Now Use XT/AT Keyboards With New PCjr Adapter

A new PCjr Internal Keyboard Adapter that replaces your infra-red sensor will allow you to use XT or XT/AT compatible keyboards with your PCjr.

Developed by Synectics Software & Systems, the adapter also includes a buffer which eliminates the annoying beeps you get when trying to type while your disk drive is spinning.

Another advantage of the new adapter is that, unlike most other PCjr keyboard adapters, it does not plug into the "K" and "LP" connectors in back of your computer. This would, for instance, allow you to have both a mouse and a keyboard connected simultaneously.

Although we haven't tested the adapter yet, Synectics reports that many different keyboards have been tested with the internal adapter. They say that all keyboards that will work on XTs will work with their adapter. This includes most keyboards, including all those made for PCs, XTs, and the new auto-switching XT/AT keyboards. Keyboards that are AT compatible only will not work, but many AT-style keyboards include a switch for use with XTs.

The adapter is attached to the infra-red sensor mounting located just behind the sensor opening on the front of your PCjr. A cable runs from there out the back of your jr,

Grandfather P.C.jr

with a 5 pin DIN socket on the end for the keyboard to plug into.

Synectics, a company that specializes in the development of hardware enhancements for PCjrs, has even made sure that the adapter will make PC keyboards conform to PCjr specifications. For example, it will not send the "AA" scan code when generated by the keyboard's power-on self test, and it separates multiple scan codes to allow processor bandwidth for non-keyboard activity.

The adapter is crystal controlled for precise timing and simulates all timing characteristics of the PC XT interface including the !KBD RESET line, according to Synectics.

The new keyboard adapter is available for under $50 from Computer Reset, Oowl Software, Paul Rau Consulting, and PC Enterprises. See advertisements in this issue for their addresses and phone numbers.

Annelisa Keithley of Synectics says her company, which began making PCjr products in 1986, plans to create more PCjr enhancements in the future. Their first product was a ROM clock chip which provides automatic time and date functions. When they found out that some PCjrs do

PCjr Lives!

How to Learn a New Program

by Ralph H. Swerdlow, M.D.

There are two types of questions that are asked of me quite often. Most frequent are those concerning specific problems with specific software. These, in general, are easy to answer.

The most difficult type of question to answer is the one that asks, "What is the best way to learn?" The asker of the question is not always the novice computer user, but is often an experienced person who has acquired a new program and wants to rapidly learn, with minimal effort, his new software. This does not imply laziness, but only the desire to employ the new program as soon as possible.

My first response to this question is always the same, "There is no royal road to learning." After the pallor leaves the face of my questioner, I do outline a system that I believe is the most time and energy effective. Perhaps you have just obtained a new program and want to learn how to use it in the least time, as well as being comfortable with what it does. Here, then, are my suggestions and recommendations.

* Leave your computer off, and carefully read the preface or introduction in the documentation that came with your software purchase. Pay particular attention to what is said about the purpose of the program.

* Many of the newer programs have a fast, or easy, introduction to the program. Read this carefully and work the examples thoroughly. This will establish the ground work on which you will later build a sound understanding of the program!

* Use the program to do something simple. This will give you a feel for the program.

* Now the hard part. Start on page one and read each through to the end of the documentation. There will (or should) be multiple examples, and each one is important. Do them, and try to learn the principle that is being made. There is absolutely no need to memorize the rules at this point.

* While doing your reading, start to seriously use the program to do what it is designed to do. You will start your learning curve by making errors, solving problems as they arise. This technique gives you the knowledge of the program without the necessity (and futility) of memorizing the program.

* Continue to read the documentation and use the

software.

* When you have finished the reading, put the documentation aside and use it for reference purposes only for several weeks.

* Now read the documentation again, starting at page one! You will see many things that did not make an impression on you the first time you read the explanations. This is the most important aspect of learning the program rapidly and effectively. Each of us best learns new facts by reading, trying, and rereading. This guarantees that what you learn will be best used and most effectively remembered.

Most of us will be comfortable with a new and complex package within twenty to thirty hours, or several weeks, depending on how much time is spent learning the program each day. Perhaps this is longer than some would like to spend on this project, but in the long run, the knowledge gained will make using the program more effective and precise. Some simple programs can be learned in a few hours of study and practice, especially if the menus and organization are intuitively easy to grasp.

Of all the suggestions I may give, I am sure that the best is to reread the documentation.

Of course, there are many additional ways to sharpen your understanding of a complex program. Joining a SIG (Special Interest Group) will give you the opportunity to discuss techniques with others who use the program regularly. There are multiple specialized books available ranging from simple to very complete reference volumes, that may be purchased in a computer bookstore.

There are computer magazines that specialize in specific types of software, and most general computer magazines have articles which discuss aspects of complex programs. These journals are an excellent way to increase your understanding of the program.

And last but not least, ask for assistance from someone who knows the program. Most people will be glad to help.

Remember, "There is no royal road to learning"!.

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

We finally have the information about IBM's BASRUN program as discussed last month, so here goes...

IBM wants $100.00 in addition to the cost of the BAS-COM Compiler for BASRUN. They also require royalty payments of $50.00 for EACH use of BASRUN if it is distributed along with the BASIC compiled .EXE program. This information was kindly obtained for us through a local authorized dealer. The dealer complained of many departmental diversions by IBM. The information was just NOT available directly to us. This royalty business appears, as we surmised last month, to come from the "mainframe" mentality, where, when a program was developed and put into use it was done for either a single client or for limited distribution.

This version of BASRUN is the copyrighted property of IBM. Our present suggestion, based on the rarity of IBM BASRUN having been used, is to try to have the Microsoft version of BASRUN available. It is probably the version which most programs are looking for.

Q. There has been mention of Generic Cad being used on the jr. The company simply states that they do not support the PC jr. Can you tell me how to configure the system to permit this program to work? I have 640K and am using a Mouse Systems optical mouse.

A. Though this may seem like heresy, we do not use a mouse. The version of Generic Cad we had access to seemed to work OK using the keyboard. The only time we used the program was to test the program for crashes. We put it through most of its functions and it did not crash. With a mouse, there may be some conflict with the speed of the serial port IF the program supports your particular mouse. See the Oct. jr. Newsletter for more information about this.

Q. I have two power supply adapters for my PC jr and I have noticed that they are different. One is rated at 16.7 VAC, 56 VA and the other is 17.7 VAC, 75 VA. Are they interchangeable? *(Robert Stewart, Candor, NY)*

A. We assume you mean the "black bricks" which are merely step-down transformers. The original jr was supplied with the 17.7 volt version and it matches the "real" power supply board inside the jr. This board, according to the PC jr Tech. Ref. Manual, requires a nominal 17 Volts a.c. at 33 watts. It may be that it has slightly more capacity (watts) because of the additional load of the disk drive, video RAM card etc. The other, lower capacity brick (56 VA) was made to be used with some of the additional side-car power supplies when more than three additional cards (internal modem, memory or parallel port) are loaded onto the buss, internal or side. Our Manual states that this brick and power board combination is designed to operate only three additional side-cars. Though it should work in practical terms, we cannot recommend swapping them. A note here: The "brick" for the Tecmar jr Captain RAM expansion has a capacity of only 18 watts and delivers 18 volts a.c. to its built-in power supply on the board.

Q. My PC jr has a Quadram expansion (clock / calendar with 512K) and has a problem. Since Feb. 29,1988 the date has been off by one day. Attempts to correct it with the DOS DATE command have been unsuccessful. Any suggestions? *(Ronald Pyzik, Kirkland, WA)*

A. Tecmar, Quadram and others included software to "initialize" their clock / calendars and to recognize memory. You don't mention what your AUTOEXEC.BAT or CONFIG.SYS files have for commands or drivers so we will assume you are no longer using the above mentioned supplied software. You will have to dig in the book (pamphlet) which came with the Quadram to set the clock from scratch. It's interesting to note that the clock is not "smart" enough to make corrections for leap years, and simply increments the day as would for normal years, though it did add the extra day to the end of February in that year.

Q. I have two programs, Questron II and Rampage, both of which work fine in four color mode on my jr. When I experimentally choose Tandy mode, there are sixteen colors, but every other horizontal line is black. Is there a way

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Questions and Answers

(Continued from page 3)

to patch these to run properly in sixteen colors? *(Darren David, La Crescenta, CA)*

A.   There is hope. Wonderful patches for Flight Simulator version 3.0, Bard's Tale, Starflight and Arctic Fox have already been done, (these patches and others, are on disk #56 from the Software Store) and we are waiting breathlessly for more. (Perhaps a "generic" patch or a TSR for the jr's Video RAM vectors to simply accept the Tandy mode as "native".) Programmers, are you reading this? You have all done a wonderful job so far!

Q. Is DOS 4.0 compatible with the jr? Has anyone tried it yet?

A.   DOS 4.0 is NOT compatible with the jr as of this writing; Microsoft and IBM make firm statements about this and will simply not support jr users.

Q. Help! I have been trying to get my US Robotics Password modem to work with my jr. I called Racore, several times and they suggested I connect into their BBS for help??? *(Don Barshinger, Malvern, PA)*

A.   We remember exactly the same "Catch-22" situation when we connected our first modem to the jr. All the needed information was on BBSs for us to simply download! Racore is not involved with your serial port and probably will not give you much information. We don't know what communications software you are using, but it might be contributing to your frustration. Procomm, our favorite, is available from the Software Store along with Swapcom, which is used to switch the addresses of COM port 1 with COM port 2. This second utility, for use with many serial port conflicts is included on our Procomm disk #15. We use it with a 1200 Baud External modem, set up for COM 2. The documentation with Procomm must be read very carefully, though the default settings (except for the COM 2 change) should get you started if the Robotics really is Hayes command-set compatible. Another tip: check your booting configuration for any re-direction of the serial port. Look for something like SET xxxx = COM1 (or COM2). It might be in the AUTOEXEC.BAT FILE to set up a serial printer, for example.

Q. When I try to run Managing Your Money as suggested by Willis Gray's AUTOEXEC.BAT in the June issue, I bomb out and get the message "SDL30.COM not found". Any ideas on this?

A.   This general problem seems to be one of those which just keeps cropping up. In this particular case, the file SDL30.COM MUST be available on the diskette for the AUTOEXEC.BAT to make a copy to the C: (RAMdisk). Do a DIRectory of the diskette called for to be sure a copy of SDL30.COM resides there so this AUTOEXEC.BAT can do its thing. Generally speaking whenever the message "XXX.XXX not found" comes up in ANY program, look for the named file to be sure it is available on the proper diskette. DOS is really telling you the truth!

Q. MultiMate locks up on my jr when I try to print after editing or writing a new file. If I re-boot, the printing works fine as do the rest of the features such as mail-merge etc. I have a 640k Tecmar expansion and whether I have the program disk in A: or on RAMdisk I have the same problem. The data disk is in the B: drive.

A.   Our information is that MultiMate works OK on the jr. If, when you are editing or writing data you are establishing a new default drive path to B: then when MultiMate looks for its printing overlay and printer driver it won't find them on B: and may not error-correct to recover from the equivalent of DOS's "XXX.XXX Not found - Abort, Retry, Ignore?" You might add to whatever BATch file gets you into MultiMate the following command: "SET PATH = B:;A:" or in the case of the RAMdisk "SET PATH = B:;C:" (Be sure to leave spaces exactly as shown.) If a file is not found in the first (B:) drive/path then the second drive/path in the SET command (A: or C:) is explored when this SET command has been invoked. If this seems too complicated or it doesn't work, then address the data with its COMPLETE drive and name and do not set the drive to B: from within MultiMate or to the default with a BATch file. Here's an example: Don't let MultiMate or your BATch file set up for B: automatically. When choosing the data to edit or write, ALWAYS use "B:filename.ext". In other words include the B: with the filename and leave the default of A: or C: for MultiMate to find its own printing driver and files.

Q.   My jr has an AST jr Combo sidecar giving me 512k, clock-calendar, parallel port, has 200 ns chips and is powered by the jr's internal power supply. I would like to expand RAM even more, add DMA, and perhaps add a hard disk all without losing the use of the existing AST and don't need or want another clock or printer port. Has anyone addressed this particular combination? *(Robert Markeloff, Kingwood, TX)*

A. Our best advice is to look through the advertisers in this issue and check with them for the most compatible way to do what you wish. The have done extensive testing of their products and have been found to be extraordinarily helpful, both on the phone and in written correspondence. One warning: 200 ns chips are only marginally fast enough for a standard PC jr. IBM installed and recommends 150 ns and some of the expansion systems, speed ups, and disk access techniques, which includes pseudo-DMA are simply too fast for your existing chips to handle.

Q. Last Christmas I received an IBM Speech attachment via mail order. I installed it and performed the POST (Power On Self Test) and it checked out fine. (Ed Note: we think he means the jr testing procedure w/ Ctrl-Alt-Ins) I put it aside and hadn't installed it again until Sept. of this year. I decided to type in and run the BASIC programs which came with it. Nothing happened. I checked the programs for errors, found none and tried again. Nothing. I did the POST test again and, to my amazement, the Speech attachment test was no longer present. Switching the parallel printer sidecar and the Speech attachment made no difference. My set-up also includes a jr Hotshot for 640k, the internal modem and is using the internal power supply. Any ideas? *(Michael Brown, Rio Vista, CA)*

A. If you did not have the same setup when you originally tested the Speech attachment, then we might see a problem. Although the jr Hotshot requires a miserly amount of power as compared to separate sidecars for the equivalent amount of RAM expansion, the addition of the internal modem and the parallel printer attachment makes the power required about the same as the three normal cards which the IBM Tech. Ref. Manual says is the maximum which the internal power supply was designed to handle.(See the first question above.) On the other hand, if the setup was the same, there are other possibilities. The internal power supply diodes have "aged" (stress, power line spikes?) and cannot handle the new current requirement. We doubt it, but have seen stranger things. Assuming that a chip in the Speech attachment really is bad, then it demonstrates that the first 30 days of possession of a new piece of hardware should be used to wring it out completely. Though this doesn't help you now, it should be noted that 99.99% of chip failures occur during their earliest hours of operation. If there is no chip failure then a possible bad sidecar contact could be the culprit, either on the printer port (the carry-through contacts for power and addresses) or on the Speech board. Try the Speech attachment without the printer port installed at all. Carefully clean the contacts with alcohol, be sure any socketed chips are firmly seated and try again. In any case, if you get the the Speech attachment to work at all, we do recommend the addition of a Power sidecar.

Q. My current problem concerns a software program I would like to run but cannot seem to do so. The program requires 256k RAM and I can boot with either 640k (jr Hotshot) or the original 128k. Closer inspection of the program showed that they insist on UN-modified DOS of 2.0 or higher! My DOS is modified to the extent that it is on a disk which will activate my jr Hotshot system. *(Robert W. Lee, Hemet, CA)*

A.   You have almost answered your own question. Remember, DOS becomes modified DURING boot-up. We have seen exactly this requirement for the program called COPY II-PC for the PC and PC jr. It will not operate on a jr when DOS modifications which recognize a second physical disk drive is present, or a RAMdisk or video RAM reservation. The Microsoft and IBM memory expansion drivers (i.e. PCJRMEM.COM when not used with options /C or /E) if used with a fully IBM patched DOS are successful, as they do not modify the DOS memory and addresses which this type of program tries to use. Try to set up your CONFIG.SYS file to ONLY recognize memory, nothing else; this means no mouse, no other drivers of any kind. We keep a "plain-jane" DOS on a separate disk for just such occasions.

Use your PCjr to learn a Japanese art form!

ORIGAMI, Disk #39 on page 23, will take you step by step through the art of Japanese paper folding. It demonstrates how to make amazing animals and other objects right on your screen.

Fun for both adults and kids!

John Sellors and his wife spend 8 months of the year in Sarasota, Florida and the remainder of the year in Cleveland Heights, Ohio. There is a PCjr in each home because John depends upon his PCjrs to prepare a daily report of their investments.

John has been retired for five years and successful investing is essential to his financial well being.
"You know, if your wife is a few years younger than you are, you have to make your investments keep up with inflation."
To achieve this goal, the Sellors' investments are split roughly into thirds, with one third in a variety of tax free instruments, another third in utilities and other investments with high dividends, and the final third in solid growth stocks. The latter group includes Exxon, Proctor and Gamble,RPM, and other companies that John has evaluated as good, solid investments. In the last five years his investments have more than kept up with inflation. Even with last year's stock market crash.

His faithful partner in making financial decisions is his PCjr. His software -- Lotus 1-2-3. He says he's tried using investment software but has found that Lotus offers the flexibility he needs. "If you use a program like Managing Your Money you're locked into their format," he says. His daily tracking of stock prices, along with earnings reports and other factors, has allowed him to make timely investment decisions. He cites Reebok, the footwear manufacturing company, which suffered a sharp decline. "I was able to spot that and get out at 3/4 of its peak," he says.

John admits that it's not really necessary to make daily tallies of his portfolio, but he does it anyway. "I guess it's idle curiosity on my part. I like to watch."

When he retired five years ago, he bought two PCjrs, each expanded to 640K and two disk drives, in order to always have a computer handy for his investment tracking. But that's not all John does with his PCjrs.

He's very impressed with Boyan, the shareware communications program, which he bought from the jr Newsletter Software Store. "It works like a charm," he says. He regularly hooks up with local bulletin board systems using his 2400 baud modem. He is a member of Compuserve as well.

In the Sarasota area he calls Space Age, located in Bradenton (813) 753-0335. It's got a lot of jazzy graphics and is a "very social" bulletin board, John says. "Every time I log on someone wants to chat." For more practical purposes, such as downloading files, Sun Coast City (813) 953-5055 provides more of what he wants.

In the Cleveland area, John recommends PC Ohio (216) 381-3320, which charges a membership fee of $25 per year, but has 800 downloadable files. Or the Northeast Ohio PC Club (216) 331-4241, which also has a lot of files and charges no membership fee.

"The reason I bought my first PCjr was when I retired I no longer had a secretary. I had to keep my own records and do my own correspondence. The PCjr came with Writing Assistant and being an engineer I'm a lousy speller. The nice thing about using my PCjr is there are no erasures and with my Twinwriter daisy wheel printer out comes a perfect letter every time." He says he doesn't hesitate to send letters to the chief executives of companies he's invested in, offering his advice.

John also uses his PCjr to keep track of his diet. He's trying to lose 25 pounds he gained after he quit smoking. He uses a shareware program called Calories. With it he budgets the calories he allows himself each week and makes his meal plans to keep within those caloric limits.

To make his PCjrs run at top efficiency, John has both versions of Jr. Power Pack as well as other PCjr utilities he finds useful. He used the DOS patch on Disk #40, which he says "Works like a charm. It solved a lot of operating problems I was having."

Since one of the disk drives in his Cleveland Heights PCjr broke down he uses RAM disks more frequently. Not necessarily for the greater speed, but to save wear and tear on his physical drives.

As for speed, John says his PCjrs are plenty fast enough for him. "I can hardly keep up with the figures now, the computer spits them out so fast." So John says he's quite satisfied with his PCjrs, both North and South.

Computers And the Killer Bees

Recent news reports say that engineers working at the Oak Ridge National Laboratory in Tennessee have developed a silicon microchip they think will help track the strain of "killer" bees expeceted to arrive in the U.S. in 1989.

The bees have been migrating north from South America for a couple of decades. In spite of their name they don't pose a threat to human life, but American beekeepers fear they may disrupt their own species of bees by mating with them and changing their behavior.

The computer chip is so tiny it can be glued to the thorax of a bee without affecting the bee's ability to fly. It contains its own power source, in solar cells. A laser diode transmitter in the chip can send signals to receivers up to a mile away. Scientists hope these chips will help them learn about the bees' habits so they can slow down their population growth.
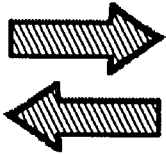
Reader Feedback
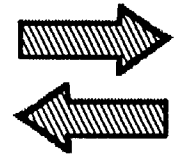
Tecmar User Gives Tips on CONPCJR Drawbacks

These are some of my comments regarding compatability of various programs.:

The **Buick Test Drive** program (1988 version) will run on the PCjr with the following configuration:
1. 512K memory (Tecmar jrCaptain & JrCadet)
2. Boot with CONPCJR - P2 if you are using DOS 2.1 (Reserves pages 2 & 3 for Video memory. Don't make general use of the -P2 option for your other programs. I have some evidence that it may slow down certain operations by as much as 50%. More on this later. Not only that, but the -P2 option tends to give new meaning to the word "crash" if you use it when you have BUFFERS = 12 in your CONFIG.SYS file (other BUFFERS will probably cause trouble, too).
3. If you have DOS 3.2, use CONPCJR -P4 (-P2 will cause crash).
4. Also works with JRCONFIG.SYS without options (I didn't try the options.).

AlphaWorks will run with the following qualifications:
1. 512K memory (this is marginal).
2. Two disk drives. I have one drive and have found that installation with one drive requires dozens to hundreds of disk swaps. (I gave up and borrowed a hard disk system) and operation with one drive requires considerable swapping. In either case, the screen tends to become so cluttered with "Insert disk for drive B and strike any key when ready" that one can become confused enough to crash the program with an incorrect swap. And with 5 disks worth of program, help, dictionary and thesaurus, I would to tend forget about a second floppy and buy a hard drive.
3. Forget about using a ramdisk. It won't leave enough memory to run the program or even the installation procedure. Besides, you can't swap disks on a ramdisk. If and when extended or expanded memory becomes available, maybe that will do the trick.
4. I have tried DOS 2.1 and 3.2 with success.
5. To type the embedded command symbols (extended codes 174 & 175) in some services, on must enter Number Lock mode by typing Alt/Fn-N (See the Keyboard Difference Chart in your PCJR Guide to Operations). This looks like a good place to try a macro. See the AlphaWorks manual for instructions on recording Macros.
6. I use Tecmar's CONPCJR to recognize my memory. JRCONFIG.SYS also appears to work. Others not tried. Don't use CONPCJR -P2. It will clash with BUFFERS = 20 in your CONFIG.SYS and cause a very colorful crash.

Wheel of Fortune will run using the same hardware. Other Programs I have tried (but not used all the features) are: **WordStar Professional** Release 4, **PCTools Deluxe** (Version 4), **Snoop II**, and several programs from Personally Developed Software (formerly from IBM). Their catalog tells which programs will not operate on the Junior. Note that if you put the entire program into a directory, the G.EXE file (basically an introductory menu) may not run. (This happens on the big IBM, too, and has nothing to do with hardware compatibility.) This menu is not a major loss; you can write a new menu or just run without it.

Does anybody still use Tecmar's CONJRPCJR? I have been using it and have been enjoying a speed of 105% of the original PC (as reported by PCTools Deluxe), and have been using **Cartridge Basic** with no problems. However, when I used CONPCJR -P2 (which reserves pages 2 and 3 for video memory for my Buick program), PCTools now reports a speed of 45% of a PC. I haven't noticed any speed loss in cartridge BASIC, but some programs become very sluggish in screen writes. I haven't had time to test other programs under this option, but it seems to support some of the reports I have read about screen memory allocation affecting Junior's speed.

I also found that some of my memory was missing from

JrNewsletter Welcomes Questions

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

Reader Feedback

cartridge BASIC when using the -P2 options, and some other "pages" will wreak havoc: -P4 gives BASIC only 10706 bytes free. This all applies to a Tecmar boosted machine with 512K; I don't know what happens with other memory sizes. I use no -P option which is the same as saying -P7 and I get about 60130 bytes free (I think that's the limit.).

The -P2 option apparently frees some extra memory as reported by CHKDSK: 457712 bytes free on a 512K jr as opposed to 392176 bytes free if I use pages 6 and 7 for video (the default). JRCONFIG.SYS will give me 389184 bytes free, but there are probably ways to improve on that. Incidentally, the Tecmar manual warns that the free bytes reported by CHKDSK may be in error when used with CONPCJR, so these figures may not be entirely useful.

If you use the -A option, which reserves only 16K for the screen, CHKDSK will report another 16K bytes free, but any program which attempts to use graphics may have trouble. So for maximum memory, use CONPCJR -P2 -A, and CHKDSK will report a whopping 474096 bytes free. Don't try this if you are using DOS 3.X or if you are using BUFFERS = XX in your CONFIG.SYS file. If you do try it with DOS 3, have a spare boot disk handy and be prepared for a colorful crash.

It's always a good idea to have a spare boot disk around anyway; you never know when a change in your AUTOEXEC.BAT or CONFIG.SYS will cause a crash, and you can't change it back if you can't reboot.

One of my main complaints about CONPCJR has been that if I use a ramdisk (or MEMDISK), I was unable to use the phantom drive B: to copy a file from one floppy to another. I bought DOS 3.2 so I could print graphics on my IBM Compact (thermal) printer and discovered a utility called DRIVER.SYS which will allow me to use the one floppy drive as C: (B: is the first ramdisk when using Tecmar's software). In my CONFIG.SYS file I include a line which reads:

DEVICE = DRIVER.SYS /D:0 /T:40 /f:0 (Use zero's, not o's)

The parameters tell DOS the type of drive to which I am referring (first physical drive; 40 tracks; type 0). See your DOS 3.2 manual for details.

If you boot with CONPCJR -D3, your phantom drive will be D: with B: and C: reserved for ramdisks.

This is starting to sound like a plug for JRCONFIG.SYS. I have just started trying that program and so far I like what I see. At least it's a lot cheaper than DOS 3.2. The next thing I would like to see is a graphics driver for IBM's thermal printer that will work with DOS 2.1.

Lester A. Zischke, Grandville, MI

News from the Metro PCjr Users Group

Dear jrNewsletter,

Thought your readers might like to hear about the activities of our PCjr user group in the Washington, DC, area. Our group's membership has held quite steady at about 200 members for several years and has now climbed to 210. Seems that we only have to make our existence known via newspaper ads and notices in software stores to attract new members, so promotion is now a high priority. We are pushing for 300 members for '89!

Our regular group meeting is held at the Gaithersburg Library in suburban Maryland and averages about 75 in attendance. Many members are "out of town" and join to receive our newsletter. A very successful chapter has formed in Virginia at the the Belle Haven Country Club and meets every other month (Washington traffic dictated this). Beginning this month, we now have a third meeting! Thanks to the full support of the Capital PC User Group, we will now have a monthly workshop/open house for PCjr users at the Capital PC User Group's headquarters on first Saturday's from 1:00 to 4:00 PM. This meeting will allow more in-depth attention to user questions - especially new users. Users are also encouraged to bring malfunctioning equipment for group troubleshooting.

We have had to add another 40 meg hard disk to our PCjr bulletin board, to bring capacity to 80 megs. The JR-BBS is now known as one of the best in the D.C. area. One very successful section on the BBS is the compatibility message area. This section discusses problems with running software on the PCjr and often offers solutions. Our BBS is the original source of patches to run Flight Simulator 3.0 and King's Quest IV in 16 colors, thanks to MSC's Lou Davidson. Technical questions are also addressed by Larry Newcomb, the author of JRCONFIG.SYS. Readers may wish to try the JR-BBS at (301)-468-0984.

Our most recent activities include the production of the the "PCjr survival manual." This manual will (finally) be available in November. It will include a full listing of all hardware sources and products for the PCjr compiled from existing lists and catalogs, plus our own letter-writing campaign to all suppliers. It also includes a listing of programs compatible with the PCjr (a disk version, an executable file originally compiled in Clarion with pull-down menus will be available in our software library in November), and information on repairs, hardware exchange programs with IBM, and add-ons.

Yet another program in the group is bulk order discounts from hardware suppliers from which our members benefit. This program is enhanced by our relatively large membership which allows quantity purchases to be made with good probability of resale and cost recovery.

Our software library now holds over 110 disks and is

File Express -- Friendly Database Software

By Carl Haub

File Express (Disks #83 and #84 in the jr Newsletter Software Store) is one of those items of software which sets out to do certain things, does them well, and with simplicity. It's refreshing to get new software and do something productive with it in the first session, without reading any manuals. Any program that is so thoughtfully designed that most users can fire it up, enter a database, and print a list of mailing labels, just like that, gets my vote.

FE is not a replacement for truly powerful relational database software such as dBase, but therein lies its strength. FE is particularly well suited for the home user with the occasional need for a database or for a business with a simple client list.

After working with an evaluation copy, this reviewer tends to think of FE as a "mailing list program." Its developers clearly gave a good deal of attention to that aspect with a topnotch provision for formatting mailing labels. But FE is a much more versatile program than that, considering its ability to define fields as formulas, easily design reports from a database, and sort records.

This review is based upon the latest version of File Express, version 4.22. The on-disk evaluation guide provides a brief introduction to the program's features and this review is based upon that guide and the distribution diskettes. This version of File Express will support 16 million (!) records per database, 120 fields per record, and a maximum field length of 250 characters. That should certainly satisfy most needs.

The program's various modules occupy two disks (beginning with version 4.0) and will result in some disk swaps for those of us sans a hard disk. Selecting the Report Writer from the main menu, for example, will result in a friendly "chirp" and a request to insert the second program disk. While disk swaps are annoying, they are likely to be somewhat infrequent in a typical session. Still -- why is it so much software now comes on multiple disks? Can't anyone write compact code anymore?

Memory and Drive Requirements

Minimum memory requirements are 256K, but a second floppy drive is a virtual necessity. Drive a: will be kept busy running the program, so a second drive is needed for data. With a 640K machine, of course, data files can be kept on a ramdisk. That's good and bad since ramdisks are much faster but will lose any unsaved data in the event of a power failure or system crash. Backing up files from a ramdisk to a floppy will involve exiting the program, but the ramdisk's speed and silent operation are worth a little planning ahead. Many typical sessions with File Express would likely involve some updating of the database and would risk

reentering relatively small amounts of data should the worst happen.

To sum up, the minimum configuration for FE is a PCjr with 640K or a 256K machine with two floppy drives. A tip on running it in 256K: my first attempt to run it on a 256K jr booted with jrconfig.nrd and a 1k ramdisk specified (the -s1 option) and 32K reserved for video memory (-v32) caused an error message. No go. Deleting the "-v32" from the jrconfig line in CONFIG.SYS (and thereby causing the machine to boot with its default of 16K video memory) ran FE just fine. The former boot sequence, which left 192K free, did not work, but the second, with 209K free, did. Sometimes booting programs on a 256K jr treads a fine line.

Since it is shareware, regular users are required to pay the $69.95 registration fee. Benefits of registration include the 310 page manual, which presumably reveals more of the program's true power, free technical support, the Express-News newsletter, notification of upgrades, and the latest version on two disks. The registration fee even includes a money-back guarantee (one copy per customer) when an

Friendly Database

(Continued from page 9)

undamaged copy is returned within 60 days. Not a bad deal when you consider that the full program can be tried for only the cost of the shareware disks.

Based on an evaluation copy, here's what happens when you run FE. Insert the program disk in drive a: and type "FE." After the opening screen, you will need to indicate the drive where your database is stored. This could be a second floppy or a ramdisk. If no database exists, one must be defined.

Defining a database is simplicity itself. After giving your new database a name, e.g., "Maillist," you will be deposited at the "Defining Fields" screen. The prompt will be sitting in the first field with the message "Enter NAME for field" directly underneath. If your database is a mailing list, the first field might be "LASTNM," for each person's last name. Hit return and the cursor jumps to the next definition and the possible choices appear at the bottom of the screen. Is your field characters, i.e., composed of letters only? Then hit "C." If numbers, such as a person's age, hit "N" for numeric. Fields can also be formulas. A teacher may wish to have a field represent grades, such as the percent of questions answered correctly on quizzes, (calculated from the number correct divided by the number of questions).

Customized Fields

Fields can also be dates or "user-defined." The latter is quite useful for custom-formatted fields such as Social Security numbers where the dashes - " - - " are automatically embedded. Finally, maximum field length and an "index length," useful for speeding up searches in very large files, can also be entered. Errors you might make can be corrected by hitting "C" for change and then moving to the appropriate field. Few programs are as painless as this. Fields can then be "painted" by hitting "P" to see a quick graphic representation.

Once the general layout of your database has been defined, it's time to begin entering records, such as names and addresses. FE then brings you to the main menu (it's not possible to see it unless at least one database has been set up). Select choice 2 for "Add records" and that screen instantly appears. The screen shows remaining free disk space and each record number as you type. Each record is saved by hitting the F10 key, which also results in a friendly "chirp." If sound effects bother you, and FE definitely has some, they can be turned off by first running the program by typing FE/S rather than just FE.

Printing Labels

Once a database has been defined and some records

entered, the next logical step would be to print out some mailing labels or their contents in a report. For mailing labels, select option 6 from the main menu. Here you will be asked to select an existing label format or design a new one. This process is made painless by a series of menus which offer a number of options such as regular or compressed type, line spacing, number of labels across page, width, spacing between labels, and more.

At first, one or more of these options might seem confusing, but then, after hitting the F10 key when "done," the program thoughtfully asks if you would like to test the label format on your printer. This can be done on plain paper to avoid wasting labels. Specifying the layout of a label is as simple as selecting each field number and specifying its position. If your layout is wider than the label width specified, a message points that out. In short, one is almost spoonfed.

> *"FE would be a good choice for those who have little time to learn computerese."*

FE also includes a simple form of "artificial intelligence" in the selection of which mailing labels or reports to print. If you want to print the entire list, just specify "ALL." But, if you wish to select only certain records, the specification you use can be freeform. Selections such as "STATE IS NY" or "STATE = NY" are equally valid. Symbols such as " < " or " > " are similarly acceptable. Almost any reasonable combination of words or symbols seems to work. That's a nice touch and suggests that FE would be a good choice for those who have little time to invest in learning "computerese."

FE has another friendly touch: hitting the "ESC" key always backs one out of a wrong choice with no penalty. The program never seems to paint you into a corner from which an unknown choice must be made. In other words, the ESC key really means escape.

Powerful Report Writer

The Report Writer selection from the main menu accesses a screen which does all one can ask. A graphic screen presents a layout with "Report Title," "Headings," and "Detail." The reports are then quickly designed by writing automatically centered titles and then specifying which of your fields go where.

When finished, menu-driven choices select such items as: title printed on the first, all, or on no pages; double space; compressed, regular, or twelve-pitch type; remove blanks from report; and more. Most of these choices will be obvious, some perhaps not. But FE gives one the choice of

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New Keyboard Adapter

(Continued from page 1)

not have socketed chips and therefore could not easily install ROM clock chips, Synectics came up with a cartridge to do the same job.

Next they developed the Keylights Cartridge, which has three LEDs indicating the status of your Caps Lock, Scroll Lock, and Num Lock keys. Synectics is also responsible for the Quicksilver Cartridge; a cartridge development system which will write and debug software before putting the software of your choice into a cartridge; a chip to make text more readable on your PCjr monitor (sometimes called the Dualfont or Thinfont Chip); and, most recently the Siamese Slots, which allow two cartridges to be plugged into one PCjr cartridge slot.(We reported on this last product in the November issue of jr Newsletter.)

That's an impressive list of excellent PCjr products created by Annelisa Keithley's company. She works with several programmers and engineers to come up with these products and points out that the name of her company "Synectics" means the bringing together of a diverse group of people to solve a problem.

They've certainly solved a lot of PCjr users' problems and we look forward to seeing what these PCjr wizards come up with next.

EXPAND YOUR PCJR

jr. Hotshot 512K Memory	CALL
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Friendly Database

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a sample print either to the printer or the screen, avoiding wasted paper or the hassle of resetting printers. Apparently, FE's programmers went to some lengths to make life as easy as possible for those of us who may not get everything "just right" the very first time.

FE also has the usual database capabilities to sort records per the user's specifications, but, again, with plain English parameters in most cases. Deleted records are maintained for a time and can be seen and recovered with "show deletes." Again, nice touches.

What's the verdict on File Express? Its initial impression of simplicity belies its capability as a serious database manager. Its niche would seem to be list maintenance such as memberships, client records, collections, etc., particularly for those who perform many tasks with their computers and do not have the time to learn more powerful, complex programs. With File Express, one can decide to create a list and print it by following screen prompts, period. That's something. But if you decide to use it, don't forget the registration fee. File Express is a product of: Expressware Corp., P.O. Box 230, Redmond, WA 98073.

If you'd like to try File Express, order Disks #83 and #84 from the jr Newsletter Software Store, page 23.

A Fever Kids Should Catch

By Jack Anderson

Learning to work with fractions is like becoming fluent in the Ugric languages, at least for most of us. Yet, it is one of the most practical concepts our children will learn in their study of mathematics. The ability to understand and interpret the relationship between the numerator and denominator is essential for understanding the language of mathematics.

The challenge of presenting fractions in an entertaining format has been met in a game written by Tom Snyder and published by Spinnaker Software. The objective is to ride a fast bouncing pogo stick sideways (direction and speed are controlled by joystick or cursor keys) until you are over a picture or "visual representation" of the fraction shown at the top of the screen. When you are in the square above the visual, fire the joy stick button (or space bar if playing from the keyboard) and you will be elevated to the next level.

You are trying to make it to the 20th floor garnering as many points as possible by knocking out fractions that do not match as you look for the matching picture that will take you up one floor.

Matching the required fraction with the visual takes skill. The same fraction can be shown in several ways, and while you are looking for fractions keep an eye on holes in the floor and the timer!

Fraction Fever uses numerical and visual representations of fractions to demonstrate how one relates to the others in the group shown. The visual display allows even three and four year old children watching the game being played to be subtly exposed to what the numeric term "3/4" means. Older players will soon figure out that the fractions are placed along the floor in relation to their value, for example, if the elevator fraction is 1/2, you will find it halfway along the floor.

There is an interesting "radar picture" presented at the bottom of the screen which depicts the holes and the current location of the player. This radar becomes very important as a tool for planning strategy after you have become more adept at controlling the pogo sticking.

This game is very much akin to the quarter a shot video game. It takes some amount of practice and good eye-hand coordination to get control of the pogo stick. The longer you hold the joy stick or cursor key the faster the pogo goes. It can achieve speeds faster than can be controlled, which is good because it challenges the physical abilities as well as the mental. If you fail to jump over a hole in the floor, due to low speed, you fall through to the next lower floor. Over shoot the end of a floor and you may fall several floors. Do either one ten times and the game ends! As incorrect fractions are knocked out for points, holes

are created in their place which makes retracing your path very much more interesting. The timer is always ticking away and when it zeros, the elevator leaves without you. You must then deliberately fall through a hole and redo a lower floor.

Does this sound like fun? It is, and whenever you can have fun and learn some of the "words" in the language of mathematics I think you have a real winner. Fraction Fever is available in both diskette and cartridge. Several advertisers in the jr Newsletter carry it in stock, it does not cost much, and this game will provide many hours of fun and learning.

Epyx Lists Its PCjr Compatible Software Titles for Our Guidance

In answer to requests for information on which games produced by Epyx Software will run on PCjrs, the company has issued the following list of titles:

Title	Memory Required
Destroyer	256K
Rogue	128K
Road Warrior	128K
World Games	128K
Spiderbot	512K
Spy vs. Spy III	128K
Winter Games	128K
Summer Games II	256K
L.A. Crackdown	256K
Death Sword	256K
Create A Calendar	384K
Sub Battle Simulator	384K
World's Greatest Baseball	256K
Temple of Apshai Trilogy	128K
Boulder Dash Const. Kit	256K
California Games	640K

Epyx also reports that Print Magic will work on PCjrs with 640K as long as the memory expansion is 100% IBM compatible. Some memory expansion units have problems with Print Magic, so ask your software dealer if you can return it if it doesn't run on your unit.

You're Lucky You Have a PCjr!

A lot of complaints have been surfacing lately about IBM's PS/2 computers, the ones that have sometimes been called the successors to PCjrs. Although IBM certainly doesn't refer to their overpriced machines this way, computer technicians say there is a family resemblance when you look at the innards.

However, PS/2 machines are giving a lot of people who spent big bucks on them a lot of trouble. First there is the problem with the hard disk controller. IBM is now offering a free upgrade to those whose new PS/2s have this problem. Also, if you try to install an internal modern into one of the micro channel slots, and if that internal modem is a Hayes compatible (the industry standard), it will fail.

It seems spending a hunk of money on a new computer, even from I.B.M., is no guarantee of worry free computing.

Here is a quote from an article written by Peter H. Lewis in the October 25, 1988 New York Times. He is a regular computer columnist and was describing problems he had using electronic mail services.

"The computer being used in this fiasco, an International Buisiness Machines PS/2 Model 80, has a regular habit of freezing, beeping twice and displaying an "8603" error message. That's all it says: "8603." This particular ailment is not listed in the user's reference manual. Nor is it listed in "The PC Configuration Handbook," by John Woram (Bantam $21.95), which is the best general source of information for upgrading, trouble-shooting, maintaining or fixing a PC or compatible.

"We called Mr. Woram, who surmised that "8603" is unique to PS/2 computers. After rooting through some technical manuals, he guessed that "8603" had something to do with a mouse.

"If I.B.M. is sharp enough to identify more than 8,000 things that can go wrong with its PS/2 computers, why can't some programmer teach the computer to display a message such as "Yo, cheesehead, you forgot to plug your mouse into the back of the machine," instead of "8603"? I can plug in my mouse in five seconds if I see the former message; or I can call an I.B.M. technician who, for $125 an hour, can get around to repairing my "8603" by next Friday.

"The "8603" mystery solved, I switched on the computer again. This time it said "602." "Sounds like your disk drive is shot this time," Mr. Woram said. Sure enough, my week old disk drive had indeeed bitten the dust.

"So, I'm going to "Deep 6" this PS/2. I had an old I.B.M. PC that ran five years without any problems, whasoever, and I've had two PS/2s in a row with Alzheimer's disease. Mr. Woram said he, too, thought the older PCs were more reliable."

And, we might add, so are our old PCjrs.

Powerful Chess Game
Added to Disk #44 PC-Chess

A few weeks ago we came across the most powerful, full featured shareware chess game we've seen. It's called Edchess, for the small shareware company, EdTech, which spent months perfecting it by playing it against the top commercial games. They claim Edchess stands up very well against them, and we believe it. It crushed everyone we asked to pit their skills against it.

Disk #44 in the jr Newsletter Software Store already had an excellent chess game on it, but it had room for Edchess, so we added Edchess to it. Now PC-Chess, Disk #44, has two fine chess games on it! Those of you who have already purchased Disk #44 are welcome to send us your copy and we'll add Edchess to it.

Edchess will work on monochrome monitors as well as color, which means it will play on virtually any PC compatible computer, including, of course, PCjrs. It allows you to select the level of difficulty you want. You can save games, order the computer to play against itself, view Edchess's thinking process as it ponders a move, it allows you to back up through earlier moves in a game, and has many other features (except one that will allow you to win).

Please 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.

Player's Choice -- New Disk for Card Sharks

One of the new disks added to the jr Newsletter Software Store this month should delight all of you card players.

It's called Player's Choice (Disk #78) and it has not one, not two, but SIX different card games on it. A fine way for card lovers to while away the winter nights on their PCjrs.

Although they are all written for adult players, two of the games on this disk are simple enough to be played by children over 7 as well. One of these is **Memory**, a game similar to Concentration, but with a few differences you'll enjoy. On your screen are 54 cards turned face down. Each represents an animal. As in Concentration, you turn over two at a time, trying to match them. You get two points for each match and the computer keeps track of the number of attempts you have made so that you can pit your skills against previous games.

In Memory, unlike the card game, if you match two animals that "hate" each other, such as Mouse and Cat, or Hawk and Dove, you lose points. On the other hand, some other more compatible matches will give you bonus points. Memory also allows you to design your own cards and bonus (or penalty) point matches.

Another one the kids can play is **Even-Out**. Using a deck of cards with the picture cards removed, the cards are dealt one by one from left to right on your screen. As each card is dealt, you decide whether the new card plus the last one dealt add up to an even number. If they do, you key in the appropriate number, and the cards are removed. If a total of eight cards are dealt before you have eliminated all cards in the deck, you lose. If you wipe out all the cards (which is not too difficult), you win.

It's a lot more difficult to beat the dealer in Blackjack. In fact, in this game, played with the standard Blackjack rules, the dealer rubs it in when you lose (which you often will). The rules are displayed in a box in the upper right hand corner of your screen, while the play takes place on the left side. That's where the dealer adds his (or her) comments at the end of a hand. "You can't beat skill," he'll say after winning a round. Or "The cards have turned against me," might pop on the screen when you win. At least the dealer is honest. He/she doesn't cheat and the deck is reshuffled regularly.

Another casino-type game on this disk is **Poker**, which plays draw poker head-to-head with you. The author of this fine version of Poker, Robert Gellman, says it "has a sophisticated style of playing and betting, and it is intended to provide a challenge for the serious poker player and to help weaker players sharpen their skills." The computer has different patterns of betting. Some of it is random so it

won't always be the same way under the same conditions. It also observes your play and modifies its behavior in response to your betting methods.

This version of Poker is v. 5.60, and has gone through a great deal of testing and refinement of the algorithm as well as the look of the program, which is excellent. As in Blackjack, you are playing against a dealer who occasionally comments on the hands. The comments can become rather nasty now and then. For instance, if you lose all your money, the dealer might say something like, "You can't beat skill," followed by an offer to buy your watch so you'll have money to continue.

The two other games on Player's Choice are very different versions of Solitaire. One is a colorful, well designed version of **Solitaire**, which is played in the normal way. It offers two choices of play -- casino or standard. It has on-screen instructions for both, in case you're not familiar with them. You can play alone, with several other humans, or against the computer, who is a tough opponent.

In **Elevens**, the computer deals three rows of three cards. You try to find two that add up to 11. When you do, those two cards are eliminated. Your goal is to get rid of all cards in the deck without reaching the point of not having any 11 combinations showing. It's tough to do, because you can't use the picture cards to make your 11s. The only way to get rid of them is to get three of the same suit. This game of solitaire presents an unusually difficult challenge.

With six games to choose from on this disk, you and your PCjr could end up spending a lot of pleasurable time together. To order Player's Choice (Disk #78) see page 23.

Tip for Beginners:

If you find yourself trying to read a screen full of large letters in lines that break up in strange ways on your PCjr's screen, your computer is probably in what is called 40 column mode. That means words will be printed within 40 spaces across the screen. Since most computers use 80 column mode, you have to give your PCjr instructions to display words in 80 columns so you can read text files easily.

To do this, type at the A> prompt:

MODE CO80

Then try reading the text file again and you will find a vast improvement.

Beware of Software BATch Files

by Bob Thomson

In the PC world almost everyone who sells software uses a BATch file to install new programs (and alter the existing CONFIG.SYS or AUTOEXEC.BAT files) or to load the program while automatically setting parameters. The problem is, that in setting *their* parameters they may undo or change some parameters you need to make your machine run properly or at least the way you have become accustomed to having it run.

Well written and designed programs will always offer you the opportunity to refuse to automatically make any changes or will make changes ONLY if they are needed and can be done without deleting other options which exist in those files. Unfortunately, only a bit of digging around will tell you whether the new program is going to destroy your basic system setup.

When you receive new software, especially if you have a hard disk, **don't** *blindly* follow the instructions that come with it and load the files onto your hard disk without first looking at the BATch files on the new disk. You can do this easily with the TYPE command. Let's say you have the new software disk in the A drive. Type:

DIR A:*.bat <ENTER>

to find out what BATch files are on the disk. Then look at them with

TYPE A:FILENAME.BAT <ENTER>

where FILENAME is the real file name and the contents will be listed on the screen.

A similar procedure should be followed to be sure that if a new CONFIG.SYS file is on the floppy, it will not alter the configuration of your system and cause problems with programs which you previously installed.

If you aren't sure of what you are looking at when you type out a file, just press <F3> (the function key which "repeats the previous command") and <CTRL> P before striking the <RETURN> or <ENTER> key. This will echo the contents of the file to your printer. By showing the printout to a knowledgeable friend and asking what the commands mean, you not only avoid trouble but also learn a little more about the way in which your computer is set up.

As an extra precaution, you should also take care that backup copies of your <u>current</u> CONFIG.SYS and AUTOEXEC.BAT files (as well as any other BATch files you use to simplify loading programs) are always available. Once the new program is installed, you can check the new CONFIG.SYS or BATch files against the originals to see what changes, if any, were made during the installation.

You may save yourself a lot of grief by ensuring that your original AUTOEXEC.BAT or CONFIG.SYS files are not changed without knowing how the changes will affect the operation of your system.

You Don't Need Cartridge BASIC to Run BASIC Programs

There are two reasons for writing this article: 1. Judging from the letters we receive, many PCjr users do not realize that they do not have to have Cartridge BASIC installed in order to run software written in BASIC.

And, 2. the patch on Disk #40 and Disk #56 which allows PCjr users to modify BASICA.COM on their DOS disks in order to allow them to use it instead of having Cartridge BASIC, has a mistake in the instructions.

Thanks to Kent Oppenheimer of Los Angeles,CA, we discovered that the instructions have a small mistake. Many users probably have noticed by themselves, but if they didn't, they would not be able to use the patch.

Let's start at the beginning

Why Use Disk BASIC?

There are two reasons for PCjr users to want to use a disk version of BASIC rather than Cartridge BASIC. First, you may not own Cartridge BASIC or you may have your PCjr slots occupied with other cartridges.

Secondly, if you have expanded memory on your PCjr, you will not be able to run BASIC programs even if you have Cartridge BASIC unless you boot your computer with a version of DOS that has not been modified to recognize your additional memory.

The way around this, if you have Cartridge BASIC, is to boot your PCjr using an unmodified version of DOS whenever you intend to run software written in BASIC.

When we say "unmodified version of DOS," we mean your original version of DOS, rather than the one that includes the programs that came with your memory expansion unit. All memory expansion units for PCjrs require special software to be located on the DOS diskette that you boot (or start) your computer with.

This memory expansion software interferes with the running of BASIC programs on PCjrs. The unmodified version of DOS would be a DOS diskette that does not have this memory expansion software on it. When you start your computer with an unmodified version of DOS, Cartridge BASIC works fine.

If you don't have an unmodified version of DOS, the easiest way to make a boot disk for using BASIC is to make a copy of the DOS disk that you use to boot your computer with and then simply delete the file called config.sys on the new copy of DOS. Then you will have a disk that allows you to use BASIC, provided you have Cartridge BASIC.

If you don't have Cartridge BASIC or you just want to be able to use the disk version of BASIC, read on:

If you have DOS, you already have a version of BASIC on your DOS disk. It's called BASICA.COM. This version of BASIC can be used on a PCjr only after taking certain steps.

The main thing you have to do is to get around the built in search that PCjrs perform whenever you type in the word BASIC or BASICA. PCjrs automatically look in the cartridge slots for the presence of Cartridge BASIC. If it's not there, your PCjr will tell you "Cartridge Required."

There is an automatic patch on Disk #40 and also on Disk #56 that will alter the BASICA.COM and BASIC.COM on your DOS 2.1 disk so that you can use these versions on your PCjr. This will allow you to run software written in BASIC even if you do not have Cartridge BASIC installed. The patch works fine, but as we mentioned, there is an error in the instructions telling you how to run it. This error has been corrected on all versions now being distributed, but for those of you who may have tried unsuccessfully to use the patch, here is how to use it:

To patch your copy of BASICA.COM (which is on your DOS 2.1 disk), make a copy of your DOS disk with BASICA.COM on it. Then copy PATCHBAS.BAT and PATCH.TXT to your new copy. Also make sure that DEBUG.COM is on the disk with BASICA.COM. Put the disk with all these files on it in Drive A: and type

PATCHBAS

The patch will run automatically and make the necessary changes in BASICA.COM, which will now be renamed BASICAJR.COM. To run programs written in BASIC, you will now type the command BASICAJR instead of BASIC or BASICA. For convenience you may want to copy your new

BASICAJR.COM to diskettes that have software written in BASIC on them.

Now, here's the error. The original instructions for using the patch told you to type in "PATCHJR" instead of "PATCHBAS" to start the patch. Many users probably caught this mistake when they noticed that the name of the batch file was called "PATCHBAS.BAT". We all know that to run a batch file you simply type its name, right?

So, you now have a copy of BASICA, the version of BASIC that was written for the IBM PC, to use on your PCjr!

This version of BASIC, although very good, is not designed to support all of the PCjr's wonderful graphic abilities. That's because the PC doesn't have all those great things. This means that some games and other programs that utilize some of our PCjrs' better features will not operate to their full capacity using your BASICAJR.COM instead of Cartridge BASIC.

We should also point out that the patches on Disks 40 and 56 are designed to patch the versions of BASIC and BASICA that are on DOS 2.1. Other versions, such as those on higher versions of DOS, are slightly different and the patch may not work on them. They can be patched to work on PCjrs, but require the manual use of DEBUG because the far call to address F600:4C79 is located in different places in different versions.

That bit of technical info is not important to most people. All you care about is getting a usable version of BASIC, and we hope this article has shown you how easy it is to do. We apologize to those of you who may have been tripped up by the error in the instructions. We hope you will now go back and try it again. With great success!

Some Facts About DISKCOPY

The DOS command DISKCOPY is one way to copy the information from one diskette to another, but keep these points in mind:

It makes a "carbon copy" of the diskette you are copying from. This means if you use a single sided diskette as your source, your copy will be formatted as a single sided disk, too. (So you won't be able to add files to it once the single side is full.)

Also, unlike the COPY *.* command, if there are any bad sectors on your target diskette, DISKCOPY will still try to write to them and will give you a copy that may be imperfect.

The preferred way to copy diskettes is to FORMAT first and then use the COPY *.* command. It's slower, but your copy will be more reliable.

> JR USERS GROUPS -- WRITE TO US ABOUT
> MEMBERSHIP SUBSCRIPTION DISCOUNTS.

New "Mean 18" Courses Offer Variety of Challenges

Mean 18, the popular golf game, which is a favorite among PCjr users, can be played on an endless number of courses. For those of you who love the game, the six courses on two disks added to our Software Store this month will offer many hours of exciting play.

We asked Mean 18 enthusiast Dom Dombrosky, who you may remember as our "PCjr User of the Month" in November, to test these courses. Here is what he had to report:

"These are very nicely detailed courses and are in every respect the equivalent of the original disks provided with this game. Some comments on individual courses are as follows:

"Boca Woods North/South - These two courses had very challenging water holes and an unusual placement of cabins or structures very close to the fairways and greens.

"Kearsage Valley - The trees and foliage are shown in their fall colors which were quite pleasing. Several interesting ponds and streams were very strategically placed.

"The TPC of Avenel - There are fewer trees and ponds in this layout but a meandering stream wreaked havoc with some of my shots.

"TPC of Sawgrass - A superbly detailed course with massive sandtraps and a liberal sprinkling of palm trees. The 17th hole consisting of the green on a small island is a real test of dexterity.

"TPC of Woodlands - Many water holes, strategically placed trees and a very tough 13th hole made this the most troublesome course for me.

"Incidentally, I believe that the initials TPC, which appears in the title of the above courses, stands for 'Tournament Players' Club.' These layouts are probably replicas of the actual championship clubs."

The six Mean 18 courses are available on Disks 79 and 80 in the jr Newsletter Software Store. See page 23 for ordering.

Charlotte (NC) PCjr Club

PCjr users in the Charlotte, N.C., area are invited to join the Charlotte (NC) PCjr Club, which has been in existence for three years and is currently seeking new members.

The club meets on the third Thursday night of every month. Those interested should contact Claire Goodman (703) 537-7033.

Reader Feedback

(Continued from page 8)

kept up to date for new versions of programs by software librarian Jim McHarg. Fund raising is accomplished by library disk sales ($2 per disk for members) and the sale of software/hardware donated by local vendors. The user group now owns several PCjr's. One 640K unit (jrHotshot) is used for the group's general meeting and another (256K) is reserved for the bimonthly Virinia Chapter meeting. Our monthly newsletter is produced using PFS:First Publisher on a jr with a hard disk.

Just thought that your readers would like to know something about our user group here in Washington.

For further information on the Metro PCjr UG, write:

> Metro PCjr Users Group
> 11732 Cherry Grove Drive
> Gaithersburg, MD 20878

Best,
Carl Haub

EDITOR'S NOTE: It's truly amazing what those folks in the D.C. area are doing to support their PCjrs. We'd like to hear from other active groups, even subgroups of larger PC user groups. Let us know how you're doing!

Reader Explains His Method Of Making System Diskettes

Since getting my IBM Pcjr during XMas of 1984 I have been using and learning about the IBM PC. One of the things that I have been frustrated with since I have only a single drive system is the fact that I was always having to put my DOS 2.1 in the drive to bring my system up. One of the first books that my wife found for me to read was "32 BASIC PROGRAMS FOR THE IBM PCjr" by Tom Rugg and Phil Feldman. One of the helpful suggestions that it made was to make system diskettes whenever possible.

The way to do this is to type in "SYS B:" with a DOS disk in Drive A and then put in the diskette that you wish to make a System Disk into Drive A. After the SYSTEM has been transferred you should then copy COMMAND.COM from DOS disk onto your new disk.

Sometimes when I would try to copy "SYS B:" to my new disk I get a message: "NO ROOM FOR SYSTEM ON DESTINATION DISK". Not to become discouraged I have come up with another way to make my favorite disks "SYSTEM DISKETTES".

1) Format a new diskette with the following command: "FORMAT/S".This transfers system commands and also the COMMAND.COM file onto your blank disk.

2) Since I have a 384K PCjr I am able to utilize my C: low ram disk. I have a special DOS that sets up 50K in the Low Ram Disk. I then put in the old disk and do a "COPY*.* C:" to move all the files from the old disk into Drive C:. I then put in my newly formatted disk with "COMMAND.-COM" on it and copy all the files back to my new disk from my Low Ram Disk C:. I now have a copy of my old disk that is now a SYSTEM DISK and I no longer need to always put my DOS disk in Drive A:.

With this method I have been able to save a lot of disk swapping amd make my system work better. Remember that you don't always have to work harder - you just have to work smarter.

> *Mike Kennedy*
> *Dellwood, MO 63136*

The DOS SYS Command Copies Hidden Files

The SYS command is capable of copying the IBMBIO.COM and IBMDOS.COM files on a properly formatted diskette. These two files do not appear in a directory of a diskette because they are the hidden controllers of DOS (somewhat like those not-so-public government agencies?)

These files must be on a diskette in order for it to be bootable. If they are not, you will get a "non-system diskette" error message. A bootable diskette must also have COMMAND.COM on it. COMMAND.COM is not a hidden file. It will show up when you type DIR at the prompt.

To use the SYS command, you must have DOS in your default drive. If DOS were in your A: drive and you wanted to put the systems files on a diskette in drive B:, you would type
SYS B:

If you buy software that does not have DOS on it, you may be able to make it bootable by using the SYS command. But the diskette must be specially formatted for this to work. Check the instructions that come with the software to find out whether the system files can be put on the diskette.

What Is ASCII Anyway?

EDITOR'S NOTE: Since our PCjrs are part of the larger microcomputer family - all of which rely upon ASCII codes for word processing, we thought you'd appreciate this offbeat history lesson from CodeWorks.

ASCII (ask-key). American Standard Code for Information Interchange. The "ASCIIbet" predated computer technology only to the extent that only a few old technoids remember its inception. That fact alone would not be noteworthy, except the old technoids do not have grey hair yet.

ASCII derives its most fundamental characteristic from the eight bit byte. Two to the eighth power is the source of the 256 character combination range. By definition, one of the bits is used as a parity bit, cutting the total number of combinations in half, down to 128 characters.

The largest chunk of code set goes to the alphabet, with 26 upper and 26 lower case letters, for 52 combinations. The numeric digits 0 through 9 get an additional 10 characters, bringing the count to 62. Of the remaining 66 codes, the first 32 were claimed back in the old days as function codes for serial data transmission, bell ringing on KSR's (teletypes), tabs, carriage returns, and most of the control codes you now use on your computer.

That leaves 34 possible characters, most of which have been used by scientific types for algebraic and relational operators. Of the 128 possible characters, there's almost enough space for everything.

On the ground floor lobby of the building where I work, there is a thirty-five year old "burned-out" systems analyst named Ralph. He sells newspapers and cigars. I figured Ralph knew what ASCII was all about.

"Say, Ralph, what is ASCII anyway?"

"You mean the 'ASCIIbet'? It has real staying power. Can't compute without it."

"What do you mean - staying power?" I asked.

"If you remember back to the olden days of computers, there were things around like card readers, core memory, and Hollerith code which you never hear about anymore. Want a paper?"

"You got today's? You mean ASCII goes way back to the old days of computing?"

"Yeh, Hollerith code used by the tab-card people was the predecessor, but I haven't seen a tab-card for years now. I still get the urge to fold, spindle, or mutilate. I got a yesterday's paper."

"I'd rather have today's. I saw a vacuum tube once in a museum. Well, doesn't the ASCII character set just basically have your upper and lower case alphabet and the numbers zero to nine?" I asked.

"Yeh, but that's only 62 of the 128 possible combina-

tions. There are 32 functions, plus all the algebraic operators, and don't forget punctuation. Look at your keyboard and you'll see most of your ASCII character set. Today's hasn't happened yet, so there's no such thing as today's news," he reminded me.

"Well, the II in ASCII stands for Information Interchange," I ventured, "so aren't you really saying ASCII is an agreed upon standard characters set for all computers everywhere?"

"But the A stands for American, so by everywhere you must mean every-American-where. There was a lot of news made the day before yesterday," says Ralph. "I'll get you a paper."

"Okay, if the numeric digits are really hex F0 to F9, then you wouldn't want to do arithmetic operations in ASCII, but I guess text editing, formats, and compares work okay, don't they?"

"You're right, but some even know ways to do ASCII arithmetic. That will be 50 cents," he said, handing me a day old paper and smiling.

"Maybe this is ASCII arithmetic," I said, handing over the 50 cents. "I was just wondering, Ralph, if you know this much about computers, why are you selling papers?"

"You must not know what the profit margin is for selling day old newspapers. Hey, you want to buy some cigars?" he asked.

"No, thanks. By the way, do you have a favorite ASCII character?"

"Yeh, it's hex 0."

"What's that?"

"End of transmission."

New Version of PC-Write Offers Many New Features

PC-Write 3.0 has been officially released. We expect to test it this month and report on it in our next issue, but we'll just tease you with these few tidbits of info:

* Now you can edit files of any size, limited only by your computer's memory.
* Column formats can now be edited.
* Move, copy or delete boxed text.
* Line and page numbers now on status line.
* New friendly opening screen with reminder lines.
* Five new kinds of margins.
* Improved spelling guesses, now guesses are visible.
* Shortcut keys, quick access to related files.
* Improved integration of edit and print modules.

If you have been using an earlier version of PC-Write, you already know how good it is. Now, judging from what we've read of the new features, it's even better. We'll let you know for sure after we've tested version 3.0.

* * * PCjr CLASSIFIEDS * * *

JR CPU, KEYBOARD, & power transformers, Racore Drive Two (non-functioning), Racore memory expansion, 128K IBM sidecar memory (total memory 640K), IBM printer port, Racore keyboard adaptor, and two joy sticks. 216-871-2405 evenings, 216-566-3096, days. (11)

IBM PCjr INTERNAL MODEM - complete with all information. 300 baud. $40.00. Call 508-473-4234 after 5 pm EST (11)

IBM PCjr 128K - One drive, amber monitor, DOS 2.1, PCjr Wordstar, PCWrite # 1 ^ 2, PC Screenwriter, plus assorted other programs. Runs excellent. Roland Ramos (213) 478-0975 $550 or best offer. 165 S. Harvard LA, CA (11)

IBM PCjr 256K - IBM color monitor, Enhanced Keyboard, Okidata 92 microline printer, excellent condition. DOS 2.1, Cart. Basic, Volkswriter, writing asst., original documentation, 25 floppy disks $650. Andy Ziegler (212) 493-8927 or (718) 631-1853 after 7 p.m. (11)

IBM PCjr - Racore Drive Two Plus with 640 K, Parallel Printer attachment, NEC V20 chip, RS232 adapter cable, keyb. cable, Cart. Basic, Original drive is disabled but serviceable. PCjr Color Monitor. DOS 2.1, Writing Assistant, King's Quest II, Thexder, Infocom games, Guide to Operations. Asking $650. MUST UPGRADE!! Darren David (818) 248-4764, 6-9 PM PST Weekdays/ends. (11)

WANTED TO BUY: Four IBM expansion sidecars -- one at a time or all four at once. Documentation not necessary. Will pay $50 each delivered. Send COD or will send check upon receipt. Call Art Risser (712) 562-6000 anytime. (12)

Support Your Shareware Programmer

If you've purchased shareware from the jr Newsletter Software Store and you enjoy using it, please say thank you to the author of that software by sending in the requested registration fee. Shareware programmers need our thanks and support to keep on producing high quality software at affordable prices.

PCjr 256K - IBM color monitor; Tecmar Jr. Captain; Clock/Calendar; Parallel Port; Mach III Joystick; Keyboard w/cable; DOS 2.1; Cartridge Basic; all manuals, cables and lots of educational & game software. $450 or best offer. Will pay shipping. Jackie Appell (516) 937-6299 (12)

PCjr 640K - Tecmar Capt. & Cadet, clr monitor, int. modem, 2nd disk dr. voice synthesizer, microphone, softstrip reader, basic, jrVideo, & PCID cartridges, etc. PLUS Epson RX-SOF/T+ printer, all relevant IBM manuals, bound jr Newsletters from June, 86, 100's of $$ in software of all kinds, books, floppy disks, etc., $1,000 complete to anyone who will pick it up. Dave Parry, 5903 Colgate Ave., Los Angeles, CA 90036. 213-938-3664. (12)

For Sale, PCjr 640K, with color monitor, new Fujica M2551 Disk Drive, Tecmar Jr. Captain, Sidecar, all manuals, programs galore, Joysticks, excellent, send S.A.S.E. for full details. Best offer T.D. Gosman, 9 Warner, Court, Huntington, NY. 11743. (12).

Manuals: Basic Personal Computer -- PCjr (Official IBM Manual); IBM DOS Version 2.1 (Official Manual); Technical Reference Personal Computer --PCjr (Official Manual); Hardware Maintenance and Service Personal Computer PCjr. Originally cost $350 and are in new condition in their original binders. All for $150 or negotiate on each one individually. J.W. Graves, Route 5, Box 1860, Palatka, FL 32077, (905) 328-2972. (12).

IBM Pcjr - 128KB, color display, parallel sidecar, ProPrinter with cable, 2 joysticks, BASIC cartridge, DOS, Writing Assistant, Filing Assistant, Assistant Home Solutions. Touchdown Football and all software/hardware documentation. All with original packing for safe shipping. $700 or best offer. Brian Beck, 1301 W. 22nd #305, Sioux Falls, SD 57105. (605) 335-9054. (12)

Do you have any tips or interesting jr experiences you'd like to share with fellow jr owners? If so, send them to jr Newsletter, Box 163, Southbury, CT 06488.

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

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 * 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)

* NEW * 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)

* NEW * 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)

* NEW VERSION * PCJR PATCHES V.3.0. Patches to fix software that ordinarily won't run on PCjrs. V.3. adds patches for Flight Simulator, V.3. Also for Arctic Fox, Managing Your Money 3.0, Autocad, King's Quest II, Turbo C, QuickBASIC, Starflight, Advanced Flight Trainer, Double DOS, Bard's Tale (16 colors), Turbo BASIC, and BASICA. (Disk #56)

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)

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)

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. Fasy, easy to use. 128k (Disk #76)

COMPUTER TEACHER. For those who want to learn how to use DOS commands and to undertand 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)

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)

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)

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)

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

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

PC-WRITE. This extremely popular word processing program is both powerful and easy to use. A review in PC World said " PC-Write may well be more versatile

than WordStar; it's certainly more straightforward." Version 2.5 runs well on 128K. Version 2.7 has more features, comes on two diskettes and requires 256K to run without the spelling checker, which requires 384K. (Order Disk #1 for 128K V2.5. Order Disks #2A and 2B for V2.7)

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

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

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

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

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

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

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

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

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

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

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

PCjr COMPATIBILITY DISK. lists over 700 software titles, along with info on how they run (or don't run) on PCjrs. Also tips on how to make software PCjr compatible. 128K. (Disk #60)

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

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

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)

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

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)

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)

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)

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)

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

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

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

PC DOS HELP. Similar to PC-Prompt, but takes up less memory (16K) as a resident program. Geared to

DOS 2.1 with special PCjr commands included. 128K. (Disk #24)

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

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)

See November Issue
for Games and
Educational Disks

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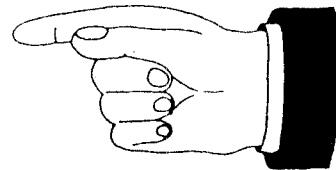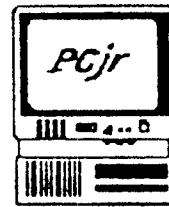
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