

# Jr Newsletter

September 1992

## Purchasing a 2nd Junior

by Louie Levy

(From the Newsletter of the Eugene, OR, PCjr Club)

As fall approaches, many of us feel that winter is just around the corner. It will soon be time to come indoors from the summer heat and think about things to do inside now that the weather is becoming more brisk. The first thing to do in our home is crank up Junior and see how he made it over the inactive summer months. Just as some folks don't prepare their lawn mowers for winter, some didn't take the necessary steps to keep Junior alive and healthy for another year.

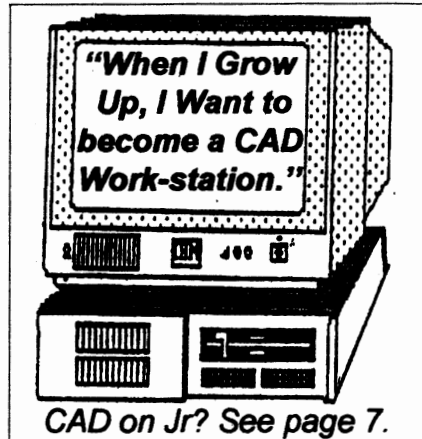
If your Junior sounds somewhat

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**PCjr Lives!**



## Protocols

David Wilson

*A diplomat's life is made up of three ingredients: protocol, Geritol and alcohol.*

—Adlai E. Stevenson

Some of the more common questions that beginning modem users ask is "What are these protocol thingies that the BBS keeps asking me about when I want to download a file? I don't know what the differences are between them, so I don't know if I'm doing the right thing. How do I know what I'm supposed to use? and why? I looked up the word in my Funk & Wagnall and all it said was a bunch of stuff about treaties and ceremonies and draft copies that don't appear to have relevance to file transfers." True it doesn't, except in the broadest

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## Beginner's Corner

### DOS Versions and Commands

By Duncan H. Brown

When I use DOS, I am usually looking for information. Also, I am trying to make sense of what is on the computer; I want a total picture of the hard disk, and of the memory the computer has available for programs.

For getting me information, three commands stand out. First, to find the DOS version on any (IBM compatible) computer, at a DOS prompt you type:

VER (Enter)

The result will look something like this:

IBM Personal Computer DOS Version 3.30

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VER (Version) is an Internal DOS command; it will work anywhere, in any subdirectory.

DOS comes in two flavors: IBM (PC) and Microsoft (MS). IBM PC-DOS is built for IBM PC computers, from the PCjr, PC, XT and AT up to the PS/2 line. MS-DOS is built for IBM compatible computers such as those made by CompuAdd, each DOS version with only slight differences. Also, some PC compatible manufacturers will license MS-DOS from Microsoft and release a version of MS-DOS especially designed for their own computers. These versions will generally work on other PC compatibles, and even on IBM machines, but this is not recommended. In any case, DOS should come with any PC or compatible computer you purchase.

Not only does DOS come both from Microsoft and IBM, it has also grown over the years. DOS started out with version 1.0, and has been rereleased as versions 2.0, 2.1, 3.0, 3.1, 3.2, 3.3, 4.0 and now 5.0.

Each new version gives the user more features. DOS Version 2.x for instance, allows the use of hard disk drives. Version 3.x adds more features, and version 4.0 added a DOS "shell" which makes it easier to use all the commands that were added

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# Questions & 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.

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**Q. Please explain a "disk cache" and why and when to use one. E. Nagle, Portsmouth, VA**

**A.** Picture this: A read/write head is against a spinning magnetic surface. The surface has been turned into millions of tiny magnets, some are oriented North-South and others South-North. The read/write head is a tiny coil and just like a tiny generator or alternator, it develops voltages because of the movement of the magnets passing so close to it. This is really generating a stream of fluctuating voltages and it has to be converted and stored as digital data right away. Here's how: A timing circuit is triggered each time a particular pattern of voltages occurs. Until the pattern recurs, the rest of the stream (one cluster) is directed, bit by bit into blocks of memory. Not your program RAM, yet, but into a part of memory set up by DOS as buffers. Then, as a second step, DOS moves the buffered data into program memory as required. It's a little like a chain of buckets filling from a faucet, then distributing the water to the garden from each little bucket selectively. Writing to disk is pretty much the same thing; the data is put from

RAM into the buffer and only then does the write head use the data to generate tiny magnets at the disk surface according to the disk speed. The buffers still keep the data at the ready for repeat reading or writing until they are all filled and will only then be over-written by fresh data. See what happens? The data is accessible and the disk drive may not have to run again. DOS always checks to see if a program's requested data is already in the buffers before running the drive to re-fill them and this can save a lot of time. When DOS searches through too many buffers however, it can actually slow down the operation so you probably shouldn't have more than buffers=32 in your config.sys file. OK so now you have a very simplified idea of what a buffer is. Now what about a disk cache? Disk cache programs or drivers vary somewhat but they take on the work of buffers and you can generally set the buffers=xx statement in your config.sys file to less than 10 or so; see the documentation with the cache. The major difference is that rather than simply being a temporary storage bin for program data

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## Questions & Answers

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they cause the disk drive to read MORE than the program asks for and all this data is quickly moved into fast RAM called the "cache." This is what is meant by "read-ahead" in the documentation for caches. More of the needed data is ready to be moved quickly to program RAM when the application sets up requests for it. Bigger and faster, that's the good news. When do you use a cache? If your work includes lots of reading and writing to disk, floppy or hard, use a cache. Examples: A database or spreadsheet program which constantly uses overlays or accesses the disk data often, a compiler, a word processor which uses a disk-based spell checker or thesaurus etc. You can effectively cut at least fifty per cent from the disk access times with a properly sized cache. You won't notice much difference when you first load an application but every disk access after that will be faster. There is a caveat, however. A cache uses RAM... efficiently yes, but it does use RAM so use a cache size which still allows your favorite memory hog to operate and you should be pleased with the performance. Remember, you don't need a cache with a ramdisk, they're lightning fast already.

**Q. I think I need a patch for keyboard problems with a program called "Just The FAX" by Britannica. The program runs**

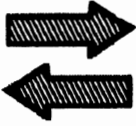
**but does not recognize the keys. Is the program looking to hardware rather than BIOS or DOS??**  
**R. Binge, Grosse Pointe Woods, MI**

A. It is difficult, if not impossible to figure this one out without more information about how you are configuring your Jr's memory and drivers. A Card in the internal modem slot and any loaded TSRs will cause problems. The correct recognition of the COM ports, addresses, and interrupts is also crucial. If this program's documentation alludes to "running in the background" it may try to use memory which the Jr has allocated to something else or it may need DMA or its equivalent. Perhaps as a drowning man grasping at straws, we recommend you TRY the new Compatibility Cartridge from PC Enterprises and run it with JRCONFIG. and a version of PC-DOS 3.xx or later. Don't use MS-DOS, the cartridge hasn't been fully tested with it yet.

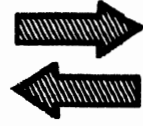
**Q. I would like to add more memory (I have already added a 128k sidecar) and constantly read in magazines about a Megabyte or more being common nowadays. Is this possible on the jr?**  
**W. Faust, Bellingham, WA**

A. Yes. You can add a Meg to whatever memory you already have in your jr. For example, if you already have what we used to think of as the maximum of 736k you can now add 1,024k (1 Meg) for a total of 1,760k! The board can be ordered

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## Reader Feedback



### Reader Annoyed with Prodigy

Just thought I'd take a moment to rekindle the annoyance that some jr lovers have with Prodigy Services. I've been using Prodigy since late December of 1991, and have had few and minor problems with it, not related to my PCjr. However, my most recent problem with Prodigy does not stem from use, but from attitude.

They recently upgraded the program (I have v3.1.1) at the beginning of my session on 7/14. Shortly after that, I started having session interrupts. I wrote to them asking if this had been a reported problem, and if they could help. Although it turned out to be excessive phone line noise (I've had this problem before), their response to me had the feeling of being less than sympathetic to problems with a non-supported system. I wrote back to them, indicating my concern for their lack of concern, and received another note from them, which said that since they had no technical information on the PCjr, weren't expecting any on it, and because there weren't that many PCjr users using Prodigy, they would still not be supporting the jr.

I could understand if they had the technical information and as yet

had failed to overcome the compatibility problems. But, they seem to be disinterested in even trying again because we are a minor group of users in their network. It seems like we're being excluded because we don't fit into the "mainstream" of computer life.

I say allow for and support variety! It keeps life interesting. Prodigy Services, Inc. seems to have lost sight of this a little. A shame. They could report more PCjr users were utilizing their system if they stopped being the large, eye to the profit, uniform conformity to our program's configuration corporation, and worked more toward being the universally accessible network they purport to be.

*Laureen P.D. Swartzmiller,  
Connelly, New York*

### Problems With Sim City

In the June issue of jr Newsletter you published a letter which had been sent to you by my son, Michael Sptizer. Since Michael is just turning fourteen, you can imagine how excited he was to see his letter printed. We both thank you for "making his day." However, you missed the point of his letter. His letter concerned not being able to run Sim City in sixteen colors even though

*(Continues on page 6)*

## Data Bases

**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)

**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)

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

**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)

**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)

## Games

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

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

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

*(Software Store continues on pg 7)*

## Reader Feedback

*(Continued from page 5)*

he had purchased Patches V6.0. Your response was that with this patch *Sim City* would run in only four colors. His point was that he is not able to get any colors on *Sim City*. He is currently able to run it in black and white. The dates on the patch are for *Sim City* versions dated 9/9/89 and 10/5/89. However, his version of *Sim City* is dated 4/9/90. Neither of the patches works with this particular version. Any suggestions?

Thanks for your help.

*Michael Spitzer, Sr.*

**EDITOR'S NOTE:** Because of the many minor revisions made to certain software programs, including *Sim City*, we are not able to provide a patch for every version which has been published. If the dates are similar, often a patch designed for a particular release date will work on a slightly different product with a close release date. We are sorry that you have not been able to use the patches with your particular version, but it is impossible for us to provide patches for each variation the publisher makes (especially when they are all supposed to be the same program, and no upgrades are announced between different release dates). If your son wishes to return the disk, he may send it back for a full refund or to exchange it for another diskette of his choice.

## Do CAD in 3-D On Your Junior!

NorthCAD-3D is a design and modeling program that lets you create, view, and edit three-dimensional objects and images on a PCjr. It is Disk #144 in the Software Store. This program allows you to make professional-style 3-D drawings on a floppy-disk based machine! The concepts of technical drawing which will be mastered as you learn to use the program are the same concepts used in larger, professional CAD programs, such as AUTOCAD.

NorthCAD-3D is a menu driven, easy to learn and use, program. It emphasizes conceptual design and illustration. You can create drawings from any viewpoint around your drawing. Included with the program are a number of tutorial and sample illustration files that help demonstrate the program's capabilities for both conceptual design and graphic arts applications, including:

Three views of a plane: front to back; left to right; and top to bottom, which are tutorial files; A Greek temple; Pyramids; Space Station; Small boutique style building; Large office building; and Backyard Gazebo (sample files).

NorthCAD-3D Version 4.2 requires the following: IBM PC, PCjr, XT, AT, 386, 486, PS/2, or 100% Compatible; MS-DOS or PC-DOS 3.0 or later (We used version 2.1 successfully); Two Floppy Disk Drives or a Hard Disk; and 512K

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**PCjr Software**  
(Order form on pages 29-30)

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

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

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

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

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

**DUOTRIS.** Two great Tetris-like games on one disk. Similar to the popular Russian strategy game, both of the versions add new twists of their own. Written in Turbo Pascal, both are high quality games. 128K ok (Disk #116)

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

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

*(Software store continues on pg. 8)*

**GAMES III.** Kingdom of Kroz, an award-winning arcade action game. Go-Moku, a challenging Japanese strategy game, also known as Pente. Zigsaw, the first really good on screen simulation of a jigsaw puzzle. All three on one disk. 256K Reviewed 12/89 (Disk #101)

**GAMES IV.** Turbo-Car tests your skills at driving a fast car on a two lane highway. Can you keep from crashing? Return to Kroz is a colorful, exciting arcade-strategy sequel to Kingdom of Kroz on Games III. Trek Trivia tests and expands your knowledge of Star Trek. Three great games on one disk! 256K Reviewed 2/90 (Disk #106)

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

**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 Keersage 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)

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

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## NorthCAD-3D

*(Continued from page 7)*

RAM. It operates in the following graphics modes:

- CGA Mode - Color Graphics Adapter and Color Monitor including the PCjr monitor.
- EGA Mode - Enhanced Graphics Adapter and EGA Color Monitor.
- VGA Mode - VGA display adapter and VGA Color Monitor.

Printing the drawings using only the Shareware release requires a memory resident screen printing utility. Screen Capture Programs can also be used to import drawings into a variety of paint and drawing programs.

If you register your software, you get a copy of NorthCAD-3D, Version 8 which includes the printer drivers, but requires a hard disk.

Be prepared to spend some time learning the program, which is in many ways similar to the large commercial program, AUTOCAD. (If you want to run a current version of AUTOCAD, you will need at least a 386 and 25-40 meg of free hard drive space!)

To create true three-dimensional images you need to be able to select points in 3D space. To identify these points, a coordinate system represents the point's location. The coordinate system specifies how far to the side, how close or far back, and how high or low the point is using a coordinate format of X,Y,Z to identify each location.

The "X" represents the location



from side to side (the X-Axis). The "Y" represents the location's length (the Y-Axis). And the "Z" represents the height or depth of the point (the Z-Axis). Together these three axes form the three separate "Drawing Planes" that you can draw on, or through, when creating images.

When you create a drawing, you choose the Drawing Plane on which you want the graphics cursor to travel. NorthCAD-3D allows the creation of images from any viewpoint. To accomplish this, NorthCAD-3D not only moves the graphics cursor on the current drawing plane in the direction of the cursor key, but also moves the graphics cursor in relation to your 3D viewpoint.

NorthCAD-3D can automatically

select drawing planes for you by pressing the keys F3 through F6. The drawing plane selected by NorthCAD-3D will be the one most associated with that particular viewpoint, i.e. Pressing F3 will change your viewpoint to the Left View and also switch the drawing plane to the "Left-Right" drawing plane—since that drawing plane would most likely be the one you wish to use from a Left View.

If it sounds complicated, don't let it scare you. The best way to learn NorthCAD-3D is to load some of the illustrations provided, and just play around with them. Use them as a base for exploration, to get to understand the program. Play with it and you will master it. Soon you will be creating images in 3D space.

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

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

**PLAYERS 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. Some need 256K. (Disk #78)

**BRIDGE PLUS.** Play Contract Bridge Or Mahjong. Realistic bridge practice in bidding and playing against the computer. Good way to practice the game, but need some knowledge of the game or a rule book. Mahjong rules are included on the disk. Requires 256K Reviewed 9/91 (Disk #131)

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

**SCRABBLE.** At last, an excellent Scrabble game that runs in 16 colors on PCjr's! Plays just like the board game. Expandable dictionary checks words. Keeps track of all premium score squares and scores for up to four players. Also contains WORDWHIZ, a nice vocabulary building game. 256K (Disk #113)

*(Software Store continues on pg 13)*

## Questions & Answers

*(Continued from page 9)*

with less memory installed if you choose and additional memory added later. In other PCs without memory managers DOS will access up to 640k of memory. In the jr, DOS will access up to 736k of RAM for application activity. The additional memory is ideal when used as a ramdisk and is just about as fast as if it were continuous memory anyway. Here's the idea: Copy a couple of programs (applications) to the ramdisk. Now you can run these one after the other so quickly it will be like having two programs in memory at the same time because you're virtually "swapping" them. Another idea is to copy something like Eight-In-One to the ramdisk. As each of its separate applications are needed they are really snapped right up on-screen, rather than the lengthy unload-reload cycle for the overlays with a floppy or hard disk based system. If there's still room on the ramdisk, and with a megabyte there should be, the data being manipulated should be directed there as well for really awesome speed improvements. Remember, to keep the data, you **MUST** copy the it from the ramdisk to a floppy or hard disk before shutting down or erasing the ramdisk! Oh yes, what is this board called? It is the Megaboard and it is available from PC Enterprises.

**Q.** Can you tell me the minimum required to install a MIDI on the jr? I have already built a PC

**compatible bus adapter and would like to install a MIDI card if possible. Is the jr's sound compatible with a MIDI? P. Wiest, Seattle WA**

A. If the bus is really compatible you probably should go with something like the Sound Blaster board which has its own sound generation capability or, for complete MIDI operation the Miracle System. We don't know if MIDI devices require "background operation" implying real DMA so we can only recommend working with a dealer with a no-questions-asked return policy. The jr's sound system will probably be by-passed in any case. For additional technical information try the book "PCjr Power" from Owl Software, one of our advertisers. The addition of even very sophisticated sound to our computers is becoming more popular every day. Some of our readers have already worked with the BigmOuth via the serial port and we'd love to hear more from them.

**Q. I have a hard disk rapidly filling up with unused files and programs I've tried but no longer need. What's an efficient way to get rid of 'em? Also I'd like to prevent various "install" programs from writing to my config.sys and/or autoexec.bat files. Why do these companies prevent me from having the option of changing these files when setting up for hard disk operation? J. Mayhews, Phila. PA**

A. First steps are foresight and pre-

vention with new applications. Always make new directories if the install program doesn't (use DOS's MD) and place new programs in their own special directory on the hard disk. When removal day comes just change (CD) to that directory and delete everything then return to the root and remove (RD) the directory. To preserve your config.sys and autoexec.bat files you should make what we call "safety" copies. Do this by making copies with unique extensions. Use names such as "autoexec.SAF" and "config.SAF" so they're easy to keep track of. We gave up on using ".BAK" because too many other programs use it for other purposes. If you don't like what the "install" program does to your originals, just copy the "safety" files back with the original, proper names and extensions. We do see some improvement, although a few companies still think their program is the ONLY one we ever use, once it's on our systems. The improvement is that you'll see options during the install process for changing your configuration and can sometimes choose "No Change" or "Manual Change" from a menu. We still recommend the ".SAF" safety copy idea outlined above, even in these cases. Bugs are still out there waiting for the unwary...

**Q. I have heard that there is a "secret" way to re-ink printer ribbons which costs nothing! If this is so, can you enlighten us readers who require oddball - read**

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## Questions & Answers

(Continued from page 11)

**"expensive" - ribbon replacements? S. Vendetti, New Bedford MA**

A. The only procedure we have heard of isn't secret and is surely only for dire emergencies. We tried this only once and do not know if there are any bad effects from it. Your printer may react very badly so we cannot simply recommend its use. Do this at your own risk! Inspect the ribbon surface for fuzziness or loose threads or holes. If any wear at all is seen, junk the ribbon and call it a day. If the ribbon is in good shape then here's the technique: Spray the commercial product called WD-40, not a substitute,

VERY SPARINGLY on the edges of the ribbon on the spools. Very sparingly means you could actually spray a cotton ear swab and wipe it on the ribbon. Now you should wait a few hours then put the ribbon back into service. If the ribbon is the cartridge type, you must open the cartridge to spray the zig-zagged ribbon inside. In any case do not spray the straight length of the exposed part of the ribbon. It's obvious that we're not adding any ink so we're not actually re-inking the ribbon and it won't last very long. The WD-40 simply causes the ink from the edges of the ribbon to thin and spread, by capillary action, throughout the fabric, somewhat replenishing the center, ink-starved area. Apparently WD-40 was chosen because of its dissolv-

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ing and lubricating qualities. Remember, the pins of printers can clog and jam with the wrong type or balance of ink and lubricant. If your printer is still in warranty you'll surely void it, so be warned! While we're on the subject of (expensive) ribbons here's some information to ponder. The ribbons for 8 pin printers seem to be priced lower than their counterparts in identical cartridges or on identical spools as the ribbons for 12 and 24 pin printers. This is one case where the difference might be understood. Inspection of the fabric shows a coarser weave for the 8 pin variety. The pins of a 24 pin (LQ) printer may actually slip right through a ribbon intended for 8 pin printers! If the ribbon is being advanced at that moment, can you picture the fine pin(s) getting bent to one side? The cost of replacement print heads has been known to make grown men weep. Buying mail order inexpensive ribbons, sight unseen, could be risky, so be forewarned.

## Protocols

*(Continued from Page 1)*

sense--as a "treaty" between two computers governing the exchange of blocks of data.

"Protocol is defined in my Webster's New World Dictionary of Computer Terms, 3rd Edition, as "Set of rules or conventions governing the exchange of information between computer systems.." That seems simple enough, but how does

*(Continues on page 14)*

## PCjr Software

*(Order form on pages 28-30)*

**STAY ALIVE !!!** Three games that require all your wits to stay alive. Can you avoid the terrible nightmares and reach the highest level in Dr. Sleep? Or fight off the alien hordes on the Planet Iskib? Bet you cant shoot down the clever enemy pilots in Sopwith. If you can, you deserve a medal! 256K (Disk #89)

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

**TOMMYS TRIVIA.** Excellent trivia game with 3 ways to play against computer, 2 against human opponent. 2,500 questions in many categories, from entertainment to history. More Qs available. 16 colors on PCjr. Need 256K. (Disk #98)

**WAR ON THE SEA.** Based on World War II naval battles, this game allows you to command a fleet in seven different campaigns in the Atlantic and Pacific. Not a joystick game, this one will allow you to see whether you have the strategic skills to be an Admiral. 256K (Disk #100)

**ZAXXON/GALAXY TREK.** Two exciting high tech shoot-em-up games. In Zaxxon you fly through an obstacle course, shooting while you go, up and over walls, and eventually through space. Galaxy Trek makes you the commander of a Star Ship which you maneuver through the universe seeking to destroy a fleet of Megaton warships before they conquer the planets. 128K. (Disk #45)

## Utilities

**DISKCAT.** Creates a catalogue of all files on all your disks, so you dont have to push disk after disk in your drive looking for that 1987 letter to the IRS. Makes table of contents for each disk, too. 128K ok Reviewed 10/91 (Disk #133)

**MEMSIM.** Simulates Expanded Memory on the Jr's hard disk (or floppy) through the use of a swap file, enabling you to run programs which require more than 640K. 384K recommended. Reviewed 12/91. (Disk#135).

*(Software Store continues on pg 14)*

## Protocols

(Continued from page 13)

**4DOS V2.21.** This is the ultimate utility since it replaces almost all DOS commands with new, improved versions. And it adds 35 more useful commands of its own! It will replace many of your favorite enhancement utilities. For example, 4DOS allows 40 character file descriptions, more flexible wildcards, multiple commands per line, handy conditional commands, command stacking, alias commands, faster batch processing and MUCH more! A must for all serious computerists. Reviewed 1/90 (Disk #102)

**LHA V.2.11** Powerful archive software will compress even more than PKZip, (though not as fast). Many extra features to update, delete, list files in archive, even extract and run. 256K (Disk #128)

**POWERBATCH.** Compiles batch files into .EXE files, which run as much as three times faster. Additional commands add power, control, & flexibility. Requires DOS 3.0 or above. (Disk #127)

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

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

**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)

**ASIC.** Excellent BASIC compiler turns your BASIC programs into executable COM or EXE files. A shareware alternative to costly compilers. 128K (Disk #122)

*(Software Store continues on pg 15)*

it apply to the average computer user? Well, it doesn't unless you have three things: a computer, a modem, and a telephone. We're not going to get into telecommunications from the beginning in this article; if you need more detail on starting up and establishing a link between your computer and another, please look it up in one of our earlier articles. You should also check the articles on file compression and decompression at the same time so you understand this "ZIP" stuff.

We're going to assume that you're connected and that you've navigated to the Files area of your favorite BBS. You've listed the new files and, sure enough, you find the Hypertext version of the position statements of Ross Perot are now available to you for downloading in a compressed file called PORP.ZIP. a file of about 200 bytes ( the unZIPed version is also available as PORP.TXT, 335 bytes long, but we'll skip that.) Since this is the very thing you've been waiting for, you decide to take the plunge and download the ZIPfile. (Remember, "download" is from the other computer to you and "upload" refers to a transfer from you to the remote computer.)

(The command sequence you follow to download is essentially the same on most BBS software I'm familiar with, but here may be some variations, so watch the prompts.)

First, tell the BBS or remote computer that you want to download

a file. Normally, simply type the letter "D" or "d", it doesn't matter-- just don't include the quotation marks, okay?-- and hit the ENTER key. The BBS responds by asking you what file or files you want to download, and you respond by typing in the name of the file you want. In this case, you type PORP.ZIP <ENTER>.

Now, we come to the protocols. You'll be presented with a list of protocols to choose from such as this:

```
Time Remaining: (32)
Minutes

Enter Option (?=Help): D

(X) Xmodem
(1) Xmodem/1k
(Q) Xmodem/1k-G
(Y) Ymodem      *
(G) Ymodem-G   *
(Z) Zmodem     *

(*) indicates batch transfer
available.
```

You are asked to select one from the list.

The most common protocols are XModem, YModem, and ZModem, but it isn't quite that simple. The differences you need to be aware of mostly concern the size of the block of information that will be transferred, but there are a few other

*(Continued on page 16)*

## PCjr Software

(Order form on pages 29-38)

**LZEXE.** Cut down dramatically on the disk space required for software. LZEXE compresses EXE files into 2/3 to 1/2 their original size and allows them to be run from compressed form. Great for keeping RAM disks small and memory free. Utility will also convert COM files. 256K (Disk #112)

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

**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)

**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)

**AUTOMENU V4.7** Make your own menu system to greet you every time you start up your trusty Junior (or PC,XT,AT,PS/2). This is perhaps the easiest menu system to set up, and yet it has advanced features if you want them. Uses only 32k. (Disk #123)

**PC-DESKTEAM.** Provides memory resident notepad, alarm clock, appointment calendar, typewriter, calculator, phone book, auto-dialer. Some say better than 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)

**PKZIP V.1.02.** The new and increasingly popular file compression utility used by more and more BBSs. Includes PKUNZIP, the one you need to uncompress downloaded ZIP files, and many other features. 128K ok Reviewed 2/90 (Disk #104)

**RAMDISK.** Use ADJRAM to create a RAM disk of any size and adjust its size at any time without losing the contents. 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)

## Protocols

*(Continued from page 15)*

variables as well. We'll keep it simple and not explore many of these.

Without getting into any of the technical aspects, a protocol establishes several facts and sets up a system for the file transfer which includes such elements as the fact that the other computer is using the same protocol for the transfer, the number of characters to be transmitted in each "block", and the type of error checking to be performed between blocks of data. This last feature is absolutely essential in providing a completely satisfactory transfer--it would do no good to spend ten minutes or an hour transferring a file only to find that a character had been omitted or scrambled during the first minute of the transfer and therefore all the following data had been incorrectly received. The result is technically referred to as "garbage," and that's accurate. Several means of checking the correctness of the block of data have been devised; all you have to do is make sure that you and the remote computer are using the same method.

XModem was the first file transfer protocol devised to be run on a personal computer, and it changed the face of home computing forever. Like most prototype models, however, it has been superseded by newer and fancier versions, as well as a host of imitations and "improved" models. YModem is one of these, as is 1K XModem. (The two

are not the same, although the 1K version is often incorrectly listed as YModem on BBS lists of protocols.) Basically, the big difference between them and the old faithful Xmodem is simply that XModem transmits data in 128-character blocks, and the other two do so using a much larger 1024-character block. Since each pauses after sending a block and queries the other computer to see if the correct block was received, then waits for a reply before continuing, it is obvious that the bigger block should be faster, and it normally is noticeably so. If the receiving computer doesn't verify that the just-received block is the one it should have gotten the transmitting computer sends it again and continues to do so until they get it right. Then it moves to the next block and repeats the process. The exception to the rule that bigger blocks are faster comes when there is interference, or "noise" on the telephone line. The higher number of repeats will cause the blocks to be repeated more often than usual and the bigger blocks simply take longer to send, check, re-send, re-check, and so forth than the smaller ones do. If you're having line noise problems, try using XModem--it may work much better. Both XModem and 1K XModem run very well on a PCjr with no hard disk or RAMdisk

ZModem is a somewhat different animal. It sends data and receives error-checking queries more or less simultaneously, and it adjusts the size of the blocks it sends according to the amount of line noise



or other problems it detects. It's a sophisticated, dependable, and rather faster protocol, and unfortunately isn't available to PCjr owners who don't have a hard disk or enough memory to set up a RAMdisk with part of it to act as a downloads destination without any problems at all.

ZModem has a couple of features that make it a very nice protocol indeed. One is that you can tell it to detect and accept all ZModem transfers without your having to type in all the information. Thus, if you're downloading PORP.ZIP, you would simply tell the BBS that's what you want, the BBS sends out a signal, and your computer automatically sets itself to receive that file. ZModem is also capable of "batch" transfers, that is, it can set up a list of files to be sent or received and you don't have to begin a new transfer for each one.

Here's another: if you're modeming along, downloading a 250,000 byte file at 1200 baud, and you've gotten to the 249,900 character point when suddenly your cat catches the modem power cord in her tail and disconnects it (don't laugh—it's happened!), you don't lose your entire file or have to begin the downloading process all over again. ZModem has the ability to detect the point at which the cutoff occurred and begin the transfer from there the next time you connect. (You have to set your file transfer options on your communications software to do this, but it's a one-time configuration setting and normally very easy to do.)

ZModem can be installed via a system of batch files as an "external" protocol, but most communications software written since 1989 have it included as part of the program.

Other protocols, such as YModem1G, are available only if you have a modem which has a built-in hardware error-correcting feature. If your modem possesses this, it'll show up in the opening screen when you first connect, or you can (gasp!) check the modem's documentation. There are a number of shareware protocols available as downloads from various BBS. Many are faster, flashier, and more ingenious than the X, Y, Z group, but if you have those basic three available to you, the chances are that you won't encounter a BBS without compatible protocols. It won't hurt to download some of the fancy ones—BiModem, PUMA, etc. but forget about HSLink if you haven't got at least a 9600 baud modem on your PCjr—and play with them, but for the most part you'll probably want to stay with the old reliables. You may want to download and set up ZModem to run from a set of batch files, but I've found that the advantages obtained over the other versions found in most communications programs aren't worth the hassle involved in setting it up.

Okay, now you've successfully downloaded PORP.ZIP using any of the three protocols at your disposal, and have unZIPped the file. You're now ready to read the wisdom of HRP, for what that's worth. Enjoy!

## DOS Versions And Commands

*(Continued from page 2)*

over the years.

The DOS version is important for several reasons: first, many programs have requirements as to the minimum acceptable DOS version the program will run with. Most modern programs require at least DOS version 3.0 or greater. This is generally found on the software's box. Second, some DOS commands only work with one particular version of DOS. The Backup and Restore commands in DOS are one such example. If you use the Backup command to save files using DOS version 3.3, and then go over to a computer running DOS version 3.2, the restore command will not work on the DOS version 3.2 computer. This is one of the reasons many people mistrust using DOS Backup to protect their files, and turn instead to programs such as Fastback and PC-Tools Deluxe's PC-Backup program for safety.

Second in my favorite DOS command is CLS (Clear Screen). CLS clears the display screen. Sometimes there is too much information cluttering up the screen. To simplify things, just type:

CLS (Enter)

Instantly, all text on the screen is erased, and the cursor with DOS prompt arrives in the upper left corner of the screen. Since CLS is an Internal DOS command, we do not have to be in the DOS subdirectory or "pathed" to it in order to use it.

Third in my favorite DOS entourage: the CHKDSK (CHeck DiSK) command. CHKDSK is an External DOS command; to use it you must be in the same directory with it, or be "pathed" to that directory. For instance, if CHKDSK.COM is in the C:\DOS subdirectory and you are in the C:\WP51 subdirectory, you must use a path command such as PATH=C:\DOS in your AUTOEXEC.BAT file or type the above set command just before using CHKDSK. Otherwise, you will get the error message:

Bad Command or File Name

To use CHKDSK, type:  
CHKDSK (Enter)

You will get a response such as the following:

Volume JGDDHB created Dec 27,  
1989 11:21p

33435648 bytes total disk space  
63488 bytes in 6 hidden files  
69632 bytes in 30 directories  
20285440 bytes in 872 user files  
16384 bytes in bad sectors  
13000704 bytes available on disk

655360 bytes total memory  
157376 bytes free

CHKDSK does several neat things: first, it tells you the name of the disk (volume label), the date the volume was created or changed (using the LABEL DOS command). Next, it tells you the size of the drive you are checking. You can see that my hard disk drive is about 33 million bytes in size. Second, you see

hidden files, directory entries, user files, and bad sectors. Then you see how much space is left on the disk being checked: in my case about 13 million bytes.

CHKDSK also tells you about the amount of RAM memory of your computer (in my case, about 655,000 bytes, which is 640 kilobytes) and the amount currently available (in my case, about 157,000 bytes). The "bytes total memory" is important; if a program's packaging indicates that the program requires 490K (490 Kilobytes) of RAM to run, and your computer starts with 512K total, and only has 480K free after you turn on your computer and DOS is loaded, then you shouldn't buy the program until you upgrade (increase) the RAM memory of your computer.

Finally, CHKDSK will detect abnormalities in the area DOS uses to keep track of or index the files on the disk volume. This area is called the File Allocation Table, or FAT. It contains the name of the files on the disk, the size, date, and time associated with them, and the particular places on the disk where the pieces of the file are stored. DOS (at the request of all application programs which use DOS such as Lotus 1-2-3 or WordPerfect) checks the FAT in order to find a file when you want to use it.

If there are problems with the FAT, the CHKDSK command will let you know about them. A typical CHKDSK error message:

Three lost clusters in twelve chains  
*(Continued on page 25)*

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latest version of jrConfig**

## Buying a Second Jr

(continued from page 1)

noisy when you boot, maybe it's time to clean it and give it a good check-up. You can refer to chapter 6 in the Guide to Operations that came with Junior. This self-test goes far in showing you how your Junior is doing. If you need to go a little further than just a physical, use the instructions found in the IBM Hardware Maintenance and Service Manual.

There is much you can do as a user to keep Junior happy and healthy. The cleaning will help prolong the life of your disk drive and if you look around to the little blower fan attached to the back of the disk drive you will see how Junior's envi-

ronment is interacting with its components. If someone has been smoking while computing you will see the brown nicotine stains on the fan, disk drive and portions of Junior's motherboard and disk drive controller card. Other things are sucked into Junior by this fan as it tries to keep Junior cool: lint, dust, dog and cat hair, etc. These stains, and the associated dirt and dust that all homes have, help lock in heat causing Junior to fail sooner than he should.

If you have had to purchase a component locally for your Junior you probably already know that very few computer repair shops have anything associated with Junior in stock. While IBM still supports our munchkin, many shops



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have "moved on" to more profitable machines...read: ones that break more often than Junior. This leads us to the meat of this article: consider buying a spare Junior CPU. I know this sound ridiculous to many; you don't buy a spare car or TV to keep around in case the one you use every day should break, but it may be very profitable to do just this for Junior.

Consider the following: You bend or break a pin on the rear of the CPU when a family member moves Junior to another room. Cost of repair, \$50 to \$100 depending on if you remove your motherboard or the repair shop does it for you. Or your power supply gets zapped during a thunder storm; \$35 to \$65--if the shop can find another one to exchange, or if they can do circuit board trouble shooting. Due to low voltage your transformer (brick) dies; where do you go in town to find another? Radio Shack? Think again. If the mother of all boards needs replacing in your Junior, look at the prices from suppliers who advertise in magazines and newsletters. You have to exchange your old board in some cases, but in all cases, you must do without Junior's familiar hum while you wait for the new or repaired board to arrive in the mail. If you use Thin-Font or a v-20 chip, just pray that the new board doesn't have soldered-in chips.

Juniors have never been cheaper. It is a good time to consider that second machine for more reasons than just to "part out." When

*(continues on page 22)*

**PCjr Software**

(Order form on pages 29-30)

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

**SPEECH.** Make your Junior talk! With this software you can make your PCjr's internal speaker say anything you want. Very easy to use. No additional hardware required. 128K ok. (Disk #114)

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

**TEXT UTILITIES.** Includes V7.0 of List.com, the powerful text viewing software, which adds many handy new features in this version. Also on disk: A versatile directory listing and disk labeler; the fastest text searcher we've seen; a handy copying utility with many features; a memory resident protection against overwriting precious files. 256K Reviewed 2/90 (Disk #103)

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

### **Especially for Junior**

**PCJR MUSIC SAMPLER.** A collection of classical music concerts performed with great precision to produce the highest quality sound you've ever heard on your PCjr. Disk includes a separate program to activate Juniors sound generator before running game software to get highest quality sound. 128K ok (Disk #119)

**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)

**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)

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

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

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

**BEST OF JR NEWSLETTER IV.** For your handy reference, disk has the most informative articles, columns, and tips published in Jr Newsletter from June 1989 through May 1990. Easy to use search utilities provide quick ways to find any subject of interest. 128K ok (Disk #118)

**BEST OF JR NEWSLETTER V.** The best, most informative articles, columns, reviews, Questions and Answers from the June 1990 thru the May 1991 issues. Includes powerful search utility so you can find and read any subject easily. 128 ok (Disk #130).

**THE BEST OF JR NEWSLETTER VI.** Disk contains articles published in Jr Newsletter from the June 1991 issue through May 1992. Articles on compatibility, PCjr hardware and software tips, questions and answers from PCjr users. Utility to search for subjects. 128K ok Reviewed 7/92 (Disk #142)

## Buying a Second Jr

(continued from page 21)

that neighbor kid comes over, or the grandkids, let them play with the spare so none of your favorite games get zonked with sticky fingers or spilled pop. Let them bang on the old chicklet keyboard all they want; they won't hurt the one you use for word processing and they won't spill popcorn on it.

So, here are some guidelines to use when buying a used Junior. Of course, price is important. The CPU and brick can be had at garage sales or through word of mouth advertising for around \$75--\$100 if they are working. While at this price they may not be in top notch shape, you should make sure they are in at least working order. Boot up and if you get the logo and then "disk boot failure" on the screen, it may be caused by only a faulty disk in the drive, dirt, or even a bad or dirty disk drive. Your club should have someone who will help you determine the problem and advise you. Just remember that a nonworking Junior holds about as much value to someone as the bookend. Still, even a "dead" Junior has some good working parts and has value to someone with a working Junior. Read on.

A nonworking Junior can be very valuable if you "part it out." Seldom will everything in a Junior break all at once. You may only have to put in a good copy of DOS (One without peanut butter on it), or replace the fuse in the "brick," or the power supply card to have a good spare

CPU. Be sure to look at the connectors on the back of Junior. If the pins are broken in the keyboard connector socket, consider using the Junior's internal keyboard adapter.. or just put batteries in the keyboard and sell your keyboard cord at the next club meeting. If the pins on the display connector are broken, use a monitor that plugs in to the serial port or one that uses the V terminal on Junior.

The IBM color display is a hot item. They can be purchased from \$75 to \$125 in good working order. Most any TV repair person can refocus them and adjust the horizontal and vertical controls for you if you can't find someone in your club to do it for you. DO NOT open up your monitor. Still, a dead monitor may only need its internal fuse replaced.

All of this is a good reason to become a member of a computer club. In nearly every one of them there is someone who actually enjoys making dying Juniors well, or giving CPR to dead CPUs.

If you can get a used CPU that works, you have a spare power supply (\$50-\$75), 64K card (\$50), disk drive controller card (\$50), disk drive (\$60), diskette drive fan (\$10), external power supply (brick) (\$45), the little infrared keyboard receiver (\$40), another keyboard (\$25), the CPU case (\$30) and a motherboard (\$98). These prices were copied from a recent catalog of a well known Junior supplier. You may also get a spare parallel printer attachment

*(Continued on page 24)*

## PCjr Software

*(Order form on pages 29-30)*

### Print Utilities

**IMAGEPRINT V3.33.** Produces near letter quality print on dot matrix printers. IBM Graphics Printers, Proprinters, Epsoms and compatibles. Contains many format features, three quality levels, interfaces with word processors. 256K ok. (Disk #50)

**PRINT HANDLER.** Excellent printer setting utility allows you to set features from a menu. Other software on disk for banners, sideways printing, custom font generator (Epson), print spooler, count pages before printing and more! Will work with most dot matrix printers. (Disk #51)

**PRINT IT!** Selection of programs allows you to print large banners as well as tiny (but quite readable) documents on most dot matrix printers. Compress four pages on one sheet with Docsmash, print on both sides of computer paper with Both, reformat into tiny columns with Microtext (many other options), make wall-length banners with Bannerific! 256K (Disk #111)

**PIVOT!** Allows you to view and print spreadsheet files. The files can be printed either in landscape or portrait on any Epson compatible dot matrix printer. Can be installed as an Add-In Utility in As-Easy-As. 384K recommended. (Disk #136)

**SIDE WRITER.** Prints text files and spreadsheets sideways on dot matrix printers. Has Menu System for configuration. Works with IBM and Epson compatible printers. Requires 128K Reviewed 9/91 (Disk #132)

**PICTURE THIS** A label program which makes address labels with three lines of text and a PrintMaster or PrintShop style graphic on your dot matrix printer. 256K. Reviewed 5/92 (Disk #141).



To Save a Heap of Money -  
Order your PCjr Programs  
in our Software Store!

## Buying a Second Jr

*(Continued from page 23)*

(\$90) or a BASIC cartridge (\$20--\$55) and even another copy of DOS. There may be a lot of software with a used Junior.

So read the ads in the newspaper and stop at garage sales; there are many Juniors out there and there is much life left in the old "orphan."

### BASEBALL STATS

Now Disk #143

Baseball Stats (formerly Disk Set #6) has been changed to Disk #143, and includes the program reviewed in the June issue of JrNewsletter.

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on the order form on pages 29-30.



## DOS Versions And Commands

(Continued from page 19)

Three lost clusters in twelve chains found: Do you wish to convert them to files (Y/N)

Error messages such as this indicate that CHKDSK has found problems with your FAT, and wants to fix them for you. In order to actually fix the errors, you must use CHKDSK with the /F (Fix) switch; typing:

CHKDSK/F[Enter]

Then, when you see the above question about converting the lost clusters to files, type: Y. CHKDSK will finish its processing by taking all the lost information it has found and

converting it into files ending with ".CHK" in the root or main directory of your hard drive. If three files result, they would be named FILE0000.CHK, FILE0001.CHK, and FILE0002.CHK. By typing these files, you can sometimes get an idea of what sort of files or information was lost. Commonly, clusters are lost when your computer is turned off by mistake (or the power fails) in the middle of a program. Programs create temporary files on your hard disk while they are active, and then carefully erase them at the end of the program processing. If the program doesn't have the chance to erase them before the power goes off, they can leave lost clusters, which CHKDSK in turn finds during its processing.

(Continued on page 31)

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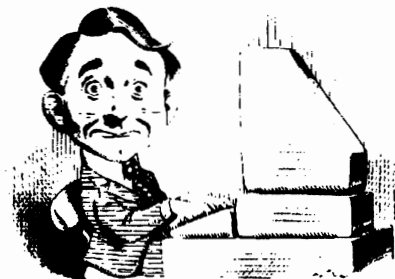
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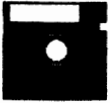
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# jr Newsletter Software Store



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**FULLY DESCRIBED  
IN THIS ISSUE:**

**Databases, page 6.  
Games, pages 6, 7, 8, 10, 13  
Utilities, 13, 14, 15  
Especially for Junior, 21, 22  
Printer Utilities, 22, 23**

**\* NEW VERSION \* JR TOOLKIT V3.0.** A collection of upgrades, modifications and repairs. Some easy, some require experience. Includes adding second 5.25" drive (easy) or 3.5" drive (easy), PCjr to Tandy 1000 Mod (harder), power supply upgrade (harder), reset button (harder), V20 speedup chip (easy), how to quiet drives (easy), adjust monitors (easy), plus many others. Reviewed 8/92 (Disk #110)

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## Software Store (Page 2)

(Listing begins on previous page)

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## DOS Versions And Commands

(Continued from page 25)

CHKDSK is not an occasion for panic, but a little checking is prudent. If you are curious about the contents of the .CHK file, you can type it to the screen. To type one of the .CHK files, you would type:

```
CD[Enter]
```

(This Changes Directory to the Root Directory, where the .CHK file is)

```
TYPE FILE0000.CHK [Enter]
```

The contents of FILE0000.CHK will scroll by on the screen. If you see a scrap of data from some program you recognize, such as a letter you wrote in WordPerfect, then you might guess that this file was lost the last time you shut off the power by mistake at some point that you were using WordPerfect.

CHKDSK can indicate more serious problems, when the number of lost clusters numbers in the thousands and you can't find any of the files you used to have on the hard disk. In such cases, a program such as PC-Tools Deluxe or Norton Utilities may be your only hope short of using the backups you keep of your programs.

Also, I make a point of deleting the .CHK files after checking their contents. I want all the free space I can get on my hard disk.

One handy utilities package is Central Point Software's PC-Tools Deluxe. This utility package in-

cludes a number of separate programs, several of which I find highly useful. Utility programs such as PC-Tools Deluxe and Peter Norton Utilities help you to use your computer more effectively. They speed up the performance of your hard drive using disk caching, allow you to restore files you accidentally deleted on your hard drive, and allow you to make backups more quickly and reliably than DOS does. They can also provide you with a DOS shell so you can use DOS commands without having to know the peculiar commands DOS requires.

The PC-Tools Deluxe programs are just like external DOS commands - they are files ending with an .EXE or .COM extender (i.e. COMPRESS.COM), and you must have the files available to DOS in order to run them.

To run an external DOS command (or any other program, for that matter), you must either be in the directory in which the file is found (i.e. C:\PCTOOLS) or must have a path command in your AUTOEXEC.BAT file which tells DOS where to look for commands. A path command such as:

```
PATH=C:\;C:\DOS;C:\PCTOOLS
```

would allow you to execute both external DOS commands, and the various PC-Tools programs, from any subdirectory on your hard drive.

.....  
• **Be sure to get the new** •  
• **JrConfig: It's located in** •  
• **PCJR Power Pack III** •  
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