jr Newsletter

PCE Compatibility Cartridge

As anyone who owns a PCjr knows, compatibility between the Peanut and the standard IBM-PC is a major issue. When the PCjr was introduced, IBM DOS was at version 2.10. At the time, the PCjr was generally compatible with the larger machines; the limitations on what software could be operted were related to disk space and memory. As the technology to add memory and disk storage became available, a new type of incompatibility problem arose. Software programs began to directly address the computer's hardware system, instead of addressing the computer's BIOS (which would then transfer the request to the hardware), even though IBM repeatedly

In This Issue:

PCjr Lives!

"You do WHAT???"

"That's right, I run my business on my PCjr."

DOS 6.0 Is Out, But Is It for You? *Most Likely Not!*

Microsoft has released DOS 6, and it has been greeted with mixed reviews even by owners of new, high-power machines. Most power users' criticism of the newest version of DOS is that it incorporates few new innovations besides ones which are available in other third-party programs such as Stacker and QEMM.

MS DOS 6.0 has added some new features. On page 21 is a list of features new to this version, and an evaluation of whether the feature is of benefit to a machine without a hard drive or to a machine with 640K or less in memory.

RAM Disks Come In Handy

By David Wilson

When I first started Junioring, I heard frequent references to RAMdisks or "virtual disks" from those who had been computer owners for longer than I had. Since there were so very many things to learn, I waited for some time before I finally got involved with them - and I wished I hadn't waited. A RAMdisk can make life much easier in a number of ways, and they really aren't that difficult to learn how to use.

First, let me explain that a RAMdisk is a "logical" disk, as contrasted to a physical one. It's a section of your computer's Random Access Memory which has been designated by software commands as another disk and is treated as one in most respects by the computer. You can't format a RAMdisk or use

CHKDSK on it, and if you turn off the computer without transferring the data from your RAMdisk to a physical storage area, you lose that data forever. On the other hand, these "virtual" disks have nothing to slow them up and can process data as fast as their little electrons can flow, making them the fastest storage, retrieval, and processing medium you can use.

A couple of ways to use the electronic disks might be: (a) As storage for uploads and the target for downloads when you transfer data. The fact that Junior doesn't have to stop every so often and refer back to a physical disk makes it possible to use sophisticated "streaming"-type protocols such as ZModem and Kermit with a PCjr -something you can't ordinarily do. (b) Placing the files from a database or other program which require frequent sorting or manipulation of data on a RAMdisk will speed up the operation considerably. (c) In a program that requires two drives to interact, Single-floppy systems can often run perfectly using a RAMdisk as the second drive.

Unfortunately, RAMdisks take memory, because they ARE memory. If you have a 128 KB memory, you're not going to get much relief from creating a RAMdisk because you then won't have enough left to run your program. By con-

Questions & Answers
By Rene Waldron

Q. Can you make some suggestions as to where I can get some programming books specific to the PCjr or are they all out of print?
B. J. Bangor ME

A. Compute! publications used to be the source with the most varied offerings and used book dealers may still have some of their publications. Right now, the liveliest book suppliers have been advertising right here in the Jr Newsletter. PC Enterprises has an excellent assortment and one company, Oowl Software, has even written a book just for the jr! You should write for the catalogs these companies produce right away. They are a real education. Sometimes you'll run into jr books at flea markets or on a 'remainders' or sale tables in the chain bookstores. We recently found "IBM PCjr Assembler Language" by David C. Willen (Sams Books) just that way. This and anything by Peter Norton or books covering the Intel / Microsoft families will be what to look for. If you want really advanced stuff, look for books by Charles Petzold.

Q. I need to be able to re-size an array in BASIC once the program is running, and will sometimes need to change or add data to it. I don't want to have to re-start the program each time this is done and I don't want to lose the data in the process. Is this possible?
P. J. Winthrop MA

A. There are a number of possibilities for the control of array size in the different versions of BASIC. Starting with QBASIC and later, or versions dated with or later than DOS 5.0, you have the keywords UBOUND and LBOUND which return the Upper Bound or Lower Bound of the array of interest. One simple use is like this: Y%=UBOUND(MyArray). This returns the highest index value usable for MyArray in Y% If you need to change the size you then can use ReDim MyArray(NewNum) but be advised that whatever data MyArray() contains will be initialized to zeros or nulls (erased) before being re-dimensioned. This happens when the memory is re-allocated for the array in QBASIC and QuickBASIC.

What to do? First of all, you should be aware that the arrays of

Questions & Answers

interpreted BASICs are DYNAMIC. They are always dimensioned and re-dimensioned while the program is running. What this means is that even if REDIM is not a supported keyword there is still a method, using DIM, which does work. So, if you're using GW-BASIC, BASICA or Cartridge BASIC, you can write the array data to a ramdisk or a real drive BEFORE doing the re-dimension like this:

Y%=UBOUND(MyArray)
:FOR X%=1 to Y%
 Print #1, MyArray(X%)
: NEXT etc.

After that, read the data back into the newly re-sized MyArray(), by using either the fast FOR-NEXT loop using the same X%, Y% parameters or a DO-WHILE NOT EOF(1). You can do better yet, using PUT and GET for the entire array to/from the disk for speed.
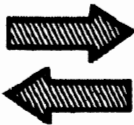
If you are not sure what facilities will be available on whatever other machines your program will be used however, you must re-consider the ramdisk method. One solution here is to use a SECOND array within the program to temporarily hold the data. You can then switch between arrays, re-dimensioning each as needed using DIM or REDIM depending on your version of BASIC. You can read the data back and forth very quickly this way. This is probably the best way for the earlier BASICs if enough memory is available or the array is not too big.

Remember, a dynamic array will be allocated separate ram space outside the 64k code space of your program.
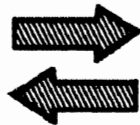
Using Visual Basic for DOS or for Windows, MyArray() will NOT be erased using ReDim if the additional parameter "Preserve" is used, so the problem has finally been addressed. Array sizes can be re-dimensioned "on-the-fly" and not lose data. This will be the case unless the array is re-dimensioned smaller than the previous size, of course. Here, only the data from the new beginning (lower bound) to the new end (upper bound) will be preserved.

In no case can the NUMBER of dimensions be changed once the array has actually been dimensioned in some manner. For example, you CANNOT ReDim MyArray(10) to MyArray(10,10). Instead, you MUST dimension, declare and/or define a new array with a differently named variable. By the way, be warned that an array declared with empty parentheses such as MyArray() as Global prepares for but does not declare either the size or number of dimensions (subscripts) the array will hold. This declared array can ONLY be re-dimensioned with up to eight dimensions. This is usually plenty, but it has been a 'gotcha!' for some programmers... We can't remember if this is well-documented or not. The work-around is to use REDIM initially and or in combination with the keyword DYNAMIC. This way, you can flexibly dimen-

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Reader Feedback

Some Long-Awaited Information

Is three years a long time for corrections? I received the first issue of PCjr magazine through an advertisement in Jr Newsletter in the March/April, 1993 issue. While leafing through it, I was struck by a name, Prelude, knowing I had heard the name before, I checked my back files of Jr Newsletter. Sure enough in November, 1989 issue was a request for information on a sidecar made for Junior by Prelude. You answered that you had no information on Prelude. Look on page 142 of the first issues of PCjr and see an advertisement for this very side car. Prelude Computer Corporation, 203 Town Center lane, Suite 217, Cupertino, CA 95014 (405) 257-6033.

It appears in the second issue of the same magazine on page 152. I don't suppose the company is yet in business, but in the interest of old Juniors maybe a little research would help. I'm writing the gentleman and letting him know. If he still lives at his old address, maybe he could do a little more research on the company. Maybe if the person is still an owner or subscriber, you could publish the address and let him know if he's moved.

Joseph J. Price, Charlevoix, MI

P.S. Has anyone on your staff any idea of how long the Junior Report was published. I'm trying to get all back issues. So far I've got:
- Jr Report, Jan, 1986-1989 complete for those years;
- Jr Newsletter, June 1986 - present, complete.
- PCjr Magazine, 1st, 2nd and 9th issue.

EDITOR'S NOTE: We don't know how you got a complete year of Junior Report for 1989. As far as we know the last issue was March, 1989. Later that year we took over the fulfillment of their subscriptions. Prelude has been out of the PCjr business for even longer.

Reader has Keyboard Question, Drive Cleaning Tip

I am writing this letter with several thoughts in mind. First, please renew my subscription to your excellent publication. Sorry I'm late, but "better late than never," I suppose.

I have a question for your technical staff which might be worthy of considering for publication. Is it possible to connect a standard keyboard directly to Jr without going through a buffer type interface. Possibly with a cable adapter or by

Reader Feedback

(Continued from page 5)

installing a matching connector on Jr. I have a Keytronics 101 key keyboard, designed for a PC, which I would like to adapt to my Jr. It has a small 5 pin DIN plug which I would like to plug in directly, reserving the ability to use the Jr keyboard if desired. I still use the IR feature occasionally, but could easily do without it.

I am retired and living on a limited income and I am the owner of 2, Plain Jane Jr's (one drive and 640 KB). One, I use myself and the other is being used by my four grandsons, under my supervision. Most of the articles you write about in the current issues of your Newsletter are directed at the people who own a so-called "improved" Jr, or the beginner. I guess I am in between these two extremes, having been involved with computers for a number of years and with relatively simple needs.,

I still use DOS 2.1 and 3.2 along with such standbys as the "Assistant" series of programs. I do however, have a fairly large library of programs including a considerable number of those which you offer in your excellent library.

In spite of its idiosyncrasies, I too think the Jr is a great little machine. Mine certainly have given me no trouble and have required very little maintenance.

Incidentally, I'll pass on my solution to the cleaning and lubricating of the rails on the QME Disk drive (or any other drive, I suppose): I DO use

a "Q-tip" type swab for this procedure. I simply saturate the swab with a Silicone type lubricant, an aerosol can of which is available from any hardware store, remove the surplus by squeezing and turning the swab in a folded paper towel (which presumably also removes any loose fibers from the swab) and rub the rails to clean them. The solvent vehicle in the lubricant does a good job of cleaning and then evaporates, leaving a film of silicone.

Richard T. Benson,
Kennapolis, NC

EDITOR'S NOTE: You do need an adapter to use other keyboards. PC Enterprises sells them.

Keyboard Cleaning Solves CAPS Problem

I have some additional information for your Reader feedback column that you may wish to pass on. I saw J. E. Jacobson's letter in the March/April issue about the jr typing all caps. Jacobson asked if this problem was limited to the Writing Assistant. We have seen this problem in many other applications, including Word Perfect, dBase, and many games. I have found if I press the shift keys several times it will usually take off the caps lock or the num lock. My husband opened the jr keyboard and cleaned the contacts for the keys and it seemed to clear

PCjr Software
(Order form on pages 29-30)

BATCH FILE TUTOR. A tutorial on how to create batch files, including color menus and macros. 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)

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 then Sidekick! Quick, easy, powerful. (Disk #22 V1.04)

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

PKZIP V.2.04.c The new version of the popular file compression utility used by more and more BBSs. Now allows archives on multiple disks. Includes PKUNZIP, the one you need to uncompress downloaded ZIP files, and many other features. 128K ok Reviewed 3/4/93 (Disk #104)

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

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 PCjrs 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 weve 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. Couldnt be simpler. Margins, tabs, type size all can be set. Disk includes two printer control programs for higher quality output. 128K ok (Disk #93)

Reader Feedback

up the problem. I thought this information might help some of your readers.

Keep up the good work with the newsletter

Ellen A. Williams

Reader Likes Our Magazine

Please renew my subscription to jr Newsletter for another year.

It is my hope that you will continue to keep your most informative publication coming to those of us PCjr diehards that depend upon it. I fully expect to renew again next year and every year thereafter.

James R. Bruns, Rochester, NY

Beginners Corner

trast, if you have 640 KB of memory, you could set up a 300 KB RAMdisk and still have more than 300 KB to let the program do its thing. (DOS will take up some memory as well.)

All RAMdisk programs that I'm familiar with take the next available letter as the drive designator after B:. If you have a single-floppy system and create a RAMdisk, it'll be Drive C:, and if you create another after that, it'll be Drive D:. B: belongs to a second floppy, although there are ways to get around that problem if you have software that'll only address Drive B: and you don't have one of those. My own system, fo example, has only one floppy and a Hard Drive, designated A: and C:, respectively, so on a very few programs I have to get sneaky with DOS -but that's another topic.

RAMdisks are normally created by placing a DEVICE DRIVER in your CONFIG.SYS file. (You do remember how to do that, right?) This driver will have a syntax allowing you to specify the size disk you wish. The IBM RAMdisk creating routine is named VDISK.SYS (it's included with the supplemental files for DOS 3.2 and later.) The proper method of creating a 250 KB RAMdisk on booting up would be to include this statement in CONFIG.SYS:

DEVICE=VDISK.SYS 250

and it's done--providing you have 250 KB available and the VDISK.SYS file in your boot directory.

There are a number of Shareware, Public Domain and Commercial RAMdisk programs available. The one I use is a little different from VDISK, as it allows you to change the size of the disk from the Command line without editing CONFIG.SYS and rebooting, a tedious process. It comes in two parts: the device driver, called RAM.SYS; and the part that actually sets the disk size, named SETRAM.EXE. After installing RAM.SYS in the normal way, you can create a disk of any size at the DOS prompt by typing

SETRAM d nnn

where d: is the drive designator for the disk you wish to create and nnn represents the RAMdisk's size in Kilobytes. After you finish using it, you may remove it by typing:

SETRAM d

always keeping in mind that you have to save the data first.

There are a number of variations on these programs and space limitations prevent us from going more fully into them now. Many are available on a trial basis, and it would behoove you to try them out until you can find one that does what you'd like it to. It's a powerful tool, and one that shouldn't be overlooked by anyone using a computer -especially not a user with limited equipment. Try a RAMdisk...you'll be glad you did.

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)

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 weve 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 youll 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)

Questions & Answers
(Continued from page 4)

sion your arrays for up to 60 dimensions!

Q. I would like to send my Impulse side unit out to be upgraded to 512k which should make my jr a 640k RAM computer. I also need the Date repaired. It reverts to 1 Jan 1980. The Time is OK. Is the Date clock on my motherboard or on the side unit and can it be repaired?

G. F. P'ville CA

A. The clock chip which keeps track of both Time and Date is on the Impulse side-car. It is battery powered and whenever you boot up the clock is read by a file or files on your booting disk. The information is transferred to the timer in the jr on the Motherboard. If, for example the file which reads or transfers the Time and Date to the motherboard timer has been corrupted, the indication (reverting to 1 Jan 1980) could be telling you something other than a faulty clock chip. Dig up the Original Disk of the Impulse Software and make NEW copies to your booting disk of the clock-handling files, reboot and note if there are any differences. Only then can you consider that the clock is at fault.

If you still have the problem, be sure the repair company also knows that the clock isn't working properly when you send the unit out for upgrading. It could be something as simple as replacing the battery! If

the clock chip itself is bad it should cost about $25.00 - $30.00 to replace.

Before you send that note to them, however, please be sure to double-check the way your config.sys or autoexec.bat file reads the clock on the side-car. Actually, our advertisers will check out this clock problem for you, but you might alleviate your own anxiousness a little sooner by checking out your software ahead of time.

Q. My youngest BASIC programming students are sometimes too restless to wait for our Jrs to do what they expect when they press a key etc. so they keep pressing the keys. As a result, the keyboard buffer reads the extra key presses then acts on them, fouling things up wonderfully! This takes away valuable class time as I de-bug or clear things up for them. I know this is really the opposite of what most people want, but is there some way to slow down the keyboard response? A Teacher, Name withheld.

A. Though most people request ways to to speed up the keyboard we think we know what you want. We also feel that slowing down the keyboard will only further frustrate the students. What probably ought to be done is to rid the buffer of all those extra keystrokes. There just happens to be a way, we discovered, to clear the keyboard buffer in BASIC.

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 Overeact, where you are in charge of a nuclear plant. 128K. Need Cartridge BASIC (Disk #34)

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 Kearsage Valley, with fall foliage in full color. Disk #80 has

Questions & Answers

Two lines do it this way: DEF SEG=0: POKE 1050, PEEK(1052) And there you have it!

If you use this little routine BE-FORE waiting for a keystroke (when implementing INKEY$, for example) the buffer will be emptied. If you find that the INKEY$ or INPUT state-ment isn't being responded to cor-rectly you'll need a short delay be-tween the buffer clearing and the keyboard reading. Use a short do-nothing loop or SLEEP or WAIT or anything which your version of BA-SIC supports. A simple way to handle two things at once is to write the buffer clearing only once in your program(s) as a SUB. Then you just call or goto it before keystrokes are

expected and you'll clear the buffer and get a little delay automatically as well.

Here's what happens: When the program reaches a point just before where it waits for or expects key-board input, the keyboard buffer is cleared. As a result, the maximum amount of keystroke data in the buffer can only be one! Depending on the speed of your machine(s) you should get very good control with a little experimentation. The length of the required delay will be the thing to change and/or the placement of the buffer clearing lines relative to the keyboard input lines.
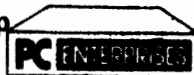
If the above trickery doesn't work you'll have to sample the program input and clear the buffer if the pro-

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(Continued from page 12)

gram is still busy. This can be done by jumping around the action(s) taken on the basis of the inputted keystroke, such as the usual ON x GOSUB XXX. For this to work, use a flag in the ON x GOSUB target to indicate BUSY=TRUE while working and then BUSY=FALSE just before the RETURN. Just before the buffer-clearing lines do an IF BUSY= - THEN line to either clear the buffer and allow input or not.

Show the students what you're doing and why for the problem to quickly disappear!

Q. How can I tell if the machine my program is running on is a PCjr or some other IBM model? I need to know to set up graphics screens etc. J. M. Fort Wayne IN

A. We have a lot of programming going on and there are a lot of machines to load our software into so there has to be a way. Once again, we use BASIC for the example, though the data is good in any language. Here it is:

```
DEF SEG = &HF000: X=PEEK(65534)
```

Now, this is the info you have; if X=255 then it's a PC (or some early XTs); 254 a PC-XT or Portable; 253 a PCjr; 252 a PC-AT. Notice how these ID #s are decreasing in value as later models were introduced... There you have it, but be SURE to DEF SEG after this PEEK to get yourself back to BASIC's proper address segment!

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)

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 rel 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 PCjrs! 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)

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)

Cribbage Partner Offers Realistic Board Game Play

Cribbage Partner is a realistic representation of the traditional card and board game of Cribbage. The program requires only 128K and runs on the IBM PC/PCjr/XT/AT and compatibles. Color and monochrome options are provided. No color/graphics adapter is needed, and BASIC is not required. A Microsoft-compatible mouse can be used if desired.

Cribbage Partner substitutes computer simulation for the cards, pegs, and board of an actual Cribbage game. Shuffling, dealing, and bookkeeping are done automatically, so you can concentrate on the strategy and (if you like) the scoring aspects of the game. The special features of Cribbage Partner make the game even more enjoyable and easier to follow.

Cribbage Partner follows the Rules of Cribbage which are detailed in full in a text file on the disk. When it's your turn to play a card, select discards, score your hand, etc., you'll be prompted by a message on screen. Cribbage Partner will catch any invalid plays and have you try again.

Whenever points are scored by either player, a short message appears which explains the scoring. There is never any doubt about where the points come from on any play.

Whenever Cribbage Partner asks you to select a card to play

(including discards to the crib), you may ask for a recommendation. Cribbage Partner will indicate the card it recommends by an arrow on the screen. You are then free to consider the computer's recommendation and play that card or play any other valid card as you desire.

When each hand is finished, you have the chance to play the same hand over and try out different playing strategies. When you re-play a hand, all points and pegs are reset to their values at the beginning of the hand. The same cards are re-dealt to both players. Then you can play your cards differently and try to improve your score.

At the end of each hand, a breakout of points scored by both players is shown. This gives you a quick picture of your performance in pegging and scoring for that hand.

After each game, a full screen of statistics gives a detailed picture of how you stacked up against the computer in about 20 categories.

The total number of points required to win a game can be changed between 121 (traditional) and 61 (short game).

If you're a beginner, you may want to select the Easy option to scale the level of play to your experience. Under the Hard option, the computer examines its cards more critically before making its plays. The program is entertaining by itself, or serves as an excellent practice method to learn how to play cribbage with real cards and board.

Cribbage Partner is disk #150 in the Software Store on pages 29-30.

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. Its 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)

Print Utilities

IMAGEPRINT V3.33. Produces near letter quality print on dot matrix printers. IBM Graphics Printers, Proprinters, Epsons and compatibles. Contains many format features, three quality levels, interfaces with word processors. 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)

Roadways PC:
Improved Mapping Program

Roadways PC is an easy to use program to help you find the shortest or fastest route from one city to another. It supports mouse or keyboard entry and will work on virtually any IBM compatible computer with MS-DOS 2.11 or higher. Roadways PC differentiates between state roads, U.S. roads and rural routes. Obviously this is important when calculating the time needed to travel between cities. It can also handle states with the lower 55 m.p.h. speed limit on their highways. This means that the times for the eastern seaboard states are much more accurate.

A simple INSTALL program places Roadways PC on your system with the proper configuration. For those of you who need more help, there are step-by-step instructions in a text file.

A typical printout shows you, in the correct order, the list of cities you will travel through, route numbers, driving miles and times. There is also a running summary of the miles and times as you proceed on your trip.

I liked Roadways PC. It's colorful and worked great. There was hardly any reason to read the manual since it was intuitive to use. The user can add cities (but, be forewarned, it's tough work), change average driving times and costs, chose the fastest or shortest routes, save routes to disk and print the results. The version I tested has 210 cities. The author has a commercial program, City Editor, that makes adding cities much easier and error-free. At a cost of $10 the editor seems like a good investment to me.

I know some of you are wondering if Roadways PC will print out a graphical map of your proposed route. The answer is no. The printout consists of several columns of names and numbers. For me, that was enough to make me happy. After all, I didn't want a map drawing program.

Printed on page 17 is a sample report produced by Roadways PC which maps out the route, distance and time to travel from New Haven, Connecticut to Las Vegas, Nevada.

If this looks like a useful program to you, it's a safe bet that you'll want to order it from the Software Store! Roadways PC, replaces USA MAP, and is Disk #139 in the Software Store on pages 29-30. It requires 384K RAM and one floppy disk drive.

The above review originally
appeared in the
Capital PC Monitor.

One Year of PCjr

The 7th volume of Best of jr Newsle 1993 issues of jr Newsletter, is now avai articles from the year's issues as we cou as a service to those PCjr users who wa

Provided on this disk are two exce interested in. One will search the table word. So you can look up any subject fas news on new products, informative letters Best of jr Newsletter VII is disk #151. Fo

Shortest Distance Route From NEW HAVEN, CT
To LAS VEGAS, NV

CITY	ROUTE	DISTANCE	TOTAL	TIME	TOTAL
NEW HAVEN, CT	I- 95	70	70	1:33	1:33
NEW YORK, NY	I- 78	103	173	2:17	3:50
ALLENTOWN, PA	I- 78	73	246	1:37	5:27
HARRISBURG, PA	TURNPIKE	83	329	1:51	7:18
BREEZEWOOD, PA	I- 70	148	477	3:17	10:35
WHEELING, WV	I- 70	48	525	0:52	11:27
CAMBRIDGE, OH	I- 70	80	605	1:27	12:54
COLUMBUS, OH	I- 70	71	676	1:17	14:11
DAYTON, OH	I- 70	104	780	1:53	16:04
INDIANAPOLIS, IN	I- 70	136	916	2:28	18:32
EFFINGHAM, IL	I- 70	101	1017	1:50	20:22
ST. LOUIS, MO	I- 70	254	1271	4:37	24:59
KANSAS CITY, MO	I- 70	60	1331	1:05	26:04
TOPEKA, KS	I- 70	114	1445	2:04	28:08
SALINA, KS	I- 70	429	1874	7:48	35:56
DENVER, CO	I- 70	350	2224	6:22	42:18
GREEN RIVER, UT	I- 70	158	2382	2:52	45:10
COVE FORT, UT	I- 15	251	2633	4:34	49:44
LAS VEGAS, NV			2633		49:44

Mileage rate is 25 cents per mile
Total mileage cost at this rate is: $ 658.25

Info on Disk For Fast and Easy Reference

tter disks, this one containing articles from the June 1992 through May/June, able in the Software Store This disk contains as many of the most informative d fit on one disk. We provide these disks at the end of every 12 month period nt a handy way to quickly find a variety of information on their computers. llent and easy-to-use search programs to help you find the subjects you're of contents, while the other will search every file (article) on the disk for a key t. Included on this disk are such things as compatibility tips, software reviews, from PCjr users, beginners columns, PCjr Questions and Answers, and more. r ordering please use pages 29-30.

UNPROTECT Disk Now In Software Store

Clyde Dodge, a subscriber who has upgraded to a 386, has sent us his disk of UNPROTECT files which he has compiled over the years to add to the Software Store. Among the general-purpose patches and fixes are:

ALTER.COM to set file attributes, (hidden, system, read only) in DOS versions prior to Version 3.0 which added the ATTRIB command to do this.

BASIC COMPILER patches, including patches for BASIC.COM & BASICA.COM ver 2.0

Routines for Protection and Reversal of Protection for programs created in the BASIC language.

Patches for EXE files created by C86 linker

CLOCKFIX, routine to fix a bug in PCDOS 2.0 and make clock automatically increment to the next date at midnight.

DISKCOPY debug for v 2.0, which creates a DISKCOPY which proceeds without operator intervention, and

patches to make PC/DOS 1.1 a resident command interpreter (See comments on DOS history in cover story on DOS 6 for information on why DOS keeps asking for COMMAND.COM is the file is not available after the operating system is loaded.)

Software Titles

Below are some of the programs which are included in the UNPROTECT disk. Please note that not all versions of the programs are necessarily included, and many of the patches are for earlier versions of the programs listed. (Historically, there has been a trend by software publishers to give up software protection and to rely on licensing agreements instead.)

Brown Bag Word Processor	IBM Time Manager
Chartmaster	Infocom games (Zork Tools)
Clipper	Kings Quest II
Dollars & sense	Lotus 123
DoubleDOS	Managing Your Money
DrHalo	Multilink
EasyWriter and EasyWriter backup	MSWord
	Multiplan
Electric Desk	Newsroom
Enable	PCDraw
Execu-vision	PFS-File
F-15 Strike Eagle	PrintMaster
Fastback	PrintShop
Flight Simulator	PROkey
Focus	Quikcode
Framework	Rbase 4000
Gato	Samna Word II
Graph Writer	Sargon III
Harvard Project Manager	Sidekick
	Signmaster
Homeword	Symphony
IBM Assistant Series	Ultima II
	Visicalc
IBM Personal Communications Manager	Wordstar
	Wordstar 2000
	Zork12
	Zork3

UNPROTECT is disk #152 in the Software Store. Required memory for the programs listed above varies from program to program. See pages 30-31 for ordering information.

Compatible at Last!

and specifically stated this should not be done. Programs which make hardware calls instead of BIOS calls usually upset the PCjr registers. In fact, other manufacturers, such as Compac and Tandy, have experienced similar problems.

The PC Enterprises compatibility cartridge cannot prevent the programs from making hardware calls. However, it corrects known hardware problems on the PCjr.

In addition, the cartridge adds support for the 101-key enhanced keyboard.

Many software compatibility problems have been overcome. Below is a partial list of programs which now operate on PCjr with a compatibility cartridge.

NOW YOU CAN RUN, all these!

Airborne Ranger (Microprose) {Incompatibility resolved by critical Interupt vector protection in the cartridge}

ALF (Box Office Software) {Floppy Disk Controller problems resolved}

Astro-Grover (Childrens Television Workshop) {NMI Bug fixed so keypress doesn't cause crash}

CD-ROM Reference Library (Microsoft) {Incompatibility resolved by critical Interupt vector protection in the cartridge}

Centipede {function key release problem fixed on 62-key keyboard}

Chessmaster (Software Toolworks) {Int 9 bug resolved, makes keypress reliable}

dBase III+ (Borland) {Now works with multiple databases open because NMI

PCjr Software
(Order form on pages 20-30)

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).

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 jrs 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)

Compatible at Last!

(Continued from page 19)

Bug fixed so keypress doesn't cause crash}

Designasaurus (Britanica) {Fixes Bit 2 of Port B so that the sound does not "trash" the video}

DOS SHELL (IBM's PC DOS) {Fixes default to high intensity colors, instead of blinking}

DOS SHELL (Microsoft) {Fixes default to high intensity colors, instead of blinking}

EDIT From MS-DOS 5.0 (Microsoft) {Int 9 bug resolved, makes keypress reliable}

Gunship (Microprose){Incompatibility resolved by critical Interrupt vector protection in the cartridge}

High Rollers (Box Office Software) {Floppy Disk Controller problems resolved}

Micky Mouse Jigsaw Puzzle (Disney Software) {Unused interrupt detection added}

MS Works (Microsoft) {Int 9 bug resolved, makes keypress reliable}

NFL Challenge {NMI bug which causes crash without warning fixed}

Paperboy (Mindscape) {Fixes Bit 2 of Port B so that the sound does not "trash" the video}

PC Tools (Central Point) {Fixes default to high intensity colors, instead of blinking}

Prodigy (IBM & SEARS) {NMI bug which causes crash without warning fixed}

QUICK BASIC (Microsoft) {Int 9 bug resolved, makes keypress reliable}

QUICK C (Microsoft) {Int 9 bug resolved, makes keypress reliable}

QUICK PASCAL (Microsoft) {Int 9 bug resolved, makes keypress reliable}

Quicken 5.0 (Intuit) {Incompatibility resolved by critical Interupt vector protection in the cartridge}

Red Storm Rising (Microprose){In-

What Version of DOS is For Your Junior?

FEATURES NEW IN DOS 6.0

FEATURE	PURPOSE	Requires:
EMM386	Extended memory simulates expanded.	Needs 386 or higher CPU
MemMaker	Memory-optimization	Needs 286 or higher CPU
Loadhigh	Utilizes space above 640K	Needs over 640K mem
device high	Utilizes space above 640K	Needs over 640K mem
DoubleSpace	Disk compression	Requires Hard drive
MSBACKUP	Improved system	Requires Hard Drive

So, if MSDOS 6.0's new features are of no benefit to your computer, what should you be using? Well, the best way to get an answer is to consider your own configuration. Although PCjrs vary widely because of the different upgrade options taken by various owners, the lowest level of MS DOS which is generally considered acceptable is DOS 2.1, the version shipped with the original PCjr. There are some, including PC Enterprises, who recommend that you upgrade to DOS 3.0 or higher to provide maximum compatibility with today's programs. Consider these points when choosing a DOS version:

* The higher the version, the more memory the operating system uses, leaving less for your programs.
* The higher the version number, the more adapted the system is for recently-developed software.
* The higher the version number, the more disk space the operating system takes on the boot disk.

So, if you have limited memory and your software consists of older programs, choose an earlier version for your operating system.

Moving?
Please send your new address to us at least two months before you move. The Post Office will not forward your newsletters. Send notice to:jr Newsletter, P.O. Box 163, Southbury, CT 06488.

Choosing A DOS Version for PCjr

Continued from page 21.

Below is a chart which shows the various DOS versions and the size of the system files.

Version DOS	System files size	Free Mem on a 640K PCjr with Jr Config 2.14	Free Mem on a 640K PCjr with Jr Config 3.02
2.1	40,960	520,353	602,273
3.0	60,416	519,664	585,200
3.2	69,632	519,552	585,088
3.3	78,848	512,432	577,968
4.0	108,544	999,999	999,999
5.0	118,669	999,999	999,999
6.0	131,533	999,999	999,999

A LITTLE HISTORY ON DOS DEVELOPMENT AND VERSIONS

Development of MSDOS/PCDOS began in October 1980, when IBM began searching the market for an operating system for the yet-to-be-introduced IBM PC. Microsoft owned the rights to 86-DOS (based on the CPM environment). IBM subjected the operating system to quality-testing and reportedly found well over 300 bugs. IBM decided to rewrite the program. The new program, PC-DOS, was copyrighted by both IBM and Microsoft. "IBM Personal Computer DOS 1.0" was introduced with the IBM PC in October 1981.

To make the operating IBM Personal Computer DOS 1.0 use less memory, the command.com interface was split so that DOS could operate with only part of the system in memory. This allowed more free space in the 64K machines of the day for program data. This ability to operate DOS with only part of the system in memory, is the cause of the "INSERT DISK WITH COMMAND.COM" message on floppy-based machines. The machine needs it so the part of DOS that remains in memory can re-load the parts that have been dropped to make extra memory free for data and programs.

DOS 2.x was introduced to support the IBM PC-XT which had a 10 meg

hard drive. Since DOS 1.0 could track only a limited number of files on a disk, the directory-tree file structure was adapted from UNIX. (Microsoft had license rights to that system which it marketed under the name XENIX.) DOS 2.x allowed for a config.sys file to support the proliferating library of device drivers that were coming out. In addition, DOS 2.x introduced the CLS (Clear Screen) command and print spooling. DOS 2.1 was introduced and marketed with the PCjr.

DOS 3.0 is similar to 2.x; It's main change was the ability to support more floppy disk formats, including the 1.2 M 5.25" disk drives. Version 3.1 added better aliasing features to allow users to trick DOS into treating subdirectories as a disk drive. Version 3.2 introduced the 3.5 inch drives and added the new XCOPY command.

Version 3.3 was an important advance for PCjr users. The new FASTOPEN command allowed caches to keep track of files the first time they are opened, and gets them instantly the next time they are requested. This version also made hard disk use easier with the new APPEND command and the ability to gang-process files with the ATTRIB command. The BACKUP command was improved somewhat by allowing the user to format backup diskettes during backup. It operated faster than previous versions because it copied all the smaller files into one single large one. The ability to call one batch file from another was a major step forward in DOS

Telecommunications

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

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

PROCOMM PLUS TEST DRIVE. This is the upgrade of the already powerful and popular Procomm V2.42. Its got many new features including an improved host mode, context sensitive help screens, more powerful scripting. In addition to its power, its very easy to use. 256K (Disk #108)

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

TELIX V3.12. Powerful, yet easy-to-use program, with variety of built-in transfer protocols. Features Z-Modem one of the most efficient and reliable transfers available. If youre disconnected while downloading, Z-Modem will pick up where it left off when you next log-on, thus saving connect time and telephone toll charges. Need 180K free memory after loading DOS and either two floppy disks or a floppy disk and a hard drive. (Disk Set #4) $12 for 3 disks.

Choosing DOS Version
(Continued from page 23)

3.3. It also allows the use of an @ symbol in front of a batch file line to prevent it from displaying. DOS 3.3 was the first operating system to check the hardware on the machine to determine the number of disk buffers based on the system's configuration.

DOS 4.0, was developed entirely by IBM. Unfortunately, 4.0 seemed to have very little reason to justify its existence - virtually all of its core features could be found in one version or another of DOS 3.x. It did make one major change. It could address hard drives larger than 32 meg. This "break-through" enabled the development of Windows and OS/2.

DOS 5.0 was a complete rewrite of the system. Developed by Microsoft, the new version was marketed to end users as a DOS upgrade, in contrast to earlier versions of DOS which had been bundled with equipment. It provided new high memory support, allowed for up to 8 hard disks, and command line editing and aliasing.

The new features of DOS 6.0, as noted above, are primarily designed for machines with extended or expanded memory and hard drives. In fact, the manual for DOS 6.0 doesn't even consider the possibility that it will be used on a floppy-based machine. Whereas the DOS 5.0 manual had a section on how to install the program on floppy disks (which required seven 5.25 inch

disks!), the DOS 6.0 manual simply says, "The Setup program decompresses these files and copies them to your hard disk. You can begin using MS-DOS as soon as Setup is complete."

Clearly, it is possible to run DOS 6.0 off a floppy disk (See article on PC Enterprises Compatibility Cartridge in this issue, for example), but Microsoft has given so little thought to floppy-based machines, that it neglects to tell the purchaser how to install the product!

The best advice seems to be that, unless you have memory beyond 640K and/or a hard drive there is no reason to upgrade to MS DOS 6.0.

So what would be a better choice for a PCjr owner to consider? Since the PCjr is a IBM product, consider IBM PC DOS. The current version is IBM PC DOS v5.02. IBM, unlike Microsoft, continually updates their operating systems and makes fixes available at no charge. This fixes used to be called CSDs (Correct Service Diskettes), but are now called Service Packs. The CSDs can be ordered from IBM with a nominal charge for the disks & postage or they can be downloaded from IBM's national BBS.

After a certain point, they issue a new maintenance release of the Operating System, hence PC-DOS v.02.

When you boot with IBM PC-DOS the CSD level of the OS is displayed on the screen. One thing to be aware of is that the CSDs in some cases can come on more disks than the original operating system. This is particularly true with IBM PC DOS 2.x.

The IBM version of DOS 6.0 will be released around the end of June and IBM has stated that it will be smaller, faster, and have better versions of the utilities. They are talking 20% faster. As soon as we learn what advantages the new version will offer PCjr users who still operate floppy-based systems and/or have no more than 640K in memory, we'll let you know.

Compatible at Last!
(Continued from page 20)

compatibility resolved by critical Interupt vector protection in the cartridge}
Sidekick (Borland) {Alt/ key combination fixed on 62-key keyboard}
Start Trek The 25th Anniversary (Interplay) {Floppy Disk Controller problems resolved}
Superkey (Borland){Alt/ key combination fixed on 62-key keyboard}
Symphony (Lotus){NMI bug which causes crash without warning fixed}
Windows 3.0 (Microsoft)
WordPerfect {function key release problem fixed on 63-key keyboard}

OPERATING SYSTEMS OK
DOS 2.10{NMI bug which causes crash without warning fixed}
DOS 3.20 {PC ID Byte changed from PCjr to true IBM PCjr, which could cause keybresses to be rejected with two beeps.}
DOS 5.00 Works OK
DOS 6.0 Works OK - See story, page 1.
DR DOS 6.0 (Digital Research) {Will now load without hanging during boot}

2 PCjr's w/Racore Drive II (2 360KB floppy drives) w/DMA, parallel printer ports, V-20 chips, PC ID cartridges, 1 Paul Rau large case w/ 2 20 MB hd's and Hardbios Cartridge. IBM compact printer w/19 PKS thermal paper (250 pgs/pk), 4 jr joysticks, 2 jr internal modems, jr speech attachment, Techmar jr captain 128KB expansion brd. w/clock & parallel printer port, 2 chicony xt/ at keyboards w/Racore adapter cable, a number of different types of adapter cables, 2 cartridge BASIC w/manuals, jr hardware maintenance & service manual, jr technical reference, PC DOS 2.1 & many jr software titles (diskettes & cartridges) all for $1000.00 plus shipping. Will sell as separate items. Glenn at (504) 887-2592 or (504) 737-0848 For complete list, send SASE to Gklenn R. Landry, 4770 I-10 Service Rd., Suite 212, Metairie, LA 70001   (2&3)

736k PCjr with MS Booster and mouse. LPT1 & 2, 2 power expansion sidecars, TV connector, PCjr color monitor, carrying case, thin font and Tandy video mods, PCE combo V 3.0 and compat plus. Many parts only three months old. Extra keyboard, circuit boards, power brick. All IBM manuals. $350.00 and will split shipping. Myles Lewis (813)747-1431 EST. (3&4)

How to Submit a Classified Ad

Classified Ads are $12 per month. Ads for items offered for $75 or less or for swap or trade, are $6 per month.

Send your typewritten ad (no more than five lines on an 8 1/2 x 11 typed page). Send to Jr Newsletter, Box 163, Southbury, CT 06488.
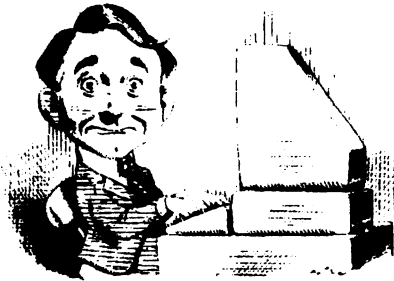
Ads received by the 20th of the month will be printed in the next Bi-Monthly issue.

Need Help?

The following disks from the jr Newsletter Software Store can help you to get the most out of your junior. To order, use the form on pages 30-31.

PCJR AUTOSETUP. A beginner's dream: Just select from a menu to make separate boot disks especially for each type of software you use. Automatically creates the right config.sys and autoexec.bat files for RAM disks, games, word processing, telecommunications and other software to run at maximum power and efficiency on your PCjr. Designed especially those who haven't mastered the art of customizing their computers. This one does it for you! 256K (Disk #99)

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 3/90, 6/90, & 8/92) (Disk #110)

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

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

JR POWER PACK III A disk chock-full of utilities to get the most out of the PCjr, including the latest version (4/92) of jrConfig, a program to increase disk space from 360K to 420K, a quick bootup disk for DOS 3.X, multipurpose compatibility drivers, keyboard patches, ramdrive programs, and many more useful utilities. 256K Reviewed 4/92 (Disk #140).

PCJR COMPATIBILITY DISK V4.0. Tips on how to run hundreds of software titles, includes PCjr compatibility info, tips on running software, and how to make some incompatible software operate. Powerful search feature finds titles quickly and easily. 128K ok. Last update April 1991. (Disk #60)

PCJR PATCHES V6.0 Patches to fix software to run on PCjrs. Most enable 16 colors. V6.0 adds patches for 1 on 1, 688 Attack Sub, Battle Chess, Battle Tech, Boxing II, Genius Mouse, Grand Prix, Indiana Jones, Jack Nicklaus, Knight Games, Paperboy, Prodigy (thru V3.1), Shanghai, Silpheed, Sim City, Space Rogue, Steel Thunder, Strip PokerII, Test Drive II, Tetris, The Games (Summer), Ultima IV, plus new patch to stop disk drive spin. Dozens of older patches, too. (Reviewed 2/91) (Disk #56)

jr Newsletter
Software Store

The software in the jr Newsletter Software Store is the best public domain and user-supported software for the PCjr we've been able to find. All software has been tested on our PCjrs and is highly recommended. Some of the programs are equal to or better than commercial programs costing hundred of dollars. These are offered for you to try at $5.95 per disk. Some shareware requires additional payment if you continue to use it.

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Newest Releases

DESCRIBED IN THIS ISSUE:
Utilities, 6, 7, 8
Games, 10,11,13,14
Databases. 15
Print Utils, 15, 19
Especially for Jr, 19, 23
Telecommunications, 24

* New * THE BEST OF JR NEWSLETTER VII. Disk contains most of the major articles published in jr Newsletter from the June 1992 issue through May/June 1993. Articles on compatibility, PCjr hardware and software tips, questions and answers from PCjr users, and other informative articles. Utility to search for subjects. 128K ok Reviewed 5-67/92 (Disk #151)

* NEW * ROADWAYS PC. A program to calculate distances between two or more U.S. cities. Also calculates best routes and time to travel to given major U.S. city. 384K Reviewed 5-6/93. (Disk#139).

* NEW * Cribbage Partner is a realistic representation of the traditional card and board game of Cribbage. No color/ graphics adapter is needed, and BASIC is not required. A Microsoft-compatible mouse can be used if desired. 128K Reviewed 5-6/93. (Disk #150)

* NEW * UNPROTECT is a disk of patches and routines to circumvent copy protection programs, which often make running them dififcult on a PCjr. It also contains some patches to make early DOS and BASIIC versions more adaptable. The required memory varies from program to program. Reviewed 5-6/93. (Disk #152)

* NEW * Batch File Tutor. This shareware tutorial will teach beginning programmers batch file techniques. The program includes chapters on macros and color menus. Reviewed 3-4/93. (Disk #26.)

* NEW * PKZIP V.2.04.c The new version of the popular file compression utility used by more and more BBSs.Now allows archives on multiple disks. Includes PKUNZIP, the one you need to uncompress downloaded ZIP files, and many other features. 128K ok. Reviewed 3-4/93 (Disk #104)

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4	PC-FILE III. 256K
5	PC-CALC. 128K
6	PC-CALC. 320K
8	GAMES I
9	DUNGEONS & WARS
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12	REFLEX POINT
14	ADVENTUREWARE
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29	MORE SUPER UTILITIES
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33A	FAMILY HISTORY (256K), need both
34	GAMES II
35	NEW KEY
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58	HOME INVENTORY
59	CHECK PROCESSOR
60	PC-JR COMPATIBILITY DISK, V4.0
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66	THE BEST OF JR NEWSLETTER II
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69	GALAXY
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71	CROSSWORD CREATOR V3.30
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82	SPELLING BEE
83	FILE EXPRESS, DISK 1
84	FILE EXPRESS, DISK 2
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Software Store (Page 2)

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117	READY FOR CALCULUS?	147	PRINT PARTNER
118	BEST OF JR NEWSLETTER #IV	148	SHARE-TAX 92
119	PCJR MUSIC SAMPLER	149	ALITE
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Coping with a Home-Office Incompatibility
By David Blagg

Every now and then I have an experience which reminds me that I am grateful the PCjr has been around long enough to get rid of most of the bugs.

One such experience occurred recently. I had a call from a user who was trying to swap disks between a PCjr 360K disk drive and a high density 1.2M 5 1/4 inch drive. It did not work. More accurately, some of it did not work. There are two technical reasons why.

First the drives have different capacities -- 360K compared wiuth 1.2M. The 360K drive was developed before the 1.2M drive, and was the one that was standard with the "enhanced" PCjr. With much computer hardware, when a new deisgn is released it includes the ability to adapt to what was produced earlier. This is the case with disk drives. The high density drive can read files which were created with the smaller 360K drive, and even the much older 160K single sided drives. But the older drive cannot read what was written to a newer drive. One way around this problem is to format disks on the newer drive using the DOS FORMAT command switches to create 360K disk with 9 tracks per side. That should do it right?

Not always, and this leads to the second technical problem. When a disk is formatted one of the things that happens is FORMAT places information on every disk in something called the boot record. This information includes the DOS version used in the FORMAT. Do you have a hunch what is coming? Earlier versions of DOS provided for a specific amount of room to store certain information about the files on the disk. This was true with Version 2.1 which was released with the PCjr. But versions after 3.x have a larger storage area for the same information. As a result, a 360K disk which was formatted with, say DOS 3.3, will not always work properly on a machine running DOS 2.1. Of course, a disk formatted with DOS 2.1 can be read on a machine running DOS 3.x or higher because of the "backward compatibility" described above.

Confused? So was I. To sort all these things out was a real struggle, especially when I was using disks on both an office 386 and my PCjr. I did it, but evey now and then I would overlook some detail and and it would cause problems. And as with other apparently complicated things, there was a simple solution. Format some blank disks on the PCjr, then keep them handy as you move to another machine. It precludes all kinds of problems.

(This article was excerpted from
The Orphan Peanut,
the Chronicle of the
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