

jr Newsletter

April, 1990

Will the Latest Goodies Run On Your PCjr ?

By Carl Haub

In the past few months, members of our PCjr user group in the Washington, D.C. area have been testing much new software on the shelves for PCjr compatibility. Our newsletter, the Metro PCjr Journal, and others such as the jrNewsletter, feature such compatibility news regularly. This would seem like a good time to put a few thoughts and findings on PCjr compatibility in one place. That's particularly true given the arrival of the so-called "Tandy mod" on the PCjr scene over one year ago.

The Tandy mod, for those new to the junior circuit, is a simple modification to the PCjr's motherboard which involves soldering a chip and a few wires. The technical aspects of the mod have been covered amply in past jrNewsletters. It can be quickly installed by any competent technician or PCjr supplier such as Owl Software in Columbus, Ohio.

While the Tandy has become a virtual necessity for PCjr users, it does not guarantee compatibility with all programs. It DOES make the PCjr compatible with the Tandy video and that's important since so much software now says "Tandy 1000" on it. But, the program that you're hoping to run must do several things: it must recognize the Tandy/PCjr 16 color video mode AND give you



"She's complaining 'cause I keep the PCjr on my side of the cave."

a chance to select the Tandy option at an opening screen or during an "Install" session. If not, the Tandy mod may do little good. Some programs, however, actually recognize the Tandy mod automatically.

The following article relates the experiences our user group has had with a variety of new software. And by that I mean experiences, not definitive statements. It has long been recorded, here and elsewhere, that some software will run fine on one machine and not another of the same make and configuration. This is especially true of the PCjr since there are so many memory expansions and add-ons out there.

Our user group holds a three hour "workshop" on the first Saturday of the month at the Capital PC User Group (a group which graciously gives us free use of their lavish facilities for the workshops despite the fact that our group is independent). At the past three workshops, we have been installing the Tandy mod free for all members. We have installed over fifty mods and I don't think we saw two PCjr's with the same setup. And we know since one must partially dismantle the machine to install the mod and then reassemble it and test it.

Therefore anyone who sets out to say what is and is not compatible with the junior runs the same risk as the confident harbor pilot who claimed to a ship's captain that he "knew every rock in the harbor." As soon as the ship grounded with a sickening scrape, he turned and said "See, there's one of them now."

(EDITOR'S NOTE: At jr Newsletter we often get a re-

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PCjr Lives!

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PCjr Fn Key Tips

Did you know that the Fn key on the PCjr keyboard is a special "sticky" key? This means you don't have to hold it down while pressing the next key because once it's pressed it says pressed. For instance, to get the equivalent of F6 function key, press AND RELEASE the Fn key and then press the 6. This is a handy feature for the Fn key to have since it's faster and easier to press and release a key than it is to press and hold it while pressing another key.

The Fn and then the Q (Pause) key will cause the words scrolling up your screen (when you've used the DOS type command, for instance) to stop scrolling. The scrolling will begin again when you press any key.

Many programs running in BASIC or DOS will immediately end when you press Fn and then the B (Break) key. This is handy for software that doesn't have an escape or end feature built in -- or if you've forgotten it. You can also use the Ctl - C keys to do the same thing.

If you want to print what you see on your screen, make sure your printer is on and press Fn and then the P (Print Screen) key. This will print everything you see on your screen as long as it's type or numbers, but if you have graphics on your screen, it won't reproduce what you see.

Another screen printing feature that works a little differently is the Fn plus the E (Echo) key. After you've pressed these keys, everything you type from your keyboard will be printed.

You can set your keyboard to make all the Fn key combinations operate automatically without pressing the Fn key first by pressing Fn Shift and Esc. This will make the number keys along with the B, E, P, Q and S keys work as though the Fn key had been pressed first. To switch out of this mode, press Fn Shift and Esc again and the keyboard will return to normal setting.

By the way, the PCjr keyboard is extremely well constructed and should last for many years. So it's worthwhile learning how to use all of its handy features such as those provided with the Fn key.

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Questions and Answers

By Rene Waldron



EDITOR'S NOTE: jr Newsletter gets questions in the mail from PCjr owners every day. So many, in fact, that we apologize for not being able to answer them personally. This Questions and Answers column is our way of responding to the questions readers ask about their PCjrs. We can't answer all of the questions we receive, but we try to answer those that are either asked by several readers or those we feel will be of interest to PCjr owners in general. If you have a question that you do not see answered here, or elsewhere in this newsletter, please feel free to write to us at jr Newsletter, Box 163,

Q. Cannot get my jr to upload from other computers. Doesn't seem to be hardware unless it's the jr BIOS. Have PC Industries 2400 Baud modem and use Procomm and PC-VT. Can you help me out? D. Trueblood, Boston Univ. Boston, MA

A. The usual problem is that the internal address for the COM port should be set to COM 2 for use of an external modem. This is best done with a COM-swapping program such as the one available on disk #52, Jr Power Pack from the Software Store. With that done, some careful reading of the manuals which accompany the modem and the software should be done. The modem switches must be set for software control of most of the parameters for example, if Procomm is being used. Here is an initialization string for Procomm which generally works on DEC modems and others which are Hayes-compatible: ATE0 L1 S7=60 X4 S0=0 &C1 &D1!. (Host mode AT S0=1 &D2!) Remember, most mainframes, midis or minis (called DEC, VAX, TOPS, D-G, IBM, whatever...) such as those at universities will use 7 data bits, 1 stop bit and even parity. This means that for up or down loading files using one of the X/Y/ZMODEM error checking protocols, the software MUST be able to switch to 8 data bits, no parity and 1 stop bit without interrupting the handshaking signals on the line. ProComm does this automatically with no problem. Procomm can also use KERMIT for file transfer if the accessed computer is set up that way. Be sure to have some sort of disk space available and set up properly in your communications software for the incoming

file(s)... a RAMdisk is terrific for this!

Q. Have been re-reading the article on Flight Sim v. 4.0 since getting the program as a gift. Is there any way to fool the jr (or the program) into recognizing some keys for the very important "trim" adjustment? Also can you tell me whether the standard jr monitor is a CGA or RGB monitor? K. Bonn, Nashua, NH

A. For Flight Sim. v 3. and 4. the same general technique for keys apply. On the standard IBM keyboard the numeric keypad also has Cursor Up, Down, Left and right. Separately, but on this same keypad are Home, End, PgDn and PgUp. For the jr keyboard to trim Flight Sim. up and down just press the Fn-Home and/or Fn-End. In this case, you MUST hold the Fn key down (do not let it up, as usual, it won't toggle!) while you simultaneously press Home or End. If you have never seen a standard IBM PC keyboard you might not realize the connection here. It's a tough one to discover by just exploring on your own by trying various keys. Another reason is that the trim is VERY slow (four to seven clicks to move the indicator) and you must hold the keys down to see any change on the screen. There ARE however, slight changes in flight characteristics at each key click even BEFORE the screen indicator moves. This gives the proper FINE adjustment. Naturally, you will test this out on the ground during your pre-flight checkout, right? By the way, ignore the turn coordinator if it occasionally flickers to one side with your set-up, the plane IS staying level... as level as a real plane, anyway... We still can't believe the programmer(s) used the Num Lock toggle (Alt-Fn-N on the jr.) as if it were a "normal" key to get the MAP display, especially with all those Alt keys available! As soon as you are in the simulator, press and hold Alt then press Fn then "N" (the last two sequentially) to get into this mode. Now you can get rid of the map which has popped up by holding the Alt key down and pressing both the Fn and "N" keys twice in rapid succession (Fn then "N" then FN then "N" again. Sick-Sack, anyone? For the second part of your question: The standard jr monitor has RGB (Red Green Blue) Transistor-Transistor-Logic (meaning, in this case, non-analog) input. The color card inside the jr contains circuitry to be compatible with the standard CGA (Color Graphics Adapter) card. It so happens that this

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EDUCATIONAL SOFTWARE

MATH FUN! A great way to get kids learning how to add, subtract, multiply and divide. Includes a program called Math Tutor which has cleverly designed exercises for kids in Grades 1-6. Also Fun-nels and Buckets, a nifty math game that makes learning math fun. 128K. Need Cartridge BASIC (Disk #42)

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

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

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

THE WORLD V.2.6 Fascinating way to see the world on your PCjr! Just use the pointer to move over full screen map of world and press Enter to zoom in on any region, country or city. Many features. Even shows you hurricane tracks by year. 256K Reviewed 2/90 (Disk #105)

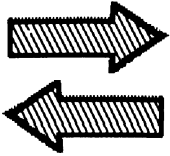
Please use order form on page 23.

card is much more advanced than the CGA cards in standard PCs and clones, but that's another story. Nowadays some advertisers and programmers assume that the card and the monitor are a "package" and mistakenly label the monitor a CGA monitor. Actually it is simply CAPABLE of displaying CGA images if they are sent to its RGB input. By the way, we'd like to remind all our readers once again that the jr's card and monitor are ALWAYS in color mode, even if you have run MODE BWxx. That mode is merely included on the DOS diskette for compatibility with DOS when used with other machines, true monochrome cards and (green or amber) monitors and programs. MODE BWxx does not affect the jr's CGA card or monitor except to limit the active colors to TWO; black and white! Some programs which need color (via DOS) will however, need MODE COxx to be executed before they will operate correctly.

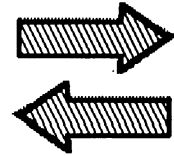
Q. Some programs run beautifully in Tandy Mode since doing the modification. Gunship from Microprose will hang up when trying to get to the second part of the program. The drive runs and then quits and the jr hangs up. How much video memory should be assigned with the Tandy modification and how do I access this graphics mode (preferably in machine language)? /D. Eastburn, Kingston TN

A. Reserve 96k of video buffer (this with DOS etc. loaded will make your program load above the first 128k of RAM, a desirable thing) if you want the best compatibility for ANY 16 color programs. If you do boot with less, when you get into the program the disk drive may whirr, stop, hang and Egyptian hieroglyphics may show on the display in gorgeous colors... There is no change to any of the screen mode numbers when the Tandy modification is done nor are there any changes to the way programs access the jr's video sub-system. Machine language to access the graphics? We have to assume that you mean using an Assembler if you intend to write a program or even some simple graphics screen routines. In any case there is still NO change to the programming of the Video Graphics Adapter even though the Tandy modification has been done. The Technical Reference Manual and one of Peter Norton's "Inside the PC (and PCjr)" books is where to begin the research for the calls and set-up of this VGA chip and the other related chips. You might also look for a copy of "Mapping the IBM PC and PCjr" from Compute! Publications, an excellent reference. Take seriously the warnings about including NOPs (or whatever) for the needed time delays between say, toggling a VGA port then writing to it, a lot goes on in there and they

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Reader Feedback



PCjr User Fights Off Ignorant Salesman

Your publication is a very fine source of information for diehards like myself who would rather fight (the slings and arrows of egregious salesmen like the one I encountered during the holidays) than switch. I went into a local CompuAdd retail store to purchase an AB Switch Box for Serial Devices. The salesman tried to sell me a board with a serial port. I patiently explained that I wanted to hook it up with a PCjr which had an external modem.

The salesman was both perplexed and outraged and started to tell me that it just couldn't be done! However, a customer in the store became quite interested when I rattled off (to the salesman) the list of high powered programs (WordPerfect 5.0, DBase III+, Lotus, etc.) that I am running on my "crippled computer" (the smarmy salesman's term). And consequently, I loaned the gentleman customer a couple of my back issues of jr Newsletter. Thus we may have gained a new convert to jr or at least a new subscriber to jr Newsletter.

Audrey Evans, Cleveland Hts., OH

EDITOR'S NOTE: Well done, Audrey!

Self-Reliant PCjr User Has Useful Tips for Others.

For the record, I got my jr in July, 1984 and expanded it to 512K with an early model Rappport (Racore) Drive II, (384K, no DMA). The chicklet keyboard gave way to the enhanced keyboard. That one "died" and gave way to one of Paul Rau's replacement models earlier this year--wish I had seen that article about using the chicklet board's innards first, as I might have saved \$90 or so. The monitor has always been an Amdek 300, green screen. The printer is a Citizen MSP-10 bought in 1985; a Royal Beta 8000T typewriter with a computer interface handles those occasions when I need REAL letter quality. I just replaced the Racore drive (alignment problems) with a reconditioned one from PCE. I silence the drives periodically by cleaning the rails with Radio Shack's Freon TF and then oiling with their Precision Oiler (with Teflon). Tremendous racket in the IBM drive a month or two ago --

really LOUD grinding that had me diving for the switch to shut it down. Cleaning the rails did nothing for the problem, so out came a copy of PC Magazine, March 19, 1985, an issue with a cover story on Maintaining Your IBM. It described 1985 procedures for drive maintenance, including putting a drop of oil on the stepper motor shaft, spindle and drive motor shaft. Now THAT was exciting because them's close quarters in a Qume 142 - there is hardly enough clearance for a drop of oil on the top of a dental probe when you're trying to get at the stepper shaft. Patience prevailed, however, and it has been going strong ever since--something needed oil! It will be replaced with a 3.5 inch when its time comes.

In the meantime, I plug along with several DOS 2.1 boot disks with the Racore drivers, mostly for different RAM disks. **PFS Professional File** runs well with the data on the RAM disk -- I'm approaching the limit of that option now, because with only 512K, File's memory demands limit the ramdisk to about 160K. **Wordstar 4** solves my wife's and daughter's needs, and version 5.5 gets me real proportional print via the computer interface on my Royal typewriter when I hook it up and use the Diablo PDF. **Lotus 123** ver 1A handles my spreadsheet needs quite well and with a bit of programming, handles my taxes faster than Tobias. **Tetris** is addictive and **Labelle** is the best solitaire program around. **PC Tools Deluxe** is great when you have a problem. **Imageprint** ver. 1.4 works great but is quirky sometimes. Never could get **DiskCat 4** or **5** to work properly on the jr and finally gave up. **MasterKey**, a disassembler and cross reference generator, helped with early forays into assembly language. PC Mag's utility disks and their **DOS Power Tools** book and disk are great helps. I noticed several jr Newsletter articles where folks are TYPEing in screens in their autoexec.bat files. Power Tools has a BAS program that lets you convert text screen to .COM files--much faster and more elegantly.

I also noticed a letter in one of the Best of jr Newsletter disks about using the jr overseas. You suggested contacting IBM because a lot of jrs were sold in Europe. Maybe you were right on the sales aspect but definitely wrong on contacting IBM here in the States. I did in 1985 and got an "IBM does not support the jr in Europe" response to every question I had lined up for them. I did get them to tell me that the frequency range was on the order

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Reader Feedback

(Continued from page 5)

of 57-63 Hz and that the incoming AC supply was rectified. Armed with that and the knowledge that a lot of electronic gear (radios, TV's, VCR's some turntables and tape decks) operated without problems on 50 cycle power IF their supply was rectified, I set up and used jr on 220v, 50 cycles in Germany for over three years without a hitch. All it took was a step-down transformer (220 to 110v) and, in 1985 without the benefit of outside expert advice, the courage to throw the switch that first time. The transformer MUST be a coil wound stepdown model rated for the total power drawn (35 watts for jr with Racore Drive II, plus printer and monitor requirements) - one of those big heavy jobs, not one of those little electronic models regardless of its alleged output. All they do is lop off half of the wave, leaving the 220 volt spike intact to fry your unit. If you're military, they have stepdown transformers in various sizes for sale in the European exchanges. Electrical supply houses can get them for you here in the States. Don't buy larger than you need because they draw power at their rated capacity, not what you are drawing from them. A 2000 watt model will set you back a bundle up front and can get expensive to operate very quickly if you only need 300 watts. One interesting thing about the move, both ways--the clock was only off a matter of seconds after two months in transit. Before leaving the States, I set up a series of operations, disk and memory as a 110v/60 cycle "control" and ran them again in Germany -- no difference! I've been back a year and jr is still humming along, apparently none the worse for its experi-

Fan on Jr Captain Solves Heat Problem

I could scream with delight after hearing that there is a newsletter dedicated to the few, the proud, and mostly creative PCjr owners.

Here is my situation: IBM PCjr with Tecmar Jr. Captain and Jr. Cadet, Epson RX-80, Zenith Data Systems monitor.

Rigging: After having the jr. Capt. board fritz out numerous times over many years (and endless chats to Tecmar about the problem), I thought I was just about beat. I was convinced that the source of the problem was from

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

over-heating right where the power connector came in. I even removed one of the white connectors attached to the heat sink on the recommendation of Tecmar. Finally, after having it still fritz out in warm weather I have found salvation in this: I took a drill and put multiple holes in the board casing on top of where the board connection comes in and on down to where the heat sink ends. Got one of those cheapo air filter machines that is basically a fan. Turned it upside down so it is blowing air in and I haven't had a problem since. I hope this is useful to other jr owners and would be interested in others' solutions.

William F. Milford, Tallahassee, FL

Yes, You CAN Use Prodigy With the Right PCjr Setup.

I am focusing my use of my computer on games and fun things. What I am finding is that jr is becoming very popular in the neighborhood. I'm certainly getting some mileage out of it now. In my software order, I also ordered the patches disk. All I really need from it is the Prodigy patch. I hope it works. I called the people at Prodigy network control one night and explained my problem. After trying to log on, I get cut off and get the message for network trouble.

The tech told me that jr had two problems with Prodigy. The first is that Prodigy writes directly to memory in order to make it work better on small systems (other than jr), and jr has trouble with this. The second is that jr can't walk and chew gum at the same time, as far as using a modem goes. Prodigy reads/writes to the disk while passing data over the line. Either of the above-mentioned circumstances will cause a break in data flow, which tells the software to shut you down.

I have also noticed Prodigy is a pain in the neck about installation. It has to modify the format of the floppies it runs on as a copy protection. Because of this, I can't use both 4.25" and 3.5" disks to run it (not an option!). I also have a hard disk, but the tech told me that would just make things worse, not all hard disks will work even on "normal" computers. Your description of the patch was to enhance colors, as best as I could figure. Help - Help !! You said some people are using Prodigy on jr, are there different releases? What's even more aggravating is that the setup software tells me it knows I have a PCjr. When the software saw this, couldn't it give me a break on some of that security nonsense?

Joseph F. McLean, Worcester, MA

EDITOR'S NOTE: You need the Prodigy patch as well as a program called NOBEEP (also on the Jr Patches Disk).

Prodigy is currently recommending that you have BUFFERS=3 and FILES=10 on separate lines in your config.sys file. If you create a special boot disk for use with Prodigy, put these lines in your config.sys file. You should also make as much memory available as possible (i.e. no memory resident programs). Also, don't try to use Prodigy at 2400 baud because you tend to get more line noise interference at high baud rates. 1200 baud is better. It takes a lot of patience to get going with Prodigy, but a lot of PCjr users are doing it, so don't give up.

Quilt Pattern Software Recommended by Reader

As always, I look forward to each issue of the jr Newsletter. I have been helped a lot by your publication, so now I am anxious to provide a little information (if someone hasn't already beat me to it).

In response to the question by Gwen McFarlane in the Jan. '90 issue on quilt patterns, my wife, an avid quilter, has been very satisfied with the program "PCQUILT." We run version 4.2, and the author has a version especially made for the PCjr. When ordering, please specify that you will run the program on the junior. It's great to see programmers who specifically include our beloved jr in their programs.

Ms. McFarlane will provide more info on the PCQUILT program if you write to her at:

Nina Antze
7061 Lynch Road
Sebastopol, CA 95472
(707) 823-8494.

Sorry, but I don't remember the exact price. We originally ordered version 3.2 and then upgraded to 4.2.

William Jenkins, San Francisco, CA

Getting Microsoft Works to Run on Jr.

I have recently purchased Microsoft Works V2.0 for my PCjr. The program seems to have three problems trying to run on my machine which has 640K, two 360K disk drives, and uses DOS 2.1.

1. I get double characters when inserting my name on the Learning programs.
2. The cursor skips to every other occurrence when trying to select menu options, and
3. When entering certain characters or options for a menu, the keyboard locks up, and I'm stuck until I turn the machine off and reboot.

I called Microsoft and they told me a keyboard patch such as one on disk #56 might fix it. I have noticed similar problems stated in the Dec. '89 issue for Microsoft Works V1.5. Hopefully the disks I have ordered (#40 and #65) will solve the problem, but what is disk #56? Could you give me some advice on my next course of action if the above disks do not solve my problem?

I enjoy reading jr Newsletter and find it very helpful on numerous subjects. I will be renewing my subscription this year. Thank you very much.

William Lionberg, Lansing, IL


EDITOR'S NOTE: Microsoft Works V2.0 works very well on PCjrs. The only thing you have to do is correct the usual INT9 problem, which occurs with most Microsoft software. This problem is corrected automatically when you use JRCONFIG as your memory management software. JRCONFIG is included on Jr Power Pack (Disk #52), Jr Power Pack II (Disk #63), and PCjr Autosetup (Disk #99). We recommend it highly. It is easy to use and very powerful. If you don't want to use JRCONFIG for some reason, you can use the INT9 patch which is included on the JR Patches Disk (#56).

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SPECIALIZING IN ACCESSORIES FOR

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VISA MASTERCARD AMEX DISCOVER

Reader Uses Multiple Drives, Wants to boot from Hard Disk

I have a PCjr with 512K of memory, a PC Enterprises Combo cartridge and 9.54 TURBO board, an SPC DISKITjr hard drive with a 10 meg and a 20 meg drive and a second disk drive by Racore.

Now I want to boot from my hard drive. I read somewhere about a hardbios cartridge that will make jr boot from a hard drive; will this work with the SPC interface? If it does, where can I get one? I would appreciate any help you could give me.

Now, I will offer some information to you about changing my second drive. My second drive is so old it was called a Rapport Drive Two Enhancement Package instead of Racore. This made me think that I could not change the drive unit, but I wanted a 3.5" 720K drive, so I thought I would give it a try. I bought a Mitsumi 3.5" drive. The power cable fit in the drive but the controller cable was not long enough to reach. The drive connector was on the opposite side. After I made up an extension, which you should be able to buy from a local computer store, I tried to format some disks. All I could format was 360K on a 720K disk. After many tries and talking to many people, I got enough information and a copy of DOS 3.3. Now with 3.3 and the right config file, I am formatting and copying to 720K disks and am happy with this setup.

The following are copies of my config files and my autoexec files. Explanatory comments, which are not included in the files, are listed in brackets [xxx].

CONFIG.SYS file:

FILES=24

BUFFERS=12

DEVICE=SHDIO.BIN [hard disk driver]

DEVICE=DRIVER.SYS/D:1 [DOS 3.3 disk driver for
3.5" disks]

AUTOEXEC.BAT file:

PCVIDEO [Racore drive software]

POW2CLK [Racore clock software]

DISKSYNC [Turbo board disk drive software]

JRSYNC [pseudo DMA cartridge software]

JRVINT21 [screen speed-up routine]

FASTKEY [Turbo Board speed change software]

DATE

TIME

With the files set up this way, I have drives A: through E:. All my drives stayed the same, my hard drives stayed C: and D: and I got a new drive E:. I can only format in drive E: but I can copy to drive B: after the disk is formatted. If you set everything up like I have, it works fine.

The drive I bought will also work on an AT as a 1.44 meg drive. I have tried to make this work but with no success. I am hoping that someone will soon come up with a way to make this work. I think your jr Newsletter is great, so keep up the great work.

Ronald G. Gates, Shawnee Mission, KS

EDITOR'S NOTE: Since you have the SPC hard drive, we suggest you contact SPC for information on how to boot up from C:. The Hardbios Cartridge does allow this, but not with your type of drive.

Monitor Problem, the Tandy Mod, and a Curser Speed-up Program

I have a problem, some information and a request. First, the problem. I've had my jr for five years and something is going wrong with the monitor or video card. I'm getting vertical gray or black lines on the screen most of the time. The diagnostic test for the monitor says to have it serviced. Any ideas on how to correct this?

Second, the information. I recently made the Tandy modification with the kit supplied by OOWl and solder supplied by a local computer store. I had minimal soldering experience but pulled it off. The piggy-backed chips fit nicely beneath my jrHotShot memory board. I suggest shortening all the legs on the 74S86 and using the lowest heat iron you can find. I had to regularly unplug mine to cool it down.

Third, the request. Will someone PLEASE write a pro-

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gram to accelerate the jr's cursor!

Terry Rich, Dickinson, ND

EDITOR'S NOTE: Although the diagnostic test tends to be an alarmist, in this case it does sound as though your monitor needs service. As for accelerating your cursor, there's a program called HOTKEY on Jr Power Pack (Disk #52).

Tecmar Sidecars Will Not Provide 736K of PCjr Memory

Having just read about the ability of the jr to handle 736K of memory, please ponder this. I have found myself in the unusual situation of having 2 Tecmar jr Captains and one jr Cadet. How can I max out my jr to 736K? Is it possible? Do I need additional software, etc.?

Bill Milford, Tallahassee, FL

EDITOR'S NOTE: Your two jr. Captains won't provide 736K. Tecmar boards can't be modified to break the 640K barrier. IBM, Microsoft, and some PC Enterprises memory expansion units are the only ones capable of this.

An Alternative to Using EDLIN

I am a newcomer to the PCjr. As such, I fit in the category of a "Beginner." I am pleased with your newsletter and find it a very informative instrument for people like myself.

I have recently tried the PC III Database Manager Program, found it meets my needs, and have signed up for the manual.

I am having difficulty with one aspect of the program, probably because of my beginner status. I have a color monitor which I would like to use with the program. In order to do so, it is necessary to use the EDLIN line editor. I have attempted to do so without success. I cannot get past the "enter" phase.

I would like to see a discussion on the line editor or some descriptive literature you can recommend that might solve my problem.

Anthony V. Ottaviano, Merritt Island, FL

EDITOR'S NOTE: Yes, EDLIN is difficult to use. Fortunately, you do not have to use it all. You can use any word processor to write what you want to write with EDLIN. Just make sure you save the text in ASCII format. Virtually every word processor can do this. Check your

manual to find out how your favorite word processor does it. ASCII format simply means "text only" Many word processors insert special characters for formatting and other purposes, and sometimes you can't see these characters. Some word processors, such as PC-Write and the word processor in Sidekick, create pure ASCII text files without any special characters. With this type of word processor you can very easily create a text only file just as EDLIN would. (For those of you who don't know, EDLIN is the very crude word processor that comes with DOS. Forget it.) See also the following letter for instructions on how to use the DOS "Copy Con" method, which is much easier than EDLIN.

Reader Needs Help Writing CONFIG.SYS File

Recently I tried to write a config.sys file using the information found in an article I read in your August, '89 issue. The problem is, that every time I boot up my computer, I receive a message telling me "Unrecognized command in CONFIG.SYS."

When writing my config.sys, I used the following program from basic: 10 device=mem.com /c. I then saved my program under the following name: "CONFIG.SYS". If you would, please take time to tell me what it is that I am doing wrong, and how I could go about correcting my problem.

Eric Nave, Carlyle, IL

EDITOR'S NOTE: A config.sys is simply a text file. You don't use BASIC to write a config.sys file, you use DOS's "copy con" command, or any word processor capable of saving a text in pure text (otherwise known as ASCII) format. Most word processors can do this, just check your manual if you're unsure of how your's works in this regard.

The easiest thing to do is to use "copy con." Just type at the A> Prompt:

```
copy con config.sys <Enter>
```

Then write each line you want in your config.sys file, ending each line by pressing <Enter>. Then on the last line, press Fn-6 or hold the Ctrl key and press Z, which will do the same thing. This will cause DOS to save your config.sys file.

The only drawback to using this method rather than a word processor is that you can't go back up a line to correct a mistake. You've got to start over if you spot a typing error, after you have pressed <Enter> for that line. Otherwise, "copy con" is a quick and easy way to write a config.sys or an autoexec.bat file.

(Continued on page 12)

In two articles, I'll outline the minimum knowledge which you, the PCjr user, must have in order to get your computer ready to run an application such as a word processor or game. My intent here is to identify the essential information and where to find it rather than to provide it all here. Although you'll have to do some outside reading, I'll keep the references very specific to minimize the amount of extraneous material.

If there are several people who share a PCjr, only one person needs to have all this information. The others can have less knowledge and run their applications with the help of the local expert. Most offices run this way. After all, the ultimate in user friendliness is having someone do it for you.

When you have absorbed this information, you will be ready to start any program which can be run on your system. You will still have to learn how to use each application, but you can be confident that your PCjr is set up correctly.

All right, what do you, the local expert, need to know? You have to know how to put your system together, so you can turn it on. That's **HARDWARE** information. You have to be able to make a **BOOT DISK**, so you can operate the computer. That requires some knowledge of **DOS**, the **Disk Operating System**, and what belongs on a boot disk. You need to do various operations with floppy disks which require some additional knowledge of **DOS COMMANDS**. If you have more than 128K of memory, you need to know about "**MEMORY MANAGEMENT**" software. All experts should know what the **AUTOEXEC.BAT** and **CONFIG.SYS** files are and how to create them. Finally, a little knowledge of **RAMDISKS** and other **UTILITIES** is very valuable.

Now, how about that? The words in upper case letters make good section headings to subdivide these two articles for the new PCjr expert. If you are already the local expert, you can use these articles to review what you know.

Hardware

Let's start from ground zero. Your PCjr computer system consists of several parts: monitor, keyboard, power transformer, CPU, and possibly a printer, modem, and mouse. Basic information about the system is in the owner's manual, the red Guide to Operations. Starting on page 6-5 are instructions for what plugs in where and how to test all the components.

You have to understand the keyboard because that's how you tell your computer what to do. Be sure to read chapter 4 in the Guide. The PCjr keyboard is different from other PCs, and the chart on page 4-9 shows the equivalent keystrokes for the PC and PCjr.

There is a warning on page 1-5 of the Guide that disk drive errors may occur if your monitor is within 6 inches of your PCjr. Messages as "Sector not found", "Seek error", and "Disk error reading..." indicate a drive problem. They occur most often if you place your monitor on top of your PCjr. If you see these, move the monitor away from the PCjr.

When you get everything plugged in, you will need a boot disk. The type of floppy disks which the PCjr uses are called 5.25 inch Double Density disks. They hold 360 kilobytes of data. Do not use Quad Density disks. They are for IBM PC AT computers with 1.2 megabyte drives and will not work in your PCjr. Just ask for 360K disks and you'll get what you need. Whether they are labeled single or double sided doesn't matter; they are all double sided.

Boot Disk

You cannot use your PCjr's disk drive until **DOS**, the **Disk Operating System**, has been loaded into memory from a "boot disk." This is a disk which contains the **DOS** system files. The program disk which comes with **DOS** is a boot disk. You can use version 2.1 or higher of any IBM PC **DOS** or Microsoft **MS DOS**. Most PCjr users have IBM PC **DOS 2.1**, and there are very few advantages to using a later version unless you have a hard disk.

The following boot disk suggestions are for IBM PC **DOS 2.1**. However, they will be essentially the same for other **DOS** versions. The page number references are for the **DOS 2.1** manual.

To prepare a boot disk, put the **DOS** disk in the drive and turn on the computer. You will be asked to provide the current **DATE** and **TIME**. If it isn't clear how to do this, read Section 2 of the **DOS** manual under the **DATE** and **TIME** commands, pages 63 and 135.

Your first job is to make a copy of the **DOS** disk, so you can put the original away in a safe place. Don't use **DISKCOPY**. The **DOS 2.1** disk is a 180K disk, and your copy will only hold 180K. Later versions of **DOS** came on 360K disks, but you will be copying lots of unnecessary files with **DISKCOPY**.

We will use the **DOS FORMAT.COM** program to create a bootable disk. Issue the command **FORMAT B:/S** and

put a new disk in the drive when you are prompted to do so. The /S switch, or option, tells DOS to format the disk and copy the system files to it. For ordinary data disks, you don't need to use the /S switch.

The system files are COMMAND.COM and two "hidden" files. That means they are not listed by the DIR command. If you are not sure whether a disk has the hidden files, you can use the DOS CHKDSK.COM program to find out more about it. With the DOS disk in the drive, issue the command CHKDSK B: Swap disks when prompted, and CHKDSK will report the size of the disk, number of files, and the amount of RAM memory. CHKDSK b:/V will list all the files by name including the hidden IBMBIO.COM and the IBMDOS.COM. Later, read your DOS manual under CHKDSK in Section 2 for other uses of CHKDSK.

After formatting the new boot disk, use the COPY command to copy files from the DOS disk to this disk. The command is

COPY A:filename.ext B:

where "filename.ext" is the name of the file to be copied. You don't need all the files. Here's my recommendation on which files to copy.

Definitely copy CHKDSK.COM, DISKCOPY.COM, FORMAT.COM, and MODE.COM.

Optionally copy ANSI.SYS., COMP.COM, DISKCOMP.COM, GRAPHICS.COM, and SYS.COM.

Don't copy the ASSIGN, BASIC, BASICA, BACKUP, FIND, FDISK, MORE, PRINT, RECOVER, RESTORE, SORT, or TREE programs unless you know you will use them.

This will leave a lot of room on your boot disk for program files or utilities instead of having the space devoted to useless, extra DOS files. We'll cover several utilities which you'll want on your boot disk in Part II.

If you have files which came with a second disk drive, a mouse, or a memory expansion unit, copy these to the boot disk now. In Part II, we'll cover JRCONFIG, a fine memory management program to recognize expansion RAM above 128K.

If you are using IBM PC DOS 2.1 and have more than 128K of memory, you need to patch one of the DOS hidden files to avoid having your system lock up unexpectedly. The patch files and instructions are on Disk #40 in the jr Newsletter Software Store, page 23.

When you are satisfied with your boot disk, you can use DISKCOPY to make another copy of it. Since your new boot disk is a 360K disk, the copy will also be a 360K disk, and it's a lot faster to use DISKCOPY than to go through copying the files one at a time again. Also, the hidden files which you patched on the first disk will al-

(Continued on page 12)

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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)

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)

See also "Need Help?" on page 22.

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 wild-card searches. Global updates and deletes. Sorts on any field. Too many features to mention. (Disk #3 runs on 128K, Disk #4 needs 256K)

SEE PAGE 22 FOR INFORMATION ON HOW TO ORDER

A PCjr Owner Should Know

(Continued from page 11)

ready be patched on the copy.

If you have to use the FORMAT /S command to make a different boot disk, be sure to start from one of these disks. When the system files are transferred, the patched version will be on the new disk.

DOS Commands

Since we are dealing with DOS at this point, let's cover the DOS commands which all PCjr users must know. Read Section 1, pages 13 through 25 in your DOS 2.1 manual for command notation and the difference between internal and external DOS commands. This will make the rest of the manual much more understandable.

All the DOS commands are listed alphabetically in Section 2 of your manual. For now, the only ones you need to learn are the eleven which follow. Read about these, especially the pages listed. I've placed the most useful form of each command in parentheses to help you get going. All DOS commands can be typed in upper or lower case.

CHKDSK (chkdsk b:, chkdsk b:/v)

CLS

COPY (a:filename.ext b:) See Section 2, p. 51-54 only.

DATE (date, date mm-dd-yy)

DELEte or ERASE (del filename.ext)

DIR (dir /P)

DISKCOPY (diskcopy a: b:)

FORMAT (format b:)

MODE (mode co80) See section 2, p. 102-103 only

REName (ren file1.ex1 file2.ex2)

TIME (time, time hh:mm:ss)

Be sure to review legal file names and the Global file-name characters, or wildcards, ?*, in Section 1 pages 17 through 22 for use with COPY, DEL and REN commands.

OK! You're on your way to being an expert. In Part II, we'll discuss the memory management program JRCONFIG and how to write CONFIG.SYS and AUTOEXEC.BAT files. Then we'll wrap up with a few words about ramdisks and other utilities.

[This article was originally published in the San Francisco PCjr User Group newsletter. John King President, can be reached at (415) 472-7035.]

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Reader Feedback

(Continued from page 9)

Reader Has Trouble Getting 16 Colors on Test Drive II

The review by Michael Chandler on Accolade's Test Drive II was a pleasure to read. I couldn't help but drive out and buy a copy for my PCjr. We've been cruising around the highways at increasingly higher speeds since.

This piece of software lives up to Michael's review except for the lack of a 16 color display. Has his junior been modified for Tandy colors? I am stuck in CGA. The folks at Accolade also are not aware that Test Drive II supports Junior 16-color mode.

I've got a 640K junior, via a jrHotshot board, and use MS-DOS 3.2 with jrconfig.dsk. Help! (How about having your reviewers mention their junior set-ups in all future articles?)

George Bergus, Plymouth, MN

EDITOR'S NOTE: We were able to run Accolade's Test Drive II on our PCjrs without the Tandy mod. If you tried all the usual tricks, such as using a large video buffer, and it still failed to run, our best guess is that there are different versions of TD II out there.

Don't Ask Me Twice!

I renewed my subscription last month and have found jr Newsletter and its predecessor very informative. It brings out the things that were left to be read between the lines by IBM. In my training on IBM equipment before retirement, our instructors said that their instructors at IBM said: "We told you once."

Everett W. Harrington, Boylston, MA

Genius Mouse Problems May be In Software

We have recently purchased a CM6000 Genius mouse for our jr. You may have received other letters about this mouse, so we are hoping you can give us a fix for making this mouse work on COM2. We do not have a modem and have tried COMSWAP. The GMOUSE.COM /22 and the GMENU POP-UP load O.K., and the left button pops up the menu. Movement of the cursor and picking do not work, and running the mouse with Dr. Halo causes the mouse cursor to run and hide in the left corner. We are hoping that some additional instruction in running GMOUSE.COM is the fix.

We have 640K jr HOTSHOT memory and have DISKFAST.SYS, RAMDISK.SYS, and READCLK.SYS in our config.sys. We've tried adding ANSI.SYS, VIDEO.SYS, LASTDRIVE=, BUFFERS=, FILES=, BREAK=. We normally use 3.1 PC DOS, but have also tried 2.1 and 3.3. The measured voltage of the port is from 12 to 16 volts DC open circuit. The CM6000 supposedly draws 10 ma.

This same mouse works perfectly on a nearby IBM PC on COM1. In fact, we're pretty impressed on how well it works. We have been using a Logitech C7 on our jr and it has worked very well. All things considered, we believe the CM6000 should work. We contacted the manufacturer, and he said to check out our port since the CM6000 requires at least 10 volts to operate. Since we have no wiring diagrams we are not in a position to check out the circuits. Besides, we have already spent more time than the mouse is worth and are ready to go to the pitcher's mound with it!

We were told by a local jr PC member that you published a recent article on this mouse. We don't remember seeing it, but if you did, we'd like to know about it. We don't mind patching if a patch will work. Please let us hear from you because this little machine is near and dear to us.

Sherman Hart, Austin, TX

EDITOR'S NOTE: Although we have not tested the Genius Mouse, we have conflicting reports from readers,

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Docsmash

Have you ever wanted to print a copy of a software manual without using a whole box of computer paper? Docsmash V2.6 will print four pages of normal type on one page of its tiny (but quite readable) type. So you can get a 100 page document on just 25 pages.

Both

Another paper-saving option which allows you to print full size characters while reducing your paper sheet requirements by half is provided by Both. This program prints the odd numbered pages first. Then you print the even numbers. This not only saves paper, but allows you to print a pamphlet or booklet using both sides of the paper.

Microtext

Microtext V3.0, like Docsmash, will print in tiny type. But unlike Docsmash, Microtext gives you many formatting options. Using its menu driven controls you can print in one or two column format, remove extra blank lines, print graphics characters, add a 1 inch left margin for hole punching, reformat most word processing and database files, print part of a document, and select from many other options. Microtext supports dot matrix as well as HP LaserJet, Epson LQ series, and IBM Proprinters.

To order Print It!, select Disk #111 on the order form on page 23.

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Reader Feedback

(Continued from page 13)

some of whom have reported problems with it, and others who are using it successfully. If you are using Dr. Halo III, that may be your problem, because that version does not operate well on PCjrs. Dr. Halo II works fine. Another point to remember, be sure to reserve at least 32K of video (using your config.sys file setting) when running graphics intensive software such as CAD and other drawing/paint software. This may solve your problem if you haven't been doing it. Would anyone who is using the Genius Mouse care to add any useful tips here?

PCjr User Wants 736K From Extra IBM Sidecar

My PCjr had 384K (two 128K sidecars) before one sidecar was upgraded to 512K. Due to the IBM-designed switching arrangement in the rear of the extended memory, I can only use one sidecar. Therefore, I am restricted to a total of 640K.

I understand there is some way to address at least part of the 128K available in the second sidecar. How is this done? Does it require soldering, programming, or special offerings to the Gods of RAM?

I would greatly appreciate any help or advice. It is small consolation that I am not alone with this problem. In view of the fact that several PCjr owners I spoke with are stuck at the same impasse, you may choose to print the answer in the jr Newsletter.

Henry A. Gleich, West Hurley, NY

EDITOR'S NOTE: The modification of IBM sidecars to get 736K involves more than just the repositioning of the switches, so we recommend using the services of Owl Software. They'll do it for \$19.95, plus \$4 for shipping and handling. Once you've made the modification, you need to use JRCONFIG to make the additional memory addressable by DOS. You'll find JRCONFIG on Jr. Power Pack II (Disk #65).

Unprotection Disk Correction

A letter in the January 1990 issue from Clyde Dodge offered two disks with unprotection programs to PCjr users. One of the programs is for the IBM Assistant series and, although we have not tested it ourselves, several readers expressed an interest in it. They are available for \$4 each, including mailing.

We had an error in the address, which should be: Clyde A. Dodge, 1075 Space Parkway, Apt. 285, Mountain View, CA 94043. We apologize for the error.

Racore Memory Upgrades

--A Clarification

One type of Racore PCjr memory expansion unit can be upgraded easily to a PCjr total of 640K, while the second type is limited to a PCjr total of 512K.

In our December 1989 issue on memory upgrades we may have misled Racore owners into thinking they could get up to 640K on their computers no matter which type of Racore memory boards they had.

We called Shawn Christiansen, Racore's PCjr expert, to clear up the confusion (ours as well as yours).

One type of board was sold with 128K, giving the PCjr a total of 256K. This board is referred to as a 384K board because that is the maximum amount of memory it can hold. It has two rows of eight soldered chips, plus four rows of sockets. When all four rows of sockets are filled with 64K chips, the board will provide its maximum of 384K of additional memory for a PCjr, giving the computer a total of 512K.

NOTE: One 64K chip does not provide 64K. It takes a row of eight 64K chips to provide 64K. Similarly, it takes a row of eight 256K chips to provide 256K.

The Racore 384K boards may contain 128K, 256K, or 384K, depending upon how many of its rows are filled. You can easily remove the cover and see how many rows of chips your Racore board has. If you see empty rows, it is very easy to buy chips from any electronics supplier and add the chips yourself.

The job is made easier by a chip insertion tool, which can be bought from Radio Shack or other suppliers quite inexpensively. These tools make it easier to line up the wire legs of the chips so you can get them in without bending them.

The second type of Racore memory board is referred to as a 512K board because that is the maximum amount of additional memory it can provide for a PCjr, bringing the PCjr total to 640K. These boards have just two rows for memory chips. One row is filled with soldered 256K chips. The second row is socketed. If you have one of these boards and the second row is empty, you can purchase a set of 8 256K chips and insert them in the sockets yourself. They should be 256K 150ns chips.

We hope this clears up any confusion and encourages you to upgrade your Racore unit so you can enjoy the benefits of additional memory on your PCjr.

PCjr Compatibility Disk Update Now Available

Version 3.5 of the PCjr Compatibility Disk, Disk #60 in the Software Store, contains all software compatibility data we've been able to collect since we began publishing jr Newsletter in June 1986. This new version has been updated with information we've received since the last update October 1989.

The disk contains information on hundreds of software titles. It lists whether or not the software runs on PCjrs, how much memory it requires and often includes comments on the quality of the software. Tips on how to get each title to run on your PCjr are provided, whenever we have been able to gather such information.

Also included on the disk are articles with information on PCjr compatibility as well as tips on how to set up your PCjr in order to get so-called "incompatible" software to run.

In our experience, over 90% of software made for PCs and compatibles will run on PCjrs, provided they have the required memory. Unfortunately, some software developers have chosen to ignore hundreds of thousands of PCjr users by allowing their software to be difficult, if not impossible, to run on PCjrs. We are currently waging a campaign to convince those companies to include PCjr compatibility in future titles and we hope this will cut down on the number of incompatible titles produced.

But the fact is, PCjrs are orphaned computers and those of us who own them, though WE know they are excellent computers, have to be aware of the fact that some software companies do not have our interests in mind.

The list on this disk is updated with information supplied by readers of jr Newsletter as well as by our own testing. We have been greatly helped in this effort by Dave Paules of the Metro PCjr Users Group, which serves the Washington, D.C., area PCjr users.

We are not able to test all new software titles, but we do try to include all reliable information we can obtain. The PCjr Compatibility Disk V3.0 is Disk #60 in the jr Newsletter Software Store, page 23.

Running the Latest Goodies

(Continued from page 1)

port from one reader saying such and such new software won't run on my PCjr and a short while later we'll try it or we'll hear from another reader that it runs just fine. As you read the following software reports, you'll see how important it is to buy new software only from sources that will take it back if it won't run on your computer.)

Most of these games will require at least 512K, although some claim to run in less; where that's the case, it's noted below. Just to make things interesting, let's start off with some bad news on one of the programs we've tested:

World Class Leader Board Golf with "Real Sound" (Access)

This very good golf game will initially show the opening screen including all the birds singing and frogs croaking, although one jr user told me that it locks up immediately. For most users, the program will appear to run properly right up to the first tee. BUT, as soon as you take the first shot, it will usually (but not always) lock up with an annoying high pitched sound.

I gave up on this game at first. It would not run properly on my 736K PCjr which has IBM expansion sidecars. The IBM sidecars have usually been regarded as those which give the fewest problems! The program also locked on another jr with a Tecmar jrCaptain. On a hunch, I tried it on one of our user group's machines, the one used at the meetings, and it worked fine! In fact, I've played 18 holes several times with no problems. That machine uses a jrHotshot memory expansion to 640K. And, as I write this, another member reports that it also works on his jr with the Racore expansion. Go figure.

It's too bad that the program gives these problems since the game is really a lot of fun. The "Real Sound" feature is interesting in that it provides a close approximation to human speech and other sounds through the one-voice speaker of a PC. This is nice, but remember that your PCjr has a three-voice speaker and has always been able to supply such high quality sound. Nonetheless, if you can get this to run on your PCjr, your shots will be greeted by such comments as: "Looks like he hit the tree, Jim" or "From my vantage point, it looks safely on the fairway." Or, my personal favorite: "He's not going to be happy about that one." That latter one goes along with the crowd's reaction as you miss a close putt.

Any other PCjr users have anything to report on this program's compatibility?

(Tandy mod 16 color: Yes, if you're lucky. CGA 4 color: Yes)

Miami Vice with "Real Sound"

This game is only interesting because it, too, features "Real Sound." The program runs through the opening screens o.k. including the sound effects. It will also take you to the first game screen, but when it's time to go to the "warehouse" to chase drug dealers, the screen dumps to scrambled ASCII symbols. Through all of this, the "Real Sound" feature continues to function, however.

This game's apparent lack of PCjr compatibility seems to be of little loss since it's fairly dumb to begin with. What is interesting is that the "Real Sound" feature, apparently programmed by another company and licensed to other makers, does work on the PCjr. "Real Sound" is also featured on the new adventure-type software "Mean Streets," but I haven't had a chance to try that one yet.

(Tandy mod 16 color: Yes, but crashes - same in CGA)

Welltris (also TETRIS) by Spectrum Holobyte

This very popular game of falling shapes runs just fine on PCjr, as did its two-dimensional predecessor, TETRIS. TETRIS, the Russian-designed game challenged you to manipulate puzzle pieces so that they would properly interlock with other shapes at the bottom of the playing field. The game may not sound terribly interesting from that description, but it really is. TETRIS is somewhat difficult, but definitely tempts one to "try again" to better one's score.

My only complaint with TETRIS is that the relatively short playing field left little margin for error. For the amount of time I have to invest in games of this type, it was too hard. So, along comes WELLTRIS. I like this game because it lasts longer. One drops the shapes down a three-dimensional "well." This gives the player the opportunity to move the "piece" around the walls as it drops. In short, for those of us with slower reflexes and less time to devote to such pastimes, WELLTRIS is a lot of fun with fewer frustrations. But, then of course, you can always move to a higher level and get totally frustrated. Great fun, though, WELLTRIS or TETRIS.

(Tandy mod 16 color: Yes CGA 4 color: YES 384K req.)

Hole-In-One Miniature Golf (DigiTek)

This miniature golf program is something of a "sleeper." Few people seem to know much about it. But, for about \$24 discount, it offers five separate courses, or 90 holes! That's not bad since many other golf programs with better graphics offer only nine holes or want you to send more \$\$ for additional courses. The program's

graphics are a bit crude in some ways, but, all in all, the game is fun.

(Tandy mod 16 color: Yes CGA 4 color: Yes 384K req.)

Pipe Dream (Lucasfilm)

This game can be a real challenge. It's not terribly imaginative, just another clone of Pac-Man type games in that one must constantly keep ahead of the attacker. The "attacker" here is the "green slime" which constantly threatens to overflow the pipe that you, the intrepid plumber, must quickly lay ahead of it. Let the green slime catch up with you, and the jig is up, game over.

The interesting aspect to this game is the fact that you must plan your pipelaying well ahead since the pieces you are given in turn often do not fit your immediate needs. Here's where the fun comes in. The game is obviously modelled on older arcade games, but does add its own innovations. It's fun and the 16 color, Tandy mod assisted, graphics are quite good.

(Tandy mod 16 color: Yes CGA 4 color: Yes)

Populous, (Electronic Arts)

This is a very different game, somewhat reminiscent of Sim City. In Populous, however, you are more than a mayor, you are a god. Yes, that's right, you get to control the actions of an entire world. Beyond that, I know little about this game since it won't run in 16 color graphics and it really needs to in order to be effective. This is one of those games which won't be fooled by the Tandy mod; you may have the Tandy mod installed, but it won't recognize it. The graphics on the box really look dazzling, but I can't get them to run. Too bad.

(Tandy mod 16 color: No CGA 4 color: Yes)

Bar Games (Accolade)

This somewhat silly, but somewhat fun collection of singles bar sports does run on the junior quite well, one of the Accolade games that does so. The box recommends it for "mature audiences," but it's really quite tame. Graphics are very good, but the games are only fair.

(Tandy mod 16 color: Yes CGA 4 color: Yes)

Jack Nicklaus Golf (Accolade)

This is a version of the very popular Mean 18 golf game, which runs very well on junior. What a bummer when this version didn't! The game will lead you believe that it will run since the initial screens go by with little fuss, but the graphics go haywire when it comes time for the second shot on the first hole. The program did this on

(Continued on page 18)

Software Selections From the jr Newsletter Software Store

GAMES.

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

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)

TOMMY'S 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 Q's available. 16 colors on PCjr. Need 256K. (Disk #98)

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

PLAYER'S CHOICE. Six different card games, some easy, some hard, but all excellent. Youngsters can have fun playing Memory or Even-Out, which are quite easy to master. Blackjack is hard to beat, and Poker, which has the ability to modify its play in response to your methods, is a real challenge. Also two fine versions of Solitaire, one with great graphics. Some need 256K. (Disk #78)

SEE PAGE 22 FOR INFORMATION ON HOW TO ORDER

The Latest Goodies

(Continued from page 17)

PCjr's with IBM expansion boards and the jrHotshot.
(Tandy mod 16 color: Yes, but not for long)

Publish It! (Timeworks)

This "entry level" desktop publisher runs on the PCjr in our initial tests, although it does require two floppy drives. A hard disk would be nice, but you can use it without one. It must be used in black and white since it doesn't recognize Tandy or PCjr color, but the definition is very good. At the time of writing, no attempt was made to edit or print a file; all I can say is that the program does seem to run ok.

(Tandy mod 16 color: No CGA 4 color: B&W only)

Blue Angels (Accolade) Rack 'Em (Accolade) Hardball II (Accolade)

Programs will begin to load properly, but will permanently turn on all disks drives. My junior has three and they turned them all on. You can actually play Rack 'Em (it's a pool game) if you don't mind the fact that your disk drive(s) will run continuously. I do. Seems that Accolade could do something about this.

(Tandy mod 16 color: Yes, but irrelevant.)

F-19 Stealth Fighter (Microprose) F-15 Strike Eagle II (Microprose)

Patches abound to make F-19 work on the PCjr, but the out-of-the box version won't, believe it. (There seem to be many versions of F-19, some of which will work with the patch while others won't - ED) In truth, it may not matter anyway. F-19 is very similar to other air combat games and it also runs very slowly on an 8088-based machine like the PCjr. I've watched it on an 8Mhz XT clone and it was only so-so.

F-15 Strike Eagle will not work and there are no patches as of yet.

(Not generally compatible)

Microsoft Works 2.0 (Microsoft)

This popular integrated software package runs well on PCjrs. It is absolutely essential, however, to either install the INT9 patch (on PCjr Patches Disk #56), or use JRCONFIG, which fixes the int9 incompatibility automatically. JRCONFIG, for those who don't know it, is the excellent PCjr memory management software designed by Larry Newcomb and available on both versions of Jr Power Pack as well as PCjr Autsetup (Disk #110).

Their Finest Hour (Lucasfilm)

This is a very good combat simulation which takes great pains to follow the history of the Battle of Britain to the nth detail. A first class package in every sense. The graphics are excellent and the program's speed is quite good on an 8088.

Note: Based upon my experience, all Lucasfilm games seem to run on the PCjr and recognize the Tandy mod. A good reason to buy from this company and to let them know we "appreciate their support!"

(Tandy mod 16 color: Yes CGA 4 color: Yes)

Zany Golf (Electronic Arts)

Why is this game so cheap? It's on the closeout racks in software stores in the D.C. area for \$10 - 12. But it's GREAT! True, you only get nine holes, but the graphics are super in this crazy miniature golf game. BUT, you must have the Tandy mod to use it.

The game also has very good music, but you must use another program to turn the PCjr's speaker on first. I use a Sierra game, such as Police Quest; run that game, exit to DOS, and then run Zany Golf.

(Tandy mod 16 color: Yes CGA 4 color: NO)

Flight Simulator 3.0 and 4.0 (Microsoft)

Both versions run on the PCjr, but will not run in 16 colors out of the box. 3.0 needs a patch, available from many PCjr user groups or from jrNewsletter (Disk #56); 16 colors are then available by selecting video option "n" - custom driver -- on the opening menu.

Things are not so simple with 4.0 which does not allow for a "custom driver" for video. To run FS 4.0 in 16 colors, you must have the Tandy mod installed.

That's all well and good except that there are still a few problems with these advanced versions of FS on an 8088 machine like junior. They will run at an acceptable speed with smooth control response until you begin to add many options such as thunderstorms and air traffic. One or two optional graphic features won't slow you down too much, but many will.

Lastly, my copy of 4.0 has one annoying feature: the aircraft flies around in a nose-high attitude by default, forcing me to remember to trim it with the wheel on the joystick. The "trim" feature in the program doesn't work at all. Anyone else have this happen? (Rene Waldron reports in this month's Questions and Answers column that the trim function works, but by such tiny degrees that you might think it's not working. - ED)

Mines of Titan (Infocom)

Everyone liked the "Zork" series back in '84 but wished they had graphics. Now they do! This is a feast for

both older Zorkophiles and neophytes. A great computer game, well thought out and well executed.

(Tandy mod 16 color: Yes CGA 4 color: Yes 384K req.)

A-10 Tank Killer (Dynamix)

This one uses something called "Smart Start" which won't let you tell it that you have a Tandy (mod). It automatically senses the type of machine you have and goes right to four colors.

But after I tried it for a bit in dull six colors, I decided that it was one of the worst flight/combat games around anyway. After all, someone has to be the worst, right?

The "Smart Start" feature also means that it's not likely that ANY Dynamix game recently released will run in 16 colors.

(Tandy mod 16 color: No CGA 4 color: Yes, but who cares)

Chuck Yeager's Advanced Flight Trainer 2.0 (Electronic Arts)

This program proves one thing we all knew: dogs don't fly. "Yeager" was an early attempt to capitalize on Flight Simulator's deserved popularity. It didn't and its "2.0" version doesn't either. It's slow and pointless. Oh, it also refuses to recognize a PCjr's Tandy mod so it won't run in 16 colors. They're doing you a favor.

(Tandy mod 16 color: No CGA 4 color: Yes, unfortunately)

688 Attack Sub (Electronic Arts)

Good news here. A great game and it runs in 16 colors with the Tandy mod. One drawback is the very long session it will take to "decompress" the files onto your "work disks" just to run it. This took me about 40 minutes; no one should be put through that type of nonsense. But, it's a relatively bulletproof process, so you'll survive and the game is worth it.

(Tandy mod 16 color: Yes CGA 4 color: Yes)

Strike Fleet (Lucasfilm)

Another good Lucasfilm product that runs on junior. This one is also one of those good games that sells for \$10 - 12 at many stores. This is an enjoyable and colorful naval battle game, although the action is not exactly fast-paced.

As noted above, all Lucasfilm games we've tried run on the PCjr. This includes the "Indiana Jones" series, although I don't have first hand experience there.

(Tandy mod 16 color: Yes CGA 4 color: Yes)

Battle Chess (Interplay)

Here's another game that requires some other program to turn on the PCjr speaker. Run a Sierra game first,

for example. This is really necessary since half the point of playing this chess game is to hear the sound effects. Armor clanks, knights groan as they die, and the rook's footfalls are like mini-earthquakes.

A completely different chess game, but you must have the Tandy mod to run it. Without it, you will get the program overlaid with horizontal black bars - the "venetian blind effect." (Here's another example of how different PCjrs get different results. Battlechess runs fine on our PCjr without the Tandy Mod. - ED)

(Tandy 16 color: Yes CGA 4 color: No)

Where In Time Is Carmen Sandiego? (Broderbund)

All Carmen Sandiego games run on the PCjr, but none seem to do so in 16 colors, with or without the Tandy mod. Still, the graphics look ok in 4 colors and the game's real forte is the mystery of it all, not the graphics display. 2 disk drives needed.

(Tandy 16 color: No CGA 4 color: Yes)

Well, there it is. A rather long list of software and the results when the programs were tried on various PCjr's. It's very likely that someone out there will have had very different experiences, good or bad, with these programs. Perhaps you use a program every day that I can't run. Or you can't get to first base with one I've labelled "compatible." I imagine that that's half the point of an article of this type: print whatever you've observed to see who can suggest a fix. In fact, that's the point of a newsletter like this, isn't it? As the old philosopher once said, "You attract more truth with lies." In any event, if you disagree with anything said above, please feel free to share your experiences.

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Questions and Answers

(Continued from page 4)

mean it...

Q. Some programs, such as Rack 'Em, load and play fine, but the disk drive does not turn off. The same thing happens with the Ford Simulator. Other programs evidently have a problem with the jr's keyboard, such as not recognizing everything such as the Function keys or even the joysticks. H. Roedersheimer, Ft. Thomas, KY

A. For some of these problems we have found that the copy of DOS 2.10 being used has not been patched. We thought the IBM DOS 2.10 "bug fixer" patch had enough publicity and circulation by now to have been installed on 100% of our readers jr's. If you haven't patched yet, get the IBM DOS 2.10 patch from the Software Store and do the installation. No other DOS version needs or can use this fix. For the second part of the above problem get diskette #56 from the Software Store and use one of the two supplied INT9 keyboard input compatibility patches. Either one will do, they do the same thing whether the .SYS version to add to your CONFIG.SYS file or the .COM version to add to your AUTOEXEC.BAT file. The INT9 correction is just great, as it will correct the keyboard incompatibilities and allow more standard IBM PC programs to run. If you use JRCONFIG, though, you won't need the INT9 patches, since JRCONFIG corrects the problem automatically.

Q. What is advantage of DMA, what negates it? What are pros and cons of V-20 CPU? I have heard things can

get complicated with this. **B. Black, Jacksonville, NC**
A. DMA is just NOT available for the jr! Pseudo-DMA for the jr, and real DMA for the PC allow a limited amount of simultaneous operations to take place. This can happen because the 8088 or 8086 CPU in other IBM PCs sends messages to other chips to get on with their thing. The CPU returns and goes right to work again. Things like: drive reading or writing and keyboard input without rejection and the accompanying the beep. Other internal timing changes for two things to go on at the same time. In the standard PC this actually happens with DMA, in the jr the 8088 does everything! No helper chips to take over some of the other work. A kind of split-use and buffer (the pseudo-DMA) allows the appearance of multi-function of the operations, such as keyboard input during drive access. The 8088 then goes back to normal duties as soon as one of the operations has finished. Advantage is speed and in the case of the jr, some increased compatibility with certain time-sensitive programs ie. those which expect keyboard or other input immediately after firing up the disk drive. Disadvantage? None really. Only that the DMA as implemented for the jr is not 100% compatible with a few really fussy programs. The V-20 chip by NEC is a simple "swap" as far as installation is concerned. The Pros are that, internally, it performs some operations faster than the Intel 8088. Not "clock" faster; just more efficiently (less clock cycles per operation) and the results are fed out to the jr's bus more quickly. The performance increase can be as high as 40% for some operations but no increase for others. In no case is it slower than the 8088. Cons? We have heard that it won't work with certain software, BUT... we have NEVER been able to duplicate the problem. Here, we have been running two V-20 chips for some years now, and have not had a single problem with either of them, hardware or software! We have grown used to the speed increase and when at the keyboard of another, standard, jr we notice the a kind of "boggy" or hesitant operation. It really isn't imagination, either. With enough memory expansion to get above the first 128K and the V-20 chip installed, the jr runs at nearly twice the speed of the PC XT, as indicated by Peter Norton's SI measurement. Normally the jr runs at only 90% the speed of the XT, or even slower.

Q. Is there a way to build a 2K buffer and interface it to work with AT or XT keyboards for the jr? **G. Hornberger, Northfield, NJ**

A. There probably are a number of ways. None are necessary, though. The reason is that there are Public-Domain and/or Shareware programs which allow the existing internal keyboard buffers to be expanded to almost any size needed. They usually work in the CONFIG.SYS or AUTOEXEC.BAT files. You might even find a TSR. You'll have to look on CompuServe or GENIE for them. You might also take a peek at the back pages of BYTE, PC World or PC Magazine. Here's some additional informa-

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tion: The safest way to interface to the jr is to get a keyboard with a switch to be able to select either XT or AT data input signals. Remember this is a kind of serial device with all the usual parity, size, stream, timing and port possibilities...

Q. I tried to install a RAMdisk using JRCONFIG with my Racore unit set to PC Mode. An error message came up looking for a "command" file and would go no further. Must I be in jr Mode to have a RAMdisk?
W. Huston, Akron OH

A. No. DOS really is telling you something when these messages come up. In cases where "cannot find..." or "cannot load..." some certain file, it usually means that the file named is simply not on the disk or in the directory where it is expected. Be sure ALL the files (along with COMMAND.COM) which will be loaded and run by CONFIG.SYS and AUTOEXEC.BAT are available as they are needed. Although it's hard to tell from the way you phrase your question, you may be speaking of an instance when software requires access to COMMAND.COM. JRCONFIG's author, Larry Newcomb provides a solution to this in his instructions. In your AUTOEXEC.BAT file include the following lines: SET COMSPEC=C:\COMMAND COM COMSPEC C:\COMMAND COM (Note: This line is only needed for DOS 2.1, not if you're using higher versions of DOS) COPY COMMAND.COM C: With these lines in your AUTOEXEC.BAT file you should never see a message from DOS asking for COMMAND.COM. See the instructions provided with JRCONFIG for more details.

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(Please use Order Form on page 23)

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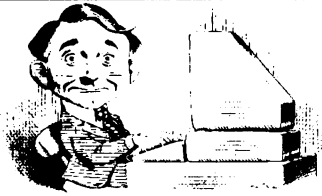
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PCjr PATCHES V.5.0 Patches to fix software that ordinarily won't run on PCjrs. V.5.0 adds patches for Prodigy, Telix V.3x, Bard's TaleII, Maniac Mansion, Designasaurus, California Games, and F-19. Also patches for Flight Simulator V.3.0, Loderunner (V-20 chip), Arctic Fox, Managing Your Money V.3, Autocad, King's Quest IV (early 512K version), KQ II (PC ver), Turbo C, Quick BASIC V3-4, Starflight, Advanced Flight Trainer, Double DOS, Bard's Tale I, Turbo BASIC, and BASICA. (Disk #56)

jr Newsletter Software Store

The software in the jrNewsletter 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.

All software titles are listed on the order form on page 23. Please refer to the following for further listings in this issue:

Educational Software, page 4.

Especially for PCjr, page 11.

Games, page 17.

PCjr Reference on a Disk, page 21.

Need Help for Junior?, page 22.

Our Most Recent Additions

NEW VERSION * PCJR COMPATIBILITY DISK V3.5. Lists hundreds of software titles, along with info on how they run (or don't run) on PCjrs. Includes many tips on how to make software PCjr compatible. Powerful search feature finds titles quickly and easily. 128k ok. Updated March, 1990. (Disk #60)

*** NEW * 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)

*** NEW * JR TOOLKIT.** A collection of 25 upgrades, modifications and repairs that PCjr users with a little soldering experience can perform quite easily. Includes PCjr to Tandy 1000 modification, memory and power supply upgrades, disk drive additions, many useful diagnostic and repair tips and more. (Reviewed 3/90) (Disk #110)

*** NEW * PROCOMM PLUS TEST DRIVE.** This is the upgrade of the already powerful and popular Procomm V2.42. It's got many new features including an improved host mode, context sensitive help screens, more powerful scripting. In addition to its power, it's very easy to use. (Reviewed 3/90) 256K (Disk #108)

*** NEW VERSION * 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. 128K ok. (Reviewed 3/90) (Disk #50)

*** NEW * FAMILY TREE.** Powerful genealogy program with easy to use menu system. Prints handy research forms, checks your accuracy, prints variety of charts and can make your family tree into a book! 256K (Reviewed 3/90) (Disk #109)

NEW! jr Software EASY ORDER! Form

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- 1 PC WRITE V3.02 (3 disks-\$12)
- 2 PC CALC PLUS. 512K (2 disks-\$10)
- 3 PRINTMASTER LIBRARY. (2 disks-\$10)

TITLE

- 1 PC-WRITE V2.5 (128K)
- 2a PC-WRITE V2.7 (256K), Disk 1
- 2b PC-WRITE V2.7 (256K), Disk 2
- 3 PC-FILE III. 128K
- 4 PC-FILE III. 256K
- 5 PC-CALC. 128K
- 6 PC-CALC. 320K
- 8 GAMES I
- 9 DUNGEONS & WARS
- 10 PINBALL RALLY
- 12 REFLEX POINT
- 14 ADVENTUREWARE
- 15 PROCMM
- 16 BUSHIDO
- 17 PC-OUTLINE
- 18 TYPING INSTRUCTOR
- 19 3 X 5
- 20 EQUATOR
- 21 TIME TRAVEL IN HISTORY
- 22 PC-DESKTEAM
- 23 PC-PROMPT
- 24 PC DOS HELP
- 25 PC-CHECK MANAGER
- 26 BATCH FILE UTILITIES
- 27 MINICALC
- 28 SUPER UTILITIES
- 29 MORE SUPER UTILITIES
- 30 ARCADE GAMES
- 31 BOARD GAMES

- 32 PLAY AND LEARN
- 33 FAMILY HISTORY (128K), single
- 33A FAMILY HISTORY (256K), need both
- 34 GAMES II
- 35 NEW KEY
- 36 PIANOMAN
- 37 PC-KEY DRAW
- 38 PC-KEY DRAW DEMO
- 39 ORIGAMI
- 40 DOS 2.1 FIX
- 41 WORD PROCESSING FOR KIDS
- 42 MATH FUN!
- 43 BRAIN BOOSTER
- 44 PC-CHESS
- 45 ZAXXON/GALAXY TREK
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- 47 GOLF/SAILING
- 48 EARLY LEARNING
- 49 DOSAMATIC
- 50 IMAGEPRINT V3
- 51 PRINT HANDLER
- 52 JR POWER PACK
- 53 CASTAWAY/S. AMERICA TREK
- 54 THE BEST OF JR NEWSLETTER I
- 55 SUPER BOARD GAMES
- 56 PCjr PATCHES V.5.0
- 57 HOME BUDGET MANAGEMENT, 128K
- 57A HOME BUDGET MANAGEMENT, 256K
- 58 HOME INVENTORY
- 59 CHECK PROCESSOR
- 60 PC-JR COMPATIBILITY DISK, V3.5
- 61 BOYAN
- 62 JR MUSIC MACHINE
- 63 GAMES FOR EARLY LEARNERS
- 64 COMPUTER JOKER

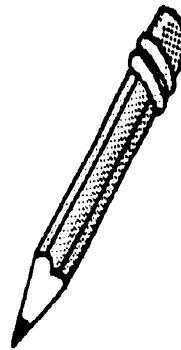
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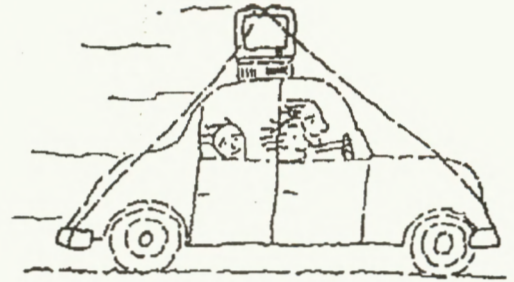
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