June, 1990

jr Newsletter

Sierra Continues Support For PCjrs (When Possible)

Sierra-On-Line, maker of the King's Quest series, which was originally written especially for PCjrs, has continued to go out of its way to provide PCjr compatible games of high quality with Code-Name: Iceman and Silpheed.

Both games are compatible with PCjrs having 640K, and both are well worth owning and playing. However, as Ken Williams, president of Sierra told us a while ago, the high quality animated graphics used in games produced by Sierra in the past two years will run slowly on computers operating at less than 8 mhz. So Ken recommended that serious game players add speedup boards to their PCjrs in order to keep up with the times. PCjrs operate at 4.77 mhz unless they have a speedup board installed.

Conquest of Camelot, another recent Sierra game, runs on some PCjrs and not on others. Sierra originally included PCjr compatibility on its packaging for Conquest, but has now taken it off because many PCjr users have found that it locks up their computers. There are so many different memory expansion units for PCjrs that Sierra gave up trying to figure out which ones Camelot will work with and could not give us a complete report.

Carl Haub, president of the Metro PCjr Users Group, says he's in the process of playing Code-Name:Iceman and has this report in the current issue of the Metro Journal:

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PCjr Lives!

If You Love To Play Games Tandy Mod Is Essential

If you're feeling sorry for yourself because your buddy has a computer with a color graphics card that displays games in a rainbow of colors, you absolutely MUST scrape together the few dollars needed to put the "Tandy Mod" in your PCjr.

With this relatively simple, but not for the klutz, modification, your PCjr will be able to display most, if not all, software that says it's Tandy 1000 compatible in 16 colors.

The modification can be done by PCjr specialists, such as the advertisers in jr Newsletter, for about $31. Or, if you have some experience with a soldering iron, you can do it for about $7. Either way it's a small price for a quantum jump in your PCjr enjoyment.

The modification is needed, to put it bluntly, because many software companies support the Tandy 1000, which is still being sold by Radio Shack, and not supporting PCjrs, which .... well, you know. PCjr graphics are just as good as the Tandy 1000s, but unless the software can activate them, they might as well not exist. There are still some software companies that support PCjr 16 color graphics, but many more are producing games that will only run in 4 colors on PCjrs.

The Tandy Mod allows you to select the Tandy 1000

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Beginner's Corner

Deciphering New Software

By Bruce Holmen

OK, you just got a program disk from your local Personal Computer Users' Group. You take the disk home to introduce it to your very own personal computer, and it's like the first time you set up a friend on a blind date. Nothing happens. Nobody knows what to say, or even where to start... Simply read on and in this very Newsletter, we shall present you with the keys to success in deciphering a disk!

1) Label the original disk, so you will know what it is. This sounds silly, but many people no longer know what programs they have.

2) Put a write-protect tab on the original, and make a DISKCOPY. This way you can experiment with the copy, knowing that your original is safe from harm.

3) Run a DIR to see what files the disk contains. If you want a hard copy directory listing, type DIR> PRN at the DOS prompt.

4) Look for a file called READ.ME or README or README.DOC or something similar. Such files are like the magic cookies that alice carried with her in Wonderland. If the cookie says EAT ME, you eat it. If the file says READ.ME, you read it. How? Type this command at the DOS prompt > TYPE READ.ME and press Enter. If it scrolls by too fast to read, use the Fn Pause keys on the PCjr keyboard to stop it. Then any key to start it again.

5) Use the command COPY READ.ME LPT!: (or COPY READ.ME PRN) to get a printed copy. Be sure your printer is ready before you enter the command. READ.ME files are usually quite short, less than ten pages, and often one or two.

6) Read the READ.ME file. It may tell you everything you need to know about getting started. If not, read on...

7) Look for files with the .DOC extension. These are normally program documentation files, much larger than a typical READ.ME file. Some may run more than 80 pages. If you want to print a .DOC file, be sure you have plenty of paper. Then type copy (Filename).DOC PRN. You type the filename as it is listed in the directory.

8) Look for .BAT files. These are DOS Batch Command files that have been written to make your life easier. Try them! After all, you are running on a copy, not the original. What can go wrong? ...can go wrong? ...can go wrong?

9) Look for .COM and .EXE files. These are the actual programs that must run for the computer to do anything useful. Most disks will have both .COM and .EXE files, just to keep things interesting. If in doubt, try the .COM files first, since .COM files can all (i.e. run) .EXE files, but not vice versa. All .COM and .EXE files will run when you type the word to the left of the .COM or .EXE.

10) If there are no files with .BAT, .COM, .DOC or .EXE extensions, look for files with the .BAS extension. Eureka! You have a disk full of BASIC programs. This is wonderful IF you happen to have BASIC on your computer. With a PCjr, this (normally) requires the BASIC Cartridge. With any other machine, it requires the BASIC that came on your DOS disk. Unless you are running a True-Blue IBM PC, you must have GWBASIC, Compaq BASIC, or some other version that can be run without the IBM proprietary ROM chips. Good Luck!

11) By now, you have either found something to run, or you have already formatted the disk and quit reading this spiffy article. It's a free country. I don't mind if you give up. But your computer will never let you live it down!

12) Try the silly program! After all, it is only bits and bytes. Besides, even if the program is a real dog, the bark is worse than the byte. (I can't believe I actually wrote that.)

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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, Southbury, CT 06488

Q. I cannot get my serial Genius Dyna Mouse GM-6000 to work properly. This mouse works on both Compaq and Epson computers. I've tried some simple mouse driver software. I have even tried to debug the non-PCjr compatible code from the software. Even a simple BASIC program gives me framing errors. I think this mouse communicates with the serial port at 1200 baud. The port seems fine, because LapLink works fine at even faster speeds. Do I need special software, hardware or what? J. Salyer, Houston, TX

A. First, we would be using COM port #2. Use any COMswapping program to do this. The driver (SYS) software which came with the mouse should have some variables to set up either in the file DEVICE= for the CONFIG.SYS and/or in the .COM file to activate the mouse driver. Set these up for COM2 and experiment with the speeds (dynamic resolution) parameters, starting at fairly low resolution and dynamic trigger numbers, however this mouse labels these. The mouse must be activated BEFORE any other TSRs in the autoexec.bat file because there is only one place in memory where it will operate due to the device driver in the config.sys. Once activated it will constantly monitor the serial port and keep track of mouse moves and button presses; your program should simply read,set, or reset the numbers.

We're not sure what you mean by "framing errors" but if you mean that the pointer is not where it is expected to be then we suspect you might need to run Microsoft MOUSE.COM (version 6.24,don't use anything earlier!) to activate the driver to be compatible with the program running and the text / graphics screens of the jr. We do this with our IMSI Mouse and it becomes compatible with everything we throw at it, especially Microsoft products, like QuickBASIC or C. It won't run 100% properly otherwise. This and a pile of other really useful files come on two diskettes packaged with a wonderful book "Microsoft Mouse Programmer's Reference",Microsoft Press, 1989. There are mouse programs in four languages (Interpreted BASIC, QuickBASIC, MASM and C/Quick C) in this package. This can be a $29.00 - $39.00 expense, so try a test of it first, if possible. There really isn't anything inherently different or incompatible in the jr as far as serial rodents are concerned, so we think it's just a matter of getting the software working correctly with however you have your jr configured. We do not have a Genius Mouse available for testing. Do any of our readers have this rodent up and running? We'd appreciate having the set-up information on various rodents to pass on.

Q. I have a problem with what seems to be the timing of my jr. It takes one minute thirty-five seconds just to do the memory check upon a cold boot-up, even though the speed of reading and writing to diskettes etc. does not seem to be affected! A technician told me that some PCjr mother boards need a circuit opened (sic) or that some boards had a problem with Racore DMA.What's going on? C. Greer, Fort Wayne, IN

A. If you really mean it that the rest of the speeds of the operation of the computer are NOT affected, then just leave well enough alone. If, however, you discover that the whole thing is really running more slowly, then you must have it looked into. We have never heard of the two bugs or fixes you mention but even stranger monsters may lurk in the dark. You might want to consult with one of our repair-oriented advertisers to find out more about how to make things right. Remember, they specialize in the jr and can make repairs and get the jr back to you in a jif if you need it.

Q. Would you please re-print the information about the protectors for the port connectors on the back of the jr? R. Chiruda, Edison, NJ and others.

A. Here's the information as of June 1990 but we cannot guarantee results if the parts become unavailable at this late date. Call 1- (303)-924-4100 (the Boulder, CO IBM warehouse) to request part #6447163. This consists of two protectors in a plastic bag with instructions. The person answering will ask for an account number; they're used to dealing only with authorized distributors or dealers. You'll have to set up an account. The parts are no longer free (the freebie aspect died some time ago) but

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Questions and Answers

(Continued frm page 3)

the cost is only $2.60 plus non-US Postal Service shipping. (UPS or Federal Express is used.) Your first order will be on a C.O.D. basis, so you pay when the parts arrive. I found the IBM personnel very polite, flexible and eager to please. (What happened there?) If you choose, you may later write and close your account. This whole operation seems to be a nuisance for getting the protectors but it's worth the effort if you need them!

Q. One of my jrs has a video problem. In text mode, the display has "dashed" vertical lines which line up with the left side of the letters making the text almost unreadable. These lines are not constant but "grow" and "shrink" up and down the screen. Have you a magical solution? A. Jones, Cheverly, MD

A. No real solution, but a technique which should help you out. You have two jrs, right? Oh, oh... here it comes...

Try swapping the 64k memory card next to the power supply on the left side of the jrs. Try swapping whatever chips and or boards are removable and observe the screen. Please, puhlease be sure to turn off AND unplug the jrs from the wall receptacles when your fingers are about to go inside!

This method may seem like a time-consuming procedure but it could save a bundle in trouble-shooting costs. If nothing worthwhile is noted then you'll probably have to go to the pros.Once again, some of the advertisers in this newsletter may be able to do whatever repairs are necessary and for less expense than local repair shops.

Q. After replacing my keyboard, I found out that the only sound my jr can give me is the "beep" from inside the system unit.I'd really like to have the sound from the monitor speaker back. E. Schmidt Jr. No. Bruns. NJ

A. There is a small audio generator/amplifier in the unit and there are actually three (eventual) outputs from this little device. One goes to the internal beeper, another (via the amp) to the IBM monitor(s) through the connecting cable and the third is the output marked "A" (for Audio) on the back of the jr. This is the round RCA type receptacle next to the power plug, beneath the ON/OFF switch. Any sound signals going to the monitor also are fed to this point. Get an audio cable from a Radio Shack with an RCA plug on one end and with spade or bare wires on the other. You can push the RCA plug in here and connect the other end of the wires to any cheap little speaker to see if the jr is outputting anything. If there is no sound then the chip or its connections are faulty. If there IS sound then the plug, cable, connections,or monitor speaker are at fault. You may be able to wiggle the cable at each end to determine if the plug(s) or cable are bad.

Q. I have a Creative Firmware second drive a would like to replace the drive with a 3.5". Will a 3.5 fit in the place now taken up by the 5.25" drive? I. J. Konrad, Big Rapids MI

A. Yup, it'll fit... here's what you'll need:
The drive itself; get a 720k drive.

A standard installation kit; this is a set of rails which is a kind of chassis, some bolts, a set of adapter cables and a replacement faceplate.

Either some new driver software for DOS 2.xx (this should be included with the drive or kit) or start using DOS 3.xx

Now, you might think about putting the 3.5" drive in the system unit and keep the 5.25" for drive B:.. same kit same installation. Just think, boot, mouse drivers, a word processor,spell-checker, spreadsheet, filer and telecommunications all on one diskette! Keep the data for these on B: If you have a hard drive or huge data files though, you might want B: as the 720k storage.

Q. My printer will only run for a certain length of time.It is connected to a port on the Impulse board. To continue printing I must shut down the computer for a few hours. The printer is fine, as it works when connected directly to an ordinary parallel adapter without the extra memory combination board. Also, is there

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READER FEEDBACK

"Neophyte" Asks Several Questions

I have been a subscriber about three years and enjoy and learn from each issue of your publication as I am a neophyte at personal computers.

I have an unmodified 128K jr with the IBM color display and a pro-printer.

A while ago I purchased a copy of "Top Gun" by Thunder Mountain of Northbrook, IL. The box says it is for a PC/PCjr 128K, but I can't get it to work. I wrote Thunder Mountain and am without success in getting a reply.

After I load the program, it locks up on the initial menu which offers PCjr or Tandy selections, and I am unable to get the cursor to move to the jr line. There is no reaction to any key or combination thereof that I can think of on my keyboard. Perhaps you or some of your readers have solved this problem.

For people like me, could you write an article about the various levels of color generation in one of your issues? I know the jr has color as do others, but I don't really understand the differences in the CGA, etc.

Please tell your advertisers to remember that they are trying to sell to some people who don't understand what they need, nor how they would install it if they got it; i.e., how does an additional sidecar go on over my parallel printer sidecar?

William Bulger, Onalaska, WI

EDITOR'S NOTE: Top Gun has been around for years and definitely does run on PCjrs with 128K. Assuming you aren't doing something that interferes with the software, like booting up with a memory resident program such as Sidekick, our best guess is that there is a new version of this software on the shelves which is no longer compatible. But, if Thunder Mountain continues to list PCjr compatibility, we doubt that's it, either. There is also the possibility that the Top Gun disk you got is defective.

As for an article on PCjr color capabilities, we had one a couple of years ago, and we agree, it's probably time for a new one. Stay tuned.

Good point about advertisers (as well as editors) keeping in mind that they're plenty of PCjr users who have very little knowledge of computers. We do try to explain things clearly and simply in this newsletter, although we realize we can't or don't always succeed. Sometimes the subject is just plain complicated, But we try, and we hope you'll ask questions when something in the newsletter is not clear enough. As for our advertisers, to be frank, it depends on who you get on the phone if you call for information about a PCjr product. Although all of our advertisers have knowledgeable PCjr experts on staff, some are better than others about explaining things to beginners. Don't forget, though, there's no harm in saying "I don't understand. Please explain." Everyone was a beginner once, and there's no reason to be ashamed of it.

To answer your last question, yes, you can attach several sidecars on to your PCjr.

Compatibility Report From Avid Game Player

War Eagles (Cosmi), is a World War I aerial combat simulator that works on my PCjr. Strangely, it only works on a copy with an open notch! Interesting and fun in biplanes and triplanes of WW I.

My PCjr system has 640K with a Racore Drive II and the Tandy mod is installed.

The following new programs will not work on my system: **Reel Fishin** (Interstel), **Up Periscope** (Sublogic), **Horse Racing** (Omni Play/Sporttime), **Ferrari Formula One** (Electronic Arts).

Dr. Warren Hedman, Honolulu, HI

Adding a 3.5" Drive, Running Chessmaster 2000, and Other Tips

I read with interest, A. R. Chinery's experience with adding a 3.5" drive to his jr. I also noted G. Johnson's problem with getting Chessmaster 2000 to run on his jr. I've had similar experiences in both areas and believe I can be of help to both.

I, too, recently added a 3.5" 720K drive to my PCjr (after previously adding one to my XT clone). While several jr vendors offer software which allows you to use the drive without upgrading to a later version of DOS, I would still recommend doing so. DOS 3.2 and higher will recognize the drive as a 3.5" 720K drive if the line "DRIVPARM=/D:1/F:2" is added to the CONFIG.SYS FILE (DRIVER.SYS, as I understand it, works somewhat

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Reader Feedback

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differently). I should also point out because of a bug DOS 3.3 requires the line to read "DRIVPARM ^A^A^A / D:1/F:2" for it to recognize the drive properly (Do NOT include "="!).

Incidentally, Racore owners who have the DMA option need to have an ohm resistor replaced on the Racore FDC if they want to use a 3.5" drive in their jrs. Paul Rau Consulting made the modification for me and also provided a new data cable (the Teac 3.5" drive I obtained has the connector on the opposite side of the drive) with a twist (pin 1 on the connector was also on the opposite side from where it is on the Qume drive) both for a nominal charge. Paul was extremely helpful and I can't praise him enough!

One question I have is, can the jr be booted from the 3.5" drive (with DOS 3.2 or later)?

I was also advised by Paul that while Teac and Fujistu 3.5" drives worked well in the jr, they had problems getting Toshiba drives to do so. A word to the warning.

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Regarding Chessmaster 2000, I also had problems getting it to run on my jr. As it turned out the problem was only in early versions of CM2000 (version 1.06 and earlier). Version 1.08 ran without any problems whatsoever on my jr. While I haven't tried it, I suspect that CM2100 will also run on PCjr.

Speaking of software compatibility, I noted that **John Madden Football** was listed in the December issue as running in 16 colors. I assume the person reporting this had the Tandy modification since the 2 minute warning version included with a box of Maxell 3.5 disks I recently purchased only ran in CGA graphics on my jr.

To close, I'd like to suggest that the jrNewsletter establish a phone number readers with subscription/software store order problems can call to resolve such problems.

Steven S. Miller, Grand Terrace, CA

EDITOR'S NOTE: Yes, you can boot from a 3.5" drive. See the article in our January issue on page 11 for details. Thanks for the tip on Chessmaster 2000. We've published this information before, but it's worth printing again for our new subscribers and others who may have missed it. As for a telephone number for readers to call, we realize it would be a great service, but unfortunately with our small staff it's all we can do to put out this newsletter every month. If we were to start taking calls, too, we'd have to make jrNewsletter a quarterly publication. We do try to respond promptly to your letters stating problems with our software orders and subscription fulfillment. And we try to answer other questions through the newsletter. We regret that we can't send individual responses to everyone who writes us. So, we sympathize with the request for a telephone service, but we ask you to bear with us and understand that much as we'd like to provide many more services than we do, it's just not humanly possible.

Do-It-Yourselfer Wants Controller Mod for 3.5" Drive

I read on page 10 in your November, 1989 jr Newsletter that a reader had modified their floppy disk card (using Paul Crumley's instruction) to add both a 5 1/4" and 3 1/2" drives to their PCjr. I have checked both of the Best of jr Newsletter Disks #54 and #91 to see if you may have printed this information in the past, but I have not been able to find it. I would like to know if you could send me the information or if you know how I might obtain Paul Crumley's instructions to modify the floppy disk controller.

I myself have information on how to add a second 5 1/4 inch disk drive by adding two IC chips to the PCjr disk controller card with a software fix from an old issue of HOME COMPUTER MAGAZINE, Vol. 4, No. 4. I have not

done this yet because I have been using the ADJRAM (Adjustable RAM drive from your Disk #75) very effectively. But now I would like the added storage that a 3 1/2" drive gives without the price.

I do not know if the information that I have and Paul Crumley's instruction are the same. I would really like to add a 3 1/2 inch drive which my instructions do not specify because it was printed before 3 1/2 inch drives on the PCjr were thought possible.

I like the do-it-yourself type projects that you have printed in the past, like the Tandy modifications which I have done myself for less than $10 with great results.

If possible please send the information with the back issues that I am also ordering. Thanks for any information you can send me regarding the disk drive controller card modification stated above.

Kenny Ibarra, Riverside, CA

EDITOR'S NOTE; No, we haven't published instructions on modifying disk controller cards to add 3.5 inch dives, but we do have the instructions included in the new version of JR TOOLKIT, along with several more do-it-yourself goodies.

MIDI, Xywrite, DMA and Dvorak All Discussed

First, let me compliment you on an excellent newsletter. Both Junior Newsletter and The Junior Report have helped educate me and many others about the PCjr and computers in general, and I am very appreciative of this.

Second, Enclosed is a diagram of a MIDI interface which is supposed to work on the PCjr. Perhaps it will be of benefit to someone trying to perfect a MIDI interface for the Junior. I have a technician attempting to build a MIDI interface for my computer, and any information that might be shared by other readers would be most welcome. (He wants to try to improve upon the schematics enclosed -- I'm not sure how well they work or don't work.) Like the reader who asked for help concerning MIDI in a recent issue, a MIDI interface is the one thing I'd really like to see devised for the PCjr ...

Third, The recent survey of "favorite software" for the PCjr listed **XyWrite,** a program I would like to be able to operate. However, the compatibility list provided in one of the issues of The Junior Report indicates that XyWrite 3+ doesn't run with the Junior keyboard (if I understand the listing properly). Can someone explain the contradiction? I am interested in running XyWrite 3+ -- I've been told that XyWrite supports the PCjr with version 3, but this particular version is hard to obtain (not to mention that it's actually more expensive). Are there any patches or tricks that anyone knows of that would rectify the problem? Or, what if I were to change keyboards (as the listing in the Junior Report indicates that XyWrite will run, but not on the Junior keyboard)? Whatever help you could give me concerning this would be very welcome.

Fourth: how about an article on quirks and solutions specific to the Racore expansion unit with DMA? Perhaps this would also spur some readers to send in solutions they have devised for making otherwise not workable add-ons compatible with this expansion unit.

Fifth: I would like to make a special recommendation for any reader interested in a Dvorak keyboard. Seasoned Systems (P.O. Box 3720, Chapel Hill, North Carolina, 27515) has a program which changes the standard Qwerty keyboard into a Dvorak layout. The keyboard can be switched back and forth between Dvorak and Qwerty modes. The software also contains a typing tutor to help learn how to type on the Dvorak keyboard. There is also an hypnosis audio tape to facilitate learning enclosed with the package. The real reason I recommend the Seasoned Systems package so heartily, however, is because their support is the best I have ever encountered in the computer industry. Recently, one of their technicians spent an hour on the phone with me (on their toll-free number) working on a problem specific to my Toshiba-

(Continued on page 8)

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)

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)

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. 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)

Reader Feedback

(Continued from page 7)

1000. This help was way beyond anything I expected. They have also been most supportive of my PCjr. My recommendation of Seasoned Systems is both a way of saying "thanks" to them and also of alerting PCjr users (who have potential quirks with keyboards, anyway) to an excellent product and service which runs flawlessly on the PCjr.

Alex Crisafulli, Des Plaines, IL

EDITOR'S NOTE: We have passed the MIDI interface diagram along to others who are interested in developing this enhancement for PCjrs. We'll report back to our readers if they come up with some useful how-to instructions.

RAMDISK. Use ADJRAM to create a RAM disk of any size and adjust its size at any time without losing the contents. Or use JRCONFIG to set up your PCjr. Both programs with complete instructions for creating and using RAM disks on you PCjr. Need 256K. (Disk #75)

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

PC DOS HELP. Similar to PC-Prompt, but takes up less memory (16K) as a resident program. Geared to DOS 2.1 with special PCjr commands included. 128K. (Disk #24)

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)

COMPUTER TEACHER. For those who want to learn how to use DOS commands and to understand basic computer hardware terms, this interactive software will help you become computer literate. Helps you better understand those manuals and computer magazines, as well as how to do more with your computer. 128k (Disk #77)

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

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

We haven't been able to find out how to get the XyWrite 3+ running on PCjrs, sorry.

If we can locate an expert on the subject of Racore's DMA, we'll certainly try to come up with a list of ways to cope with it. In the meantime, all we can suggest is, if you're having difficulty with it, you can disable the DMA fairly easily. We provided instructions in our January 1989 issue on page 8.

And finally, thanks for the very useful information on the Dvorak keyboard.

User Appreciates SPC's Service

I am writing this letter to tell my good experience with a company called Systems Peripherals Consultants. I purchased a hard drive without the drive, from them. I received the power supply in a really nice case, plus the sidecar controller to run the drive and the software. I received everything in fine condition, but I had trouble with the sidecar controller. I phoned them at their 800 number. I explained the problem and within the next day, I received a new sidecar card. I then tried formatting it and did a write check. Again I rain into trouble. I spoke to Bob Richards and found out I was using the wrong configuration to format the disk. He even gave me his home phone number to call on the weekend if I still had problems.

I know it seems like I was having many problems, but Bob was very helpful and he sent me the things I needed right away. I would highly recommend this hard disk product to anyone interested in purchasing it for their PCjr. I am really enjoying the use of the hard disk and not having to use the diskettes.

Matt Friedland, Mt. Sinai, NY

Unprotecting Writing Assistant V2.0 And Other Software Discussed

Has anyone figured out how to unprotect IBM's Writing Assistant version 2.0? I need to do so in order to load the program on my hard disk since the install procedure on the original registered disk does not work on my configuration. I have tried using CopyIIPC, including Nokey and Noguard, without getting anything to install on my hard disk.

The dealer successfully installed the program on a PC clone using my disks. Because of this IBM says the problem has to be with my equipment which consists of the following:

PCjr with Racore Drive II Plus, Memory to 512K
PC Enterprises Jrsidecar, 256K; Total Memory 736K
SCSI Harddrive system for PCjr with 20 Meg Seagate Drive ST225N.
Using DOS 3.3.

My CONFIG.SYS reads as follows:
DEVICE=JRCONFIG.NRD -D2 -L -T3 -X
DEVICE=V DISK.SYS 256 512 64
BUFFERS=20
FILES=20
DEVICE=SCSI4JR.SYS

The June/July issue of Junior Report contained a debug routine provided by a Mr. Clyde Dodge of Mountain View, California to unprotect Writing Assistant version 1.01 but not for version 2.0.

I strongly suspect the problem has something to do with the write program routine and/or the drive recognition routine in the program. Not being a hacker, I have reached the end of my rope and would appreciate any help you can give me.

I find each issue of the jrNewsletter great and look forward to receiving each issue!

Robert R. Neilson, Quechee, VT

EDITOR'S NOTE: Clyde Dodge has made his unprotect routine available to other PCjr users, but we don't think it's for V2.0. He didn't say which version it was for in his latest correspondence with us, which we published in the January, '90 issue. Incidentally, we had an error in his address, which we've corrected in last month's issue, but we'll do it here also. It is Clyde A. Dodge, 1075 Space Parkway, Apt 285, Mountain View, CA 94043. For those of you who didn't read his letter, he offers two disks full of unprotection programs and tips for $8. They cover several of the Assistant series as well as other software.

Reader Finds Starflight 2 Not Compatible

I have some news for all those people that make wonderful patches. The game Starflight 2 by Electronic Arts does not run on the jr. I thought the first Starflight was a great game, and was very disappointed when the new game wouldn't start.

Seth Norlin, Oakham, MA

Editor's Note: We thank you, Seth, for reporting your experience with Starflight 2. Since this is the first incompatibility report on Starflight 2 we've received, we'll wait for more information before branding it as definitely not PCjr compatible.We've found that many times some PCjr users can get software to run on their machines that others report as not compatible. So we don't want to rule Starflight 2 out until more reports confirm your information.

Homeword II Word Processor Runs Well With Patch

I'd like to let you know that Sierra's Homeword II word processor seems to work well on the jr although I haven't tried all its functions yet. Initial startup/run problems were solved as follows:

System -- PCjr with Racore memory expansion to 640K and DMA, two disk drives, V20 chip and Tandy Modification.

AUTOEXEC.BAT file:
SPEEDMA2
HUSH
POWDCLK2
MODE 80

CONFIG.SYS file:
Device=JRVIDMA2.SYS /C
Device=INT9.SYS
Files=20

* Racore mode switch in PCjr position
* DMA option not executed (No JRDMAON2.EXE).
* INT9 patch must be used to eliminate a double keystrike problem.

Calls for help to Sierra Online showed they had no knowledge of the problem or the solution. I intend to let them know what I've learned so they can pass the word along. By the way, the idea to use the INT9 patch came from back issues of jr Newsletter and the file from Disk #56. Thanks for the help.

Bob Peck, Prospect, CT

Reader Enjoys Prodigy After Learning How to Use it.

Just received the April issue of jr Newsletter, and immediately noticed a subject dear to my heart: Using jr on Prodigy! My original experiences on Prodigy in May, 1989 were almost uniformly bad: I really hadn't thought through the requirements of junior and system as well as I should have. (I have 640KB, modified IBM sidecar, 2nd disk drive from OOWL and a NEC V-20).

Initially, all I did was to prepare the A and B disks per Prodigy instructions. Of course, as soon as I tried to log on, I was told I didn't have sufficient memory (only had 1024 bytes left on the A disk, after preparing it as a system disk). Finally figured out that I would have to prepare a boot disk, so I could load JRCONFIG on it to recognize

(Continued on page 10)

Reader Feedback

(Continued from page 9)

the memory AND the 2nd drive. At this point I successfully logged on, but kept getting bounced after six to 75 minutes (mostly six), with a CMT or ABEND interruption. I was using a 1200 BPS modem. The techs at Prodigy couldn't tell me (at that time) what an ABEND was and told me the CM5 was either a noisy phone line or bad modem. Fortunately, on one session, I was able to stay on long enough to read a message on one of the BBS to the effect that the ABEND problem could be cured by NOBEEP. Along came the July issue of jr Newsletter, and I noted the article about adding the Tandy 16 color driver. (I had been receiving Prodigy in various shades of gray, almost illegible!) I immediately ordered the patches disk (Disk #56), and was delighted to find it also had the NOBEEP utility! What a difference, both in the appearance and in the ability to decrease session interruptions. I eventually replaced the modem with a 2400 BPS modem, and have experienced (with rare exceptions) good, uninterrupted sessions.

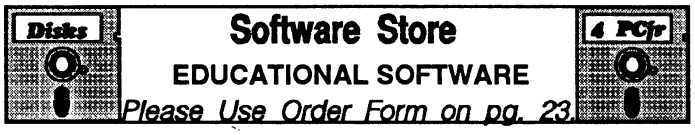
While on Prodigy, I also noted that there are a group of utilities under the name PRODHP12, developed as freeware or shareware, which enable more efficient use of the system. These may be downloaded from many BBSs throughout the country, with weekly updates of the phone numbers being posted by a group of very helpful people. One key log-on, printing to disk, printing from screens for which Prodigy has not made printing provisions, printing in 80 columns, instead of the 40 column Prodigy format are some of the many utilities provided.

Now a few comments on the EDITOR'S NOTE: The above mentioned helpful people recommend BUFFERS=20, FILES=20 due to problems which have occurred. As you noted, these should be in the CONFIG.SYS file on the boot disk, if used, and if so, the CONFIG.SYS file on the A disk should be erased.

I recommend 2400 BPS; you can always drop back to 1200. (I have had to do this ONE time since October!) Also, using the files MARK and RELEASE from the PRODHP12 utilities will clear out the TSR's when logging off.

Finally, I scan the Beginners' and Prodigy Service boards on a daily basis. Whenever I see a call for help from a PCjr user (who, naturally, is experiencing all the problems I went through), I respond. I have not only been offering advice, but (and more important, I believe) I have also been providing, to those who have asked, a diskette (which I have labeled PCJRPRO3) containing information on setting up a boot disk (with the necessary utilities included) as well as a copy of PRODHP12 utilities, to those who are unwilling or unable to access BBS's having that information. The first diskette has been posted (though not by me) on a couple of national BBSs. To date, I have sent out about 16 packages, and have advised many more users. I became very stubborn when I found that it was difficult, if not impossible, to receive other than tiny bits and pieces from various sources. This situation, to the best of my knowledge, has not changed appreciably. Therefore, I resolved to help as many people as I could who make inquiries on the subject. It has been a source of great satisfaction to promote the use of the jr and (on occasion) argue its merits with other Prodigy users.

O. J. Zorzo, Hicksville, NY (Prodigy ID# HDBD21A)



WORD PROCESSING FOR KIDS. Simple, fun and easy-to-use word processor designed especially for beginning writers. Allows children to express their ideas easily and then print them out in large type on your printer. Colorful opening menus make learning the simple commands very easy. Parents/teachers manual is on the disk. 128K. (Disk#41)

WIZQUIZ. The Wizard keeps track of your progress in solving math problems that range from elementary level through fractions and negative numbers. Extensive exercises, with scores and times recorded under each "player's" name. Compete against your personal best as you improve your skills. Grades 4 through adult. 128K ok. (Disk #95)

TYPING INSTRUCTOR. Disk contains both PC-Touch, a great typing exercise and speed testing program, and Touch Typing Tutor, a combination of lessons, including finger positions, speed tests and a typing game. 128K ok. (Disk #18)

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)

TIME TRAVEL IN HISTORY. A maze adventure game in which you have to answer questions about different periods of American History in order to get gold pieces--and save your life! 128K (Disk #21)

STUDY AIDS. Three great programs to help students. PHLASH - a computerized version of flashcards which you make and use for any subject. Multiple choice, true/false, and/or fill in blanks. FRACTIONS - a series of interactive exercises in fractions (many levels). And PHRASE - a program that picks out examples of bad writing in any document and suggests improvements. 128K ok (Disk #92)

SPELLING BEE. A game that builds spelling skills from Grade 3 level to adult. You are an Olympic athlete representing your country. Excellent color graphics. Four skill levels from very easy to very difficult words. Fun way to become a spelling champ! 256K ok (Disk #82)

SPEED READ. If you'd like to double or triple your reading speed, and increase comprehension as well, Speed Read can help you do it. It provides instruction and exercises designed to break bad habits and improve reading efficiency. 256K (Disk #90)

PLAY AND LEARN. Educational games for kids 5-12. Word match games, find-a-word puzzles, word scrambles, and many more made by teachers. 128K, need Cartridge Basic. (Disk #32)

Sierra Continues Support

(Continued from page 1)

"This very latest addition to the Sierra library of interactive adventures with beautiful color graphics runs fine on any PCjr with 640K -- just as it says on the box. Iceman is a bit different from previous Sierra games in that a working submarine is included in the scenario. You begin as a Navy Captain on R & R on a tropical island and then must figure how to get to your ship, etc. I can't tell you any more since I'm trying to work through this game without looking at hintbook or "cheating" by asking other users (Wish me luck!).

"We've mentioned here many times that Sierra has continued to support junior users and actually put the PCjr information BACK on the box once they realized that we (PCjr users) were still out here. That means that the entire **King's Quest, Space Quest, Police Quest, Manhunter, Leisure Suit Larry, Mixed-Up Mother Goose, Colonel's Bequest, Hero's Quest**, and all their other adventure series run on the PCjr from their beginnings back in 1984 to today. Those programs alone are enough to keep a PCjr gamer busy for months or years on end!"

Sorcerian, a game just released by Sierra, is made for EGA computers and won't run on PCjrs. But they didn't promise that ALL their games would be PCjr compatible. We should be thankful that a company like Sierra that consistently produces the highest quality games does try to include PCjr compatibility whenever feasible.

If you have enjoyed any Sierra games and would like to see them continue to make games you can run on your PCjr, we urge you to write to: Ken Williams, President, Sierra-On-Line, P.O. Box 485, Coarsegold, CA 93614. Let them know we're STILL out here!

Hard Disk Controller Price Reduced by SPC

Systems Peripherals Consultants in San Diego has reduced the price of its Diskitjr Hard Disk Interface to $195. The sidecar-enclosed card is compatible with all ST412/506-type drives and comes with cables and software. A variety of drives from 10 to 160 megabytes are available from many discount/mail-order firms at low prices, and used XT-type drives are also readily found. A chassis with 5 and 12 volts is available from SPC which will support one full height or two half height drives. Since the interface connects directly to the jr's bus, the maximum data transfer rate is used, regardless of speed-up options already in place.

Many PCjr users have easily installed their own hard drive(s) during the past four years using the SPC hard disk interface.

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)

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

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)

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

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

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

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 (Reviewed 5/90) (Disk #112)

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)

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)

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

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

Telecommunication Hints

By John King

Do you have a modem installed and connected to the phone line? Do you have communications software? Have you tried calling an electronic Bulletin Board System (BBS)? Did you have any problems?

When you called a BBS, did you see lots of weird symbols and Greek letters mixed randomly with normal letters, instead of readable messages? If so, you probably had the parameters set wrong in your communications program.

In many programs, including my favorites, JRTELE and PROCOMM, Alt-P brings up the parameter menu screen. The common choices are 8-N-1 for most BBSs and 7-E-1 for banks, libraries and other BBSs. The best thing to do when you start with the wrong parameters is hang up, change the parameters, and call back. If you have the PCjr internal modem, make the software change, reboot your computer, then call back. The messages from the other computer should now be readable.

Here's another problem. You call a BBS or other computer and see everything you type double as in "YYoouurr NNaammee." There is a simple explanation for this. Keyboard input for communications software goes to the modem rather than directly to the screen. The modem can be set to echo this to the screen or not. Why would you want the modem to echo to the screen? Well, if you were doing some testing before calling another computer, you might want the modem to echo what you typed so you could see it.

When you are connected to another computer, what you type is echoed back by the distant computer to your computer and displayed as it is received. If your modem is also echoing everything, you will see double. If this is the case, you need to change the Echo or Duplex setting to stop your modem from echoing. In JRTELE or PROCOMM, press the Alt-E key combination, and the duplicate letters will stop.

A related, minor problem can occur with line feeds. If everything is double spaced, you are getting an extra linefeed. If lines print right over previous lines on the screen, you are missing a line feed. The problem can be corrected in the program setup menus. To correct it during a call, use Alt-N in JRTELE or Alt-Fn 3 in PROCOMM.

Have you seen unexpected characters, symbols, or Greek letters appear while connected to a BBS? These may be due to noise on the telephone line. Loose phone connectors in your house can cause noise. Check them by wiggling the lines while watching the screen. A spectacular source of noise is someone picking up a receiver on the line you are using and trying to dial or talk. You will see lots of garbage on the screen until they hang up.

If you use PROCOMM, here is a problem you'll want to avoid. PROCOMM uses overlay files which is gets from the disk. If the disk is replaced during a session, the files on the new disk will be wiped out when PROCOMM tries to find its overlays. The solution is not to change the disk. If you have one disk drive, copy the PROCOMM program files to a ramdisk if you have enough memory. As an alternative, use a ramdisk for files which you want to download or upload if they will not fit on the disk with PROCOMM.

JRTELE is much more polite about disk swaps. It won't clobber a disk that replaces the program disk during a session, so you can change disks to download files to different disks. However, if you update the dialing directory or default parameters, the new data will be written to the disk in the drive. If that's not the JRTELE program disk, the updates won't be available the next time you start the program.

That's enough about problems. Once you have a little success calling BBSs, you will be able to learn rapidly through practice and by reading the help files on the

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BBS. Now let's see what can be done to improve the efficiency of electronic communications.

The first thing to do is to use the keyboard macro feature of your communications program. JRTELE lets you assign up to 25 characters to each function key. You can make Fn 1 print out your name and Fn 2 your password to speed up logging onto a BBS. The Alt-Key macros in PROCOMM are capable of more complex strings, but the idea is the same. Let one key combination do the work of many that you use regularly.

Large communications programs such as PROCOMM, QMODEM, Boyen, and others go far beyond simple keyboard macros to increase your efficiency. They have their own programming languages, or scripts, which allow large parts of a communications session to be automated. A script can not only send desired characters, but it can wait for specific messages from the other computer before proceeding. If you are going to use a large communications system, such as Compuserve, a script file will save you lots of time, effort, and money by moving you through the layers of menus efficiently.

Another way to be more efficient when using a BBS, is to scroll through messages without pausing and capture the screen information to disk to read after you have hung up. When the call is long distance, this can save a lot of time and money. JRTELE and PROCOMM both have this feature.

If you use PROCOMM, here's a way to save even more time. Write your BBS messages in your word processor and save them in ASCII format before placing a call. After logging on, give the commands to start writing a message. These are typically an E to "Enter a message" followed your responses to several prompts. When you would normally begin typing the body of the message, give PROCOMM the Fn PgUp command to do an upload. Select ASCII from the upload protocol menu which pops up, and then enter the name of the ASCII file with the message. The message will appear on the screen just as if you were typing it rapidly. Magic!

Even a low speed, 300 baud modem can upload messages from disk much faster than anyone can type. Unfortunately, JRTELE doesn't handle ASCII uploads in the same way as PROCOMM, but many other programs do.

An ASCII message upload is just one example of a file transfer. Let's look at file transfers in more detail since a good part of the fun of calling a BBS is to share program files.

Programs (files with .COM and .EXE extensions) cannot be sent by an ASCII transfer because they contain nonASCII characters. Furthermore, ASCII transfers provide no error checking. If there is noise on the line some of the characters received may not be part of the original file, or some characters may be lost. For text, this is only a nuisance. In a program file, incorrect or missing

(Continues on page14)

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)

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)

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)

MEAN 18 GOLF COURSES. Three excellently designed courses for those who play "Mean 18," the commercial golf game. Disk #79 has Boca Woods North, Boca Woods South, both with especially challenging water holes, and Kearsage Valley, with fall foliage in full color. Disk #80 has TPC of Avenel, TPC of Sawgrass, with massive sand traps and a tough 17th green on an island, and TPC of Woodlands, which may be the most challenging of all. (Disk #79 and #80)

GOLF/SAILING. Two great games for sailors and golfers! 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)

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 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 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)

(More Games on Page 14)

DUNGEONS & WARS. In Dungeon Quest you can choose tobe 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)

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

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

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)

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

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)

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

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)

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)

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 (Reviewed 5/90) (Disk #113)

(See page 13 and our PCjr Survival Kit Software Catalog for more games listings)

Telecommunication Hints •

(Continued from page 13)

characters could lock up your computer when the program is run.

We need a way to transfer files, so that there are no errors when we are done. In computer language, we need a file transfer protocol that's better than ASCII.

The most common of these is XMODEM. XMODEM incorporates error checking to ensure that every byte is transferred correctly. The file is sent in 128 byte blocks, and a check made after each block is sent to ensure that is was received correctly. If there was an error, the block is discarded and resent automatically until it is correct. Even if your communications program reports a few errors during a transfer, you don't need to worry. The bad blocks will be discarded, and the file you receive will be fine.

There are a few peculiarities in file transfers by XMODEM that you should be aware of. Because 128 byte blocks are sent, the received file size will be a multiple of 128. If the original file was 400 bytes, the received file will be 512 bytes (4 x 128). The last 112 bytes will be zeros. These fill the block and have no effect on the program.

The date on the file will be the date it was received, not the date shown on the original file. That's because the date is the "file creation date", and this copy was created on your computer.

With XMODEM, which both JRTELE and PROCOMM offer, we can be sure that all the programs we download from bulletin boards near and far will work exactly as they were written. Now, let's look at how the program files are stored on a typical BBS, so we can go get them.

In the files section a BBS, you will see files with the familiar .COM and .EXE extensions of executable programs. You will also see files with .DOC and .TXT extensions which are ASCII text files. What may be new to you will be the files with .ARC and .ZIP extensions. These are compressed files. BBS operators store files in ARCed or ZIPped form to conserve disk space and minimize downloading time.

Compressed files are ordinary program, data, and text files which have been operated on by a file compression utility. These programs can squeeze text files down to less than half their original size and reduce program files by 10 to 30 percent. They can also combine several files, perhaps a program and its documentation, into a single file so everything stays together. The same utility or a related one can open up the compressed file into its original files. The sizes and dates of files extracted from a compressed file are the same as the original files.

The most common compression programs are ARC.EXE from System Enhancement Associates in Wayne, NJ and PKZIP.EXE by Phil Katz of PKware in Glendale, WI. ARC both compresses and expands files,

and PKZIP has a companion program, PKUNZIP, to restore the original files. These utilities work similarly, but they are not compatible. If you download a compressed file with the .ARC extension (FILENAME.ARC), you will need ARC.EXE to uncompress it. Similarly, if the compressed file has the .ZIP extension, you will have to use PKUNZIP to open it.

Fortunately, most BBSs have the necessary compression utilities available for downloading. Look for a name like ARC51.EXE for version 5.1 of ARC.EXE or PKZ090.EXE for version 0.90 of PKZIP.EXE and PKUNZIP.EXE.

With your modem, communications program, ARC and PKZIP/PKUNZIP, you can obtain new software and communicate with people all over the country. All it will cost you is your time and the phone charges.

A last item, Allen Ueckert, the author of JRTELE, is not planning any further updates to his program. As a result, he is no longer accepting registration fees. He says, use it and have fun.

(The above article was originally published in the San Francisco PCjr Newsletter, a publication of the San Francisco PCjr Users Group. John King, president can be reached at (415) 472-7035.)

Tandy Mod Essential

(Continued from page 1)

option when the software offers you the choice in an opening menu. In some cases, software will automatically recognize the modification when it's been installed in a jr.

The modification, invented in 1988 by Tony Cooper (we think), involves replacing a chip, cutting a trace and adding a couple of wires. We printed the instructions and a schematic for this in the April 1989 issue of jr Newsletter. We're out of that issue, so don't try to order it from us. Instead, if you think you can handle the modification by yourself, get the instructions from Jr Toolkit (Disk #110 in the jr Newsletter Software Store). Or have it done for you by one of our advertisers.

The modification does not work on all software that says Tandy 1000 on the box, so you'll still have to be careful about buying software with an option to return if it won't run on your computer. But the modification will allow you to see 16 color splendid graphics on many more programs than you could before you made the change.

Although we've had a few reports of problems with other software, they've been very rare and once you've made the Tandy Mod you'll find that your PCjr will run 99% of the software that it ran before. Most people notice no change at all, except for the benefits of running many new games in 16 colors.

This modification is likely to become more and more important as the years go on because software companies are likely to consider it important for their new products to be Tandy 1000 compatible, even after the 1000 becomes joins the PCjr in the computer orphanage.

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Exploring Your Junior With Debug

(Part 1)

By John E. Wilson

This is the first of two articles in which we'll use the program DEBUG.COM to explore the IBM PCjr. Debug is a program that virtually every PCjr owner has since it comes free with PC-DOS. In theory, Debug is a utility program that any programmer could use to analyze programs and track down programming errors, but Debug doesn't have enough features to be a real debugging program like Borland's "Turbo Debugger" or Microsoft's "CodeView". Nevertheless, Debug is a handy little program (only 11,904 bytes for the version that comes with PC-DOS 2.1) that is easy to use, fun, and enlightening. Debug allows you to look at, and even to change, the contents of disks and files (including programs), and you can also use it as an rudimentary assembler for Assembly Language programs.

These two articles will also help you learn about the inner workings of your PCjr; and since your Junior is a member of the 8086-family of computers, most of what you learn will apply also to the latest, most powerful computers available today - even the 80386 computers. You will be able to almost literally see inside Junior's microprocessor as it processes instructions, you will learn a little about machine language and assembly language, and we'll take a look in Junior's memory, and change memory data to change some of Junior's features.

In these articles we'll always refer to the microprocessor as an 8088, since that is the standard microprocessor in IBM's PCjr, but to Debug there is no real difference between any of the 8086-family of microprocessors. The NEC V20 microprocessor is also identical to an 8088 as far as Debug is concerned.

This will be a hands-on type article, so to get the most out of it, go to your PCjr now, turn it on and follow along. If you haven't already found Debug, it is located on your DOS Supplemental Programs diskette and you should copy it from there to a working diskette.

To start Debug, at the DOS prompt type DEBUG and press the enter key. The only response you will receive is that a dash, or hyphen, will appear, followed by a flashing cursor, below the line you just typed. Debug is not a flashy program. There are no title screens, or messages, or menus. It doesn't even clear the screen when the program is started. Only the dash appears to show that you are in Debug and that the program is waiting for a command.

All of Debug's commands consist of a single letter, although many of the one letter commands are followed with parameters. Debug doesn't care whether you use upper or lower case letters, but the program itself normally prints in upper case.

The first Debug command we'll look at is the REGISTER command. Type in a

r and press <Enter>

You should then see three lines similar to those in Figure 1. The first two lines show the present contents of each of the 14 registers (AX, BX, etc.) in Junior's microprocessor. Registers are small portions of specialized memory within the 8088 microprocessor where data is stored and used. The contents of some of these registers depend upon how much memory your computer has and how the memory is configured, so the results of your register command will probably be a little different than those shown in Figure 1.

About half of the registers will contain four zeros, but the other registers (with one exception which we'll cover shortly) will contain four letters and/or numbers. Actually they are all numbers, but the numbers are in the hexadecimal number base. Hexadecimal, usually shortened to "Hex", numbers can consist of the letters A through F in addition to the digits 0 through 9. Debug uses hex numbers because they have a very close relationship to binary numbers, and binary numbers (Which are always either 1 or 0.) are the very basis of every computer's operations. A group of eight binary digits is referred to as a byte. Each hex digit represents four binary digits, and therefore a single byte is represented by two hex digits. Each register in the 8088 can hold two bytes of data, and since two bytes are the equivalent of 16 bits, the 8088 is often called a 16-bit microprocessor.

The exception to the way Debug displays the contents of registers is the Flags Register. This register also holds 16 bits, but only eight of them are used by Debug, with each shown as two characters at the end of the second line in Figure 1. As we'll see later, the results of certain operations in other registers affect the Flags Register.

The eight hex digits at the beginning of line three in Figure 1 is the address in memory that Debug is currently looking at. The first four digits, which will undoubtedly be different in your computer, show the "segment" portion of the address. You'll notice that this portion of the address is repeated in the DS, ES, SS and CS registers, but we won't use, or even concern ourselves with these registers. The last four digits (separated

FIGURE 1
Registers in the 8088

```
AX=0000 BX=0000 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=2597 ES=2597 SS=2597 CS=2597 IP=0100 NV UP DI PL NZ NA PO NC
2597:0100 0000 ADD [BX+SI],AL DS:0000=CD
```

from the first four by a colon) in the address is the "offset" portion of the address, and we'll soon see how that is changed as we step through a program. In Figure 1 the offset address is 100, and this should be same in your computer. The segment address will vary from computer to computer, but when you start Debug the way we did the offset address will always be 100.

The next set of numbers in the third row show the contents of memory at that address. In Figure 1, these are all zeros but your computer may have other numbers. In the middle of the third line are what Debug interprets as the Assembly Language instructions for these contents of memory. Unless told otherwise, Debug thinks that everything is a program and will attempt to process the contents of memory as instructions in a program. All instructions end up as numbers, and an instruction of 0000 happens to be an addition instruction. If you have other data at the current memory address, the assembly language instruction will be different than that shown in Figure 1.

You may also have some characters at the far right end of line three, but we aren't interested in them at this time.

You can use Debug's register command to modify the contents of any of the registers. For example: to place the number 1234 into the AX register type in after the Debug prompt:

r ax and press <Enter>
Debug will respond with AX 0000

Type in, after the colon
1234 and press <Enter>

Then, type in just the r command, and you will see that AX=1234.

The next Debug command we'll look at is ASSEMBLE. At the Debug prompt, type in:

a 100 and press <Enter>
Debug will respond with:
27A6:0100

followed by the blinking cursor on the same line. You will recognize this as the segment and offset of the address, and of course, the segment portion of the address will probably be different on your PCjr. The offset portion of the address will be the same on your computer because you told Debug to start at offset 100. Next type in:

mov ax,3 and press <Enter>

A new address will appear on the next line on the screen and you should type in:

mov bx,8 and press <Enter>

Another new address will appear and you should type in:

add ax,bx

and then press <Enter> twice.

Altogether this sequence of commands will look like this on the screen:

```
-a 100
27A6:0100 mov ax,3 <Enter>
27A6:0103 mov bx,8 <Enter>
27A6:0106 add ax,bx <Enter>
27A6:0108 <Enter>
<Enter>
```

You have just entered a short Assembly Language program into Debug. Each line is an instruction to your computer, and each of the instructions has two parts. The first part is the "operation", and the second part contains the "operands". These instructions are reasonably self explanatory. The first instruction tells the computer to move a 3 into the AX register, the second says to move an 8 into the BX register, and the last instruction says to add the contents of the BX register to the contents of the AX register.

It doesn't matter whether you use upper or lower case letters, and the number of spaces between the operation and the operand is not important. If you make an error, Debug will tell you so, and you can retype the line.

The Debug command that is opposite of ASSEMBLE is UNASSEMBLE. To try it type in:

u 100 and press <Enter>

About a dozen lines will appear on the screen, but we're interested in only the first three lines. They should look like:

```
-u 100
27A6:0100 B80300 MOV AX,0003
27A6:0103 BB0800 MOV BX,0008
27A6:0106 01D8 ADD AX,BX
```

This looks pretty much like what you typed in during the assembly phase, but there are now some hex numbers between the address and the instructions on each line. These numbers are the Machine Language equivalents to the Assembly Language instructions. Some people confuse Machine Language with Assembly Language, or think that they are both the same, but this shows the difference between the two. Ma-

(Continued on page 18)

FIGURE 2
Adding 8 to 3 in Assembly Language

```
-r
AX=0000 BX=0000 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=27A6 ES=27A6 SS=27A6 CS=27A6 IP=0100 NV UP EI PL NZ AC PO NC
27A6:0103 B80300 MOV AX,0003

-t
AX=0003 BX=0008 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=27A6 ES=27A6 SS=27A6 CS=27A6 IP=0103 NV UP EI PL NZ AC PO NC
27A6:0103 BB0800 MOV BX,0008

-t
AX=0003 BX=0008 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=27A6 ES=27A6 SS=27A6 CS=27A6 IP=0106 NV UP EI PL NZ AC PO NC
27A6:0106 01D8 ADD AX,BX

-t
AX=000B BX=0008 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=27A6 ES=27A6 SS=27A6 CS=27A6 IP=0108 NV UP EI PL NZ NA PO NC
27A6:0108 BE1F75 MOV SI,751F
```

Exploring DEBUG

(Continued from page 17)

chine Language is a series of numbers that makes sense to the computer but is virtually unreadable by humans, while Assembly Language is a set of symbolic instructions which are, at least somewhat, understandable by humans. Assembly Language instructions must be converted into Machine Language that the computer will understand. This is done with an Assembler Program. Debug can function as an Assembler, but it doesn't have enough features to be useful for any but the simplest Assembly Language programs. A program such as Microsoft's Macro Assembler is needed to convert most Assembly Language programs into Machine Language.

Now, lets try to "run" our program. The computer steps through all programs by using the IP (Which stands for Instruction Pointer.) register to point to the instruction to be executed. We want to be certain that the IP register is set to offset 100, so type in:

r ip and press <Enter>

and then type in:

100and press <Enter>

To see the existing contents of the registers, issue the Register command by simply typing in an r. You will notice that AX and BX both contain nothing but zeros, that the IP register is set to 0100, and that the next instruction is to move 3 into the AX register. Next type in:

t and press <Enter>

T stands for the TRACE command and it causes Debug to execute one instruction, show the contents of the registers, and increment the IP register so that it points to the next program instruction. You will notice that AX now contains a 3. Issue the Trace command again and you will see that an 8 has been moved into the BX register. Another execution of the TRACE command will show that BX still contains 0008, but that AX now contains 000B. In hex arithmetic, 3 + 8 = B. This sequence is all shown in Figure 2.

You can also do hexadecimal arithmetic on two numbers with the HEX command. This is considerably easier than making an Assembly Language program. At the Debug prompt, type in:

h 8 3 and press <Enter>

The response will be:

000B 0005

The first number, hexadecimal B, is the result of adding 8 to 3, and the second number, hexadecimal 5, is the result of subtracting 3 from 8. If you reverse the numbers you will get:

000B FFFB

The first number is a hex B, just like before, but the subtraction result is a strange looking number. Its really -5, but it is certainly not obvious. Lets try the same subtraction using Assembly Language in Debug. Type in the three line program shown below. It is the same as the previous program, except that it subtracts the contents of BX from AX instead of adding them.

```
-a 100
27A6:0100 mov ax,3
27A6:0103 mov bx,8
27A6:0106 sub ax,bx
27A6:0108
```

Next, be certain that the IP is set to 100 by typing in r ip and 100, reissue the r command to view the contents of the registers, and trace through the program with t three times. Your screen should look similar to Figure 3. The result of the subtraction in AX is the same as that from the HEX command. It is a negative number, but how does your computer know that it is a negative number? It can tell by the Flags Register. You will notice that the fourth pair of letters in the Flags Register is PL until just after the SUB AX,BX instruction; then it becomes NG. As you probably suspect, PL stands for "positive" and NG stands for "negative". It is the job of the Flags Register to signal (or "flag") the results of certain operations, such as a negative result. It is then up to the rest of the microprocessor, and to the Programmer, to do something as a result of the flag. You will also notice that the negative result changed a couple of other flags also.

By now you have learned something about the 8088 microprocessor registers, memory addresses, Assembly Language and Machine Language, hexadecimal numbers and flags. You have also learned the Debug commands of r, a, u, t, and h, but you now you need to learn one more Debug command. To quit Debug, simply type in a q. In our next article we'll learn some more Debug commands and use them to peek into Junior's memory.

FIGURE 3
Subtracting 8 from 3 in Assembly Language

```
-r
AX=000B BX=0008 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=27A6 ES=27A6 SS=27A6 CS=27A6 IP=0100 NV UP EI PL NZ NA PO NC
27A6:0100 B80300 MOV AX,0003
-t

AX=0003 BX=0008 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=27A6 ES=27A6 SS=27A6 CS=27A6 IP=0103 NV UP EI PL NZ NA PO NC
27A6:0103 BB0800 MOV BX,0008
-t

AX=0003 BX=0008 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=27A6 ES=27A6 SS=27A6 CS=27A6 IP=0106 NV UP EI PL NZ NA PO NC
27A6:0106 29D8 SUB AX,BX
-t

AX=FFFB BX=0008 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=27A6 ES=27A6 SS=27A6 CS=27A6 IP=0108 NV UP EI NG NZ AC PO CY
27A6:0108 303C XOR [SI],BH DS:0000=CD
```

Questions & Answers

(Continued from page 4)

any payroll file programs for the Canadian tax system? C. Fournier, Vancouver, B.C.

A. Either a chip on the Impulse board or a connection is probably heating up during printing. That's why you have to shutdown; to allow the part(s) to cool down back to normal. You can try to find out which one it is by waiting for failure then quickly cooling each chip separately. There are cooling sprays made for this but you might want to try this trick: Cool a 1/2" strip of rubber from an old inner tube by pressing it on an ice cube with your finger. Wipe it (the rubber) dry and press it on a suspect chip. Do this to each chip one at a time to try to find the offender.

Now, if you have results, visually check the connections and un-plug then plug the chip in and out to clean and rub the connections and try the printer again. If you still have the problem, the chip is probably bad and can be replaced either by you or your local repair shop.

Payroll systems are usually set up by the users because there are so many different State and local tax systems. If spreadsheets such as 1-2-3 or AsEasyAs seem too daunting for you, then you might have to look into an accounting program such as Dac-Easy or its equivalent.

Q. Is the Nickel Express the only speed up option for the jrHotshot board? Now that the Mesa286 is out do we have any other choices? W. Glasspool, Milpitas, CA

A. The Nickel Express works best with IBM side-cars or their equivalent. And we do mean equivalent! Some of the Tecmar or other cards do not have the quality (or speed rating) of RAM chips to handle the new speed. Even the jrHotshot will not always run at the maximum of the speed up. The Nickel Express however, does have intermediate speeds to choose from and these do work, you just won't get the maximum out of the board.

Remember, if you haven't yet put in a NEC V-20 you're wasting time, too. This chip can be had for between $5.00 and $12.00 with instructions and gives 10% to 30% or more in speed. There are no other changes needed, it really is fully compatible. We've had our two V-20s in and running for over five years now and not a glitch!

Q. I am having trouble loading Ample Notice. My system is a jr with 640k Tecmar and Datadesk keyboard and an Epson printer. My configuration is as follows:

My config.sys is:

```
DEVICE=JRCONFIG.DSK -T3 V32 -W55 -L -X
DEVICE=PCJRXTRA.SYS
DEVICE=ZANSI.SYS
FILES=12
BUFFERS=12
```

My autoexec.bat is:

```
DSKWATCH.COM
PROMPT $P$G
STATLIN -CO30
PATH A:\;C:\
SA BRIGHT YELLOW ON BLUE
COPY A:COMMAND.COM C:
DOSTIME.COM
SET COMSPEC=C:\COMMAND.COM
COMSPEC C:\COMMAND.COM
ALARM.COM
AN.EXE
MOVEIT.BAT
```

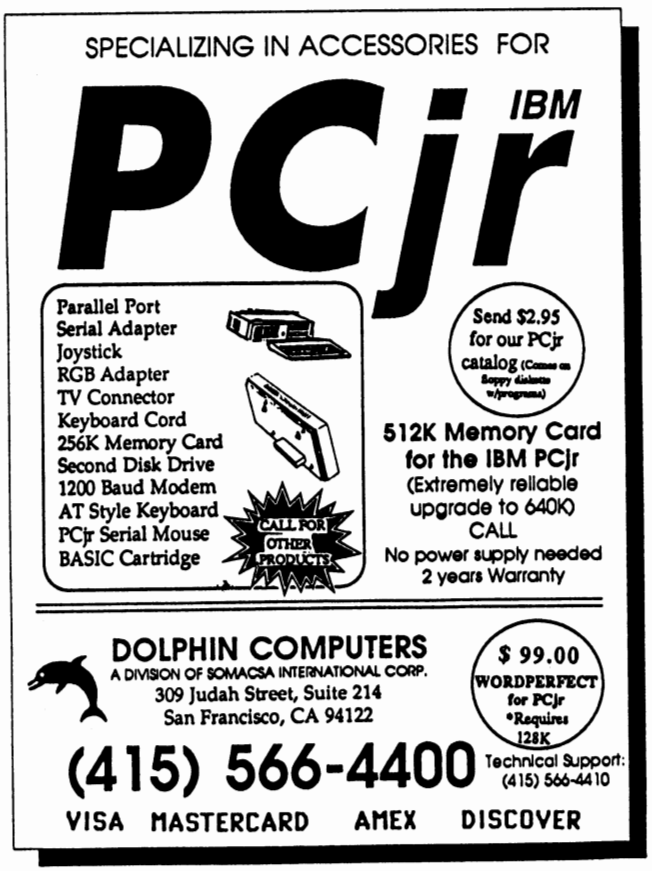
Here's how we would do it:

Scrub PCJRXTRA.SYS (You have already set up with JRCONFIG)

Unless you NEED it, scrub ZANSI.SYS and SA.--there are other ways to get colors in DOS.

Use FILES=20 AND BUFFERS=20 (The absolute minimum we use!) Get rid of those TSRs... DSKWATCH, STATLIN, and ALARM.

Do MOVEIT.BAT separately upon exit from AN.EXE unless you have DOS3.3



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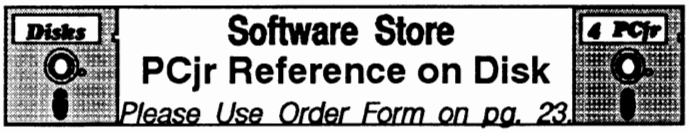

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Second Edition of "PCjr Power" Adds More Useful Material

Albert Allen, owner of Oowl Software, has upgraded his book called "PCjr Power" and two disks included in the package, making it even more valuable to PCjr users than it was already.

This is a great resource for the PCjr user who wants to get the most from his or her great little machine -- and keep it up and running when problems occur.

"PCjr Power" includes useful information for beginners as well as those who feel capable of troubleshooting and doing their own upgrades and repairs. The basic information on DOS, config.sys and autoexec.bat, etc. are even good reviews for those who feel they're already knowledgeable.

About half the book is devoted to upgrades, modifications and repairs. It includes step-by-step instructions and, in many cases, useful diagrams. The section added to the second edition falls into this category. It has such things as "Building A Serial Port Card," "Controller Modification for Three Drives, "Two and Three Drive Cable Construction," and additional tips and directions for upgrades and repairs.

The software on the two disks which come with "PCjr Power" is a useful collection of utilities, including several PCjr specific ones such as jrconfig, the excellent PCjr device driver which sets up your PCjr in many different and useful ways.

With it's many valuable tips for PCjr users of all levels of expertise, "PCjr Power" can not only save you much time, money and aggravation, but make your relationship with your great little machine much more enjoyable.

"PCjr Power" is available from Oowl Software, 1435 Burnley Sq. N., Columbus, OH 43229. The book plus two disks are $19.95, plus $3.50 shipping. If you already have the first edition and want to get the added material, sent $7.95 plus $2.50 shipping. Or call (800) 322-0219.

MESA 286j Format Tip

Ed Strauss, designer of the MESA 286j, reports that formatting of disks in Drive A: works better using PC Format from PC Tools than the DOS format command. According to Ed, this is due to the fact that PC Format does not have the timing loops that the DOS format has.

The MESA 286j was removed from the market in January, but for those PCjr users who have it up and running this formatting tip should come in handy.

WORD PROCESSING FOR KIDS. Simple, fun and easy-to-use word processor designed especially for beginning writers. Allows children to express their ideas easily and then print them out in large type on your printer. Colorful opening menus make learning the simple commands very easy. Parents/teachers manual is on the disk. 128K. (Disk #41)

TYPING INSTRUCTOR. Disk contains both PC-Touch, a great typing exercise and speed testing program, and Touch Typing Tutor, a combination of lessons, including finger positions, speed tests and a typing game. 128K ok. (Disk #18)

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

SHARESPELL. Spelling checker that works independently of your word processor. Can check spelling of any text file with its 52,000 word dictionary. Will also use custom word list you make. Works with all word processors. 384K ok (Disk #94)

PC-WRITE. This extremely popular word processing software is both powerful and easy to use. A review in PC World said, "PC-Write may well be more versatile than WordStar; it's certainly more straightforward." Version 2.5 runs well on 128K. Version 2.7 has more features and needs 256K to run without the spell checker, which needs 384K. Version 3.02, the most powerful, needs 512K. (Order Disk #1 for 128K V2.5. Order Disks #2A and 2B for V2.7. Order Disk Set #1 (3 disks) $12 for V3.02.)

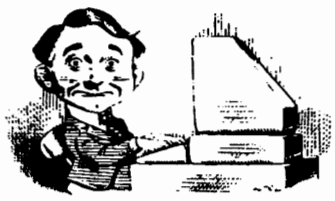
PC-STYLE. Perhaps the best of many programs that help you make what you write more readable. Jim Button made this a very slick, useful tool for improving your writing. It reads and analyzes what you write, then gives you a detailed analysis based upon several useful standards. Fast, easy to use. 128k (Disk #76)

PC-OUTLINE. Organizes thoughts, notes, lists of just about anything. Powerful features create logical outlines, merge with your word processor, customizing allows you to rearrange and manipulate data. Outperforms many commercial programs, says PC Magazine. 128k. (Disk #17)

MIND READER. Experience the wonders of artificial intelligence! Use a full-featured word processor that guesses the words that you're about to type. Works like a charm! 128K ok. (Disk #74)

GALAXY. One of the easiest to use word processors we've ever seen, Galaxy has all the features you need to write letters and do most word processing. It has many, but not all, advanced features. Its strength is its simplicity, with help menus always ready to assist you. You probably won't even have to read the manual. 128K ok. (Disk #69)

Did you know that, when a high school student was asked to identify Chernobyl, he answered that it was Cher's full name? If you don't want that kind of answer coming from your kid, you better start participating in his or her education. One way to help is to encourage the use of educational software on your PCjr. There are many excellent titles to choose from, for all grade levels and all subjects See page 10 of this issue or our software catalog, PCjr Survival Kit. For a free catalog, see page 22.



Need Help?

The following disks from the jr Newsletter Software Store can help you to get the most out of your junior. To order, see the coupon on page 23.

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 V2.0. A collection of 30 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) (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)

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 April, 1990. (Disk #60)

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 Tale II, 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 the programs are listed on the order form on page 23. Please refer to the following for further listings:

Telecommunications, page 7.
Systems Utilities, page 8.
Eductional Software, page 10.
Utilities, page 11.
Games, page 13 and 14.
PCjr Reference on Disk, page 20.
Word Processing & Writing, page 21.

Software Store Recent Additions

Please Use Order Form on pg. 23.

*** NEW VERSION * JR TOOLKIT V2.0.** A collection of 30 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) (Disk #110)

*** NEW * 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 (Reviewed 5/90) (Disk #112)

*** NEW * 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 (Reviewed 5/90) (Disk #113)

A full listing of software titles is found in our catalog. If you didn't receive PCjr Survival Kit, write
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3 PRINTMASTER LIBRARY. (2 disks-$10)

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2a	PC-WRITE V2.7 (256K), Disk 1
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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
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14	ADVENTUREWARE
15	PROCOMM
16	BUSHIDO
17	PC-OUTLINE
18	TYPING INSTRUCTOR
19	3 X 5
20	EQUATOR
21	TIME TRAVEL IN HISTORY
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29	MORE SUPER UTILITIES
30	ARCADE GAMES
31	BOARD GAMES
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33	FAMILY HISTORY (128K), single
33A	FAMILY HISTORY (256K), need both
34	GAMES II
35	NEW KEY
36	PIANOMAN
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38	PC-KEY DRAW DEMO
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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
65	JR POWER PACK II
66	THE BEST OF JR NEWSLETTER II
67	AS-EASY-AS, V.2.05 (256K)
68	DOUBLE TROUBLE
69	GALAXY
70	NAMEPAL
71	CROSSWORD CREATOR V3.30
72	LANGUAGE TEACHER
73	BAKER'S DOZEN
74	MIND READER
75	RAMDISK MASTER
76	PC-STYLE
77	COMPUTER TEACHER
78	PLAYER'S CHOICE
79	MEAN 18 GOLF COURSES-1
80	MEAN 18 GOLF COURSES-2
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99	PCJR AUTOSETUP
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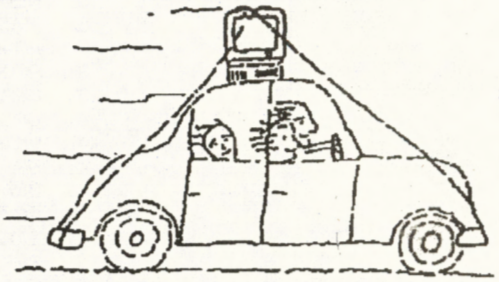

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