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The Junior Report®
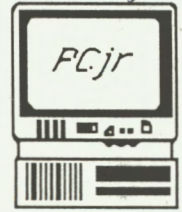
Borland Responds to PCjr Demands

Releases PCjr-compatible Turbo C.

Borland International, one of the major players in the software arena, has decided to release a PCjr-compatible version of their popular Turbo C program. Previous versions of the program were incompatible with most configurations of the PCjr, except those with the Racore expansion unit, DMA, and the Racore PCID cartridge. The new version will

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be made available to any PCjr owner who has the non-compatible version, and writes to the technical department of the California company. The revision consists of a four disk package, and will be sent to those Junior owners at no charge.

Is it just the old program with the PCjr Turbo C patch installed? According to Borland, the answer is no; they are not the same versions. From early reports, both the patched and new programs now work well on the PCjr, with neither showing any advantage over the other.

It is not surprising that it is Borland and not Microsoft to make the first move in reconciling the 500,000+ PCjr owners who have been put off by recent non-compatible offerings by both companies. It was Borland that first presented the idea of "good software at low prices," a philosophy that had won it thousands of loyal customers, many of which were PCjr owners. Borland had always been consumer-conscious. In

fact, the PCjr and Borland's most famous program, Sidekick, made their debuts in the computer world almost simultaneously. Accordingly, many Junior owners upgraded their PCjr memory in order to run Sidekick more efficiently in the resident mode. Inexpensive machine; inexpensive software - it was a marriage made in heaven.

Microsoft's PCjr connection, on the other hand, consisted of the Microsoft memory expansion board and mouse combination for the PCjr. When IBM announced PCjr's fate on March 20, 1985, Microsoft dropped the PCjr line like a hot potato. Pcjr owners haven't heard from it since.

It may be a little early to tell whether Borland's release of PCjr compatible Turbo C truly represents a change in the company's PCjr software philosophy. It was a nice gesture, and all PCjr owners should write to Borland first to thank them, and then to remind them that 500,000 is a number not to be ignored.

By Harrison Day

Drives, Disks, And A Look At The Past

Editor's Notes: We think that with IBM's PS/2 computers grabbing all of the headlines, some PCjr owners are bound to acquire that deadly 3 1/2 inch disk format fever. As we have mentioned before, several manufacturers have been producing the drives with a even a few making them PCjr-compatible. One highly visible manufacturer is Astro Systems, Inc. of Santa Clara, California that sells the *Astro EXTJr*, an external **PCjr 3 1/2 inch drive** that has been designed for the PCjr. It comes with utility software and an adapter card that must be inserted inside your Junior main unit. This smaller format of diskettes packs a bigger wallop than its bigger sibling - holding up to 720Kb of data versus the 360Kb found on the standard 5 1/4 floppy diskette. The external drive gets all of its power from the PCjr, but if your Junior power supply is taxed already, you can purchase a separate power supply for $25. The cost for one drive is $385., but drops down to $250. per unit for every order over ten. If you are interested in buying in a group, write to us and we can gather some names and purchasing strength. A drive is on order for us for review, but if you can't wait and would like more information, Astro Systems, Inc. can be contacted at (408) 727-5599...........speaking of diskettes,

Verbatim, the floppy disk manufacturer, is seeking to grab a larger share of the massive diskette market. They are the first to come up with a floppy diskette that is **teflon-coated** which is supposed to seal against the most common and careless mistakes of handling, e.g., spills and fingerprints. Verbatim is hoping to grab 30% of the $1 billion dollar floppy disk market by the end of 1988 with its new product. We don't think so. Most owners are either Dysan or Bonus people, and they'll probably stay that way despite this new idea. The cost for being able to fry an egg without sticking to your diskette? About 15% higher than that of standard 5 1/2 inch diskettes.......our thanks and a new Junior Report coffee mug goes to **Richard P. True** of Hummelstown, PA, who was so kind to write a nice letter expounding the virtues of *The Junior Report* in the September issue of PC Resource magazine. Richard, you're a great guy. It's not that we love to read compliments about us in national magazines so much...well, actually, we do like to read compliments about our newsletter in national magazines. Thanks, again, Richard and don't drop your mug - cause you're only getting one........Paul Rau Consulting is quickly becoming a hotbed for new PCjr products. The newest item is a cartridge that allows some PCjr hard drives to become self-booting. The new cartridge, which would sit in one of the cartridge slots directly below your PCjr disk drive, is called the **Hardbios Jr**, and works with all hard drives sold by Paul, and possibly with a few others. Check with Paul (260 N. Lincoln Way R Galt, CA 95632 - (209) 745-9284). Last month we discussed some of the incompatibilities with The Nickel Express Jr (the PCjr turbo board), specifically that some expansion boards made it incompatible. One of them was the jrHotShot which was not compatible

with the turbo board last month; this month it is and increases your PCjr speed to 7.37Mhz. Interesting.........well, do you think you would like to see what the cover of a major computer magazine looked like three years ago? Yep, that's none other than old Junior sittin' pretty on the February 1984 cover of *PC World* magazine. If you look carefully, you'll see that the keyboard is the famous chicklets board, one of the flaws of the original PCjr (another being its original price tag). What did the article say? Basically, it was a wait-and-see review that nevertheless labeled the Junior as a "can't-miss" product, and at
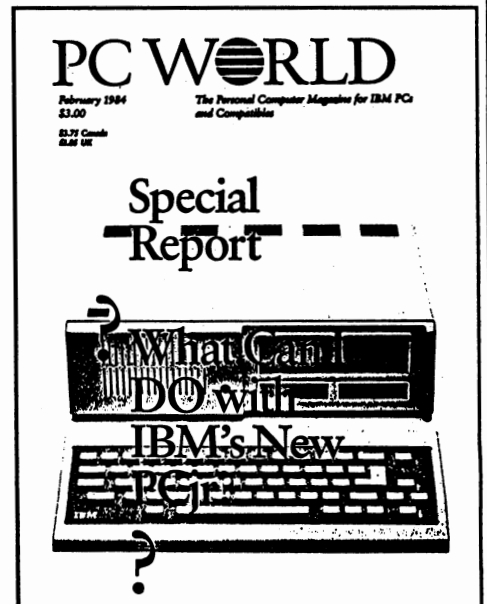
the same time chronicled some of its shortcomings. Skimming through the rest of the three-year old issue was like reading one of my mom's twenty-year old Life magazines - that much has changed in the computer world in three years. "386" was only a number one would play in the lottery, and the hot new product, besides Junior, was an idea processor called ThinkTank. WordPerfect was a new kid on the block given little chance against an in-

stitution named WordStar, and the big news was that they were actually coming out with games for the PC! People were confident that a ten megabyte hard disk drive was enough storage to last any computer operator's lifetime, and anything above 128K of memory was splurging, unless one had to use Lotus 1-2-3. An IBM PC with 64K, two drives, and a monochrome graphics card cost $2490. sans monitor. A 64K memory expansion card went for $395, a Hayes SmartModem for $699., and a ten meg hard drive for $1395. It was still an age of infancy, and you could almost see why the PCjr was released in a somewhat underpowered, overly-expensive mode. It is a testament to the Junior that it has overcome several early obstacles, and has remained a very productive computer today. It hasn't been easy, but with the help of PCjr lovers, PCjr vendors, and software companies that know a vital market when they see one, the Junior has done quite well, despite the odds................Legacy Technologies of Nebraska has announced that they have several hard-to-come-by PCjr items that may interest the Junior owner. How about a cable that allows you to use your PCjr color monitor to be used on a regular PC ($55.)? A **TEAC replacement drive** for $105? Or PCjr replacement drive belts, or internal and external power supplies? If you're interested in these or other products, you can phone Legacy at 1-800-228-7257 for more details..........Last month Microsoft felt our wrath about non-PCjr compatible software, and this month it was supposed to be **Borland's turn**. Unfortunately, the letter has been pre-empted by our hard disk review, which we wanted to get into this issue. Nevertheless, Borland has already shown some responsibility with the release of a PCjr-

compatible Turbo C, but we should continue the pressure, and we will do so in next month's issue. For any of you that would like to get a head start, Borland's address is 4585 Scotts Valley Drive, Scotts Valley, California 95066. If you haven't sent last month's Microsoft letter out yet, do so now. It'll cost you a few pennies and a few minutes, but it may save you thousands of dollars from not having to buy a new computer system in two years. Personally, I'd rather put that thousand dollars saved into something safe like the stock market.........another software company that's certainly going to hear from us is **Electronic Arts** in San Mateo,

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It is a testament to the Junior that it has overcome several early obstacles..it hasn't been easy..

California. We hope their current disinterest in the Junior is only a temporary malfunction of the senses. Meanwhile, EA is investing in its first hardware product - a full-size yoke-style steering device that emulates those used in the cockpits of many aircraft. It will be available in December, and will have a list price of $129.95, quite reasonable, I think. Oh, my wife is VERY excited. Now she can wake up in the middle of the night and find me at the controls of my PCjr flight simulator with a real-looking flight steering wheel!!! It will go very nicely with my normal, middle-of-the-night PCjr flight attire which consists of an old, leather aviator cap and my wife's bath robe.

L E T T E R S

By Dolores Jack

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

WRITING TO READ

Your September 15th issue of The Junior Report indicated IBM's Writing to Read program could be purchased for $50. in a store in Chicago. Could you give me the store address and phone number or any stores which might have the program for a similar price?

In the July 15th issue (New Shareware column), you discussed Larry Newcomb's JRCONFIG.SYS & CONFIGJU.SYS programs and their ability to use up to 736K of RAM. Could you tell me the technical details of how to modify an IBM 128K memory expansion board so it will provide the memory above 640K on a PCjr which already has 640K? I am experienced at printed circuit board work.

I appreciate your magazine and especially those articles which are more technically inclined. The PCjr is a good machine and your efforts to distribute information about it are invaluable.

Bradley Young
Lexington, KY

The store in the Chicagoland area that had the Writing to Read Programs is The Software and Beyond store located at 1211 E. Golf Road, Schaumburg, IL 60173. Their phone number is 1-312-882-3377. The last time we checked, they only had a few left, so try calling them right away.

We asked Egghead Software as to the availability of the highly-acclaimed PCjr program, and they informed us that they could not obtained any of the programs because they are not authorized IBM dealers. So the next best thing to do would be to contact your local IBM dealer as to the cost and availability of the program.

The December 1986 issue of The Junior Report has the article on how to transform your 128K IBM memory expansion sidecar into a 512K board (giving a total of 640K of PCjr RAM), but you'll have to read John King's article on page 15 to learn how to get more than 640K on your PCjr. As you'll read later, the IBM board is not the ideal board to have for this situation.

PCjr POWER OVERLOAD

I have owned my PCjr for three years and it has probably been the best investment I've ever made. The programming skills I've developed have been a big asset in the systems design responsibilities of my job as an Instrument Technician at a major chemical plant. The second best investment I've ever made was joining The PCjr Club!

The Junior Report is the best source of PCjr specific information available.

In the September Letters column, reader Harry Daykin reported success in using Turbo C with the P.C.I.D. Cartridge available from Racore. Do you know whether this will work with non-Racore expanded machines? I have 512K of jrHotShot memory expansion and would like to use either Turbo C or Quick C if they will run on my Junior. Along the same line, do you know if Turbo Pascal 4.0 will run on the junior? I have version 3.0 and am trying to decide whether to upgrade.

What is the best software available on the Junior for printing a 4 to 8 page newsletter? I've been thinking about buying NewsMaster but am wondering whether PFS First Publisher would be a wiser purchase. I'm not even sure if it will run on the PCjr.

How much expansion can a PCjr accept before the power supply is overloaded? In addition to the jrHotShot, I have an IBM parallel port sidecar. I am considering adding a 20MB hard drive from SPC and wondered if the controller card might overload my system. Do you consider this drive to be a reliable choice?

Finally, is there any compatibility problem between the PCjr and the "capture" mode (modem to disk) of communications software? Does this feature require DMA to operate? I am a novice at telecommunications and would like to take some college courses via computer. One catalog I received listed use of the "capture" mode as a requirement.

LETTERS

Any help you can give me is appreciated. Thanks for producing such an informative newsletter!
Dan Baldwin
Kingsville, OH

We're glad that you think your Junior has been a great investment. We still think it was the best buy during that time period, especially if the PCjr system was bought during the great Christmas sale of 1984. We have no regrets.

The P.C.I.D. Cartridge from Racore will only benefit the Racore-enhanced PCjr. However, we do have a patch for Turbo C which is included in a special "patch disk for the Junior" (See page 12) As you may have already read, Borland has a new Turbo C version that will run on the Junior.. As far as we know, and according to Borland, Turland's Turbo Pascal will run on the Junior, unless someone else tells us otherwise.

As far as the newsletter software is concerned, we need to know what quality of newsletter do you require. If it is just your church newsletter or anything that does not require 300DPI (dots per inch) quality, NewsMaster should fill your need quite admirably (see May 1986 issue for review of NewsMaster). NewsMaster will require at least 256K. However, if you need something more professional, you will need desktop publishing software that can run one of the many laser printers that abound in the printer world. PFS First Publisher, though not as easy to learn as Newsmaster or Newsroom, and requires a hefty 512K of memory, will output to a laser printer, provided you have access to one. Software Publishers, manufacturer of PFS First Publisher informs us that the software is compatible

with the Junior, and to prove it, they are in the process of sending a copy to us for review.

The 20MB hard drive from SPC WILL overload your PCjr power supply if you have a jrHotShot installed. You will need an additional PCjr power supply if you are planning to go with that setup. The review on SPC's 20MB hard drive appears in this month's issue.

We know of no major problems with using the "capture" mode of communications software with the PCjr, and it does not require DMA. We use Cross-Talk VII with one of our Juniors, and we have not experienced any "capture" problems with the Junior.

BROKEN LIBRARY CASE

Thank you for the quick service on my public domain software. I thought the idea of a free library case with the software was a terrific idea. Needless to say, you can imagine my disappointment when mine came in the mail cracked in the middle on the back - no doubt in the post office handling of it. Is there any recourse for me?

I do look forward and enjoy the newsletter. Keep up the good work. Thank you.
Bonnie Joriman
Maplewood, MN

We're sorry your library case was broken during the mailing process. We spoke to our supplier about the case, and she informed us that the combination of cold weather and a heavy weight can damage the cases. She is sending us some newer cases that should not be affected by the weather. Meanwhile, if you can slip the damaged case in the mail to us, we can send you a new one right away.

OKIMATE 20 PRINTER

I've had my PCjr for almost 3 three years and I'm still green behind the ears as to how to use it. We live 150 miles from any major town or city and getting help is not an easy matter. Any suggested reading or disks that would help me out? I'm also interested in educational software - I have a 14 year old son and a six year old daughter.

Is the Okidata Okimate 20 a good, economical printer for the PCjr? I was quoted a price from a mail order firm for $129. shipped, which I thought was a good price. I have been told that it may even be lower very soon.

Thank you in advance to the answers to my questions.
Evan Olson
Redway, CA

There are very few current books on PCjr computing these days, but for general knowledge, a good DOS manual would be valuable to "un-greening" the area behind your ears. As we had mentioned in a previous issue, Peter Norton's PC DOS: Introduction to High Performance Computing is a great book for the novice. The PC-DOS Help diskette (#89) in our library is also very helpful. The only PCjr-specific books that might be useful are again written by Peter Norton. They are Discovering the PCjr and its companion Exploring the PCjr. Both books were published by Microsoft Press a couple of years ago and sometimes can be obtained dramatically discounted at some local book stores.

Unless you want a printer strictly for fooling around with color, we do not recommend the Okidata Okimate 20 printer. The color graphics are nice, but the specially-treated paper that it requires is expensive. However, the

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biggest drawback is that the regular text quality of the printer is so low - actually unacceptable for most correspondence. There are plenty of good, low cost printers around that are better buys, better all-round printers.

TRI-FLOW LUBRICANT

Just a note to compliment you on the information The Junior Report contains. I have had my jr for a couple of years, but being a novice, haven't used it all that much. Mine was becoming more noisy with use and was wondering what to do about it when your article on the "Diskette Drive Maintenance on the PCjr" arrived (September issue) -- just in time!

But I'm having trouble finding "TRI-FLOW", the teflon-based lubricant that was recommended. Kindly advise where I might order this lubricant.

Marcella Meixner
Owatonna, MN

It's really amazing how life is enhanced by such a simple change such as quieting your PCjr disk drive. I had one of those noisy drives from day one of my PCjr ownership. I never realized how more pleasant computing life can be when I finally silenced my drive, so I know how you're going to feel. One lubricant can be can be purchased at any Radio Shack dealer (they can order it for you if they do not have it in stock), and is called Archer Precision Oiler with micro-miniature teflon particles (Stock #64-2301). If we could, we also recommend using a zero-residue cleaner like Radio Shack's # 44-1014 to finish off the project. Both items cost under $10.00 comnined. Silence is golden especially if it only costs ten dollars.

PCjr Patches Now on Diskette #99

We have decided to distribute the PCjr patches to the various software programs on diskette. It would seem that the patches would be a lot easier for everyone to obtain if we were to do this. The diskette ($5.50) consists of the following software patches:

TBJR.PAT

This patch allows you to run Borland's Turbo BASIC on your PCjr. It was also listed in last month's issue.

DDOSJR.ARC

Allows Double DOS, the fine DOS utility, to work on Jr, however, only the very early versions of this program have been able to run even with this patch.

QUICKBASIC.ARC

Allows Microsoft's QuickBASIC 3.0 to run on JUNIOR.

AFSFIXER.DOC
AFSFIXER.COM

These remove the copy protection from Chuck Yeager's hot flying Advanced Flight Trainer (the copy protection was what caused the program not to run on the Junior).

TCJR.PAT

Allows Borland's Turbo C to run on the PCjr.

We thank Mr. S.A. Borbas for supplying the patches to our library.

IBM, TECMAR, MICROSOFT EXPANSION BOARD UPGRADES

If you want to be the first kid on your block to have 256K chips in your IBM, Tecmar, or Microsoft expansion board, this one's for you. After replacing the 64K chips originally soldered in your JrCaptain or IBM expansion sidecar, adding new sockets, and inserting 256K chips, you will effectively have 640K of RAM in your PCjr to play with. All work will be done by qualified technicians headed by Brian Cook. What we want you to do, is to fill out the form below to let us know if you're interested. Once we have your form on file, you will be notified by phone or mail when we would like for you to ship your board to us for prompt work, hopefully within three weeks time. The cost of mailing the board to us and insuring it will be your responsibility, and the cost and care of returning your upgraded board to you via UPS in a safe manner will be ours. We want you Tecmar owners to send your power supply along as well, so that we can test the board with your own power supply before we do anything to it. The cost of this service will be $145.00 (U.S. Currency). If you should have any questions concerning this service, please let us know on your form. We will guarantee the work and the 256K chips for 90 days.

Please cut along dotted line or xerox

Name : _____   *Telephone no.:* _____

*Address*_____

*City*_____-___*St*_____*Zip*_____

Mail form to:
The PCjr Club, P.O. Box 59067, Schaumburg, IL   60159-0067
ATTN: Brian Cook

How To Write for The Junior Report

The Junior Report is accepting articles and reviews from readers and subscribers for possible publication in our newsletter. All articles should be submitted in pure ASCII text (single spaced) on diskette, accompanied by a printed copy. Hard copy-only submissions will still be considered for publication, but their inclusion in the newsletter may be delayed at the discretion of the editorial staff, or in other words, we may be too lazy to type out your article. Frequent authors will receive software to review in the future on a regular basis.

PC-File+ Vs. File Express

Two inexpensive, popular databases battle for the PCjr owner's favors.

In the past few months, new versions of two very good data base programs have been released. PC-File III changed to PC-FILE+ and FILE EXPRESS is now version 4.01. Both programs can run on a 512 K PCjr. PC-FILE+ is perhaps better known. It has been around longer than FILE EXPRESS and, until now, was the more versatile program.

I have used PC-FILE III for a number of years. About a year ago, I read some good things about FILE EXPRESS 3.00. I tried it, found some excellent features and became a registered owner. But I quickly returned to PC-File III. I gave copies of FILE EXPRESS to some of my colleagues and they declared it to be excellent and started using it on their hard disk systems. They told me it was a very easy piece of software to use. I didn't have the heart to tell them I preferred PC-FILE III.

When Expressware notified me that I could have a copy of FILE EXPRESS 4.0 at a reduced price, I hesitated. However, I remembered a few features I really liked and decided to gamble. Like a well known judge, I changed my mind. However, I use most programs on both a hard disk EGA turbo system at work and on a PCjr so I have some biases that you might not have. You might not agree with me. Read on.

For someone who does not want to be bothered with using a second disk for certain functions, PC-FILE+ is a clear winner. Most of the program fits into memory at one time and you will still have a sufficient amount of memory to use as a ramdisk for your data. With this configuration, data manipulation is rapid and you will be happy - as long as you never run FILE EXPRESS 4.01.

To make these programs run efficiently on a PCjr, I recommend you have 640K so you can set up a ram disk of about 200K and transfer date to the ramdisk before starting either program. Both programs go to the disk for data and a ramdisk makes good sense even on a dual disk system. (See the addenda for information on setting up these programs on the PCjr.)

Since both of these programs are full of features, I decided to focus on those features that are either strengths or weaknesses or where there is a significant difference between the way the two programs implement a feature. Since both these programs are shareware, you can get copies of them. You, as should be the case, can then be the ultimate judge.

PC-FILE+ is faster than FILE EXPRESS in the cases I tried. I did not try large files on PC-FILE+ so I am not sure the speed advantage would always be there. But, even though FILE EXPRESS was slower, it still was fast. Because FILE EXPRESS has to overlay programs, PC-FILE+ is faster - especially on the unmodified PCjr - at switching between functions due to less disk activity. So on speed, give the advantage to PC-FILE+. Accessing the help screens requires disk activity and this will slow down PC-FILE+.

BY JIM STREATOR
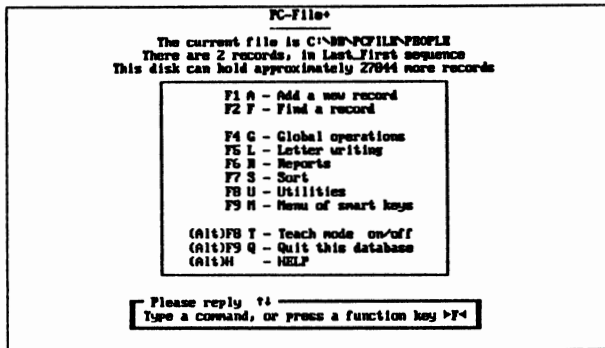
PC File+
opening menu
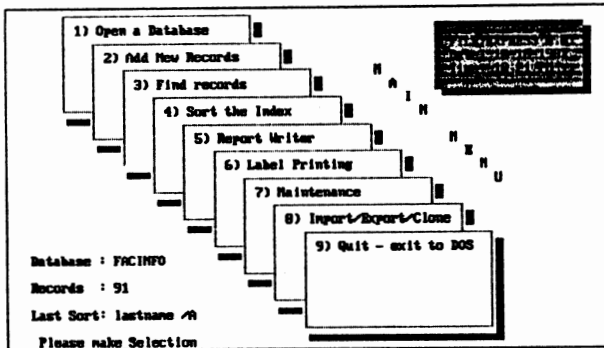
File Express
opening menu

If God had meant that we all be perfect typists, He would not have invented the QWERTY keyboard...Happily, both programs allow you to make corrections easily.

lies in its ability to selectively print out records. FILE EXPRESS allows you to make selections using what the manual calls "natural language". A record can be selected by statements such as: IF F1=42 AND (F5=45.50 OR F3="Rat") THEN "CORRECT" ELSE "NO SHOW" or this can also be done by the following:

IF VALUE EQUALS 42 AND THE COST EQUALS 45.50 OR THE RESPONSE IS "Rat" THEN PRINT OUT "CORRECT" OTHERWISE PRINT OUT "NO SHOW"

You probably do not need to use such statements but what should impress you is that no mathematical symbols were used in the second statement yet it works as well as the first statement. My experience was that it worked just as rapidly! The manual warns you not to get too carried away, especially on complex formulas. I do not mind using symbolic logic but it is nice to be able to be a bit free with the way you

PC-FILE+ has a "Teach" mode where windows of information pop up when you are asked to make a choice. This is a nice feature and it can be turned on and off at will. I hate programs that do not allow you to dispense with help screens after you know how to use the software. FILE EXPRESS does not have these windows. Instead, the prompts and menus are generally sufficiently descriptive so that help screens are not needed. I declare this a draw although you may like one over the other.

Reports are commonly made from data bases. PC-FILE+ gives you

choices of preformed and free form reports. FILE EXPRESS does not. Yet I consider setting up free form in FILE EXPRESS so easy that you do not need any standard forms. Four of us who use FILE EXPRESS have marveled at how easy it is to design a report form. The PC-FILE+ screen for generating free form reports is cluttered although fairly easily used. File Express is more restrictive on the use of headers than PC-FILE+ but makes up for deficiencies by making the designing of the rest of the form very versatile.

The power of a report generator

PC-File+ Vs. File Express

write formulas. Be warned that there are some quirks. There are some cases where you need to add an ELSE to an IF THEN even if the ELSE does nothing. However, you can mix math and "natural language". The versatility and easy of use of this selection feature gives FILE EXPRESS a big plus.

If God had meant that we all be perfect typists, He would not have invented the QWERTY keyboard. We err now and then and must make corrections. Happily, both programs allow you to make corrections easily. Both allow you to edit records with considerable ease. Some of us do forget to include some information in our data bases. Both programs allow you to re-define a database by deleting or adding a field. Both do this with ease. Blessings on you both!

Label making is the only thing some people use a data base for. Both of these programs make labels. FILE EXPRESS has a main menu label choice while PC-FILE+ has a separate label making program. Both will make labels to fit most any format. I really can not decide which one I like better. This might be considered a standoff (or is it a labeloff ?).

Both programs handle more records than most of us would ever create. If you only look at numbers, FILE EXPRESS wins because it can handle up to 16,000 K records. I wonder how long it would take to do a sort on 16 megabytes of information? FILE EXPRESS allows a maximum field length of 250 characters while PC-FILE+ only allows 65. But PC-FILE+ allows you to define a super field as the last field. The size is determined by the size of your other fields. FILE EXPRESS allows 120 fields per record while PC-FILE+ allows 70. There is no clear winner here. If you frequently want two lines of information in a field, you either break it into parts for PC-FILE+ or you use FILE EXPRESS. Both programs have features the other does not have. PC-FILE+ allows you to carry out DOS commands. (Care with this on a PCjr. Your system may crash!) You can use a password in PC-FILE+ while the FILE EXPRESS manual states that Expressware purposefully did not use passwords. PC-FILE+ has a mini word processor built in that allows you to use data to type a letter. FILE EXPRESS allows you to vary the index size used in searching. This may be needed for certain types of data. PC-FILE+ only allows forward searching for records; FILE EXPRESS allows searching forward and backward.

There is a long list of what both programs can do. They may not do things the same way but these programs have a lot of similarities. This is not surprising since they had a common ancestor. However, the manuals are dis-

Setting Up Your PCjr to Use PC-File+ and File Express

PC-File+: PC-FILE+ has two files which must be available. These are PCFILE.PRO which sets default settings and the main program, PCF.EXE. The help screens are in PCF.HLP but the main program will run without this file. You will be told that help screens can not be set up if this file is missing. The usual procedure would be to include the help screens on the same disk as PCF.EXE. If you do, there is not enough room on a 360K floppy for DOS. I suggest you put DOS and files that set up the PCjr memory and create a ramdisk on your data disk. This way, you can boot with this disk, transfer your data to the ramdisk and run the program along with the help screens from a second disk. Put the PCLABEL.EXE file on the same disk. This is a separate program which uses your database to create labels. As usual, be sure to transfer files to a floppy when you are done.

File Express: As with PC-FILE+, I recommend you put DOS 2.1 and files needed to recognize extra PCjr memory and to set up a ramdisk on the disk with your data. Boot the computer using this disk and transfer data to the ramdisk.

File Express has nine .EXE files. Eight of the .EXE files are named FE-xxx.EXE. The files where xxx is FE, MAIN, OVL, SORT, and SRCH should be on the disk used to start FILE EXPRESS. A short file containing the default settings, FE.PRO is also needed. As with PC-FILE+, there is no room for DOS on this disk.

The EXP, DEF, RPT and LBL files are needed occasionally and may be put on a separate disk. These files are used for EXPorting, DEFining, writing RePorTs, and LaBeLing. When you need these, simply put your auxiliary disk in when instructed to do so. The only time this causes significant disk swapping is when you write a report and need to sort before writing another report. To prevent this, I choose not to put the 80K FE-EXP.EXE file on the second disk. This leaves room for a copy of FE-SORT.EXE. This prevents considerable disk swapping. If I ever need to export data, the file to do so is on a disk in my disk box.

Be sure to transfer your data base to a floppy disk after you are done. Use a command from C> such as COPY {name}.* A: and the entire database will be copied to the floppy disk in drive A:.

PC-File+ Vs. File Express

similar in their tone. The FILE EXPRESS manual is more conversational than the PC-FILE+ manual although both are informative and accurate.

PC-FILE+ allows you to use data from another data base, the relational approach; FILE EXPRESS does not. This one feature could be extremely significant for particular uses. Make no mistake, if you need it, this is a powerful feature. For any given person, this could be a neutral feature or a very positive feature of PC-FILE+.

Every owner of a PCjr with 640 K memory should use one of these programs. FILE EXPRESS 4.00 had a bug in it which was corrected in version 4.01 so be sure to get the correct version. PC-FILE+ may have a minor bug in that it does not maintain colors you set. The first three screens use the colors and then go white on black. You can fool the program by telling it to use a new control file a you just created. In truth, you simply tell it to use the file it should have used when it booted. Strange.

For the PCjr user, PC-FILE+ is the easier program to set up. It will be faster and will probably be quite satisfactory. If you use a variety of MS- DOS computers, you may find the easy of use of FILE EXPRESS to your liking. Both are shareware so you may try both before you decide. But, don't be content to simply read about these programs. Try them! Most every computer user can use a data base program and one of these programs should fill your needs without breaking your bank account.

Both PC-File+ and File Express can be obtained from our software library.

The Guggenheim Collection

Welcome again to our world famous PCjr art collection. This month we are featuring the works of Dr. L.R. Armstrong of Liberal, Kansas. There are many fine paintings in this collection, but we are only allowed to show you two of them below. Dr. Armstrong's palette consists of a PCjr with a Racore expansion unit (640K), and a PC Paint program with mouse.

SPC's 20Meg Hard Drive

A review on the least expensive 20Meg hard drive for the PCjr. Is it worth it?

When our editor gave me the opportunity to test drive a 20 Meg hard disk drive and write a report on it, I thought "Sure, why not? I'm already testing a speedup board and the combination might be of some interest to those considering a step up with Jr. or a step out with something else."

First of all, you should know the configuration being tested, since results may vary depending on the particular setup of your PCjr.   My Junior system consists of the 128K PCJr (obviously) with the following upgrades:

Tecmar Jr memory (256K)
clock, parallel port
Microsoft memory (128K), mouse
IBM power expansion module (for extra disk drives)
Two do-it-myself added floppy disk drives
Cherry keyboard

To this, we now add the Nickel Express Jr. speedup board from RIM Electronics and the 20 meg hard disk drive from Systems Peripherals Consultants. The review of the Nickel Express Jr. will now only be a "once over" because this product is still not quite in final form, so judgement should be reserved for a while. We will review this product in more detail in a future issue. The hard disk, on the other hand, seems to be a mature product. Let's concentrate on it.

Physically the hard drive is a metal box the same color as Jr., and measures about 3.5 x 12.75 x 6.25. It sits on the narrow side and houses a half height disk drive standing on edge, and a power supply. There are slots in the case which are more than adequate for the
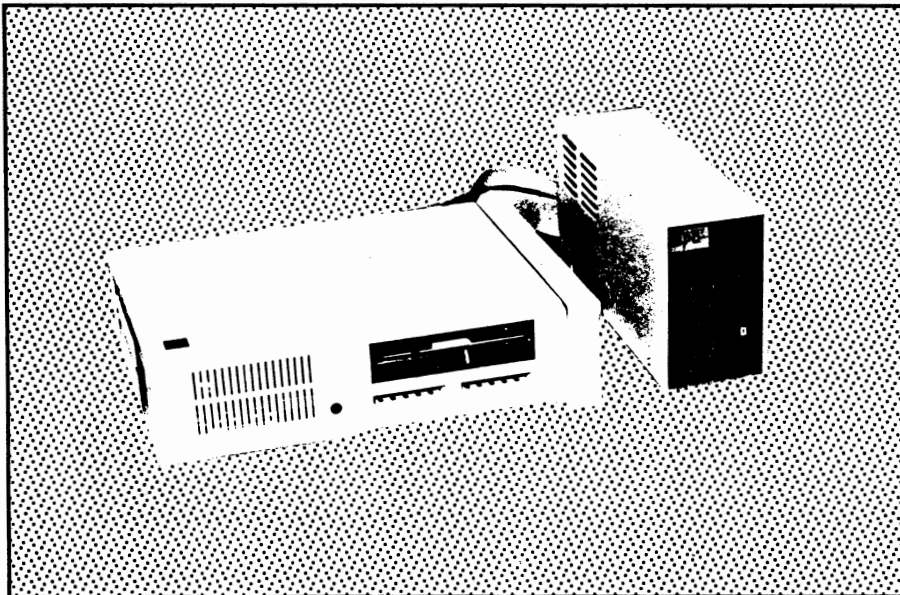
BY JIM BOOTH

cooling task they perform. Since this rather large box houses a half height drive and there is a filler panel to cover the other half of the front, it is apparent that a second half height drive could also be housed in the same box. The instructions included with the system do not specifically state that the hardware can support the extra drive, but the invoice received with the review sample states that any Seagate interface drive up to 280 Mb can be used and that two physical drives are supported.

The other piece of the system is a sidecar expansion module which does the translation from the PCJr bus to Seagate. There is a double ribbon cable about (only) a foot long connecting the two together. I say only a foot because it would be very nice to be able to put this box under the desk rather than on it, but the cables are too short to allow this. If the interface can handle longer cables, SPC should provide them.

As with most Jr add-ons, this system also comes with software to make Jr aware that it has joined the big guys. The installation instructions are very clear and easy to follow as long as no errors are made along the way. When you are all done the instructions ask you to run the DOS chkdsk command, and they say "You should not, in any case, see any error messages!", but they don't say what to do if you do get an error message. They do list their phone number. It took me about two hours to go through the complete set up, one hour of which was consumed with a write checking program which proceeds automatically and writes four bit patterns to each of the 614 cylinders to check for defects in the media. There were none. The other hour was spent finding a blank floppy

Hard Drive versus Floppy Drive

	SPC 20Mb Hard disk		Floppy disk	
Disk file access test	512 bytes 512 records	4k bytes 64 records	512 bytes 512 records	4k bytes 64 records
Sequential file	create 14 sec	6 sec	115 sec	30 sec
	write 23 sec	5 sec	211 sec	30 sec
	read 13 sec	5 sec	110 sec	24 sec
Random file	write 33 sec	5 sec	193 sec	36 sec
	read 23 sec	6 sec	102 sec	26 sec
Sector random access	82 millisec		218 millisec	

to create a new bootable disk and then following the step by step procedure for installing, formatting, and initializing the disk. This was very easy, and even the novice should not have difficulty doing it. This time also includes some duplicate effort, since I got a "drive not ready" error during the process, and had to start over once. The software also includes a utility for parking the heads before powering down the system.

Now that it's hooked up, what do you really get for your hard earned $700 ??? Well, you get a lot of convenience that you just don't have with floppies. Even with my three floppy system, there is a bunch of hunting for the right floppies, swapping back and forth if you are using several programs, finding the sleeves, etc. etc. These are mostly organizational problems, but for those of us who are not meticulous, it can be a source of aggravation. For those few people who have not added at least a second floppy, I can hardly blame you if your machine sits unused for long periods.

The next thing you get is speed. This system, like all systems for the Jr,

is no speed demon compared to the AT or even the XT, but besides the faster access to the disk, you save the time of pulling your copy of PC-Write out of the disk storage box (or where did I leave it?) and loading it in to the drive (now I have to put PC-File+ away, unless I'm in a hurry, and then it ends up in the miscellaneous stack beside the monitor.) You also get the faster access mentioned above. The tests I ran indicate roughly a three to one speed advantage over floppies. Copying *.* from my PC-Write v2.6 original (30 files, 1K free) to another floppy took 3 minutes, 4 seconds. The same copy to a subdirectory of the hard disk took 58 seconds. Loading my CAD system from three floppies (remember I don't have to swap in this case) took 38 seconds. Loading from the hard disk took 13 seconds. I also ran the disk speed tests in the PC Labs Benchmark disk, release 4. Although the results are slow for a hard disk, this disk is really handled like a large floppy disk as far as DOS is concerned, since it is accessed by way of a device driver. Still, the speed improvement is impressive

(See sidebar on previous page).

Those of you who are familiar with hard disk average access know that 40 millisec is considered a "slow" drive in AT circles, but half as fast as the AT isn't half bad for a Jr.

Another consideration related to speed, especially for those who use hard disk systems at work, is that since the access is via the device driver, the interrupt handling is different than with floppies and you can now type ahead while the hard drive is accessing files. You will not get beeped for trying to type the next command while the drive is running, and you don't have to wait for the drive to finish before continuing typing.

Now comes the hard part of the reviewer's job. Should we all rush out and buy one of these for $695? Should we pay $200 extra for their new 35millisec option? Or $1200!!!! for the 40Mb version? Each of us has to decide how a purchase of this magnitude fits in for the long term. Many will say, "Good grief, you can buy a complete Northgate AT system (monochrome) with 30Mb drive for under $2000." That's true, and realistically, prices will have to come down before these things really start to sell. But for those who have some loose cash laying around and who don't want to dump the investment they already have in their Jr (mine is up to about $1700 so far buying things discount and do-it- myself) this could be a real solution to the capacity and performance problems that people have with the Jr. This won't turn your Jr into an AT or PS/2 clone. It won't pat you on the back and tell you "Job well done" when you need encouragement. But it will hang in there in the background doing its job, unob-

trusively, and let you get on with what you want to do. Which isn't looking for the disk you need among the pile of papers on the desk or the pile of disks that got shoved off the back of the desk on to the floor.

I do have a suggestion for Systems Peripherals Consultants (are you lis-

But for those owners who have some loose cash laying around......this could be a real solution to the capacity and performance problems that people have with the Jr.

tening?) which might help many of us (readers, here is your chance to influence the market place). For many of us, the prospects of buying a hard disk and buying or building a power supply is really more like fun than anything else. We love scrounging for the best deal at ham fests or computer flea markets. For us, the part of the system we can't do is the sidecar adapter. If the sidecar and software were available separately for say $100 to $150, about the same as a memory sidecar, then many of us would jump at the opportunity to hunt down a

Seagate ST225 or other compatible drive to hook up to it and stave off obsolescence in our systems.

And now, since it is part of the system I'm running, and some of the speed tests are no doubt influenced by its prescence, a few words about the Nickel Express Jr. This is a board which you can install in your computer (soldering is required) and it gives the system a faster clock speed except for the display and system clock. It is supposed to provide selectable speeds of 6.66MHz, 7.37MHz, or 8MHz. Software provided will let you change the speed, although the software I received only lets you run Jrfast or Jrslow - no Jrmedium. My memory will not run at the fast speed, and I have had a few cases of strange behaviour at the slow (6.66 MHz) speed. A modification to the adapter is on its way and we will report next time as to how it helps. As configured, Norton's SI test gives an index of 2.5 when running in the expansion memory using either the Microsoft or Configjr memory expansion software. Without the Nickel Express, SI reports 1.3 on my system. (Quadram or IBM memory driver software comes up 1.0) A doubling of speed for the modest price of $70 seems to me to be a worthwhile expenditure, and if the new version will work at the higher speeds, then so much the better. They do say that IBM sidecars seem to work the best, so yours may work at the higher speeds. Remember, this is a "once over lightly", but it does show that vendors are still interested in the Jr, and that if priced properly, Jr add-ons are still profitable.

More Than 640K For Your PCjr

How much memory can the IBM PCjr have? 512K? 640K More? Ads for memory expansion boards usually offer up to 640K. However, it is possible to have more.

If you are interested in big memory, read on. My PCjr has 736K of RAM. With so much memory I can use two ramdisks: one that is 360K for programs or copying and a 96K disk for utilities. This way I can live without a real second disk drive and save some money. Alternately, I can use all 736K for DOS. This is enough to run big graphics programs and still have room for a ramdisk or memory resident utilities such as Sidekick and Prokey.

Which memory boards allow more than 640K? The ones which I know about are listed later in this note, but first let's look at how memory is allocated. DOS uses only the first 640K of memory for applications. The next 64K block of memory is "reserved" by IBM, but nothing for the PCjr to use. The 64K block after that is for video, 32K for monochrome, and 32K for color. Since the PCjr has no monochrome board, all 96K from

Is 640K of PCjr memory not enough? John King shows us how to break the 640K barrier.

640K to 736K can be used if you have memory chips at these addresses. The 32K from 736 to 768K is reserved for color video and must not be used in any other way on a PCjr. It is OK to have memory chips at these addresses so long as they are not addressed except as part of normal video processing.

What can you do with this high memory? Well, you could put a ramdisk there. Or you could use the extra memory for regular DOS programs. The necessary software to do either is in our San Francisco PCjr Users Group library on disk number 65. To learn how to create a ramdisk in high memory, read VDSK96K.ASM. I use 640K for DOS and a 96K ramdisk (VDSK96K.SYS). This ramdisk sur-

vives warm reboots because DOS only clears the first 640K of memory and leaves all the rest untouched.

DOS can also use memory above 640K for regular programs, but a special type of utilities program is required. I modified two public domain utilities which were written for the IBM PC so that they work well on the PCjr. MORE736K.ASM and DRVR736K.ASM are text files which give lots of details on to use the two programs MORE736K.COM and DRVR736K.SYS. Also, there are instructions on how to customize these programs using DEBUG if you have special requirements.

Both allow DOS to use up to 736K. If you have only 704K, that's OK. The program will stop at the real end of your RAM memory. MORE736K.COM works with Tecmar and Impulse board memory management software. DRVR736K.SYS will work with IBM, Racore, Microsoft, and also Tecmar and Impulse software. A list of hardware that I know allows for more than 640K of RAM on the PCjr appears on the next p a g e .

BY JOHN KING OF THE SAN FRANCISCO PCJR USERS GROUP

More Than 640K on the PCjr

Sadly, IBM memory boards cannot be set for more than 640K due to limitations IBM built into the switches. Some groups are modifying the boards to contain 512K instead of 128K, but the starting addresses don't permit more than 640K without one of the Microsoft or jrHotShot boards.

What about using more than 736K of RAM? As noted earlier, the memory from 736 to 768K cannot be used because programs use these addresses for video and would destroy anything stored in this space.

RAM memory above 768K (CQOOO hex) cannot be used by DOS for programs. Further, RAM

The Hardware Story

1. Microsoft Jr Booster - 128K
A bus mouse is included. This board can be set to start at any 128K boundary. On page 9, its manual shows how to set the Booster switches for the memory to start at 128, 256, 384, or 512K. Here's how to start at higher addresses when you already have 640K:

PCjr Old Memory	Total Memory	PCjr Booster Switches SW3 SW2 SW1	Starting Address (Hex)
512K	640K	on off off	80000
640K	768K	on off on	A0000
768K	896K	on on off	C0000

2. Tecmar JrCaptain plus JrCadet
The original JrCaptain only added 128K, so the jrCadet was provided to expand memory to a full 640K. However, if the jrCaptain is modified to provide 512K, the jrCadet board can continue to higher memory. The first 64K bank on the jrCadet is at 640-704K(A0000-AFFFF), the second is at 704-768K(B0000-BFFFF), and the third at 768-832K (C0000-CFFFF), and so forth.

3. Tecmar Jr Wave Board
With 256K chips in the first two banks, the third bank can have 64K at A0000 to AFFFF and the fourth bank can have 64K at B0000 to BFFFF.

4. jrHotShot
This board fits inside the PCjr case. On special request, the developer, Ed Strauss may be willing to set the 512K board to start at 256K instead of the normal 128K. This will permit a total of 768K when used with any other 128K board.

from C0000 - CFFF may conflict with ROM chips. For example, the Impulse 100 memory board ROM and ROMs for hard disk controllers use these addresses. However, if you have memory chips in the C block and need a ramdisk program, you can leave a message for me on the SF PCjr Users Group BBS at (415) 997-4874.

The memory from D0000 to EFFFF behaves somewhat oddly. Bits are systematically lost. This may be because the Jr uses these addresses for cartridges. For instance, the Jr BASIC cartridge is in the E0000 - EFFFF block. Finally, the ROM BIOS on all machines is at the top of the memory between F0000 and FFFF. Therefore, RAM memory above 736K is normally unusable on the PCjr except by cartridge and ROM BIOS.

A 736K PCjr is a powerful machine. There are quite a few ways to get more than 640K on your PCjr. If you know of some that I've failed to list, please let me know via the BBS.

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                        without 2nd Floppy Drive $ 269
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2nd Disk Drive Add_On Modem slot Semi_Kit
(you supply disk drive case & power supply) $ 95
RACORE DRIVE II+ with DMA and 512K Memory $ 460
HARD DRIVE 20 Megabyte (complete system add on) $ 700
HARD DRIVE KIT (interface and drive control card, for your ST-
406 interface drive, case & power supply) $ 325
All PCjr Memory & Disk drive expansions supplied with our PCjr
Special Utility Software incl; RAM DISK, File Transfer, etc. "

IBM BRAND ACCESSORIES

PCjr JOYSTICK $ 29
128K MEMORY EXPANSION sidemounted unit $ 140
ADAPTER CABLE FOR COLOR DISPLAY (connects PCjr
                to a standard RGB color monitor) $ 15
ADAPTER CABLE FOR SERIAL DEVICES (used to connect
                mice, modems & serial printers $ 15
Cartridge BASIC (very hard to find) $ 75
POWER ATTACHMENT (recommended if 2 or more side
mounted expansions are used on the computer) $ 55
PARALLEL PRINTER Port $ 79
300 baud INTERNAL Modem (with software) $ 79
KEYBOARD CORD for PCjr keyboard $ 15
CARRYING CASE   (great for VCR or tools also) $ 25
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CHICKLET KEYBOARD (the original PCjr Keyboard) $ 19
CHICKLET KEYBOARD OVERLAYS (pkg of 5) $ 1
ENHANCED KEYBOARD (standard PCjr keyboard) $ 55
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TV ADAPTER (connect PCjr video/audio to TV or VCR) $ 25

RACORE   PRODUCTS

DRIVE II PLUS   (with DMA) $ 330
DRIVE II PLUS   (without DMA) $ 290
512K memory board for the DRIVE II PLUS $ 130
RACORE DRIVE II's add a 2nd Floppy Drive, Clock, and Parallel
Port in a nice looking expansion chassis on top of the PCjr with
expanded memory mounts inside

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Controller uses modem slot and includes:
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Modem slot controller kit $ 45
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(kits include: control card, 2 drive signal cable)
(software and installation / setup instructions)
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2nd Floppy Disk Drive Case, Power Supply & IBM
compatible drive for use with the above kits $ 155

OTHER   USEFUL ACCESSORIES

MICE LOGITECH SERIAL with Plus Software $ 109
with serial adapter cable for the PCjr $ 124
with serial adapter cable & jrCOLOR PAINT
(limited quantity of this software) $ 145
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PC CLONE COMPUTERS - send for our list of XT, jrAT
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*I LOVE MY PCjr bumper sticker $2 (no shipping chg)

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256K jrHOTSHOT & 2nd drive control $198
jrHOTSHOT Real time clock & 2nd drive control $108
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7920, 300 to 2400 BD, 8bits, 1 stop bit and no parity,
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Learning To Draw on the PCjr: Part II

In Part II, John Van Dyck teaches you how to draw on your jr the old fashion way - you learn it.

Load up PART 1 and start entering the listing. The first two lines have changed, the rest is new. If you don't have PART 1 then enter a line 150 (150 RETURN). Without PART 1, program seven will not work properly. In this session we will cover the move (M), return to the begining of last plot (N), angle (A), and turn angle (TA) string commands.

We covered a little on the move (M) string in the first session. Remember how each DRAW " command starts with a move string (BM150,100) for pre-position. The string command is telling draw to start in the middle of the 40 wide screen. From now on we will refer to the start as just the numbers after BM ie. 150,100. The B, of course, means don't plot dots.

After entering the listing, RUN it. A large X will be drawn from corner to corner and the string command displayed for that X. Starting point (0,0). First string command, C2, is the color. M319,199 says draw a line from 0,0 to 319,199, upper left to lower right. BM319,0 says don't draw but move to the upper right corner. M0,199 says draw a line from 319,0 to 0,199, upper right to lower left. Drawing always starts from the last entry to the new entry. The move string always has the horizontal position first and the vertical second. Because the plotting was done directly to a spot on the screen this is called absolute positioning or coordinates.

The cursor is resting on RUN 800, press <ENTER>. Now you will see a 3D box and the string commands that produced that box. This a two part program so don't press that key yet. The start is (150,100). C1 is the color, L30U30R30D30 is the front of the box. The dot is in the lower right corner, back where it started. Look at the next set (M+8,-4), the signs tell you this is relative positioning. This says move right 8 dots and up 4 dots, then draw a line to that spot. This is the right side bottom. U29, (up 29 dots), backside is shorter right? Now with (M-8,+3), the right side is complete, left 8 dots and down 3. Why only 3, because we only went up 29. But now we have to retrace our steps to finish so (M+8,-3). L28 left 28 dots and then to finish the top (M-10,+3). Relative
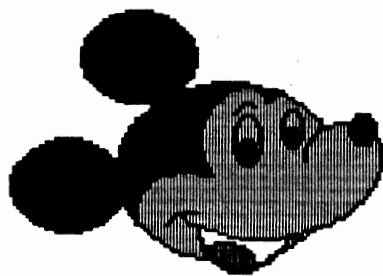
Drawings by Mr. N. Thomas Lischer using basic drawing techniques.

By John Van Dyck

moves use these laws, + is right or down, - is left or up. Now press any key. Notice the color changed and a new string appeared. The new string does exactly the same task but it is shorter. Note that the place where we had to retrace our steps in the first string is replaced with (NM-8,+3). The N in the front of the string command says do the plotting but return back to where the plotting began. The next set dramatizes this.

Press enter on the line RUN 900. Pause here and lets look at the lines 900 to 920, notice that the first five lines in each mini program do the same job. Each program starts every 100 line mark. This will give you room for inovation later. Look at lines 925 to 940. The start position for each star is different and the color is too. XA$(5) is the string displayed on the screen, which is line 5 in the program. Now let's look at the string displayed on the screen. See the N before each M string command, this means a line is drawn from the start to the new position and returns to the start again to draw another line. This happens over and over at different plus and minus values which produces the star, the start position being at the center of the star.

Again press ENTER on the line RUN 1000. Stars everywhere! Line 1020 will make each run of this program different. Lines 1030 to 1040 assigns a random number to; E horzontal position, F vertical position, and B color. The +30 in lines 1030 and 1035 give us a border where none will be generated. Line 1045 is displayed on screen for examination. Start 0,0. Semicolons are needed to surround equations, so BR=E says move but don't plot, Right, E many dots. BD=F says move but don't plot, Down, F many dots. BR=E and BD=F is a form BM string for the start position. C=B changes the color to the random number assigned to B. Xa$(5) of course is the star string. Notice how every star

LISTING PART 2   (as seen on a 40 wide screen)

```
1 GOTO 700
2 A$(2)="C2M319,199BM319,0M0,199"
3 A$(3)="C1 L30U30R30D30 M+8,-4 U29 M-8,
+3M+8,-3 L28 M-10,+3"
4 A$(4)="C2 L30U30R30D30 M+8,-4 U29 NM-8
,+3L28 M-10,+3"
5 A$(5)="NM+30,+10 NM+20,+3 NM+23,-6 NM+
6-18 NM-3,-5 NM-15,-3 NM-24,+6 NM-2,+10"
6 A$(6)="D8F1R6E1U2L2D1L4U6R4D1R2U2H1L6G
1BR10D8F1R6E1U8H1L6G1BR2BD1R4D6L4U6BR8U2
R2F2E2R2R2D10L2U6G2H2D6L2U10BR11D10R2U10L2
BR5D10R2U4F4R2U10L2D4H4L2BR10BD1D8F1R6E1
U4L4D2R2D1L4U6R4D1R2U2H1L6G1"
7 A$(7)="D3F1R5D3L4U1L2D2F1R6E1U5H1L5U1R
4D1R2U2H1L6G1BR10D8F1R6E1U8H1L6G1BR2BD1D
6R4U6L4BR10D6R4U6L4BL2U1E1R6F1D8G1L6H1U8
BR10U1R2F4U4R2D10L2H4D4L2U10"

<< enter if you don't have PART 1 >>
150 RETURN

500 'VARIABLES
505 'A$(?) is ascii,(?), built letters
510 'A is the ASCII number (?)
515 'B is the color
520 'C is length of message
525 'D is number of dots to move right b
efore drawing
530 'B$ is the input message
535 'C$ is each letter in the message
540 'E is random horizontal position
545 'F is random vertical position
550 'G is random angle
555 'H is the turn angle
560 'R, Z, Y are control variables
565 'Z$ is a keyboard input

PROGRAM 1
700 CLS : KEY OFF : SCREEN 1 : WIDTH 40
705 DIM A$(127)
710 GOSUB 2
715 LOCATE 1,11 : PRINT "The MOVE comman
d"
720 DRAW "BM0,0;XA$(2);"
725 LOCATE 4,1 :PRINT A$(2)
730 LOCATE 7,1 :PRINT "RUN 800"
735 LOCATE 6,1:END

PROGRAM 2
800 '3D box
805 CLS : KEY OFF : SCREEN 1 : WIDTH 40
810 DIM A$(127)
```

Drawing: Part II

has the same form.

The cursor waits on RUN 1100, press <ENTER>. Angle is how to change, one string, to look like four different strings. The stars shapes are now random. This little program is the same as the last one except for the lines on the screen. Line 1145 gives G a random number to be used as the angle. Angles can be a value from zero to three. Zero is normal (A0). Line 1150 is the same as 1045 except ;A=G; is added. A=G is the angle to turn before drawing XA$(5). After an angle is set in a draw command string it stays in effect. So at the end of the draw string we must return DRAW back to normal. The reason for this is to make the next pre-position, (E and F), use absolute positioning. Do away with A0 and see what happens to the program. Just RUN 1100 again to see it. Look at line 1055 and 1160, if you want more stars on the screen increase 20 in R<20. This is sort of a DO LOOP, DO until R=20.

Press ENTER on RUN 1200. Turn angles (TA) can turn a string command at any angle from -360 to +360. On line 1225, H is set to zero, the start angle. Line 1230 gives the starting position, (150,100) and then the turn angle TA=H. If a line is extended, as in BR70, it will move from start 70 dots at that angle before it draws the string A$(4). In this case our line is invisible (B). Line 1235 increments the DO LOOP, R, by one then selects the next angle (H=H+45). The angle will turn counter clockwise with an increase of 45 degrees each time through the loop. Decreasing the value, (H=H-45), will make the turning clockwise. Line 1240 says to DO eight boxes, eight times 45 = 360. Pressing ENTER on RUN 1300 without PART 1 will not produce the desired results. This is your first test. See if you can figure this one out on your own. Clue, lines 1300 to 1325

```
815 GOSUB 2
820 LOCATE 1,9 : PRINT "3D BOX DIFFERENT
MOVES"
825 DRAW "BM150,100;XA$(3);"
830 LOCATE 3,1 : PRINT A$(3)
835 LOCATE 5,1 :PRINT "PRESS ANY KEY"
840 Z$=INKEY$ : IF Z$="" THEN 840
845 DRAW "BM150,100;XA$(4);"
850 LOCATE 5,1 : PRINT A$(4)
855 LOCATE 8,1 : PRINT "RUN 900"
860 LOCATE 7,1 : END

PROGRAM 3
900 'stars with move back
905 CLS : KEY OFF : SCREEN 1 : WIDTH 40
910 DIM A$(127)
915 GOSUB 2
920 LOCATE 1,10 : PRINT "STARS WITH MOVE
BACK"
925 DRAW "BM150,100C2;XA$(5);"
930 DRAW "BM110,40C1;XA$(5);"
935 DRAW "BM210,160C3;XA$(5);"
940 DRAW "BM33,180C1;XA$(5);"
945 LOCATE 3,1 : PRINT A$(5)
950 LOCATE 7,1 : PRINT "RUN 1000"
955 LOCATE 6,1 : END

PROGRAM 4
1000 'stars with random starts
1005 CLS : KEY OFF : SCREEN 1 : WIDTH 40
1010 DIM A$(127)
1015 GOSUB 2
1020 RANDOMIZE TIMER
1025 LOCATE 1,10 : PRINT "RANDOM STAR PO
SITIONS"
1030 E=INT(RND*270)+30 'horz
1035 F=INT(RND*140)+30 'vert
1040 B=INT(RND*3)+1 'color
1045 DRAW "BM0,0;BR=E;BD=F;C=B;XA$(5);"
1050 R=R+1
1055 IF R<20 THEN 1030
1060 LOCATE 6,1 : PRINT "RUN 1100"
1065 LOCATE 4,1 : LIST 1045
1070 END

Program #5
1100 'stars with random angles
1105 CLS : KEY OFF : SCREEN 1 : WIDTH 40
1110 DIM A$(127)
1115 GOSUB 2
1120 RANDOMIZE TIMER
1125 LOCATE 1,5 : PRINT "RANDOM STARS WI
TH ANGLE COMMAND"
1130 E=INT(RND*270)+30 'horz
```

```
1135 F=INT(RND*140)+30 'vert
1140 B=INT(RND*3)+1    'color
1145 G=INT(RND*4)      'angle
1150 DRAW "BM0,0;BR=E;BD=F;C=B;A=G;XA$(5
);A0"
1155 R=R+1
1160 IF R<20 THEN 1130
1165 LOCATE 7,1 : PRINT "RUN 1200"
1170 LOCATE 3,1 : LIST 1145-1150
1175 END


PROGRAM 6
1200 'turn angles with boxes
1205 CLS : KEY OFF : SCREEN 1 : WIDTH 40
1210 DIM A$(127)
1215 GOSUB 2
1220 LOCATE 1,11 : PRINT "TURN ANGLES BO
XES"
1225 H=0
1230 DRAW "BM150,100C1;TA=H;BR70;XA$(4);
"
1235 R=R+1 : H=H+45
1240 IF R<8 THEN 1230
1245 LOCATE 6,1 : PRINT "RUN 1300"
1250 LOCATE 3,1 : LIST 1230
1255 END


PROGRAM 7
1300 'turn angles with letters
1305 CLS : KEY OFF : SCREEN 1 : WIDTH 40
1310 DIM A$(127)
1315 GOSUB 2
1320 B$="TURN ANGLES LETTERS" : GOSUB 30
00
1325 H=90
1330 B$="  THE FLYING CLUB OF AMERICA  "
1335 R=R+1 : A=ASC(MID$(B$,R,1))
1340 DRAW "BM150,100C1;TA=H;R40 BR10;XA$
(A);"
1345 H=H-12
1350 IF R<30 THEN 1335
1355 LOCATE 3,1 : LIST 1340
1360 END


SUBPROGRAM
3000 C=LEN(B$)
3005 D=INT((319-(C*6))/2)
3010 DRAW "BM0,1C3;BR=D;"
3015 FOR Z=1 TO C
3020  C$=MID$(B$,Z,1)
3025  A=ASC(C$)
3030  DRAW "XA$(A);"
3035 NEXT Z
3040 RETURN
```

are just setup lines.

The last program uses the subroutine at 3000 to put the title on the screen. For fun modify the other small programs to do that also. All the programs run on their own so look and modify and RUN. There is a small addition to the variable list. Variable lists are handy when looking for bugs or adding to a program.

PART 3 will cover the paint (P), and size (S) feature in the DRAW command. We'll take a couple stabs at animation by making our drawing and using the GET and PUT commands in basic. There is a little preview of next time, hidden in the the lines you typed in. Clue? The lines we didn't discuss.

TRICKS

Before you modify the programs save them to disk, then save your modification under a different name. For those of you who have Cartridge Basic by Microsoft, try typing in these commands as line numbers 712, 812, 912, 1012, 1112, 1212, and 1312.

712 PALETTE 1,14 : PALETTE 2,2 : PALETTE 3,10. This line will change color 1 to 14 (yellow), color 2 to 2 (dark green), and color 3 to 10 (light green). Color 3 is the color of the screen printing. PALETTE 0 is the background color, Change that too if you wish. A black background makes the colors look bright. This command will not work in Basica.

If you really want LOTS of color, replace CLS : KEY OFF : SCREEN 1 :WIDTH 40   with CLS : KEY OFF : WIDTH 40 : CLEAR,,,32768 : SCREEN 5. This will give you 16 colors to play with. Change the C values (1 to 15). Change the random colors to RND*15. If you do this, erase the PALETTE lines first. Enjoy.

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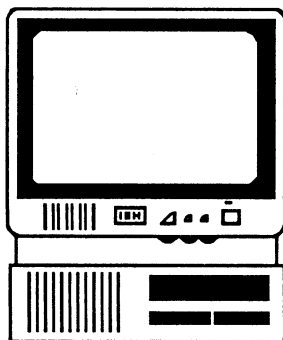*Name:* _____

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The PCjr has its drawbacks, but it performs a lot of computer chores admirably, such as word processing and database management. Another strength is Junior's graphic abilities. With or without a mouse, there is an abundance of good to great drawing programs that run well on the PCjr, and the best part is that they are all coming down in price. Whether you draw for fun or for profit, we would like to see your work. Just send in a printout of your masterpiece to The Junior Report, The Guggenheim Collection, P.O. Box 59067, Schaumburg, IL 60159-0067, and we'll feature some of the best pieces during the year, and at the end of the year, we'll pick the very best drawing and award a first (IBM PCjr speech attachment), second, and third place prize. Just send your masterpiece, a description of your PCjr setup, and the software you you are using. So let's see how good your PCjr really is with a brush. You may surprise your Junior and yourself.

N E W S H A R E W A R E

By D. Glanville

GALAXY (#95): is a new addition to our library that has received very good reviews from many publications. It is a fast, RAM-based word processor with features designed to make the program powerful, but easy to use. Being based in the PCjr's memory means that it does not have to access a slow floppy drive for instructions, therefore it operates more quickly than those word processors that are disk-based like WordStar. The main feature that makes it easy to use is its generous use of the pull-down window. See below. This user-friendly pull-down menu system provides the new user a way to quickly learn the multitude of special commands When the user becomes more accustomed to the programs functions, Galaxy becomes a lightning quick word processor using function keys or control characters.

Galaxy has many more features that are worth mentioning. The keyboard commands are mnemonic, which means that the use of letters in the commands make sense, and therefore, are easier to learn. For example, Alt-C is used to center a line, Alt-J to justify, and Alt-L to set the left margin. It can open two windows, or in other words, you can view two different documents at one time. A block of text could be "cut" from one and "pasted" into another. Screen colors are easy to change to suit the users preferences, as well. This great program does not include a spell-checker, however, and requires at least 192K. Borland's Turbo Lightning spell checker works nicely with it though.

Galaxy is a powerful, easy-to-use word processor that will meet the text handling needs of most PCjr owners.

AS EASY AS (#96): is the clear winner in the shareware spreadsheet derby. It is called the Lotus 1-2-3 of the

Galaxy is a powerful easy-to-use word processor that will meet the text handling needs of most PCjr owners.

shareware world, in fact, it looks and acts just like its famous version 1A cousin. It has almost all of 1-2-3's functions including range names and macros. Best of all, it can import and export 1-2-3 version 1A and version 2 worksheets. Because it is so powerful and function-rich, it does not have the room for the extensive documentation required to utilize its awesome features. However, any Lotus 1-2-3 version 1A manual will help you learn to commands quite well. The spreadsheet comes home with As Easy As. Requires at least 320K.

MOVIES ON LINE (#97): is a user-friendly movie cataloging program designed for movie lovers and video buffs, and best of all, it runs on a 256K PCjr. Has thousands of movies on file, and answers such questions as who directed Chinatown, or is the MPAA rating of "Outrageous Fortune" (PG-13) really suitable for your pre-teen daughter? Written by fellow Juniorite Chad Graham, so try it!

FILE EXPRESS (#98): (Reviewed in this issue) It is a database that is becoming quite popular due to its ease of use and menu format. A mailing list and report generator are included in the system. It has a complete and comprehensive manual on the second diskette, which is out of the ordinary for most shareware programs. Requires 192K and either 2 floppy drives or ramdisk capabilities.

Galaxy's pull-down menu shown over text format.
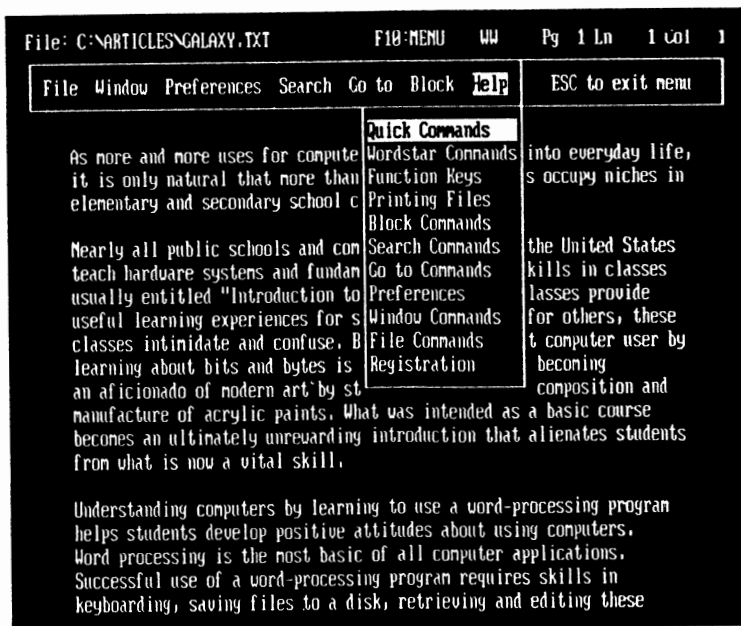
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PC FILE III (#1): the classic, updated, full-featured database program that has set the standard for shareware programs. Considered by many to be better than most commercial programs. Version 4.

PC WRITE (#2): this best-selling shareware program is equal to or better than most word processors on the market. This is the latest version (2.55) and will run on the single drive, 128K PCjr.

PC TALK (#3): PCjr adapted version of one of the most popular communications programs.

HOME MANAGEMENT (#4): a reliable, general purpose financial manager.

MONOPOLY (#6): Colorful, electronic version of the most popular board game in history. **Requires 256K.**

KIDS (#7): a special children's disk composed of a kid's word processor, an intermediate math program, and a colorful counting game for the preschooler.

PC-KEY-DRAW (#9): the most powerful graphics program available in shareware. **Requires 256K.**

GAMES (#10): one of the best selling game disks has Combat, Dungeons & Dragons, & Global THermNuclear War.

PC TUTORIAL (#12): a course in computer and the PC-DOS environment.

PC OUTLINE (#17): an easy-to-use outlining program that's a must for writers and aspiring writers.

EDUCATIONAL GAMES (#18): features math exercises, thinking programs, and the classic Flashcards.

LABEL MASTER (#19): the original label making program has a variety of uses.

GAMES (#24): Poker games, Battleship, Land Mines, Fire, Grime, and Hostages.

IMAGEPRINT (#25): A must-have printer utility that makes your dot matrix into a lean, mean, quality text producing printing machine. Can proportionally space text. Requires an Epson or IBM compatible printer.

QMODEMjr (#26): a special PCjr version of the popular communications program, allows easy access to BBS's.

PC-LEDGER & PC ACCOUNTS RECEIVABLE (#27): A very good business manager for the small and home business.

EZ FORMS (#28): Create and print custom forms to fit every need. A business neccesity. **Requires 256K.**

PC-STYLE (#29): Written by Jim Button, helps improve your writing skills by analyzing your writing style. Easy to use, it wakes up your documents or prose, making your writing more readable and stylish.

VISIBLE-PASCAL (#30): A special version of Pascal for novice Pascal programmers.

PC-CALC (#31): A "visible" spreadsheet program that challenges those offered commercially. Income tax computations, calculating depreciation, computing loan interests, or just plain balancing your checkbook are just some of the chores this program can handle.

PC-GRAPH (#34): Also by Jim Button, create an assortment of graphs from databases such as PC-File, or spreadsheets, too.

DOSAMATIC (#35): No, it doesn't slice and dice onions, but it is one heck of a DOS utility, that includes multi-tasking abilities, debugs, sorts, and much more.

PC-DESKMATES (#36): A memory resident that includes an alarm clock, phone book, calendar, notepad, and printer commands.

GAMES (#38): Frogger, Wa-Tor, R-Logic, and Zaxxon, among others.

GAMES (#39): Includes Yahtzee, Chess, Slot Machine, and Wizard.

GAMES (#40): How about a game of CoreWar, Keno, Othello, or Golf?

GAMES (#41): Features Striker, an arcade-style helicopter attack game that will make you swear you're in a real arcade. Also has Catacombs of Nemon, and JumpJoe.2 (A donkey Kong lookalike) **Requires 256K.**

GENEALOGY (#42): Contains both informal format and LDS format for you to see if you are related to the Czar of Russia.

TRIVIAL TOWERS (#45): Trivial Pursuit in a computer form, has six catagories from which to choose, or write your own questions and answers. **TWO DISK SET - $9.00.**

GENERIC ADVENTURE GAME SYSTEM (#46): Create your own exciting, adventure world where you are the hero or heroine. You supply the imagination and GAGS does the rest. **TWO DISK SET - $9.00.**

ULTRA UTILITIES (#47): features U-File, U-format, and U-Zap in a powerful collection of programs that will allow you complete access to the power of your PCjr DOS operating system and of your PCjr disk drive controller circuitry.

CASHTRAC 5.15 (#48): an excellent program intended for use by the household manager, club treasurer, small business, and expense account keepers. **Requires 256K.**

PCjr UTILITIES (#49): special utilities for Junior includes a print spooler, two text editors, and a program that can create special PCjr keyboard templates for WordPerfect 4.1, Reflex, PC-Write 2.55, and others.

GOOD HEALTH (#50): features PC-Recipe, a fun program that maintains recipe information, and allows you to display, update, add, change, and re-calculate recipes. Also has BioRhythm and ELIZA, the "artificial intelligent" companion.

TUNE TRIVIA (#52): Quick, for one thousand dollars, NAME THAT TUNE! For up to six players.

GAMES (#53): arcade-style games featuring Warrior, Empire, and Wumpus. **Requires 256K.**

GAMES (#54): play arcade-style, 3-D 3-DEMON. and also Afghanistan, Dominoes,and Hostages. **Requires 256K.**

PROCOMM 2.42 (#55): This has become the new standard in Public Domain communications software. Powerful and easy-to-use, this version is the one that works well on the Junior. **Requires 192K. TWO DISKS - $9.00.**

GAMES (#56): Includes three casino games led by Las Vegas Style Craps that includes its own tutorial, three text adventure games, and an assortment of other arcade games that should keep everyone busy.

Jr MUSIC MACHINE (#57): One of two music programs on this disk, this program lets you play and see music simultaneously, and utilizes Junior's special sound capabilities.

GOLF HANDICAPPER (#58): Allows you to compute, store, update and print golf stroke handicap information for up to 75 players, using the handicap formula established by the USGA.

PC-FONT (#59): A utility program which enables your Epson or IBM Graphics printer to print a variety of fonts that includes block graphic, engineering, scientific, foreign language, and other special characters.

SLEUTH (#61): A murder has just been committed, and your job is to mingle with houseguests, search the house, and solve the crime. Every game is different. If you like the game of CLUE, you'll love SLEUTH.

SAN MATEO EDUCATION (#62): Educational games for children 12 years and older. Includes scramble, states, nations, chemist, and many more.

BUTTON GAMES (#63): Includes Buttonware educational and adventure games SOUTH AMERICAN TREK (You are a special investigator for the Federal Geographical Magazine and you have been sent to gather information about each country in South America. Your travels will take you from one end of the continent to the other where you will be picked up by a friendly submarine), and CASTAWAY (You are shipwrecked in the Pacific, slowly drifting through the fog until you find a deserted island. There you find countless treasures, but they are worthless if you cannot return to civilization. Will you be able to get off the island?)

PC WRITE 2.7 (#64): Newest version of best selling Public Domain word processor. Now has Spelling checker. **Requires 256K. Two disks $9.00.**

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

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

QFILER (#67): the famous file maintenance utility that also prints up its own function key template. **192K.**

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

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

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

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

PC-CHESS (#73): A true, stand-alone chess program that will challenge you like no other program before. This is a full-color multi-featured program that can run on a 128K Junior.

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

PC-FILE+ (#75): Power-pack update for the most popular shareware program of all time. 2 Disks - $9.00.

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

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

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

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

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

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

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

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

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

EMS & MAROONED (#86):EMS is a employee management program that uses responses to descriptive statements, then analyzes them and prints out a 5 page report on the personality. Marooned is a text-based adventure game on an alien planet.

EXTRA SENSORY PERCEPTION (#87): Tests your ESP quotient. It makes for a very interesting time as you test yourself or your friends. This disk also contains a couple of versions of the game PAC-MAN for both monochrome and color systems. ESP - some have it and some don't. Do you?

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

MAKE MY DAY (#89): A complete, computerized time management system for the PCjr owner. It contains an appointment calendar, a job scheduler, a time log, and an expense account manager, and can be used to keep track of all of these things for one person or for several people.

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

THE GOLDEN WOMBAT of DESTINY (#91): One of the better all text adventure games in our library. Your quest is to discover the Forbidden City of the Great Lost Empire and unearth the mysteries it contains. Has wit, humor, styling and a good sized vocabulary, that can handle full sentence commands, much in the same way as the major commercial programs. Try it you'll like it.

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

FOOTBALL POOL MANAGER (#94): This is one of our favorites, because 1)it is a well-written program that makes football pool activities infinitely easier, and 2)it is written by fellow PCjr owner and loyalist Andy Kunz. This software program performs all of the tedious work that is involved with running a football pool such as generating the weekly pick sheets (+ and - odds), summary spreadsheets showing everyone's picks, and standings reports, among others. This has good documentation.

THE PC JR CLUB
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SCHAUMBURG, ILLINOIS 60159-0067

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