PCjr Surveys Reveal Many Surprises (We Think)

Those of you who filled out and sent back your 1990 Reader Surveys sent us some surprising data about how you have expanded your computers and what you are using your computers for.

Here's one surprise (at least it was surprising to us): 78 per cent of you have expanded your PCjrs to 640K or more. We thought it would be more like 50 to 60 percent.

Another surprise was the number of PCjrs with modems -- 32%. That's a bit higher than we thought it would be, too. And within that figure lies another surprise -- 62% of you who own modems own the PCjr internal modem, which has often been called the "infernal" modem because of the difficulty in using it.
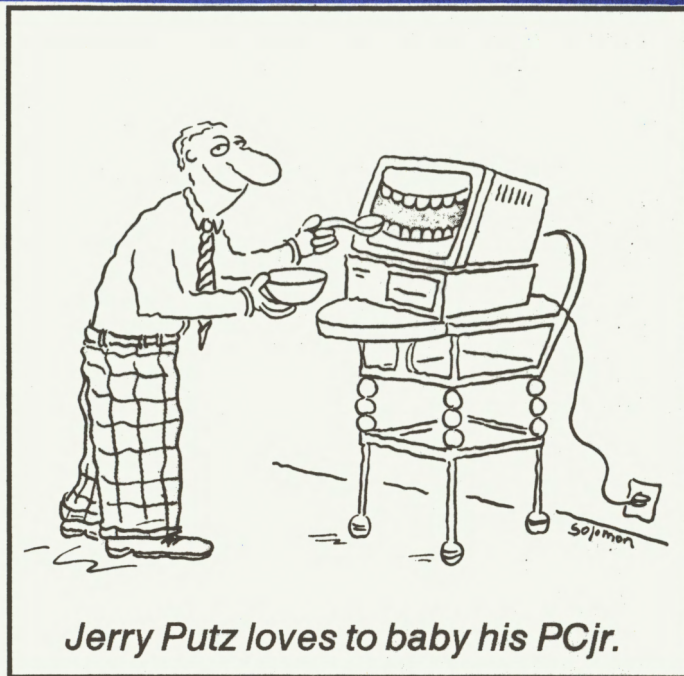
Are you ready for surprise #3? Almost 12% of you report having hard drives on your juniors. That's more than we thought it would be, too.

But before we get too astonished, we should remind ourselves that not all of you sent your reader surveys back to us. In fact, only 210 of you did. That's less than five percent of our readers, so it may not be a representative sample. It also may very well be that those of you who have expanded your computers the most are the ones who were interested in sending us your information. So the results would be heavily weighted toward a higher degree of expansion. This would explain our "surprises" and would mean that there are many, many more of you who have not expanded your PCjrs very much at all.

All right, so the figures may not be an accurate reflection of all PCjr users, here is the rest of our survey results on PCjr expansions anyway:

Jerry Putz loves to baby his PCjr.

Memory Expansions

736K -- 14 respondents, or 7%
640K -- 150 respondents, or 71%
512K -- 12 respondents, or 6%
384K -- 6 respondents, or 3%
256K -- 24 respondents, or 11%
128K -- 4 respondents, or 3%
(The total is over 100% due to rounding of figures).

Here are a few more figures, which may be of interest, although we wouldn't call them surprising:

Eight percent of the respondents have added 3.5" drives to their PCjrs.

Fourteen percent have mice. The brands mentioned were Logitech C7, Microsoft, PC, and Mouse Systems -- not necessarily in that order.

Eighty-three percent report having at least two disk drives. Several have more, usually in combination with 3.5" drives.

It looks like a lot of people don't like the PCjr keyboard, because 19% of the survey respondents have replaced theirs with larger AT or XT or PC style keyboards.

Thirteen percent have replaced the 8088 CPU chip in their PCjrs with V20 speedup chips. Most report only a moderate increase in speed this way.

Less than three percent have purchased speedup boards like the Nickel Express or the Excellerator boards, and less than one percent have added 8087 math coprocessors to speed up calculations on their juniors.

The PCjr to Tandy 1000 modification seems to be

PCjr Lives!

When you turn on your PCjr, the first thing it does is check all internal components. This is called the Power On Self Test, or POST, and is programmed into the ROM BIOS chip. Part of the POST is displayed on your monitor. The IBM logo and the memory count in the lower right-hand corner of the screen are parts of the POST. If all the components pass their tests, your PCjr lets you know it is ready to work by issuing one beep from the speaker.

If any part of the computer does not pass its test Junior will either not beep or beep twice, and the word ERROR may appear on the monitor just below the memory count. Below the ERROR message will be a letter indicating what part failed.

The most common message is ERROR B. This indicates that the keyboard didn't pass its test. Usually, this just means that you touched a key during boot up. The POST interpreted the key press to mean that a key was stuck in the down position and issued the message.

You can test this by holding any key down when you turn your computer on. At the end of the memory count, the speaker will beep twice, ERROR B will appear, and the boot process will stop. If you press the Enter key, the boot process will continue.

If you receive ERROR B for no obvious reason, it's time to run the internal diagnostics on your keyboard. You can bring up the diagnostics menu by holding the Ctrl, Alt, and Ins keys down at the same time. Move the cursor to the keyboard picture by pressing the space bar, then press the Enter key to start the test. If one key is the problem, you should be able to find it quickly.

The second most common error message is ERROR H for disk drive problems. Again, the internal diagnostics can be helpful. When you select the disk picture, you will be reminded graphically that any data on the test disk will be erased, so insert a blank disk. The password which you must type in to start the test is MPNP. If your drive fails, a simple lubrication may be all that is required. How to do this has been explained in the newsletter previously and detailed instructions for this and other disk drive remedies are included on JR TOOLKIT (Disk #110).

Error A indicates a memory problem. If the memory count stops at 128K or less, the problem is on the motherboard, otherwise it's in your expansion memory. If it's in the expansion unit, remove it and reboot. If there's no error, you now need to find the bad chip on the expansion board.

Error C is from a cassette recorder. No one has seen this one since disk drives became standard.

Error D is from the serial port on the mother board, the S port. That's one for an expert. ERROR E is for problems with the serial port on a PCjr internal modem. Remove it and reboot. It's cheaper to replace the modem than to pay to have it repaired.

Error F is a generic ROM BIOS error. If you see this rare one, try to find a dead PCjr and steal the ROM chips. Error G is a related but less serious cartridge error. Cartridges contain ROM chips which can be damaged by careless handling. Exposure to static electricity and heat are ROM killers. Remove all your cartridges and reboot. Replace them one at a time to find the bad one. Discard it. ROMs can't be repaired.

The red Guide to Operations also lists an Error X without any description. It's not listed in the ROM BIOS code, so perhaps it doesn't really exist.

If there is no error message, but you heard no beep or two, something else is wrong. Try removing all accessories and rebooting. If that fails, it might be the power supply card. See if you can borrow one from another machine. If that's the problem it can usually be repaired. Power boards are very standard and simple.

If it's not the power board, then it is almost certainly the motherboard. Here's a final thought. If you have a motherboard problem, replacement is cheaper than repair, and the cheapest way to obtain a replacement is often to buy a used 128K PCjr. Furthermore, this provides other parts for future use.

Use your PCjr to learn a Japanese art form!
ORIGAMI, Disk #39 on page 23, will take you step by step through the art of Japanese paper folding. It demonstrates how to make amazing animals and other objects right on your screen.

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 have a curious programming problem in both Cartridge and QuickBASIC. When I try to calculate (for example) 9.9 -9.0 = I get an answer of 0.8999996. There are other problems like this and the "bug" makes my accounting program come out a penny off now and then. I've read pg. 3 - 32 about changing precision and I don't think it applies here. Is this me or my jr? Can you shed some light on this? L. A. Stevenson, Houston, TX

A. Yes, and you must realize there is nothing wrong with the computer, the programming languages or you. We wrote about this feature (problem) in the Feb. 1990 Issue, but it bears a kind of re-do and and an additional way to work up a solution. Limited numbers of that Feb. Issue are available if you would like that information. Because the computers in common use are binary devices, (this means whole numbers from 0 to 1 or exact multiples thereof) there is no way to present the true results of, say, PRINT 10/3 or even PRINT 9.9 - 9.0!! Get into BASIC, any version, DEFine any floating point precision and type in the above for a demonstration. What we will present this time around is simpler than in our original answer, but a mite less educational. It boils down to this: just convert ALL numbers to integers, then do the required math, convert back to floating point and display (or store) the results. If you are dealing with decimal cash (dollars and cents) multiply by 100 before converting to integers. This really just turns everything into pennies! To get back to displayable cash convert back to floating point and divide by 100.

While in a BASIC environment, do this:

```
DEFSNG S      '(all variables which begin with S = Single float)
              '(use DEFDBL D if Double float required)
DEFINT I      '(all variables which begin with I = Integers)
SCASH1 = 9.90
SCASH2 = 9.00
ICASH1 = SCASH1 * 100
ICASH2 = SCASH2 * 100
ITOTAL = ICASH1 - ICASH2
STOTAL = ITOTAL / 100
PRINT STOTAL
END 'optional
```

If this seems like extra work it's because Microsoft and others leave it up to YOU as to how you really want to handle the math, numbers and precision in your program. By the way though the above program fragment certainly should be streamlined, it runs pretty well as it is. Test this idea, find the other possibilities or problems then clean it up for your own use. Take every opportunity to use integers. They take up less memory, are manipulated much more quickly than floating point and even take up less space on diskettes. A reminder now, use the back-slash "\" when dividing integers, not the forward-slash "/".

Q. I own a PCjr with 512k memory and a Racore drive/expansion. When I try to upload or download files using ZMODEM protocol I get the message; "Warning PC-JR Disk I/O does not support streaming" then ZMODEM ends. Is there any way to get around this so I can use this much faster protocol for file transfers? J. Bush, Grandville, MI

A. This is a quicker protocol for file transfers. Because it is 100% dependant on DMA, while it is error checking it expects disk drive read/write NOT to be interrupted. The timing is very tight and the stream in/out to/from the COM port must occur without interruptions. The PCjr has circuitry which handles in/out devices such as keyboard, COM port(s) etc by putting them on "hold" while drives, etc are operating. Most of the speed improvement of ZMODEM comes from "simultaneous" operation even to the on-line signals. Can't figure out how to get around this one.

Questions and Answers

(Continued from page 3)

There is hope, but at additional expense. The MNP classes of error protocols built-in to some modems of 2400 BAUD or higher will do the trick for really speedy transfers. The error checking is done right in the modem hardware. All we do now is wait for decent software to handle it.

Q. I cannot get Chuck Yaeger's AFT 2.0 to run on my jr. The old version ran fine and still does. The install program runs the B: drive forever, but I never get to the program and have to re-boot the system. Is there a patch, perhaps? J. A. Costa, Mattapoisett, MA

A. A patch for AFT is on disk #56, "JR Patches version 5.0" available from the Software Store. However, we have found that this patch does not work with all versions of AFT (and we don't mean the version numbers such as this V2.0, we mean versions WITHIN versions, something software publishers do, but don't tell you about.) Our Elves tell us that AFT runs with as little as 256K of free memory.

Q. I am a novice at best but will try to describe my problem before I end up on the funny farm. I have an upgraded jr to 640k with the jrHotshot board. When I boot DOS 2.1, at the A> if I don't type something in within about 30 seconds I get completely locked out and must re-boot. I have patched DOS with those on disk #40 form the Software Store and tried other tips and tricks. Even savenmi.com made no difference. This problem occurs whether I use the config.sys supplied with the board or I use jrconfig.sys from disk #52. If I enter a command right away most programs will run OK though I still have to re-boot occasionally. F. D. Nataro, Alpharetta, GA

A. You could put "DATE" in your autoexec.bat file which would force you to enter the date right away...???

Seriously, the first thing to do is to get out the ORIGINAL DOS diskettes, format/s to make a fresh "working" boot disk then put the originals away again. Patch this disk carefully with the IBM corrections. The idea here is to be absolutely sure that every bit, byte and word is correct for the disk booting procedure. Now, without any config.sys or autoexec.bat files on this diskette, boot up and see if the problem arises. If it does, you probably do have a hardware glitch and should start a process of elimination by removing the jrHotshot board and re-booting and testing.

Otherwise you can add one device or file at a time to your config.sys and test after each addition to find out if software is at fault. The one where the problem first shows up is the culprit. In any case you'll be so busy you won't be able to get to the funny farm.

Q. I use the conpcjr software supplied by Tecmar to recognize the extra memory up to 640k. The jr, upon reaching the conpcjr file re-boots a second time before going on with a full boot up. Is this normal? Perhaps the jrconfig file will over come this awkward boot up as it is hard on the disk drive. I have enclosed my various booting files. R. Henderson, Shanty Bay, Ontario, Canada

A. This is absolutely the normal boot sequence for recognizing additional memory, drives etc. One of our jrs will initialize our printer three times when booting, so we keep it turned off for the peace and quiet until we need to print.

The jrconfig family of files for system configuration will not change the sequence. What it will do is recognize extra drives, memory, set up for 80 column color, take care of the int9 problem an a slew of other housekeeping, all in one file!

Please note: The "double booting" is not hard on the drive; after all it is merely reading files in the normal manner... We notice that your command.com file is a whopping 37557 bytes in size. PC DOS 3.3 which really is the recommended version is only 23507 bytes. Care to enlighten us further?

Q. I have made the Crumley Modification to an IBM side-car to get up to 736k without incident (it works fine!) and modified another per the July 1989 Issue again without a problem. All my boot disks show from 736k to 768k which is expected. My programs run fine, except... now when I try to run FriendlyWriter it starts up in B&W as if it is not finding the profile it uses. Checking the maintenance menu, it shows a B&W monitor chosen. Changing this to color brings it back to normal and writes an identical profile back to disk! Removing the second side-car (dropping to 640k) the program comes up in glorious color again... Got any ideas? S. L. Thomas, Springfield, MO

A. We do not have a copy of FriendlyWriter to test but have had the same, or almost the same problem with other programs.

Here's our fix:

Set up a GO.BAT file or something of the sort to get into this word processor. In this batch file, be sure to include MODE CO80 just before calling the word processor file. Be sure to have MODE.COM available in the path. It seems we forget that DOS in our jr defaults to B&W and most of the programs we run set up the color. A few check to see what DOS has done and they act accordingly, setting up for B&W, such as
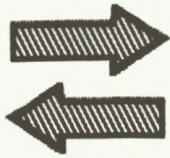
READER FEEDBACK
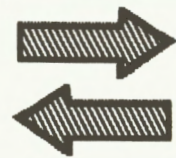
Beginning Level User Needs Help with W. Assistant

I purchased my Jr, along with an Epson RX-80, DOS 2.1, Writing Assistant, and numerous BASIC books, in December, 1984. Like other people, I was upset when IBM stopped producing the Jr and the computer dealer was no longer willing to "go the extra mile" to help me learn what to do with mine. Even after numerous attempts to teach myself to work BASIC, operate DOS, and expand my computer's capabilities, I still have the same 128K machine, and can still only use it as a word processor.

Seeing the Sept-Oct '89 issue of jr Newsletter, and reading about others who are doing great things with this "dinosaur," motivated me to subscribe and work more with my Jr. I found I could shrink my screen from Writing Assistant's 40 column mode to 80 column, and read my pages left to right without continuously using Fn Home and Fn End. I also recently discovered I could program my printer to print in elite type, versus the Writing Assistant's pica mode. I now know why my cursor disappears while I'm typing, my screen goes to a blue blank after pressing Esc, and all the funny colors and symbols go across my screen; all which cause me to hit Ctrl/Alt/Del and start all over gain. Thank you for publishing this forum for us frustrated "jr illiterates."

Now, for my question: Writing Assistant's right margin only goes to 78. When printing in elite type, the result is a page that extends little more than halfway across the paper. I wrote and called IBM, but they either couldn't or wouldn't help. My question is, can the program's margins be changed to accommodate elite or compressed type, or must I use it only for pica type?

I use Wordstar at work and was glad to read there is a Wordstar program for the Jr. Until I become more familiar with my basic computer and can expand it, however, I don't want to put out money for something I can't use.

Again, thank you. I may not know how to correct half my computer woes, but at least now I know where to write or look to correct them.

Carlton P. Wickliffe, Holloman AFB, NM

EDITOR'S NOTE: We don't use Writing Assistant ourselves, but since many readers do, perhaps one of you can help Carlton out.

Experienced PCjr User Describes His System

I have 768K of memory by way of an IBM memory adaptor that I converted to 512K. I modified my second 128K IBM memory adaptor so that an additional 96K of memory could be available to DOS.

I have a jr joystick, one 5.25" 360K disk drive (Original IBM drive) and one 3.5" 720K disk drive (from an IBM laptop). I used the Junior Drive Kit (PC Enterprises Catalog #10011) to install the 3.5" 720K drive.

I recently added a ROM-CLOCK (Synectics Software & Systems), Thin-font Module (PC Enterprises), Tandy Modification chip (Oowl Software) and the Legacy serial card (internal modem slot). The IBM power adapter, speech adapter and parallel printer adapter are also parts of my system. I use the PC Enterprises Configuration Cartridge to set my display to the 80 column color mode. This cartridge also provides some routines that allow my IBM 101 Keyboard to work with the jr. A Racore Keyboard adapter (model 3200) connects this keyboard to the jr.

Other hardware components are a Radio Shack Mini Amplifier with Speaker, PCjr Color Display, IBM Proprinter II, Case 212A External Modem (300/1200 bps), Cartridge Basic and a reset switch.

I use PC Dos 3.3 and Jrconfig v2.14 to boot my system. My word processor programs are WordPerfect v5.0, Writing Assistant v2.0 and Grammatik III. Procomm v2.4.3 is my primary communications program. Some of the other programs I use are Copylljr v5.01, File Express, Print Shop, Printmaster, Turbo Pascal v5.5, MakeTalk, GATO, TurboTax, PCBOSS, PC Paintbrush v3.11 and Flight Simulator v3.0.

I would like to learn more about communications. I want to know how different combinations of program, protocol and modem speed compare using their data transfer rates. May I suggest that you cover communications in future articles?

I use my jr to write letters, prepare income tax returns, play games and communicate with Compuserve. My latest project is to catalog the programs on my VCR tapes. This project is taking more time than I anticipated because I have nearly 150 VCR tapes.

My wish list includes a fixed disk and the jrExcellerator board. I may get the jrExcellerator first because I cannot

afford a fixed disk now.

The only hardware problem I had was with the monitor. The image would change colors and blank out. Three loose solder connections to the metal shield on the video card caused this problem.

I am unable to run Moonbugs or Bricks on my system. I used various video memory sizes, but the images were unstable. Both programs would run but the screen image would pulsate and the programs ran slowly. If you know how to make these program run better, please let me know.

Copy IIjr 5.01 does not work with logically assigned drives as advertised nor does it duplicate 720K diskettes. It only copies the first 40 tracks. I have tried PC-DOS 3.2 with drivparm=/d:0 in the config.sys file and it still only copied the first 40 tracks.

PC Paintbrush worked well before I made the Tandy modification. Now the jr 16 color mode configuration does not work. The program starts to load but the screen goes blank and the disk drive stops. I reconfigured PC Paintbrush using the Tandy 16 color driver and now the program runs fine. Looks like PC Paintbrush doesn't recognize the jr's 16 color mode after the Tandy mod is installed.

Comments

My setup gives me a very versatile system. The 720K 3.5" drive is normally my "A" drive. This "A" drive will format the 3.5 diskette to only 360K BUT THIS IS NOT A PROBLEM. The A drive WILL READ from and WRITE to diskettes formatted to 720K besides reading and writing 360K formatted 3.5" disks. The logically assigned "D" and "E" drives WILL NOT read from nor write to the 3.5" 360K diskettes. I also use the "D" drive to format 3.5" to 720K My 360K 5.25 "B" drive is also my "F" drive. Drive "C" is my ramdisk.

I installed a double pole double throw switch in the hole in the front cover where the infrared sensor was. I connected this switch to the PC Enterprises Enhanced jrDriver card. This switch allows me to select either the 3.5" or the 5.25" drive as my boot drive. Now I can use self booting programs on 5.25" disks without having to transfer them to 3.5" disks. Many of these 5.25" disks contain copy protected games. My reset switch fits neatly in the recess to the left of the left cartridge slot. I connected this switch to the upper two left pins in the cartridge slot. Pressing this reset button has the same effect as removing or inserting a cartridge.

I called Central Point (January 31, 1989) about CopyIIjr's inability to work properly with the 720K drive on the jr but their representative was unable to help me. Maybe if you contact them and alert other readers to contact them, Central Point may respond after they find out that there are many jrs with 720K drives. Their address is Central Point Software, 15220 NW Green brier Pkwy, #200,

Beaverton, OR 97006.

My Config.Sys File is as follows:
```
Device=jrconfig.dsk -d2 -x -1 -v32
Device=driver.sys /d:0
Device=driver.sys /d:0
Device=driver sys /d:1 /t:40 /f:0
Device=fixbas.sys
Device=ram.sys
Device=zansi.sys
Buffers=30
Files=30
```

Jrconfig, by default creates a 57K ramdisk "C" when the video buffer is 32K because of the large size of PC DOS 3.3's command.com file. The ram.sys driver lets me use the setram command to create a ramdisk "g" as needed for downloading files.

My autoexec.bat file is as follows:
```
CTTY NUL
PROMPT $P $Q$G $e[37;44;m
READCLOCK
DB
POP2XL P
BORDER A
BREAK ON
VERIFY ON
COPY BORDER.COM C:
COPY COMMAND.COM C:
COPY LIST.COM C:
GRAPHICS.COM
FIXQCjr.COM
SET COMSPEC =C:\COMMAND.COM
PATH A:\;C:\;B:\;
CTTY CON
CLS
CHKDKS C:
READCLOCK
```

William H. McCarthy, Syracuse, NY

Tips for 3.5" Drive and Racore Expansion

When I ordered the 3.5" drive only from PC Enterprise they were not sure this drive would work with the Racore expansion I had. The software that came with the drive left much to be desired when it came to installing the software. After much experimenting with the installation files for the CONFIG.SYS file I got it to work and it worked just fine.

In my original Racore expansion my physical B drive was the second 5.25" (the Racore) drive and was B: drive and C: was the RAMDISK. The 3.5" software made the

Reader Feedback

new 3.5" drive C: and the RAMDISK is D:. When two disk drivers are installed by CONFIG.SYS the order in which they are called determines which drive is assigned what letter by the software. The software wants to assign C: to the 3.5" drive and D: to the RAMDISK. If a second RAMDISK is created it is assigned E:. If no RAMDISK is created and CONFIG.SYS only installs the 3.5" disk, the drive is assigned C:.

The CONFIG.SYS must call out the driver as:

DEVICE DRIVER=MICRODSK.SYS C: /3 1: [note the spaces & :] which creates a 3.5", 9 sectors, 2/cluster 720K disk.

The required PC ENTERPRISE files and the Racore files must be on the 5.25" disks in order to be called in the CONFIG.SYS and AUTOEXEC.BAT files.

The JUMPER on the 3.5"drive was on -0-. Left on -0-.

To format 3.5" disk for 9 sector, 720K:

MICROFMT C: /9

If Volume label wanted: [note spaces]

MICROFMT C: /9 /V

To format 3.5" disk for 360K DOS 9 sector:

MICROFMT C: /d [note small "d"]

William F. Dobias, New Paltz, NY

Family History Shareware Good But New Version Has Print Problem

For the first time I've found an incompatible program, **Family History**. I had been using the shareware version (Disk #23 in the Software Store) for several months when I decided I liked it enough to register it. The program is somewhat more sophisticated than the shareware, but the PRINT UTILITY won't work. I contacted Rick Cherry and he phoned me about the problem and even sent another copy, thinking it might have been damaged in the mail. It still won't work. When I choose Print Utility, the drive goes through the motions, then comes up with "error reading drive a, not ready, a, r, i" then locks up and the computer must be rebooted.

I had a friend try it on an AT and it runs beautifully, therefore, it must be something about jr. I haven't told Rick about this yet, but I will, and see if he can do anything about it. In the meantime, I wondered if any of our readers might have had the same problem, and thought this information might be of value. I have put many hours of work into this program, but all is not wasted, as I can still print it out with the shareware.

We tried **Conquest of Camelot** on my jr with the Hot-shot expansion. It was painfully slow..it does work, but it's not worth it.

Edna Y. Nagle, Portsmouth, VA

Some Compatibility News And Problems with Mice

Here's some good compatibility news:

System Sleuth, ver 2.0 by Dariana Technology Group, Inc.; a very educational configuration and troubleshooting utility. Documentation and help screens are worth the purchase price as tutorials. Runs fine on a 360K 5.25" floppy disk. Appears to use more than 4 colors per screen.

Manifest, ver 1.00, by Quarterdeck Office Systems; memory analysis and reporting tool utility. An even better educational configuration and troubleshooting utility than System Sleuth. Runs fine on a 360K 5.25" floppy disk. Can also be run as a TSR. But this option did not work well on my PCjr when Manifest was called up while using another program. Here, too, the documentation, especially, and the help screens, to a lesser extent, are worth the purchase price as tutorials. Appears to use more than 4 colors per screen. Screen colors and layouts are superb. Easy to use. Really does everything System Sleuth does, and more. No need to buy both.

Barron's Computer SAT, ver no. not shown but Copyright 1989. Runs fine on this PCjr.

Mavis Beacon Teaches Typing, ver. 1.28 by the Software Toolworks; a typing training program. Runs fine in 4 colors! The install program loaded up in color when using IBM PC-DOS 3.3. However, the system locked up when I followed the instruction on the screen to "Press any key" to move to the next step. So, I booted again with IBM PC-DOS 2.1 and the Quadram drivers. The install program came up in monochrome, the system did not lock up, and the installation was successful. However, the installation process is super slow because of all the unpacking involved. You definitely have time for a beer or two while working disk 1 is being created. The program itself worked fine with IBM PC-DOS 3.3 and the CGA monitor mode selected. The install program includes a Tandy Graphics Adapter (TGA) option, but I haven't installed the Tandy mod on my jr yet. So, I don't know if the option works or not.

Third, for the depressing part of the story: PCjr and mice, mouse vendors/ manufacturers, PCjr suppliers of mice, jr Newsletter, and mice, configjr and mice, swapcom2 and mice. You can lose you faith quickly if you try to get to the bottom of this compatibility mystery. I hate to admit it, but I have given up for now.

(Several pages describing failed attempts to get a mouse working on his PCjr have been deleted, since we don't feel such a lengthy account of problems will be of interest to other jr users - ED.)

Paul F. Metzker, Jonesboro, GA

EDITOR'S NOTE: In addition to providing some useful information on software compatibility, Paul raises questions about the use of a mouse on a PCjr. In the lengthy section not published here, he correctly states that PCjr companies offer only a limited number of mice for sale for use with PCjrs. He did not buy a mouse from one of these companies, but chose to try two mice which he says were the same ones offered by PCjr companies, but available at significantly lower prices elsewhere. After purchasing these mice, he was not able to get them to operate on his PCjr.

We sympathize with his frustration, but we are not in a position to purchase and test the many brands and types of mice available today. We also know that the failure of one user to get something to work is not necessarily the last word on the subject. That person may be doing something wrong, or failing to follow directions, or may have a defect in his or her computer or peripheral that is causing problems. Too many variables for us to diagnose long distance. That's why we're much more interested in descriptions or things that DO work. If someone says "The X Mouse works on their PCjr," chances are you can get it to work on yours.

We published an extensive article on mice in our February 1989 issue, but the situation has changed a great deal since then. So we ask readers who are successfully using mice on the PCjrs to please write to us describing their setup, their mice, and the software they are using. Then we'll do a new report on the rodents that like PCjrs.

Software Store
SYSTEMS UTILITIES.
Please Use Order Form on pg. 23

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)

See The World On Your PCjr

By James Prossick

Across America or around the world, PC Globe Inc's two on-disk atlases, PC USA and PC Globe, can take you to any state or country on the planet and provide enough facts and flavor to make you feel right at home. These two programs are fun filled fact factories that chart the continent and the world in junior's sixteen fine colors.

They are educational tools that encourage intellectual play, while at the same time providing a valuable data resource and presentation capabilities. They make learning fun.

Both PC USA and PC Globe are menu driven and intuitive to use. The interface common to both gives the user a top-down view of the geography, zooming in from the main map, to the region, to the state or country desired. This has the same effect as moving from a wide angle shot to a close-up in cinematography. It gives the user the big picture first before zeroing in on the subject.

The programs' menus can be controlled by cursor keys or speed key on the keyboard, or via mouse. PC USA and PC Globe are so easy to use that once you've backed up the program disks, and installed the graphics driver and systems configuration, you are up and running. An on screen help menu will guide you if you have questions.

The manuals serve well as reference material and are helpful in defining some of these programs' special features; like saving graphics files in PCX format, exporting text data to the printer, ASCII file, or Lotus file, or viewing a previously created ASCII file. The only deficiency that I found in the manual had to do with the Print Screen option. In order to print a graphics screen Disk One must be placed in the A drive, else a warning message will appear telling you to run the install program.

Neither PC USA or PC Globe are copy protected, so junior users can configure boot disks to their liking. This is especially nice, since both are multiple disk programs. PC USA comes on three disks, while PC Globe comes on five, plus one additional disk for the great add-on program I'll describe later - PC Nations. I found PC USA quite convenient to use with two 5 1/4 drives, and even with PC Globe's six disks a minimum of switching was required. The reason is that the main execute file is loaded from disk one on PC USA and disks one and two on PC Globe, so those disks take a vacation unless you need to print a graphics screen. That brings the disk count to two on PC USA and three on PC Globe, or four with Nations. Of course, this means junior must have 640k to run either USA or Globe. But with enough memory, these big programs are quite easy to manage even without a hard drive, and give the advantage of quick execution speed even on the PCjr's stock 8088 CPU.

The graphics presentation and use of color are quite appealing, and the user has a great amount of control over the color choices. When using the USA or World map, the active color can be changed by a pull-down menu, and selected from a sixteen color palette. The same is true if you've stepped-down to the region or continent map or zeroed in on a state or country. This means color changes can be made on- the-fly without stopping the mapping project at hand. Other color selections for border, text, menus, water, and the like are accomplished in separate functions under the utilities menu. The only real shortcomings to color selection are the black and white only choices of the main maps, and the inability to change text colors in the PC Nations flag presentation sequence, where the nations' names in yellow are nearly illegible. Those are minor complaints, and in honesty the black on white or white on black used for the main maps is the best background choice for a sixteen color palette.

There is a incredibly large amount of useful and interesting data contained in both of these on-disk atlases' Database, and that information is accessible through graphics, charts, tables and text. The integration of this data is smooth throughout and allows thorough investigation of individual states and countries and graphic comparisons of all or some of those states and countries on a regional and main map scale.

The state data is organized into 11 categories and over 150 sub-categories, while the country information contains four main categories and over 75 sub-catego-

ries. In both USA and Globe you can choose the states or countries to compare by name or by point and shoot on the main map. You can display comparisons of one to all available categories for a selected number of states and countries, the top or bottom ten with or without the active state or country, or the entire USA or world in a colored bar graph presentation.

There are more limitations when using the maps to compare data, but the graphic results are more visually appealing and illustrate geographical trends instantaneously. In the map mode, you can select either 5 or 9 types of data for comparison, and one, many or all states or countries for color-coded presentation. This comparison can be presented on either the main or regional map scale, but while it's acceptable on the USA map, the World Map is just too busy for the presentation to be very effective. It's better to make your map comparisons on a continent or region map for PC Globe.

"truly an inexpensive and fun way to travel."

The top down view of geography works the same in PC USA and PC Globe. You start out with the main map, USA or World, focus on the region or continent, and finally zoom-in on the state or country. There are short-cuts in the menus to reach your destination or widen your field of view to a larger area. The active state or country can be selected by point and shoot, as well as menu. A nice feature in the point and shoot mode is the on-screen appearance of the names of the countries and states as you scroll cross-country with the cross-hairs selecting your target. Larger cities can also be pinpointed on the main or regional maps, but no detailed views or data on these cities is available. One thing you can do is get a graphic depiction of an as-the-crow-flies traveling distance between cities, and the bearing for the most direct route. This is quite handy as a benchmark between points of interest, and a good estimate of distance for planning travel.

Once at the state or country level, you can get a very detailed visual look at the topography, features, major cities, waterways, and general lay of the land. The 16 color palette is well used here, especially in the topography display giving it a real three dimensional feel. Here is where PC Globe, with the addition of PC Nations, goes a step farther than PC USA in giving the user a true flavor of the locale. By starting-up with the Nations' program disk and transferring two files from it to Globe disk's two and three, you can see each Country's Flag being raised and hear their national anthem. The sound and visuals are really quite a treat, and give you a feel for the spirit of the country you're investigating.

All the flags of the different nation's can also be scrolled through, six at a time, by initiating the flags option under the Utilities Menu. This doesn't have the impact of the raising of the flag to the national anthem, but offers a nice comparison of the different flags.

So PC USA and PC Globe are fun, educational, and fully compatible with junior's graphics set, but what can they be used for and why not buy a high quality printed atlas instead? Answering the use question could be lengthy considering the many possibilities these computerized atlases offer, but let me touch on a few uses that come to mind first.

Number one is what educators and academics call "The Thirst For Learning". These two programs will pump factual moisture into that parched gray matter between your ears faster than a dry sponge soaks-up water in a full bucket, and the process is so easy, painless, and entertaining that you will be wanting for more.

Beyond the cerebral enjoyment, there are plenty of nuts and bolts uses. For example: Researching and preparing a report with graphics; investigating and defining an area to market a new product or find a new job; exporting graphic screens for use in desktop publishing or modification by paint programs. There are plenty of other uses as well, but can't a printed atlases do those same things? The answer is yes and no. A high quality printed atlas will no doubt have a better collection of detailed maps and an equal set of demographics and facts, but will lack the flexibility, the ease of integration of facts and graphics, presentation capabilities, and educational value of its computerized counterparts. In a nutshell, a printed atlas is a reference tool only, while PC Globe and PC USA are both a reference tool and learning environment.

The retail price of PC USA and PC Globe are $69.95 each, with PC Nations retailing for $29.95. Both PC USA and PC Globe can be had for under $50.00 mail order, but make sure you're getting the 1990 version that contains the Tandy/PCjr graphics driver. The only way to visit America and the world is in 16 colors. This pricing is very competitive with printed atlases and software products in general.

So to learn about the boundaries of the USA and the World, and to experience a small feeling of what it is like to visit these places, there is no more compact method of travel than to boot-up PC USA or PC Globe. When you consider the price of this reusable ticket, it is truly an inexpensive and fun way to travel.

PRODUCT - SYSTEM INFORMATION

PC Globe, Inc. 4700 S McClintock	PC USA	$69.95 (640K 1 DD)
Suite 150	PC Globe	$69.95 (640K 1 DD)
Tempe, AZ 85282		
(800) 255-2789	PC Nations	$29.95 (PC Globe Req.)

Booting Tips for 33 Meg Hard Disk

By Richard Schneider

The following information pertains to a PCjr with a Microsoft Booster (modified to 512Kb, 640 kb total memory) a 33 megabyte Diskitjr hard drive from Systems Peripheral Consultants and PC DOS version 3.3. It should be adaptable and useful to other configurations.

I chose SPC's drive for several reasons. SPC uses the most up to date drives available, uses the best brands and gives good service. Their configuration was preferred as it accessed the expansion bus and could be physically located in many possible ways. Others stack on top of jr and/or hook into the jr's internal modem slot. There is room and power in the SPC case for another half height drive.

The biggest drawback to the SPC drive, and others, is that it will not boot from the hard disk, a floppy is still required. The following hints will allow the boot process to go more quickly and access the hard drive much sooner than is documented elsewhere:

1) The drive A floppy disk requires only five files:

```
IBMBIO.COM
IBMDOS.COM
CONFIG.SYS
SHDIO.BIN (SPC's hard disk driver)
AUTOEXEC.BAT (which is one line long)
```

That's right, for those who noticed, COMMAND.COM is missing from the boot disk. For those who wonder where the IBMBIO.COM and the IBMDOS.COM are, they are hidden but present on any "bootable disk." The command FORMAT/S or SYS puts them there.

2) The CONFIG.SYS file should begin with DEVICE=SHDIO.BIN. This tells junior a hard drive is attached and the rest of the drivers can be accessed on C. All the rest of the device drivers can be accessed on C. It is suggested they be in a directory called BOOT. COMMAND.COM and the rest of your DOS files should be maintained in another directory on C. The suggested name is DOS. The CONFIG.SYS file then looks like this:

```
DEVICE=SHDIO.BIN
DEVICE=C:\BOOT\MEMORY.SYS
                    (specific to your setup)
DEVICE=C:\BOOT\RAMDISK.SYS
                    (specific to your setup)
DEVICE=C:\BOOT\MOUSE.SYS
                    (specific to your setup)
DEVICE=C:\BOOT\GETIT.SYS
SHELL=C:\DOS\COMMAND.COM  /E:4096  /P
                    (DOS 3.3)
BUFFERS=20
FILES=20
BREAK=ON
```

It is not known if the shell command will work with DOS 2.1, probably not. Try it, if you fail, a copy of COMMAND.COM will have to be on your boot disk.

3) You will have an AUTOEXEC.BAT file on your "boot" disk. I requires one or two lines:

```
@ECHO OFF (the @ in DOS 3.3 only)
C:\CONTINUE.BAT
```

4) Your hard drive, C, will contain CONTINUE.BAT which does all the things your AUTOEXEC.BAT used to do. It should list something like this:

```
SET COMSPEC=C:\DOS\COMMAND.COM
     (DOS 2.1 requires another line here, see note)
PATH=C:\;C:\DOS;C:\BOOT
SETCLOCK
DOTHIS
DOTHAT
PROMPT  $[WHATEVER]
MENU
```

NOTE: DOS 2.1 requires s copy of a program called COMSPEC.COM which is included with the share program JRCONFIG version 2.15 on drive C, plus the additional line under SET COMSPEC which reads COMSPEC C:\DOS\COMMAND.COM

5) Now for the good stuff. A PCjr with stuff hanging on it Big Blue didn't put there, "double boots." PC's have switches to avoid this, but not jr The result is a waste

of time. Evidently jr boots, finds out it has a mouse, a second drive, a hard drive or whatever, then reboots set up for them. A program is available on the Bionic Dog BBS [617-964-8096] called BOOTSECT which re-writes the boot sector of junior's boot disk so it boots in one pass. The Doc's say it works on DOS 2.1 but not 3.1. It works just swell with DOS 3.3. I'd get it and try it.

What does all this mean? My junior boots in 42 sec-onds flat. Floppy whirring and churning is minimal. My CONFIG.SYS is ten lines long and the AUTOEXEC.BAT replacements execute twenty-four lines. I also utilize the QUICKSILVER cartridge which speeds the POST (Power On Self Test) and have a NEC V-20 CPU which helps a little.

Send me one formatted floppy, a diskette mailer and three 25 cent stamps and I'll return it all to you with BOOT-SECT, et al, therein/on. I'll also include some other PCjr specific goodies I've gathered over the years. Hate to send a nearly empty disk. Can't beat that.

Richard Schneider
3210 Hawthorn St.
San Diego CA 92104

Our Favorite Batch File Commands

Here is a summary of the most often used batch file commands:

ECHO [ON|OFF|message] Controls display of on-screen messages and can create files or append data to existing files by redirecting ECHO output.

REM [message] Lets you add comments and titles to your batch files.

GOTO [:]LABEL Is a powerful command that sends con-trol of a batch file to another location in the batch file identi-fied by a unique label.

CALL filename Starting with version 3.3, this lets you exe-cute one batch file from another and return execution to the original batch file when the second one finishes.

FOR...IN...DO This integrated trio allows repeated execu-tion of a command on a specified set of files. [The format of this command varies depending on whether it is used in a batch file or at the DOS prompt.]

PAUSE [message] Momentarily halts execution. Nothing more.

SHIFT Moves each replaceable parameter down in value on notch.

IF Allows batch files to execute specific commands or branch to specific batch routines, depending on external conditions.

Programming Power: Turbo Pascal, Ver 5.5
By John Wilson

You should not confuse the acronym OPP with the ex-clamation "OPPS". "OPPS!" is what you say when your latest computer programming project creates a random pattern of colors on the display and then locks-up your computer.

OPP, on the other hand, stands for Object-Oriented Programming and it is the current hot buzzword in com-puter programming circles. It has replaced AI, Artificial In-telligence, as hype ammunition for software promoters.

The promise of OPP is that it will dramatically reduce the amount of work required to create new computer pro-grams. In fact, one source has claimed that with OPP about all you will need to do to create a new program is to tell the computer in general terms what you want - sort of what the new Star Trek crew does with their Holideck ad-ventures. Of course, OPP is not that powerful but it does represent a significant advancement in computer program-

Turbo Pascal

Continued from page 13

ming techniques.

Object-oriented programming languages have a new type which is called an "object". Objects are different from conventional types (such as arrays, and integers, and strings) in that they can contain both data and code (program steps). This property of objects is called encapsulation. Objects can also inherit characteristics - both data and code - from other objects. This property is called inheritance. Encapsulation and inheritance, along with a few properties that we haven't mentioned, allow a programmer to create self-contained modules that can be saved and used as building blocks for new programs.

Object-oriented programming has it roots in work at Xerox's Palo Alto Research Center and to a programming language called Smalltalk. From this basis as a research tool, OPP has evolved into a well developed set of methods for production programming. Early OOP systems were used specifically to create computer graphics, but the principles of OOP are well suited to general- purpose programming. The current widely used C++ programming language is an object-oriented language. To keep pace with these developments in programming languages, Borland International incorporated object-oriented features in their latest version of Turbo Pascal, version 5.5. You will be pleased to know that Turbo Pascal 5.5 will work very well with your IBM PCjr.

I've been a user of Turbo Pascal since version 3. At that time TP was sort of revolutionary among programming languages in that it had a built in editor, it was easy use, it was inexpensive, and it would run on a 128 Kbyte PCjr. Since then it has become more complicated to use, it is

"With TP 5.5, you'll be using your PCjr to keep up with the latest in programming."

more expensive (The list price for TP 5.5 is $150.), and it definitely needs more than 128 Kbytes of memory, but it still works on my PCjr.

I have done some work in recent years in other programming languages - Assembly, C, and LISP - but I still believe that Pascal is the best language to learn programming with and TP is powerful enough to do just about anything that a programming language should do. The OPP extensions in TP 5.5 reinforce the power of the language and keep it up to date.

The Turbo Pascal manuals do not say what the program's memory requirements are, but the program is about 156 Kbytes in size, so probably you could run the program on a Junior with as little as 256 Kbytes of computer memory. The program should work on a single floppy disk-drive computer. I have a PCjr with two 360 Kbyte drives and 640 Kbytes of memory, and I use drive A for the TP system disk and drive B for the programs I'm working on. The program comes on four 360 Kbyte disks, and includes a number of graphic drivers, utilities and sample programs. An installation program makes your TP system disk, but it doesn't do a complete job, so you'll find that you have to add files for graphics and other support as you need them.

There is an excellent context sensitive on-line help system which is kept in a separate file. This help file is too large (240 Kbytes) to fit on the TP system disk so I keep it on a separate disk and insert it in drive A whenever I want help. Of course, this isn't especially handy but the help system is really very good. It is in hypertext format - that is, you can move the cursor to a highlighted word on the help screen, press enter, and receive detailed information on that particular word.

Starting with version 5, Turbo Pascal has a built-in debugger that I find truly amazing. You can step through your

programs line-by-line, and at the same time look at the current value that selected program variables have and also see the output of your program.

For example: Suppose your program has a loop in which five circles, each with a radius of 10, are drawn with the center of each circle located at five different X and Y values. After each circle is drawn both X and Y are increased by a value of 20. The Pascal program steps to do this would be:

```
for j := 1 to 5 do
    begin
        Circle(X, Y, 10);
        X := X + 20;
        Y := Y + 20;
    end;
```
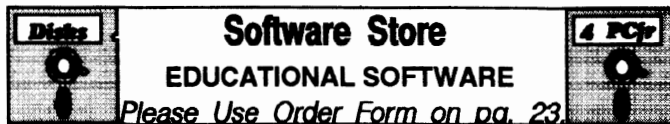
With the Turbo Debugger you could set up a window that shows the current value of j, X and Y, and then you could step through this loop five times. At each pass through the loop you would see j, X and Y change values. It is almost like looking inside your computer. At the same time you could see the circles appear one at a time with each pass through the loop. This debugger is not only great for finding out where a program has gone wrong, it is great for seeing how programs work and for learning Pascal.

About the only fault that I can find with Turbo Pascal is the manuals. The content of the manuals is satisfactory, but they are in thick paperback volumes that require a lead brick to keep open. Don't expect to learn how to write Pascal programs from the manuals. They are basically reference manuals that cover language syntax and tell you how to use the TP program, so you'll need a text on Pascal to learn the language. Tom Swan's book Mastering Turbo Pascal is a good one.

The object-oriented programming features of Turbo Pascal comprise a relatively small part of the language. OOP is a powerful and useful addition to the language, but it is not something that you will pick up at once. Tom Swan doesn't cover OOP until the very last chapter in his book. Fortunately, you can do a lot of programming without it, and meanwhile, it is a satisfying goal to work towards. With Turbo Pascal V5.5 you'll be using your PCjr to keep up with the latest developments in computer programming.

What Is A File Manager?

A File Manager is a very handy type of software for copying, moving, deleting, renaming and doing other useful things to files without having to use DOS commands. Scout, Disk #81 in the jr Newsletter Software Store, is one of the best we know of. It can be "memory resident," which means it'll pop up any time you need it by just pressing two keys.

New 20 Mb Hard Drive
Available for PCjrs

Ed Strauss, creator of the popular jr Hotshot memory expansion for PCjrs, has come up with a 20 Mb hard drive, complete with controller card, XT bus expansion port and power supply. The price, from several PCjr suppliers, is $495, which is in line with the prices being charged for other hard drives for PCjrs.

A PCjr XT buscard which brings PCjr expansion port signals out to a PC/XT expansion connector, is used to supply the signals to the hard drive and may also be used for other types of expansions,although the possibilities have not been fully explored. We'll report back on this in a couple of months.

The hard drive, via the buscard, plugs into the side of the PCjr,or into whatever expansion module may already be on the side of your PCjr. It runs off a standard PC/XT power supply, the way Ed has configured it, but at least one supplier, Computer Reset, says an internal power supply will be provided instead of the external PC/XT supply.

As our recent reader survey has indicated (see article on page one), many PCjr users have acquired hard drives, and the addition of this new one will provide users with another excellent choice.

Hard drives are very convenient, operate much faster than floppy disks, provide much more storage capacity all in one place where you can find it, and are less susceptible to damage than floppies because hard drives are built into their own protective cases.

As we have mentioned in previous issues, hard drives for PCjrs are more expensive than those for most other computers because the components such as controllers, cases, etc., must be custom made in relatively small quantities due to the smaller PCjr market.

As of this writing, Ed Strauss' hard drive can be obtained from Computer Reset or Oowl Software (see ads in this issue).

Reader Survey

catching on, because almost 15 percent report having this done. This may be a surprisingly low figure in view of the fact that the modification is inexpensive and it makes many more games run in 16 colors.

What Do You Use Your PCjr For?

We probably shouldn't have been surprised by the next part of our report, because each year there has been an astounding range of things that people do with their PCjrs. It's really to be expected since PCjrs can do just about anything that larger computers can do, even if it may not be lightning fast at doing it.

Here is a sampling of uses that give you an idea of what the thousands of PCjr users across the country are doing with their computers:

Janet T. Clark of Kansasville, WI, reports she does real estate analysis (as a broker), business and personal letters, spreadsheet analysis (using SuperCalc 3), database storage (with PFS Professional File), Genealogy (with Family Roots V3.5), and model railroad layouts (she didn't say what software she uses for this).

William Hester of Endicott, NY, says he does personal letters, household finances and investments, maintenance and miles per gallon records for two cars, grocery coupon records for his wife, medical expenses and mileage records for tax purposes and "just about anything I know I will forget if I don't have it recorded and saved via computer." (Makes you wonder whether his PCjr is ever turned off, doesn't it?)

Ernesto Molina of Minneapolis, MN, writes "I use my PCjr for personal letters, games, organizing my chaotic life and managing my personal finances. I will buy a modem and look into the world of the BBS when I can afford it, but until then I am aquiver with anticipation. I use it to design forms and display graphic designs. I try different CAD programs, LogiCadd and Generic Cad. I do use it as a major source of entertainment. My wife considers herself a PCjr widow and refers to my computer as my mistress because I am so attentive and am always looking for more ways to use it."

What My PCjr Means To Me

Although this wasn't a category on the survey, many of you made comments on what your PCjr means to you. We thought you'd like to hear a few:

"It is a wonderful all-around personal management tool. It can be simultaneously useful, helpful, educational and enjoyable. It can also be frustrating, but isn't everything else at one time or other?" -- Lino Magliocco, Shelton, CT

"I am attached to my jr, which has driven me nuts on occasion, but which has taught me so much about computers. Upgraded as it is, it can handle all of my home and many of my business needs....I see no reason why my jr. can't give me another good 10 years of service. It's debugged, paid for, and comfortable. And I love confounding power users who see it in action (especially when it talks to me on boot-up!). --R. Legro, Milwaukee, WI

"PCjr has been a wonderful way to learn the ins and outs of computing. I can say after six years that jr lead me into a new class of computing expertise -- much beyond many of my peers at work. Thanks for being such a wonderful part of making my jr a growing, useful tool. I look forward to all the years to come as engineers and software artists pump up my junior to even greater heights." --Mickey Ellison, Bloomington, IN

THANKS TO ALL OF YOU WHO TOOK THE TIME TO SEND US YOUR SURVEYS

Next month we'll report on what the Reader Survey revealed about PCjr users' hardware and software loves and hates, including a listing of software titles people use and like best.

Questions and Answers

QMODEM. This may be one of those, so our MODE command could take care of it.

Q. Some questions: There are 3.5" drives with 720k, is it possible to get 5.25" drives with 720k capacity? Is it Possible to have a hard drive even if you have a modem? I know that hard drives have their cards plug in to the modem slot. I would like a hard drive but don't want to give up or have to purchase another modem. B. Tragni, San Jose, CA
A. First question: The 5.25" drives of high capacity generally format the disks to 1.2MB but can read lower density. The only one we know of is the drive offered by PC Enterprises. It is specially set up to operate with the jr.

Second Question: It certainly is possible to have an internal modem and a hard drive. The option of a side-car for the interface card is available from more than one of our advertisers. Call and they'll get you any information you need.

Back to floppies with an addendum: We (Q&A) have just sent a program called FORCE18 to the jr Newsletter main office. This program allows formatting to 400K in any ordinary 360k 5.25" jr drive. It also allows formatting to 800K in standard 720k 3.5" drives, and to 1.44MB in floppy drives which normally do 1.2MB.

Software Store
Games

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)

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

Questions and Answers

We (Q&A) have been extensively testing this and so far have found that the only incompatibility is with CHKDSK. No special software is required to read these disks, the information is all in the boot sector, FAT and directories.

To over-simplify; this program puts 10 sectors on standard 5.25" diskettes where DOS puts 9 sectors, and the result is actually a little over 403K of usable disk space. For other drives the step size (track spacing) is controlled as well. Get the idea?

Q. For DOS 3.xx I am having trouble with the config.sys file for 3.5" 720k drives and additional memory. Can you help out? A. Stokes, West Valley City, UT and others.

A. Best bet is using jrconfig:
DEVICE=JRCONFIG.NRD -S1 -T3 -B1 -D2 -J -V80 -C
DEVICE=RAMDRV.COM (drive C:, A & B assigned by DOS)
DEVICE=DRIVER.SYS /D:0 (3.5" 720K D: in the 0 (A) slot)
DEVICE=DRIVER.SYS /E:1 (3.5" 720K E: in the 1 (B) slot)
FILES=20
BUFFERS=20

Remember, DOS automatically assigns the first drives as, A:=first internal floppy, B:=next or additional floppy, and C:=first hard disk or RAMdisk. That's why the 720k drives above are set up as D: and E:

For increased efficiency, use FASTOPEN in your AUTOEXEC.BAT with whatever memory size you can afford, it really speeds things up!

IBM Color Printers
Available from Computer Reset

The IBM 5182 Color Printers, a sturdy wide carriage printer that once retailed for about $2,000, is currently available for $399 from Computer Reset, the PCjr specialists in Garland, Texas.

These printers are not state-of-the art color printers and are not supported by much software, but they produce excellent results when used with software that does support them. Lotus Freelance is one such program and Computer Reset is in the process of testing others.

The 5182 printer operates at 200 characters per second in draft speed, 35 cps in Near Letter Quality mode. It will print in black as well as color and is supported by word processors such as Word Perfect for black printing.

Also being restocked by Computer Reset are many of the IBM Assistant series software (Writing Assistant, Graphing Assistant, etc.), which run well on PCjrs.

For more information, contact Computer Reset at (214) 276-8072.

WordCraze Disk Revised With New Word Search Software

WordCraze, Disk #87, has been revised with the replacement of a defective program called WordHunt by the new and more powerful Super Pro WordSearch.

Although it ran well in our tests, many of you who purchased Disk #87 had trouble running the word puzzle creation program on that disk called Word Hunt. We have responded to your complaints by replacing that program with Super Pro WordSearch, an excellent program for the creation of word search puzzles from words you select.

Anyone who purchased this disk who would like to receive the new version should send the disk to us and we will replace it. We thank those of you who brought this problem to our attention.

As it turns out, it's probably for the best. Since we assembled the programs on Disk #87, a new and much better program for making word search puzzles has been created by shareware programmer Rick Boozer of Greer, S.C.

The program is very easy to use. Just start it up and select what you want to do from the initial menu of choices. If you want to create a new puzzle, you are asked to simply make a list of the words you want the puzzle to contain. During the entering of your list you can edit or revise it at any time.

When your list is done, you return to the opening menu to print or save the puzzle. When you print it you have the option of printing with or without the solution. If you chose the solution, Super Pro Word Search will print a copy of the puzzle with your words circled. Word Search will adjust the size of the puzzle to the length and number of words on your list, which is something most other word search programs can't do.

Rick Boozer claims he has made "The most advanced program of its kind ever!" He backs up this claim by listing the program's many features and by describing the tips he received from an editor of word search puzzle books. After trying out Super Pro Word Search, we don't see any reason to challenge Rick's claim.

Disk #87 also contains Quotefall, a program which makes an interesting and challenging puzzle out of messages, or even entire paragraphs, you write. And there's a difficult version of hangman, for those of you who say "Ho, Hum," to the simpler versions and want to test your brain power.

The new word search program requires 256K to operate, so we must apologize to those of you with only 128K, but this program was too good to pass up.

Software Store

More Games
Please Use Order Form on pg. 23

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 also games on page 18)

Especially for PCjrs

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

JR MUSIC MACHINE. If you want to write and play music on your PCjr, this program allows you to do it. Displays music as you write it using jr's 16 colors, and plays music back in three voice harmony. Features allow you to adjust key, tempo, note values, etc. Color Display required. 128K ok. (Disk #62)

DOS 2.1 FIX. Patches to fix the bugs in DOS 2.1. Cures most problems encountered when running memory intensive programs. Also patches to run BASIC and BASICA on DOS 2.1 without having Cartridge BASIC installed. 128K ok. (Disk #40)

More Reader Feedback

Has Anyone Linked Two Juniors?

I have two PCjrs; both have one drive and one has 2 side cars; a power supply and a 128K memory. I am an electrical engineer and an amateur radio operator. With this background, I've looked at the extra PCjr sitting on the shelf and wondered if the two could be paralleled to get a 2nd drive and 128K more memory. Help jr grow up. Has anyone ever tried to wire the two together and write a program to make them work as one. I'm sure it's possible, but I don't know if it is practical. Has anyone tried it?

Robert Srver, Largo FL

EDITOR'S NOTE: We don't know of anyone who has done this other than in LAN setups with the PCjr cluster attachment.

Slide Show Provides Impressive Video Titles

I read your letter cover to cover the day it arrives. It provides a great deal of help and I think it is great. My jr has a 2nd Drive with DMA (Racore) and 640K.

I have been looking for a graphics program that would enable me to make impressive titles for my home video tapes. Recently I found **Slide Shop** by Scholastic in New York. It was just what I wanted--gives me great fonts, color, clipart and even music and sound effects.

I hope this will be helpful to other video buffs. I'll bet many jr owners are not aware that they can pipe video and audio directly from jr to their VCR. They will find video and audio output jacks (labeled V and A) on the back of jr.

Carl McAlister, Riverton, NJ

Multiplan v4.2 Works With Patch

For your information, the INT9 patch on JR POWER PACK II (Disk 65) also fixes Microsoft **Multiplan** version 4.2. Two figures showed on each keystroke prior to using the patch. I talked to Microsoft and they said that they had not been supporting PCjr for several years and did not have a fix for the problem. Multiplan 4.2 runs fine now.

Matthew Lawman, Richmond VA

EDITOR'S NOTE: The INT9 patch, which is also on JR PATCHES DISK #56, makes many Microsoft programs, including QuickBASIC and Works V2.0, run on PCjrs. If you don't want to use a patch, you can also solve the problem by booting up with JRCONFIG which automatically fixes this incompatibility. JRCONFIG is on the JR POWER PACK II (DISK #65) and PCJR AUTOSETUP (Disk #99).

She Won her PCjr And She Loves It!

Your newsletter is eagerly awaited every month and is full of support. Congratulations!

How I acquired my PCjr is a story that came about quite by accident(?). Five years ago I had decided to buy either the PCjr or a Tandy (after shopping for 2 years for a computer). While still trying to make a decision, I had entered a contest to win a PCjr and that is just what happened! I won!!

Even though I have also purchased an Epson Apex 100/20, I still prefer my "orphan" and it will never be for sale. In fact, I persuaded my son and his family to purchase a PCjr, too (through the ads in your newsletter).

I still have much to learn about the more advanced technologies of use but that just makes it more interesting and challenging!

And, by the way, it's never to late to learn what a computer can add to your life. I'm 60.

Shirley Ferris, Arvada, CO

Tetris Lover Creates His Own Great Version

An engineering student who loves to play Tetris, the best selling game from the Soviet Union, decided to make his own version, adding the ability to play against another person -- and he's come up with a winner!

And so has Daniel Singer, of Lehigh University, who made his own version of the popular game. He calls his XTetris, and he adds a few treats of his own to the Russian concept.

Both of these excellent Tetris-like games are on our new Duotris Disk #116.

Double Blocks, by engineering student Ernest Yale, challenges you to juggle the dropping shapes into strategic positions similar to the way Tetris does, complete with sound effects. You can select your level of expertise, and, by completing lines of blocks successfully, you can graduate to new levels.

Double Blocks allows you to set the keys you want to use for right, left, rotate and drop. It also provides settings for "next block" and "drop slide", which allows you to slide a shape left or right, if you're quick enough (setting 9 gives you the most time).

Two players can pit their skills against each other with Double Blocks, and the author will send registered users a version designed to be played via modem, for $5.

In Daniel Singer's XTetris, a couple of new spins are put on the game. For one thing, he's added triangles to the falling shapes, two of which will make a square, provided they're in the right position. XTetros also give you a chance to clear up your mistakes every now and then by dropping a "bomb" in the shape of an X, which will obliterate the shape it hits.

Both of these versions of Russia's gift to American game lovers are very well designed and run without a hitch on PCjrs with 128K. To order, please use the order form on page 23.

Compatibility Update

Barron's Computer SAT, Compatible

Compushow V.8.10 Excellent, runs well with 640K.

Clue (Parker Brothers) Not compatible.

Daily Double (Artworx) Runs well in 4 colors.

Loom (Lucasfilm) Runs well in 16 colors with Tandy Mod, 4 colors on standard PCjr. With Tandy Mod, add ts to command line for Tandy plus sound.

Low Blow (Electronic Arts) Runs well in 16 colors with Tandy Mod,4 colors on standard PCjr.

Horse Racing (SportTime Omni-Play) Runs well in 4 colors.

MoneyCounts V5.0 Runs well, but V6.0 has problems for some PCjr users.

Multiplan (Microsoft) V4.2, Compatible (Use jrconfig or Microsoft patch on JR PATCHES DISK.

Shark Attack (Virgin Mastertronic-Melbourne House) Runs well in 16 colors with Tandy Mod, 4 colors on standard PCjr.

Wolfpack (Nova Logic - Broderbund) Not compatible.

The Latest On Compatibility

The latest version of the PCjr Compatibility Disk, with tips on nearly 1,000 software titles, is now in the Software Store.
See Disk #60.

Are You Ready For Calculus?   If You Care, Disk #116 Is For You

Disk #117, "Are You Ready For Calculus?", provides a review of the skills you'll need before starting a course in Calculus. Designed by a professor in the University of Arizona's Math Department, this review was created because many students taking Calculus and Business Calculus did not have the skills in Algebra and Trigonometry that were necessary to begin Calculus. This includes many students who may have received good grades in high school Algebra and Trigonometry, by the way.

This program provides questions, answers and help in the following subjects: Greek symbols, Elementary Trigonometry, Elementary Algebra, Factoring, Fractions, Exponents, Functions and Equations, Inequalities, Curves, Functions and Formulas, Trigonometry Identities.

Questions in each of these areas are designed to expose any misunderstanding you may have and to help you develop your skills.

Are You Ready For Calculus (Disk #117) runs on 128K. To order, please use the order form on page 23.

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, 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, 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.

Software Listings In This Issue:
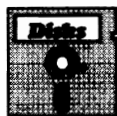**Word Processing & Writing, page 7.**
Systems Utilities, page 9.
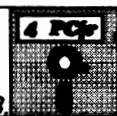**Telecommunications, page 13.**
Educational Software, page 15.
Games, page 18-19.
Especially for PCjrs, page 19.

Software Store New Releases
Please Use Order Form on pg. 23.

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

* NEW * DUOTRIS. Two great Tetris-like games on one disk. Similar to the popular Russian strategy game, both of the versions add new twists of their own. Written in Turbo Pascal, both are high quality games. 128K ok (Reviewed 8/90) (Disk #116)

* NEW * ARE YOU READY FOR CALCULUS? Excellent review of Algebra and Trigonometry skills you'll need before taking Calculus. Provides help in needed areas. Designed by professor in University of Arizona's Math Department. 128K ok (Reviewed 8/90)(Disk #117)
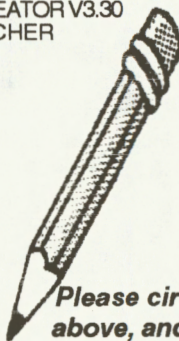
* NEW VERSION * WORDCRAZE. Create your own word search puzzles and print them out for friends and family. Just make the list of words you want in the puzzle and it's printed out for you. Or try Quotefall, a unique type of scrambled word puzzle. And then there's a high-level version of Hangman. Just try escaping from the noose in this one! 256K (Update review 8/90) (Disk #87)

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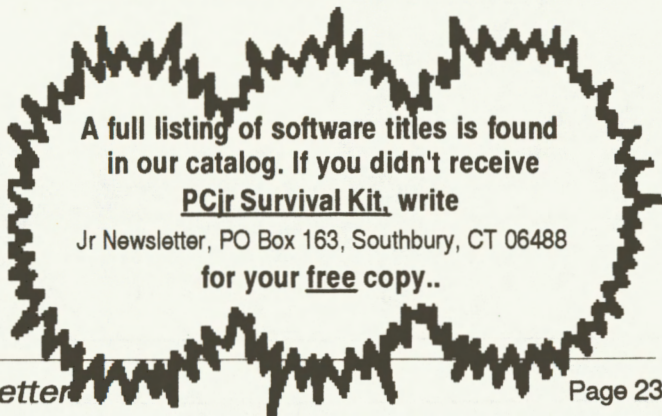Shipping & Handling = $ 3.00
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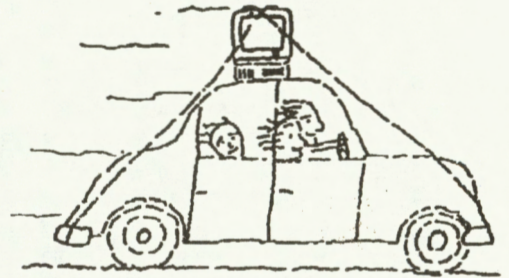Address _____

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