEWRITER, Disk #93 in the jr Newsletter Software Store. It turns your PCjr into a simple, easy to use typewriter.

PCjr POWER

The book plus two diskettes of software all about your PCjr.

The book contains hints and helps, modifications, layout, parts, and prices and much more.

Price $18.95 plus $3.00 shipg.

OOWL Software

1435 Burnley Sq. N.
Columbus, Ohio 43229
(800) 322-0219 11 am to 6 pm M-F

VISA & M. CARD Accepted
Ohio Residents add 5.5% S. Tax

How PCjr Memory Works (Part 4)

By John King

Our exploration of memory in the PCjr continues. First we'll do a little hexadecimal arithmetic. Then, we will be able to take our first peek into memory with DEBUG.COM from your DOS Supplemental disk.

In Parts 1, 2, and 3 of this series, I showed addresses for items in memory in both K-bytes and "Hex". For example, the video buffer on a PCjr with 128K of RAM starts at 112K or 1C000 Hex. We could ignore the Hex addresses then. Now, we need to understand them to use DEBUG and because so much of what is written about computers uses hexadecimal notation.

Hexadecimal arithmetic simply uses the base 16 instead of the base 10 which we use in ordinary decimal arithmetic. It is useful because it provides a convenient shorthand for the base 2, binary numbers actually used by digital computers. Here is a comparison of counting in decimal, hexadecimal and binary.

Decimal	Hexadecimal	Binary
0	0	0000
1	1	0001
2	2	0010
3	3	0011
4	4	0100
5	5	0101
6	6	0110
7	7	0111
8	8	1000
9	9	1001
10	A	1010
11	B	1011
12	C	1100
13	D	1101
14	E	1110
15	F	1111
16	10	0001 0000
17	11	0001 0001
32	20	0010 0000
64	40	0100 0000
128	80	1000 0000
255	FF	1111 1111

In hexadecimal, the digits 10 through 15 are represented by the letters A through F. Notice that in decimal you "carry" to the next higher place after 9 while in hexadecimal you carry after 15. Of course, in binary you carry after 1. To avoid confusing hexadecimal numbers with decimal, I'll write Hex after them as in 10 Hex which is 16.

To test your understanding, how much are the following in Hex: 5+6, A+3, A+9, and B+E? The answers are at the end of this article.

If you recall from Part 1 of this series that eight bits is called a byte, you can see how neatly FF Hex represents the largest eight bit number.

Two bytes is a word, and the largest 16 bit number is:

1111 1111 1111 1111 = 65,535 (64K)
or F F F F = FFFF Hex.

The 8088 microprocessor was designed to address one megabyte of memory. This is 1,048,560 bytes or FFFFF Hex bytes (5 Fs). However, with one 16-bit word, we can only count to 65,535 or FFFF Hex (4 Fs). To address the full megabyte, we have to be able to count higher. The solution is to use two words to hold a memory address.

The first word is called the "segment", and the second word is called the "offset". The segmented addresses are written segment:offset with the two words separated by a colon. The bottom of memory is at 0000:0000 and the top of memory is at F000:FFFF. A segment is 65,535 bytes (64K) long and can start every 16 bytes. (Segments are not tied to the physical 64K blocks of memory.) The address 1000:C000 identifies a segment of memory which has its first byte at 1000:0000. The C000 is the offset into that segment of 49,152 bytes (48K).

The address 1000:C000 is the address of the video buffer on a 128K PCjr. We previously said this was at the absolute address 112K or 1C000 Hex. Absolute addresses are simply the count in bytes up from the bottom of memory. Now, we need to know how to convert a segmented address to an absolute address.

IF YOU ARE FEELING LOST, HANG ON.
THE FUN IS COMING SOON!!

The absolute address is obtained by adding together the segment and the offset. However, you must add a zero on the right of the segment before adding it to the offset. (Adding a zero on the right in hexadecimal arithmetic is the same as multiplying by 16.)

Segment with zero added	10000
Offset	+C000

Absolute Address	1C000

For a quick test, what do the addresses 1000:2345, 1200:0345, 1230:0045, and 1234:0005 all have in common? See the end of the article for the answer.

Frequently, only the segment is given is referring to an address, then the offset is assumed to be zero. For example, if you see it stated that expansion memory starts at 2000 this means 2000:0000 or 20000 Hex absolute.

If the 16 bit word A012 is stored in memory, it is stored as two 8 bit bytes, a high byte, A0, and a low byte, 12. The high byte is stored at the higher location in memory and the low byte in the lower location. The address of the word is the address of the lower byte. That's all very logical. However, when DEBUG displays this number, it will look like 12 A0. This is because DEBUG displays the contents of memory with the lower addresses on the left increasing to the right.

Furthermore, if the address 1000:C002 is stored in memory, it will be displayed by DEBUG as 02 C0 00 10. You can see that the segment word is placed at the higher memory address and the offset word at the lower. With a little bit of experience, the storage format will become familiar.

If you want to read more on this, I suggest Peter Norton's books, Exploring the IBM PCjr Home Computer and Programmer's Guide to the IBM PC, or David Willen's book, IBM PCjr Assembler Language.

Now it's time to use DEBUG. Boot your PCjr without memory management, so that the video memory buffer will be at 1C000 Hex. (If you are sure where the video buffer starts with your memory management software, you can adjust all the addresses to follow for that location.)

Put a disk with a copy of DEBUG.COM from your DOS Supplemental Programs disk in the disk drive. Now, we need to put some text in the video buffer in a known location. Type in the following lines. The <Enter>, means to press the Enter key. The (returned) means that this appears on the screen from DOS or DEBUG.

CLS <Enter>
Give me a million dollars! <Enter>
Bad command or file name (returned)
DEBUG <Enter>
- (returned)

Now type in the following lines at the minus sign which is the DEBUG prompt.

-d 1C00:00A0 <Enter>
Wow! Lots of stuff returned.
-d <Enter>
More stuff returned.

You have displayed (the d command) the contents of memory in the video buffer. Recognize the text? Of course, it's the message at the top of the screen.

Now type in these commands to quit DEBUG and start over.

-q <Enter>
CLS <Enter>
Give me another million! <Enter>
Bad command or file name (returned)
-DEBUG
-d 1C00:00A0
Wow! Same stuff returned again.
-e 1C00:00E0 <Enter>
20. (returned)
58 <Press the Space bar, not Enter>
07. (returned)
04 <Space bar>
20. (returned)

The e is the edit command, and we can now rewrite part of the video memory. Look at the display. The location of 1C00:00E0 is just after "million!". The 20 is hex code for space, and we can replace that with another character. The 58 is hex for upper case X. Notice that an X appeared on the screen. You wrote it to video. The attribute for that character is 07. When you changed it to 04, the X turned red.

To quit this business, press Enter to return to the DEBUG prompt and the q <Enter> to return to DOS.

Each text character has one byte for the ASCII character and one byte for the attribute. Try different values between 00 and FF for both the character and attribute bytes. An 80 character line requires 160 bytes, so you can calculate how to put characters anywhere on the screen. For example, try editing at 1C00:0860.

The attribute bytes are explained on page 4-66 of the Basic Manual, and the ASCII characters are in Appendix G. You'll have to convert them to hexadecimal or find a listing that includes the hex nomenclature as well as decimal.

More explorations in memory with DEBUG next month, and we'll write a program to change how the cursor looks.

Answers: 5+6=B, A+3=D, A+9=13Hex, and B+E=1A.

All the address are the same, they all add up to the same absolute address, 12345 Hex.

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

Do You Have the Skill To Stay Alive?

Those skills will be severely tested when you try to outwit your opponents in the three challenging games on STAY ALIVE !!!, Disk #89 in the jr Newsletter Software Store.

Questions and Answers

(Continued from page 4)

Q. I bought Music Construction Set. When printing the work done, it prints one line of music vertically down the page - useless! Playing the music the notes are a half tone sharp - "A" is "Bb" etc - useless! Do you know of any program which works properly on the jr? D. Hicks, Hollywood, FL.

A. Music Construction Set only worked for a week on our machine due to copy-protection so we never did get to test it very extensively. Let the buyer beware! You might try Pianoman on disk #36 from the software store.

Q. How does one print a graphics screen with Fn-P (PrtSc)? GRAPHICS.CO doesn't seem to work. A. Smith, Suffern, NY

A. Normally GRAPHICS.COM is loaded before the program is started and Fn-P works just fine. Some programs will "take over" the keyboard and not allow the codes for certain keys to get through. If the programmer does not want you to print the graphics because of copyrights, etc. the key(s) AND the print-screen interrupt will be disabled. What's more the program may even write over GRAPHICS.COM rendering it unusable. You didn't say what graphics you are trying to print, so we can't be more informative. If this is a BASIC program you are trying to print and it doesn't work, you should get a fresh copy of GRAPHICS.COM.

Q. How about some comments or problems when installing a Microsoft compatible mouse WITHOUT a hard disk? W. R. Weyant, Bloomsburg, PA

A. With or without a hard disk, installation and operation are identical. Be sure to acquire a SERIAL mouse, preferably without the need for a separate power cord. It should get its minuscule power needs directly from the serial port, or be specifically set up for the jr; both kinds are available from our advertisers. There are plenty of 'em available now, and they will be packaged with drivers to get them installed and recognized and also some kind of "paint" or "draw" software. There is generally a single driver statement in the CONFIG.SYS file, then some other command later to activate and use the mouse. Rodents nowadays usually include "menu-development" software so you can even write your own custom menus for nearly any applications software.

Q. I have been having problems with the type of programs PC Magazine has. I used to type them in and had no problems but the last few I tried would not work, esp. "Snippet." Any ideas? W. H. Delp, Hatboro, PA

A. When a BASIC program (though this will apply to other languages) will not run, have the manual and / or reference guide handy and carefully note whatever error messages appear. If the message is found in the guide then you will have to re-write the offending part(s) to agree with your version of BASIC. Be sure to already have enough video RAM reserved on your booting diskette if graphics (CGA) or multiple pages are involved.

There may be conditions where the program can be really difficult to correct; the use of PEEK or POKE are signals of a tough one. The reason is that the memory locations may be different in the jr from the ones in the programmer's machine. Another source of glitches is a program which has an assembled sub-program as part of its needs. We did not see "Snippet" so we can't offer more detail.

Q. Once and for all, what is the "big" difference between the jr and its big brothers? Please answer in layman's terms. H. J. Litz, Williamsville, NY

A. There really is no "big" difference. There are three "small" differences: one is the location of the screen memory, another is the way the keyboard sends signals to the computer and the last is the lack of DMA. (Direct Memory Access) If programmers will stop trying to be "fancy" and instead use the IBM recommended BIOS (Basic Input Output System calls) in their programs, one, two and three disappear. The PCjr Compatibility Code we have published and sent to software publishers tells them exactly how to avoid these "small" differences when writing new software, and thus make future titles PCjr compatible.

Q. Can jrHotshot and V-20 chips be used at the same time? A. McKee, Glen Mills, PA

A. Yes, and it is recommended. It will be an option when you order from any of our advertisers who stock this memory upgrade. With this combination, your jr will run almost twice as fast. (1.9 with DOS 2.1, and 2.0 with DOS 3.3 as tested with Peter Norton's Utilities.) Did you know that the jrHotshot also has such options as a battery powered clock and a second disk drive interface, including all the proper software? So far, further speed-ups such as Nickel Express will not run at top speed with this hardware, but you can bet they're working on it!

When DISKCOPYing Keep RAM Free

The time it takes to copy diskettes, when using the DISKCOPY command will be reduced if you keep your RAM memory free.

When you are DISKCOPYing, DOS transfers data from your source diskette into memory before dumping it to your target diskette. So if your memory is occupied there will be less space for the transfer, and the copying process will require more steps

Back Issues of jr Newsletter

The following back issues of jr Newsletter are available in limited supply. In addition to regular features, such as the Beginner's Column, Questions and Answers, software reviews, letters, etc., some of the feature articles in each month's issues are listed here to help you select issues of special interest to you.

You can obtain articles from issues not listed here by ordering Best of jr Newsletter Disks. See Software Store listings for more info on these disks.
To order back issues, please fill out the form below.

June 1988: Reader Survey Results * PCjr Patches * Solution to Socket Damage * Finding Lost Files * Install a V20 Chip * PCjr's Self-Check.

July 1988: Customize Your Boot Disk * The Amazing PROMPT * Compatibility Tips * Using JRCONFIG * Inspect Contents of Cartridges.

August 1988: New Combo Cartridge * Low Cost Computer Gadgets * User Friendly CAD Software * Using DOS's PROMPT * Language Tutor.

September - October 1988 (double issue): New PCjr Turbo Board * Color Programming * Rotate Your Disk Drives * The Word Processor That Knows! * CAD vs. Paint * Troubleshooting Tips * Printing Koala Pics * Adjustable RAM Disk * Modem Tips * 1-2-3 Shortcuts.

November 1988: Flight Simulator 3.0 * Add Cartridge Slots * PC-Outline * Merging Files * Improve Your Writing * Learning DOS.

December 1988: XT/AT Keyboard Adapter * Friendly Database * Run BASIC Without Cartridge * What Is ASCII? * Card Games.

January 1989: Using A Modem * PCjr BBSs * How Video RAM Works * Ink Jet vs. Laser Printers * Great File Manager (Scout).

February 1989: Using A Mouse * Flight Simulator Instructions * The Best Games * More Readable Font for Your Monitor * Ramdisk Software.

March 1989: Compatibility Update * Navigating Flight Simulator * jr Hotshot Tips * 1-2-3 Enchancements * Software Teaches DOS.

April 1989: Sierra Pledges PCjr Support * Earl Weaver's Baseball * PCjr - Tandy 1000 Modification * PCjr Helps Children Learn * What to Do When jr Breaks * Write and Play Music on jr.

May 1989: IBM Support To Last 5 More Years * A jr-Loving Family * Low Cost Introduction to Modems * How PCjr Memory Works (I)* Keyboard for Young Learners * Advanced DOS Commands.

June 1989: New 80286 Board for PCjrs * Books for PCjr Users * Favorite Games for PCjrs. * How PCjr Memory Works * Great PCjr Hard Drive * New PCjr Shareware.

July 1989: PCjr Screen Driver for Prodigy * Software for Preschoolers * Help -- I'm A Beginner! * Adding a Second Drive * Scholastic Lists PCjr Software * Turn PCjr Into a Typewriter.

Back Issue Order Form

Please circle the issue(s) you want:

5/88 6/88 7/88 8/88 9-10/88 11/88 12/88

1/89 2/89 3/89 4/89 5/89 6/89 7/89

1-3 issues - $2.95 ea. 4 or more issues - $2.00 ea.

_____ issues @$2.95 = $_____

_____ issues @$2.00 = $_____

Add 8% tax in CT $_____

Total $_____

Name _____

Address _____

City _____ State _____ Zip _____

Add $5 for Canada. Must be U.S. Funds.

Send to:
jr Newsletter
Box 163
Southbury, CT 06488.

Software Compatibility Notes

Be careful, now. The following notes on whether certain software is or is not PCjr compatible are just that -- notes. We have compiled information sent in from readers and from our own experiences with software here.

It is not uncommon for one PCjr to say software runs just fine on his/her PCjr while another user will report it as not compatible. This is due to the wide diversity of PCjr memory expansion units, memory configurations, and user knowledge.

So we offer this list as a guide only. The best policy when buying software is to do so only from a dealer who will take it back if you can't get it to run. Many software dealers will do this (The Egghead chain, for example). So don't hesitate to ask your local software dealer to do the same.

The information below applies to PCjrs which do not have the PCjr to Tandy 1000 modification. This modification allows many programs to run in 16 colors which will not run on an unmodified PCjr.

688 Attack Sub - Runs in 4 colors.

Airborne Ranger (Microprose) - Reportedly works for a while, but crashes later.

Battle Chess (Interplay) - Runs in 4 colors. Need 512K. Great game with spectacular sound and graphics.

Battletech (Infocom) - Runs in 16 colors. You may have to erase the file named $erify.exe to do this, though.

Calendar Creator Plus - Some say compatible, others say no.

Heroes of the Lance - Runs in 4 colors.

Home Video Producer (Epyx) - Some say not compatible, others say it runs fine with 640K.

Instant Recall - Compatible.

Metropolis - Reportedly not compatible.

Monty Plays Scrabble (Epyx) - Compatible.

Rack 'Em (Accolade) - Reportedly not compatible.

Red Storm Rising - Runs in 4 colors.

Sentinel Worlds I: Future Magic - Runs in 4 colors.

Thud Ridge (Three-Sixty Pacific) - Runs in 4 colors. Need 640K.

Turbo Tax - Compatible.

TV Sports Football (Cinemaware) - Reportedly not compatible.

War In Middle Earth - Reportedly not compatible.

Wizardry V (Sir Tech) - Some say compatible, others say no.

For PCjr Compatibility tips, on over 800 software titles, see Disk #60 in the Software Store

Using Wildcards to Find Files

DOS allows the use of two wildcard symbols, the * and the ? These symbols can be useful in many ways, but the one we'll discuss here is using wildcards with the DIR command to find files quickly and easily.

Each of the symbols means something different. The * will match any number of characters, while the ? will match just one character.

Here are some examples:

If you type DIR *.DOC, you will get a listing of all the files in your directory with the file extension .DOC.

To get even more specific, if you type DIR A*.DOC, you will see all files whose names begin with A and whose extensions are .DOC.

Since the ? represents a single character, if you type DIR FILE.DO?, you will get a listing of all the files named FILE with extensions that have DO as the first two letters.

If you keep these wildcards in mind, you can not only speed up your searches for files, but you can create file names and extensions that will help you organize and find them later.

Support Your Faithful Programmer

If you are enjoying the use of user-supported software and have not yet sent in the requested payment, please do so. The fees requested are very reasonable. And you will be helping to continue the availability of "try before you buy software" - a concept that benefits all computer users.

Batch Files Can Come In Handy

A batch file contains a series of commands that DOS executes sequentially whenever you enter the name of the batch file and press <Enter> at the DOS prompt. The batch file name must contain the extension .BAT to execute. However, when running a batch file, you do not have to enter the extension as part of the command. The batch file is saved as an ASCII text file. It can contain DOS commands that are only used in batch files.

How Do Batch Files Operate?

Each command statement in the batch file is listed line by line in the file, and DOS executes each statement in the order in which it is entered. DOS will terminate the batch file as soon as it has executed the last command in the file. To terminate a batch file at any time before its completion, issue the BREAK command (<Ctrl Break> or <Ctrl C>). When you issue the BREAK command during the running of a batch file, DOS will display the message:

Terminate batch job (Y/N)?

Type N to continue the execution of the batch file or Y to abort the process.

Note that some versions of DOS require you to press <Enter> after typing Y or N. Also some commands that can be entered in a batch file will not respond to a BRAKE command.

Where are They Used?

Batch files are frequently used to automate the execution of a group of commands that you find yourself having to enter manually over and over. These groups of commands can include installation, maintenance and backup procedures as well as simple tasks such as renaming specific commands to make them easier to remember. For example you may frequently need to:

* Log on to a subdirectory on drive named FILES.
* Delete all files with a .BAK extension,
* Copy all files to a backup floppy in drive B,
* Display the list of files on the backup disk,
* Return to drive C's root directory and
* clear the screen

This procedure would quickly become tiresome if done manually, but it is an ideal candidate for a batch file which we will call BAKUP.BAT. The file can be created by any text editor or work processor in non-document or ASCII mode, EDLIN (DOS's line editor), or using DOS's COPY command. For this article we will use the COPY command.

```
COPY CON BAKUP.BAT
CD C:\FILES
DEL *.BAK
COPY *.* B:
CD\
CLS <CTRL-z> <ENTER>
```

The above batch file will execute when BAKUP is typed at the DOS prompt and save many keystrokes!

The Automatic Execution Batch File

This is a special batch file that DOS looks for at boot up time after it has read and set the parameters in the CONFIG.SYS file. The file contains all the DOS commands to set date, time, path, prompt, etc. that you want invoked every time you start your computer.

For example, here is a typical autoexec.bat file for a PCjr with a Racore expansion:

```
PCVIDMA2
PCWDCLK2
MODE CO80
ECHO Ready to go Boss!
```

You can make an autoexec.bat file the same way the previous batch file was made, using the command COPY CON. Except in this case to write an autoexec.bat file, you start off by typing COPY CON AUTOEXEC.BAT (then press the Return, or Enter, key).

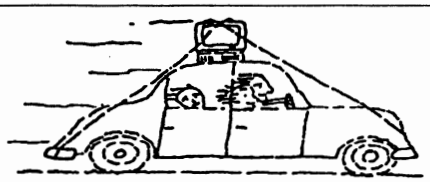
Here's what each of the lines in the above autoexec.bat file does:

PCVIDMA2 - with a Racore expansion unit in PC mode, places the video buffer just above where DOS is located in your PCjr's memory.

PCWDCLK2 -Allows DOS to read the time and date from the clock in the Racore Drive Two Plus so DOS can give the correct time and date to files.

MODE CO80 -Sets a PCjr in the color mode with 80 column display, rather than 40 column display, which makes it hard to read text files.

ECHO Ready to go Boss! - Causes that message to appear on your screen indicating that your PCjr is ready to respond to your commands.



Tell Us When You Move

The Post Office will not forward your copies of jr Newsletter when you move, because the newsletter is mailed via Third Class Mail. So please notify us immediately when you plan to change your address.

* * * PCjr CLASSIFIEDS * * *

IBM PCjr-enhanced keyboard with IR Adaptor. $30. Internal 300 Baud Modem with Boyan 4.0 shareware configured and ready to run. $25. Craig Cooper 7208 E. 104th St. Kansas City, MO, 64134. 816-761-1185 (9)

WANTED for PCjr, Monitor, memory expansion, parallel port & cable, joysticks, external disk drive, & printer, Call Jack 413-637-1777. (9)

IBM PCjr - 640K, Legacy II 2nd Drive, Tecmar memory with parallel port, internal modem, color display, 2 joysticks, software. Worth $2500+ new, Now $950. Additional software, cables, LapLink Plus available. Call Michael Horvath (309) 677-3190 days or 693-7157 evenings. (9)

IBM PCjr - 640K, Racore Drive II w/o DMA, 2 5 1/4 drives, Keytronic 5150 jr keyboard, 20 meg SPC disk, 1 joystick, Epson RX 80 F/T printer, PCjr color monitor, NEC V20 chip, thinfont chip, all in excellent condition, DOS 2.1, other software and manuals. Best price over $1,000.00 + shipping. Call Merv at (508) 870-5507 til 4 p.m. and (508) 879-0056 after 4:30 p.m. (9)

FOR SALE - TECMAR Jr. Captain 128K expansion unit, with parallel printer port. Technical reference material and software included as well as a brand power pack. Asking $150. I will pay for shipping. Call Rance (301) 666-121- between 6pm-8pm EST weekdays. (9)

FOR SALE - **Lotus 1-2-3 Cartridge** Version. Runs on 1 disk drive and 256K RAM. Cartridges with original discs and manual for $75.00 (includes shipping). Call David at (409) 238-6538 work or (409) 297-2307 after 5 p.m. (9)

384K PCJR w 300 baud modem, 2 keyboard & cable, joystick, PCjr color display, Epson LX 80 printer w tractor feed, Lotus 123, PFS Prof. Write, Tobias Manag Your Money, etc., with manuals. Looking for $800 or BO + UPS. Mob McMurtrie (716) 223-7549. (9)

IBM 512K memory sidecar $250, parallel printer port sidecar $70, BASIC cartridge with manual $70, IBM Writing Assistant with manual $50. (407) 632-3141, Brian Lund, 850 Gray Rd., Cocoa, FL 32926. (9)

FOR SALE: Two PCjr enhanced keyboards, $18 each. One 300 baud PCjr internal modem, $30. Call Rob Perschau, 816-765-1335 before 2 p.m. weekdays or anytime weekends. (8)

How to Submit a Classified Ad

Classified Ads are $12 per month. Send us your typewritten ad (no more than five lines on an 8 1/2 x 11 typed page). Send to Jr Newsletter, Box 163, Southbury, CT 06488

NOTICE:
This issue contains a complete list of software in the jr Newsletter Software Store.

Software: Full original documentation and diskettes in original box. all run great on my 128K jr. Price includes COD U.S. Mail to you. Sierra's King's Quest II ($25), and IBM's Writing Assistant version 1.01 ($40). Dave at (208) 522-2830. No collect calls, please. (8)

IBM PCjr w/jr. Captain & jr. Cadet, 640K; DOS manual & disks; basic cart.; Basic manual & Guide to Operations. Color IBM monitor; Datadisk Turbo 101 + 2 original keyboards; cables + disk ribbon cable; + Star 103-232A acoustic coupler 300 baud + cables. $700 + Shipping. Call Patricia (216) 238-3183. (8)

Wanted: Defective IBM color monitors for PC and PCjr. Picture tube must be intact. Will pay $50 for repairable units. Hank Kennedy, 813 Chisholm Vly. Dr., Round Rock, TX, (512) 255-2812. (8)

Muppets Learning Keyboard and software, $55.00. PCjr cartridge BASIC with manual, $50.00. I'll pay UPS ground. J. Martin Anderson, (206) 545-5748 PST days, (206) 367-5150 PST evenings. (8)

For Sale - 2 external 1/2 height 5 1/4 disk drives, case, power supply and Remex drives. Only one drive works. 2 chicklet keyboards. 1 Tecmar jr Captain and Cadet. Call (402) 426-4840. (8)

PCjr ACCESSORIES FOR SALE - Serial Cables, $10; Cassette Adapter Cables, $8; TV Connectors, $12; PCjr Cluster Attachments, $25.00; Cluster Cable Kits, $25; "chicklet" Keyboard $10; 300 baud internal modem w/Procomm, $25. All items in original boxes. COD plus shipping. 716-544-8536 after 5 p.m. EST. (9)

FOR SALE - PC 2622 (REFLECTION) software by Walker, Richer & Quinn. For PCjr - HP3000 communications. Binary or ASCII file transfers and HP terminal emulation at up to 9600 baud (direct or via modem). Also emulated DEC terminal. Used once for testing. $35 or best offer. Call Gabe (215) 483-4324; leave message. (9)

PCJR INVENTORY SALE - Monitors, sidecars (no memory), an early 128 jr. (new) with socketted chips (no soldering on motherboard), Microcom ERa_2 modems, more hardware and lots of software. All published magazines on the junior (4 publishers). Write to Alfred Woelk, 28 Nnutmeg Court, Ridgefield, CT 06877-3710, or call (203) 431-0777 evenings or send SASE for listings. (9)

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 * EDNA'S COOKBOOK. Will organize your recipes by subject, allowing for quick retrieval. Print out sorted collection for your own cookbook. 128K, 2 drives. (Disk #96)

* NEW * MR. LABEL. Extremely versatile, this software enables you to make labels ranging from the very simple to the very sophisticated. It's the best of many we've tried. 128K ok. (Disk #97)

* NEW * PC CALC PLUS. V2.0 More advanced than PC Calc (Disks 5 and 6), this is a very powerful spreadsheet program which includes graphing features. Excellent. 512K (Disk Set #2 (2 disks) $10.)

* NEW VERSION * PC-WRITE. This extremely popular word processing software 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 and needs 256K to run without the spell checker, which needs 384K. Version 3.02, the most powerful, needs 512K. (Order Disk #1 for 128K V2.5. Order Disks #2A and 2B for V2.7. Order Disk Set #1 (3 disks) $12 for V3.02.)

* NEW VERSION * CROSSWORD CREATOR V3.30. Make your own puzzles up to 36 columns by 22 rows. Many helpful sorting and placement features. Prints out on virtually any printer. 256K (Disk#71)

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

ADVENTUREWARE. Six different text adventures with titles like "Island of Mystery," "Terror in the Ice Caverns," and "Moon Mountain Adventure," all test your wits and take you to strange mysterious places. 128K (disk #14)

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

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)

BAKER'S DOZEN. 13 powerful utilities by shareware star Jim Button. Recover zapped files, save screen to files, print sideways, sort files, file management, locate text, pop-up calendar, powerful one screen spreadsheet, set screen colors, and more. (Disk #73)

BATCH FILE UTILITIES. A tutorial on how to create batch files and six utilities to use. 128K (Disk #26)

BIBLE QUIZ Excellent quiz game tests knowledge of both the Old and New Testaments. Provides answers and biblical references for each question. For one to three players. 128K OK. (Disk #85)

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)

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)

BRAIN BOOSTER. Includes IQ Builder, a program that both teaches and tests your ability to solve number, analogy, synonym and antonym problems like those on IQ and SAT tests. Also includes Algebra and Chemistry programs. For high school and up. 128K (Disk #43)

BUSHIDO. Test your skills in martial arts combat. Fighters kick, spin, duck, punch, etc. Requires 256K and keyboard with function keys (Disk #16)

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)

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

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

COMPUTER TEACHER. For those who want to learn how to use DOS commands and to understand basic computer hardware terms, this interactive software will help you become computer literate. Helps you better understand those manuals and computer magazines, as well as how to do more with your computer. 128k (Disk #77)

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)

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 sev-

eral programs at once and jumping from one to the other. 128K ok, but more memory needed for "multi-tasking." (Disk #49)

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)

DUNGEONS & WARS. In Dungeon Quest you can choose to be a dwarf, elf, magic-user, fighter or other type of character. You select your strengths and weapons, too. Then you enter the dangerous dungeons on your Quest. Thermonuclear War pits the US vs. the Soviets in a very real demonstration of what a nuclear war might be like. Combat is a strategic battle on the ground. 128K ok. (Disk #9)

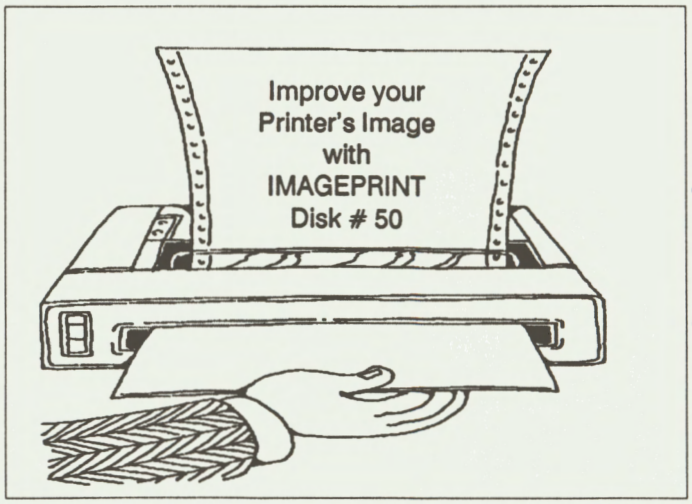
EARLY LEARNING. A collection of colorful educational games for ages 6-8. Sing-along alphabet, letter match, counting game, maze, pattern matching and more. 128K, need Cartridge Basic. (Disk #48)

EQUATOR. An excellent way to learn and review 35 basic equations used in math, finance and science. Learn to compute the volume of a cylinder, compound interest, or average velocity and much more. Manual on disk. 128K (Disk #20)

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.

FILE EXPRESS. (V4.22) Very easy to use database manager. Extensive menus and prompts to guide you. Excellent choice for maintaining mailing lists, etc. Many powerful features. 256K (Disks #83 and #84)

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)



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)

GAMES I. 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)

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

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)

HAPPY GAMES. Written by a mother to help her own preschoolers learn on their PCjr, this set of colorful educational games makes learning fun. Teaches colors, shapes, logic, eye-hand skills. 256K and joystick required. (Disk #88)

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. 128 K. (Disk #57) Or v. 3.13 for improved screenwriting and disk access speed. 256K. (Disk #57A)

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. Cartridge BASIC required (Disk #58)

IMAGEPRINT V1.5. Produces near letter quality print on dot matrix printers. IBM Graphics Printers, Proprinters, Epsons and compatibles. Contains many format features, three quality levels, interfaces with word processors. 128K ok. (Disk #50)

JR 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)

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

JRTELE V2.1. Excellent, easy-to-use telecommunications software made especially for PCjrs, and the PCjr modem. Ideal for beginners, but has enough power and features for most users. Supports 300 and 1200 baud. PCjr internal or Hayes compatible external modems. 128K ok. (Disk #86)

LANGUAGE TEACHER. Helpful exercises for both French and Spanish language students. Hundreds of vocabulary words and verb conjugations. 128K ok. (Disk #72)

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)

MEAN 18 GOLF COURSES. Three excellently designed courses for those who play "Mean 18," the commercial golf game. Disk #79 has Boca Woods North, Boca Woods South, both with especially challenging water holes, and Kearsage Valley, with fall foliage in full color. Disk #80 has TPC of Avenel, TPC of Sawgrass, with massive sand traps and a tough 17th green on an island, and TPC of Woodlands, which may be the most challenging of all. (Disk #79 and #80)

MIND READER. Experience the wonders of artificial intelligence! Use a full-featured word processor that guesses the words that you're about to type. Works like a charm! 128K ok. (Disk #74)

MINICALC. A small, easy to use, spreadsheet program. 11 columns by 22 rows. On-line help function and manual on disk. In addition to performing calculations, will generate bar graphs. (Disk #27)

MORE SUPER UTILITIES. A collection of excellent screen and keyboard enhancements, useful file managers, color selectors, and more. Under 128K ok (Disk #29)

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

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)

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)

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

PC-CHESS. Two great chess games on one disk! A full-color, many featured chess program with four levels of play, allows such things as switching sides, setting up the board yourself, validity checking, en passant, etc. The other works on color or monochrome, has window showing options it considers before moving, adjustable difficulty level -- but a powerful opponent at any level. 128K ok for one, 256K for other. (Disk #44)

PC-DESKTEAM. Provides memory resident notepad, alarm clock, appointment calendar, typewriter, calculator, phone book, autodialer. Some say better then Sidekick! Quick, easy, powerful. (Disk #22 V1.04)

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

PC-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-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)

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-OUTLINE. Organizes thoughts, notes, lists of just about anything. Powerful features create logical outlines, merge with your word processor, customizing allows you to rearrange and manipulate data. Outperforms many commercial programs, says PC Magazine. 128k. (Disk #17)

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

Can't Keep Track of Your Records?

Try the database File Express!

Disks #83 and #84

PC-STYLE. Perhaps the best of many programs that help you make what you write more readable. Jim Button made this a very slick, useful tool for improving your writing. It reads and analyzes what you write, then gives you a detailed analysis based upon several useful standards. Fast, easy to use. 128k (Disk #76)

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)

PCjr COMPATIBILITY DISK v2.0. Lists over 800 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. Updated Feb. 1989. (Disk #60)

PCjr PATCHES V.5.0 Patches to fix software that ordinarily won't run on PCjrs. V.5.0 adds patches for Prodigy, Telix V.3x, and California Games (16 colors). Also patches for Flight Simulator V.3.0, Loderunner (V-20 chip), Arctic Fox, Managing Your Money V.3, Autocad, King's Quest IV (early version), KQ II (PC version), Turbo C, Quick BASIC V3-4, Starflight, Advanced Flight Trainer, Double DOS, Bard's Tale, Turbo BASIC, and BASICA. (Disk #56)

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)

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)

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, the hardest one of all. Runs on 128K. (Disk #10)

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)

PLAYER'S CHOICE. Six different card games, some easy, some hard, but all excellent. Youngsters can have fun playing Memory or Even-Out, which are quite easy to master. Blackjack is hard to beat, and Poker, which has the ability to modify its play in response to your methods, is a real challenge. Also two fine versions of Solitaire, one with great graphics. 128K ok. (Disk #78)

PRINT HANDLER. Excellent software for printing banners, sideways, etc. Contains custom font generator, print spooler, and other useful print control utilities for Epson and compatible printers. 128K (Disk #51)

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 log-on, 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)

RAMDISK. Use ADJRAM to create a RAM disk of any size and adjust its size at any time without losing the contents. Or use JRCONFIG to set up your PCjr. Both programs with complete instructions for creating and using RAM disks on you PCjr. Need 256K. (Disk #75)

REFLEX POINT. Patterned on the TV show Robotech, this game follows the show's storyline, with the Freedom Fighters trying to reach the Reflex Point and destroy the evil Invid Prince. 128K ok. (Disk #12)

SCOUT. Excellent memory resident (or not) file manager, DOS shell. Move, copy, rename, volume label, search, sort, printer control, view files, and more - fast and easy. Best we've seen. (Disk #81)

SHARESPELL. Spelling checker that works independently of your word processor. Can check spelling of any text file with its 52,000 word dictionary. Will also use custom word list you make. Works with all word processors. 128K ok (Disk #94)

SPEED READ. If you'd like to double or triple your reading speed, and increase comprehension as well, Speed Read can help you do it. It provides instruction and exercises designed to break bad habits and improve reading efficiency. 128K ok (Disk #90)

SPELLING BEE. A game that builds spelling skills from Grade 3 level to adult. You are an Olympic athlete representing your country. Excellent color graphics. Four skill levels from very easy to very difficult words. Fun way to become a spelling champ! 128K ok (Disk #82)

STAY ALIVE !!! Three games that require all your wits to stay alive. Can you avoid the terrible nightmares and reach the highest level in Dr. Sleep? Or fight off the alien hordes on the Planet Iskib? Bet you can't shoot down the clever enemy pilots in Sopwith. If you can, you deserve a medal! 256K (Disk #89)

Save A Heap of Money!

Use Our PCjr-Tested Public Domain Shareware.

STUDY AIDS. Three great programs to help students. PHLASH - a computerized version of flashcards which you make and use for any subject. Multiple choice, true/false, and/or fill in blanks. FRACTIONS - a series of interactive exercises in fractions (many levels). And PHRASE - a program that picks out examples of bad writing in any document and suggests improvements. 128K ok (Disk #92)

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)

SUPER UTILITIES. The 15 utilities in this collection include Undelete, to recover a mistakenly deleted file; a powerful command editor; a clock, notepad, time and calendar; another to redirect file contents from printer to disk...and many more useful utilities. Under 128K ok. (Disk #28)

THE BEST OF JR NEWSLETTER I. 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 compatibility, problem solving, software, maintenance, memory expansion, how-to projects, tips on using DOS, and more! 128K (Disk #54) 7 NOV 89

THE 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) 7 NOV 89

THE BEST OF JR NEWSLETTER III. Disk contains most of the major articles published in jr Newsletter from the June 1988 issue through May 1989. Articles on compatibility, PCjr hardware and software tips, regular columns, letters from PCjr users, and other informative articles. Utility to search for subjects included. (Disk #91) 7 NOV 89

TIME TRAVEL IN HISTORY. A maze adventure game in which you have to answer questions about different periods of American History in order to get gold pieces--and save your life! 128K (Disk #21)

TYPEWRITER. When you'd rather use a typewriter instead of a word processor, this is the one to use. Couldn't be simpler. Margins, tabs, type size all can be set. Disk includes two printer control programs for higher quality output. 128K ok (Disk #93)

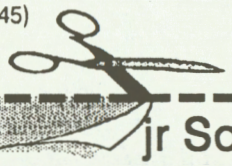
TYPING INSTRUCTOR. Disk contains both PC-Touch, a great typing exercise and speed testing program, and Touch Typing Tutor, a combination of lessons, including finger positions, speed tests and a typing game. 128K ok. (Disk #18)

WIZQUIZ. The Wizard keeps track of your progress in solving math problems that range from elementary level through fractions and negative numbers. Extensive exercises, with scores and times recorded under each "player's" name. Compete against your personal best as you improve your skills. Grades 4 through adult. 128K ok. (Disk #95)

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)

WORDCRAZE. Create your own word search puzzles and print them out for friends and family. Or tease their brains with Quotefall, a unique type of scrambled word puzzle. And then there's a high-level version of Hangman. Just try escaping from the noose in this one! 128K ok (Disk #87)

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)



jr Software Order Form

1	2a	2b	3	4	5	6	7	8	9	10	12	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29
30	31	32	33	33a	34	35	36	37	38	39	40	41	42
43	44	45	46	47	48	49	50	51	52	53	54	55	56
57	57a	58	59	60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79	80	81	82	83
84	85	86	87	88	89	90	91	92	93	94	95	96	97
98	99	100	101	102	103	104	105	106	107	108	109	110	

Disk Sets:
#1 ($12.00) #2($10.00)

_____ disks @5.95 each = $ ____
_____ disk sets = $ ____
Shipping & Handling = $ 3.00
Add 8% sales tax in CT $ ____
TOTAL $ ____

Name _____

Address _____

City _____ State _____ Zip _____

Prices are U.S. funds.

Make check Payable to jr Newsletter.
Send to:
jr Newsletter
Box 163
Southbury, CT 06488
All Orders Sent First Class Mail

SUBSCRIBE NOW
to jr Newsletter

1 yr. (12 issues) only $20
2 yrs. (24 issues) only $36

Name _____

Address _____

City _____

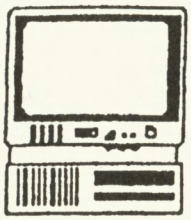
State _____ Zip _____

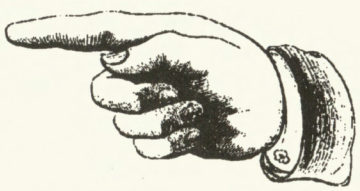
Satisfaction guaranteed or your money back for all unmailed issues. All prices U.S. funds. Add $8/yr. for delivery to Canada.

(Connecticut residents add 8% sales tax)

Send order with payment to:

jr Newsletter
Box 163
Southbury, CT 06488





jr Newsletter
P.O. Box 163
Southbury, CT 06488

Bulk Rate
U.S. Postage
PAID
Permit No. 31
Southbury, CT 06488

9007-R

L E TEAGUE
17707 LACEY DR
EAGLE RIVER, AK 99577

Address Correction Requested