

THE JUNIOR REPORT

Taxing Times for the PCjr

COPY 11 PC p. 3
 W/ ADD to RANOSIK p. 5
 See June '88 p 5
 PCjr Compatibility Update
 pp 10ff

The PCjr has survived. Period. It has survived because of the hard work of PCjr lovers, the stubbornness of PCjr owners, and the plain, simple fact that the Junior will still run a lot of software. And since it is nearing that eventful date of April 15th, this issue celebrates the fact that the Junior will run the three most popular tax preparation packages in the PC market. This article will describe the three packages, while the *PCjr Magazine* reprint article starting on page 12 will give the PCjr owner the basics about filing your income tax on old junior.

Andrew Tobias's Tax Cut

Originally developed by Best Programs, it is now produced by MECA Venture, Inc. This program does a good job of teaching you about taxes as well as prepare them. Uses screen displays that are excellent and easy to follow. The newly released version from MECA instantly recalculates tax owed or refund due, along with the current tax bracket and the taxable income of the taxpayer every time a number is changed. This way, you can see "what-ifs" as you computerize your taxes. The easy-to-use help screens and an easy-to-understand user manual are both written by Andrew To-

bias, author of the best-selling *Managing Your Money* software package. Creates and prints out an IRS approved 1040 form. This is a solid, sensibly designed program.

Forms: 1040, 2106, 2119, 2210, 2441, 3468, 3800, 3903, 4562, 4797, 4952, 5695, 6251, 8582, 8598, 8615.

Schedules: A, B, C, D, E, F, & SE.

Requires: 256K, 2 drives

Price: \$80.

Cost of yearly updates: \$50.

Address: MECA

355 Riverside Ave.
 Westport, CT 06880
 (203) 226-2400

A New Look for Junior Report

For many of you who have subscribed to *The Junior Report* for several years now, you may have noticed that we like to change our look every so often. That time is now. We felt stagnated by certain restrictions, and we wanted to start fresh, with a new outlook on the PCjr scene, and a new face as well.

You've already noticed as you're holding this issue that we have cut out most of the dead weight that added pages to each issue, but not much content (such as a huge Shareware listing, certain large ads, etc.). We've also reduced the type size from 12 pica to 10 pica for each article to fit more editorial content into fewer pages. It will improve our

readability, and cut down on mailing costs as well.

Finally, if you look closely at the expiration date on your current mailing label, you'll notice that your subscription has been extended two additional issue dates. That's because we've decided to name this issue the February 1989 issue, and finally get us on the right month from a date standpoint. The additional issue is given to every subscriber to make up for all of this confusion. To put it all in perspective, we are finally caught up from being so far behind these months. You should expect each issue by the fifth of each month, and that's reason enough for every one to celebrate.

So enjoy our new look, and look forward to many more issues of great PCjr reading.

TurboTax Personal Edition

This is the very best selling program at the moment, according to Egghead Software. Not only does this do your 1988 taxes, but it helps you plan for your 1989 taxes as well. The user friendly program uses pop-up menus and on-line IRS instruction. TurboTax keeps you from the yearly tax rush by allowing you to keep your tax records in your jr all year long. Like Tax Cut above, this will print an IRS-approved 1040 form on a dot matrix printer. For an additional \$40. you may be in one of 40 states that allows you to use this program for state returns.

Forms: 1040, 1040A, 1040ES, 2108, 2119, 2210, 2441, 3800, 3903, 4255, 4562, 4797, 4884, 4972, 6251, 6252, 8582, 8606, 8615.

Schedules: A,B,C,D,E,E1,E2,F,R,SE,1

Requires: 384K, 2 drives

Price: \$75.

Cost for yearly upgrade: \$37.50

(Continued on page 22)

EDITOR'S NOTES

So how do you like our new look? Don't answer that. Well, it had to be done, anyway, and though some of you will not like the changes, we feel it will make our monthly efforts a lot better. Less white space, less graphics, a few less ads, smaller type when possible should make The Junior Report a lot less wieldy and much more efficient. We've tried to cut away the fat (we didn't have to call Oprah either) to make a lean, mean, PCjr-loving machine.

Carl Haub, editor of the highly-acclaimed Metro PCjr Journal out of the D.C. area, informs us that IBM does have replacement parts for the PCjr. How about a jr motherboard for \$75.? Well, you'll have to exchange your defective board to get that great price, but who cares? Carl says call (303) 924-4015 for a parts I.D. number, and then call (30) 924-4100 to order. Thanks for the tip, Carl. By the way, Carl, how's George doing so far?

R.A. Pelletier of Salt Point, NY has reminded us this month that Prodigy, the joint IBM and Sears interactive, online computer service, is still not available to PCjr owners, despite earlier promises by IBM that "they" were in the process of writing special PCjr software for the service. This is an important deal because Prodigy is backed by these two giants, and will

allow jr owners to access a wide range of information including educational and entertainment features, and to make shopping, travel, and financial transactions all from the comfort of your computer room chair. Even if you do not participate in telecommunications yet, you surely will. So get out that pen and paper and whip out a note to Prodigy, Director of Programming, 445 Hamilton Ave., White Plains, NY 10601 to complain. The world and PCjr owners thank you.

Speaking of thank you, have you written your letter or postcard to Accolade yet as described in last month's issue? Here's a company that will listen to PCjr owners if there are enough of them. Accolade is a case of a good guy who might be "gooder" if we can, in force, let them know that 500,000 PCjr owners should not be forgotten from an economic standpoint. The address is Accolade Software, 550 S. Winchester Blvd., Suite 200, San Jose, CA 95128. Attn: Mr. Jeung.

Many of you have requested information about PCjr daughterboards to house an 8087 math coprocessor. Again this is the chip that greatly enhances math intensive computer operations such as those found in Lotus 1-2-3 re-calculations. They can now be obtained from Technical Economics Consultants in Minneapolis, Minnesota,

(612) 781-4537, at a cost of \$130 per board. Please contact Andrew Nimitz.

Another hard-to-find item that we have found is a 6 foot PCjr serial port adapter cable that makes jr's rather unique serial port into a rather normal PC serial port. The "regular" (is there anything regular about the PCjr?) serial port adapter cable is only about 6 inches long, so this is a great improvement. The extra long cable can be bought for \$28. (retail \$39.95) from PC Dimensions in Minnesota (507) 288-1396. Call to make sure they still have them.

We've always tried to make The Report more like a personal letter to each of you in the past, and we hope we can continue with that kind of closeness in the future and with all of the new changes. Like veterans of all wars, we have survived a lot of things together. The battles with software companies and IBM have inflicted wounds that have not been mortal in nature, but has instead forged a more closely-knit group of "juniorites", ready to defend our machines against the grim reaper of obsolescence. He hasn't showed up at our door yet, and with your support we can continue to delay his visit for many years to come. As a group, we can not only keep him from coming, but we can collectively kick his butt from here to Kalamazoo. So, let's keep kicking.

The Junior Report

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LETTERS

Thank you for your letters and comments. We're sincerely sorry that we are not able to answer all letters personally, but will attempt to cover as many questions and topics as possible in this column. All letters become the property of The PCjr Club and are subject to editing for length and clarity.

CHURCH PROBLEMS SOLVED

I am writing concerning the letter from Dotty Doenig concerning church software. I've been financial secretary for a small congregation for 4 1/2 years. The software I use is Viansoft Church Contribution System. You can contact them by writing:

Vian Corporation
R.D. 1 Box 36
Glen Gardner, NJ 08826

I use it for keeping track of contributions and time and talent sheets. The program puts out quarterly and yearly statements as well as mailing labels. I ordered the program in December 1986 and it cost about \$60. I think they also put out more advanced programs for church treasurers. It runs with 2 disk drives or a hard disk. I have a PCjr with a Racore II Expansion with DMA and 640K and have had no problems with the program.

By the way, I've had my PCjr since February 1985 and not only keep track of church contributions, but also our family finances with NET WORTH and our investments with the TWIN spreadsheet. My two sons (ages 4 & 10) also use the jr for many games MY ABC'S, MIXED-UP MOTHER GOOSE, AMY'S FIRST PRIMER, SUPER SUNDAY, WINTER GAMES, and MICROLEAGUE BASEBALL among them.

Keep up the good work. Your magazine is one of the last places I

can find to get products to keep my PCjr running. I look forward to it every month.

Mark Dietzler
Kimberly, WI

Thanks for the helpful information. Dotty and The Junior Report are extremely grateful. You may be typical of the PCjr owner in that your jr is used and used often by several members of your family for a variety of purposes. Praise be to God that YOUR jr is alive and well.

WRITING ASSISTANT ON A 256K MACHINE

My question concerns the Writing Assistant Program version 1.01. Can we or should we try to change from the 128K version to the 256K version? If so, how? We tried replacing WRITE.SWP with WRITE.NON, but the program will not run when we do this.

Any information concerning this problem would be appreciated.

Bonnie Brown
Bettendorf, IA

The Writing Assistant is the most popular word processor for the PCjr for three reasons. One, it is incredibly easy to use, and two, a lot of us got it free with our Juniors, and three, it integrates with The Filing Assistant to create a more powerful package. However, it has several limitations, one of which is that regardless of how much memory you may have or your Junior may recognized, the page length of your document is severely restricted.

But ease of use and productivity make up for page length problems for many of you, and changing your Writing Assistant program disk to be used on an upgraded PCjr is definitely worth the effort. Of course it is wise to perform any alteration to a program

on a backup. Always use a backup program like COPYIIPC to make legitimate copies of your programs before you proceed. COPYIIPC costs less than \$40, and you'll use it for a number of important programs.

In order to change your 128K version of Writing Assistant to a 256K version, you must erase both the WRITE.EXE and WRITE.SWP from the 128K version first. Then, you must copy the 256K versions of WRITE.EXE and WRITE.SWP files from your SAMPLER diskette back onto the backup. The WRITE.NON must be on the backup in order for the program to run.

TO EXPAND OR NOT TO EXPAND, THAT IS THE QUESTION

I have been a jr owner since December 1984 (as probably are most owners). I too came up against the question whether to expand jr's memory and add a second disk drive or purchase one of the new clones. This really was a difficult decision when one looks at the cost and capabilities of the new machines. However, in the end, I opted to expand my junior. I now have an enhanced jr with 640K via PC Enterprises 512K memory sidecar, a 1.2 meg second drive, a Keytronic KB5151jr keyboard, and the 1.2 jr synchro cartridge.

I opted to expand the jr for several reasons:

1. The investment I had already made in purchasing jr totaled some 1500 dollars.

2. To purchase a clone system with the same capabilities as I currently enjoy with my jr would have cost about the same amount of money and I did not want to spend that much.

3. Anyone keeping an eye on the PC market can see tremendous changes occur about every 2 years. I did not want to get stuck with another orphan.

4. Most of the software I already run or want to buy will run on the jr.

5. I could expand jr's memory to 640K and add a second disk drive for about \$500.

I chose PC Enterprises' sidecar memory expansion and second drive frankly because reviews of the jrHot-Shot's installation scared me off. I did not like the idea of removing the CPU chip and having to shave a plastic disk support to fit the jrHot-Shot board in. I use the 1.2 meg like a hard drive. It is great for running programs that come on more than one diskette; I simply copy the program to a 1.2 meg disk and totally avoid disk swapping. An added bonus is that the memory expansion came with JRCONFIG.SYS utility described by Richard Spencer in the November issue.

Since I have expanded my jr, I've been extremely happy with it and have not regretted my decision. Some day I will probably purchase another machine but as long as jr runs the software I want, I don't need to.

I read with great joy your software compatibility list in the November 1988 issue. I am an avid wargamer and science fiction fan and own many simulations which either were not on your list or which you have no information. Well, here is some more information for your next list: (Ed. Note: see page 10 for these and other jr-compatible programs).

One thing that burns me is that when I first got Reach for the Stars and figured out how to run it, I called Electronic Arts to ask if there was any way to get it to run in

CGA mode. I also wanted to find out if their new game Sentinel Worlds would run on the junior. The answer I got was that Electronic Arts no longer supports the PCjr but that I was more than welcome to try to run any of their software. For anyone following the computer game market, Electronic Arts has consolidated and affiliated themselves with computer game companies faster than Bismarck united Germany. Electronic Arts has become the Titan of the computer gaming world. For them to no longer support the PCjr is intolerable. Is there anyway you can print a form letter to Electronic Arts similar to the one you printed in the October 1987 issue to Microsoft so readers can express their displeasure? These people have to realize how large a market they are denying themselves by not supporting the PCjr.

As an aside, for anyone interested in computer gaming, the magazine to get is Computer Gaming World. Other than The Junior Report, CGW is my favorite source of what is going on in the computer world.

In closing, I'd like to say that The Junior Report has greatly increased my interest in computing and really helped finalize my decision to keep my jr. Keep up the good work!

Robert Young
Dover, OH

Thanks for taking the time to write and for including the list of software that you find compatible for the PCjr. Our job here is made infinitely easier when readers like yourself take time to help your fellow jr owners.

The lengthy list of programs that you find that will run on your PCjr attests to the fact that you made the right decision to expand your PCjr. We bet that besides the "wargames" that you have listed, there is a lengthy list of non-entertainment software as well. Somewhere out there, there is a wealth of programs waiting to be run on the Junior. But for companies like

Electronic Arts, that do not see the truth in the PC world, we will be reminding them of it with a form letter in next month's issue.

RUNNING A DENTAL PRACTICE WITH JUNIOR

I received a PCjr from my brother-in-law several months ago and am having a great time in learning about computers. I have picked up some home finance packages and look forward to performing practical duties on my jr as well as play games.

My question is whether there are professional dental programs that will run on the junior. The packages I have seen run into the thousands of dollars and I'm not quite ready to spend the money yet.

W. Lee
Chicago, IL

CMA provides professional applications for a variety of professions including physicians, lawyers, and dentists. They have a dental program that will run on the PCjr. The company can be reached at: CMA, Micro Computer Division, 55722 Santa Fe Trail, Yucca Valley, CA 92284.

XT CLONE AND PCjr LIVE HAPPILY UNDER ONE ROOF

I was sorry to read about Mr. Taylor deserting his jr for another machine. I understand his position as I, as of last October, switched over to an XT clone (I refuse to say upgraded to a "better" machine)! I did not opt for an AT as speed was not the primary reason for the switch. I wanted a hard drive, but like Mr. Taylor, I couldn't bring myself to pay what amounts to extortion for a hard drive for the jr.

Unlike Mr. Taylor though, I did not "desert" my jr when I got my XT clone running. Rather, it is

now my five 1/2 year old daughter's first computer. I myself still use it to play KQ4 and the like as my XT doesn't have color yet. My jr has become an old and trusted friend. You just don't throw out old friends when new ones come along! To be honest, if a hard drive for the jr was available at a reasonable price, if my jr hadn't started to exhibit a few problems last year, and if someone were to come up with a piece of software that would allow the jr to run Tandy 16 color graphics, I would never have even considered switching to a new machine. I still love my jr every bit as much as the day I bought it!

Not only am I going to continue to use my jr, I intend to continue subscribing to The Junior Report as well! Like I said, you don't abandon old friends when new ones appear on the scene!

Steven Miller
Grand Terrace, CA

We consider all of our readers as old friends, too. But as fellow PCjr owners, we share the PCjr lifestyle, which means we revel in junior's successes, and we get angry when jr has been jilted or ignored. Together, we'll all see that the PCjr will be around for some time.

WRITING ASSISTANT ON A RAMDISK FOR SPEED

I found the letter from Richard Schneider in the November issue of The Junior Report to be very informative. Although I am probably not the "novice Jr hacker" that his letter was directed to, I am a rather heavy user of The Writing Assistant and therefore I'm very interested in any ideas to make this program run more efficiently. Since my jr has an expanded memory (640K via a Tecmar 512K sidecar), I was particularly interested in Schneider's idea to store Writing Assistant on a RAMDISK

to speed it up. However, his instructions for that operation were too brief for me to succeed on the first try. I have now figured out how to do it, and the program runs much faster than before. I offer here my approach for the benefit of other novice users of Writing Assistant who may be interested:

1. Boot up DOS with a 360K ramdisk as drive C (I use DOS 2.1)
2. Insert WA disk, and enter: COPY * * C: (copies WA to ramdisk.)
3. Insert DOS, and enter: ASSIGN A=C B=A (makes C the default, and allows use of B for data files.)
4. Insert WA, and enter: G (starts Writing Assistant).
5. Now insert data disk, and put away DOS and WA disks. Remember to precede all references to data files with a B: (e.g. B:XXXXX where

XXXXX is the name of the file).

I hope this helps others to speed up Writing Assistant. By the way, I keep reading references to a "patch" for Writing Assistant. Could you tell me what reprint to order to find out about this?

Thanks.

Neil Frankel
Rochester, NY

Are you talking about the patch to remove the Writing Assistant's copy-protection? If so, that article and how to remove the copy protection from the rest of the Assistant series appeared in the double issue of The Junior Report of June/July 1988. This reprint will be made available on diskette soon.

EXPAND YOUR PCjr

jr. Hotshot 512K Memory	CALL
Racore Drive II Plus w/DMA & 512K Memory	\$500
Quick Silver Cartridge	\$ 30
AT Style Keyboard w/adaptor cable	\$129
20 Meg External Hard Drive System	\$579
1200 Baud External Modem	\$ 99
JR-RS232 Modem Cable	\$ 19
3.5" External Disk Drive	\$299
Nickel Express Jr 8MHz Turbo Board	\$ 79
Siamese Slots-Cartridge Expansion	\$ 25

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260 N. Lincoln Way • Galt, CA 95632
(209) 745-9284 (PST)
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JUNIOR'S BIOS VIDEO SERVICES

BY JOHN WILSON

Deep in the heart of every IBM personal computer's Read Only Memory (ROM) are a group of routines called the BIOS Video Services. These routines access the computer's hardware to set screen modes and colors, write and read characters on the screen, control the screen cursor and just about anything else connected with the video display screen. The IBM PCjr has all of the video services that the original IBM PC and XT computers equipped with Color Graphics Adapters (CGA) have, and Junior has a few services that those computers do not have.

Most assembly language books contain listings of the ROM-BIOS services, but often they do not cover Junior's extensions to the video services, so this article will give you a list all of Junior's video services in ROM-BIOS. The video services are actually only a small part of the ROM-BIOS, but in most of the other services Junior is almost identical to the PC and XT and these services are covered very well in numerous books. Peter Norton's Programmer's Guide to the IBM PC is one of the best reference books for the ROM-BIOS and DOS services, and it does a very good job explaining material specific to the PCjr. However, Norton's book just skims over Junior's extensions in the video services, and the list in this article is much more complete.

At this point you may have two questions. The first one is probably: "What are the ROM-BIOS services?" and quite likely the second one is: "What good are they to me?" or "Is there any way that I can use them?"

ROM-BIOS stands for Read Only Memory-Basic Input/Output System. It is a set of assembly language routines, residing in ROM (So that they are permanent and cannot be changed.), that provide hardware control of the major input-output devices in the computer's system. They access the ports on the support chips and controllers to handle all of the computer's peripherals and devices - the display, the disk drives, the keyboard, memory, etc. The BIOS services are supplied so that programmers will have a standard input/output interface with a variety of computer models. For example, a programmer doesn't need to know the I/O address of the printer port and how to control it in order to send a character to the printer. The programmer can use a BIOS call to send the character, and the program using this BIOS call will work on Junior, on an AT and just about any member of the PC family. You could instead send the character to the printer by issuing specific signals to specific ports, but the program probably would not work on all members of the PC family because of differences in

hardware. Often the reason that some programs are not compatible with certain members of the PC family is because the programs by-pass the BIOS services and are programmed down to the hardware.

The ROM-BIOS services are useful to you directly only if you do some programming, but you do not need to be a "hard-core", low-level programmer to get some valuable use out of them. Previous issues of "The Junior Report" have often contained examples of very short programs which use the ROM-BIOS services to set-up and customize your Junior.

If you write programs in compiled BASIC, Pascal or C, you can use the ROM-BIOS services to extend your programming language and give it features that it originally did not have. All of the ROM-BIOS services are initiated with an interrupt instruction in the program (See the sidebar article "Intel Interrupts" for an explanation and discussion of interrupts.) and originally the ROM-BIOS were intended to be used only by assembly language programmers, but most versions of modern languages have provisions for calling interrupts and now you don't have to be an assembly language programmer to use them. In Turbo Pascal the `Intr` procedure initiates interrupts and this makes it easy to add procedures and units to Turbo Pascal which will set border colors, control the cursor and extend the graphic capabilities. I believe that Turbo BASIC has similar capabilities and I am certain that most versions of C are also able to call interrupts. You will have to dig through your language's programming reference manual to see if it can handle interrupts and for details on how to do them.

EXPLANATION TO THE ROM-BIOS VIDEO SERVICES SECTION

In the following section each of the 16 video services available on the IBM PCjr are listed in numerical order. The title given to each service is adapted from the title given to it by IBM. The input registers are microprocessor registers that must contain the values, or data, listed in order for the service to work correctly. Output registers will contain data after the service has been invoked. A couple of examples are given below. Next, there is a description about each service with details and hints on how to use the service. Finally, there are a few remarks on most of the services to cover anything not mentioned.

All numbers in this section are in the decimal number base. Remember, if you write assembly language programs for DEBUG you will have to convert them to the

hexadecimal number base. The services are invoked by placing call-specific values in the appropriate 8088 registers as listed in the sections below and then executing an INT 16. Information about microprocessor registers is in most books about 8088/8086 Assembly Language programming, but you can get by pretty well if you just think of them as variables such as are in any programming language. Here is an example of the assembly language code to set the cursor to a full box shape:

```
MOV AH,01    ; Select service number 1
MOV CH,00    ; Cursor's top scan line
MOV CL,07    ; Cursor's bottom scan line
INT 16      ; Invoke interrupt 16
```

You will notice that the service number is always placed in the AH register. Services that read data will output that data into the specific registers listed. For instance, the assembly language code to read the current video mode is:

```
MOV AH,15    ; Select service number 15
INT 16      ; Invoke interrupt 16
```

After this section of the program has run, the AL register will contain the number of the video mode, the AH register will contain the number of text display columns the mode has, and the BH register will contain the number of the active display page.

PCjr ROM-BIOS VIDEO SERVICES

SERVICE 0 SET VIDEO MODE

Input:
AH = 0
AL = video mode

Output:
none

Description: This service sets the screen video mode to the value placed in AL. The values and the resultant mode type and characteristics are:

Value	Type	Characteristics
0	Text	40 X 25 monochrome
1	Text	40 X 25 color
2	Text	80 X 25 monochrome
3	Text	80 X 25 color
4	Graphics	320 X 200 4 colors

5	Graphics	320 X 200 4 shades, monochrome
6	Graphics	640 X 200 2 colors
8	Graphics	160 X 200 16 colors
9	Graphics	320 X 200 16 colors
10	Graphics	640 X 200 4 colors

Remarks: Modes 8, 9 and 10 are valid only on the PCjr. The PCjr normally boots up in mode 0. See Service 15 for the reverse function.

SERVICE 1 SET CURSOR SIZE

Input:
AH = 1
CH = starting scan line
CL = ending scan line

Output:
none

Description: There are eight (horizontal) scan lines per character. The top line is scan line number 0 and the bottom scan line is number 7. Values of CH = 0 and CL = 7 would result in a cursor that completely fills the character box.

Remarks: This service is valid only for the text modes. The default settings are CH = 6 and CL = 7. If CH = 32 the cursor will disappear.

SERVICE 2 SET CURSOR POSITION

Input:
AH = 2
DH = row number
DL = column number
BH = page number

Output:
none

Description: The upper-left corner of the screen is position DH = 0, DL = 0. The maximum number for rows is 24 and the maximum number for columns is 39 or 79, depending upon the mode. In 40 column text modes the page number can range from 0 to 7, and in the 80 column text modes the page number can range from 0 to 3. In the graphic modes the page number must be 0.

Remarks: This function places the cursor in a position for

writing characters and it works in both text and graphic modes. Service 3 is the reverse function.

SERVICE 3 READ CURSOR POSITION

Input:

AH = 3

BH = page number

Output:

DH = row number

DL = column number

CH = cursor start scan line

CL = cursor ending scan line

Description: This function places the current position of the cursor in the DH and DL registers. You must specify, in the BH register, the page number. The row and columns are as described for service 2. This service also returns the cursor style, with the values returned in CH and CL as described for service 1.

SERVICE 4 READ LIGHT-PEN POSITION

Input:

AH = 4

Output:

AH = pen trigger signal

BX = pixel column

CH = pixel row

DH = character row

DL = character column

Description: This service reports if a light pen is active and where it is. If AH = 1, the light pen was triggered; if AH = 0, the light pen was not triggered. Note that both character rows (0 to 24) and columns (0 to 79) and graphic pixel rows (0 to 199) and columns (0 to 639) are returned regardless of the video mode.

Remarks: This is a rarely used service for a rarely used device. There is no BIOS service that writes at the location of a light-pen.

SERVICE 5 SET ACTIVE DISPLAY PAGE

Input:

AH = 5

AL = new page number

AL = 128, read CRT/CPU registers

AL = 129, set CPU register

AL = 130, set CRT register

AL = 131, set CRT/CPU registers

BL = CPU register value

BH = CRT register value

Output:

BL = CPU register value

BH = CRT register value

Description: This service supports two functions in the PCjr. The first function is to set the active page display in the text modes. For 40 column modes the range of page numbers, placed in AL, is 0 to 7, while the 80 column modes can have up to four pages (0 to 3). The second function, which is active only in the PCjr, is to set up an extended video display memory buffer for use with video modes 9 and 10. With the normal 16k byte size video buffer the CRT and CPU registers will both contain the value of 2. This value should be set to 1 in order to use video mode 9 or 10. Any program changing the value of the CRT and CPU registers should restore the original value prior to ending.

Remarks: I have never tried the second function of the service. It may be a method to enable the use of modes 9 and 10 in programs compiled with a language such as Turbo Pascal.

SERVICE 6 SCROLL ACTIVE PAGE UP

Input:

AH = 6

AL = number of lines to scroll

CH = upper row of window

CL = left column of window

DH = lower row of window

DL = right column of window

BH = attribute to use in window

Output:

none

Description: This service creates a window with using the dimensions placed in the CX and DX registers and scrolls the window up by the number of lines in the AL register. Blank lines are added to the bottom of the window. If the value in AL is zero the window is blanked. The character attribute byte, which affects the new lines placed the window (or the entire window if AL is zero), is placed in BH. In hexadecimal numbers, the left-hand digit of the attribute byte is the background color and the right-hand digit is the foreground color.

Remarks: This service is often used to clear the screen and set up a screen color by making the entire screen a window and placing a zero in AL. Service 7 is very similar to this one.

Services #7 through 16 will be covered in next months issue. Stay tuned.

INTERRUPTS

Whenever you begin to delve into the inner workings of Junior you run into interrupts. (This was intended to be a pun.) Intel, the company that designed and made the 8088 microprocessor that is the heart of every Junior, built provisions for interrupts into the microprocessor and interrupts are a key feature in all computers using Intel microprocessors (and clones of Intel microprocessors, such as NEC's V20). There is even a special chip on Junior's system board, the 8259A, to help control and manage interrupts.

There are three basic types of interrupts: hardware interrupts, Intel interrupts and software interrupts. Hardware interrupts are those which have been built into the computer, and they are triggered automatically upon certain occurrences, or conditions, in the computer's hardware. The 8259A Interrupt Controller chip prioritizes and handles hardware interrupts. A good example of a hardware interrupt is the one that occurs every time a key on the keyboard is pressed. Another important hardware interrupt is the one that occurs whenever the computer's clock has ticked, which is about 18 times every second.

Intel interrupts are generated by the microprocessor and they all relate to what is happening within the program being run. For example: If the program attempts to divide by zero an interrupt is triggered to keep the microprocessor from going wild. There are only five Intel interrupts, and one that is often used is the one that causes the program to be stepped through one in-

struction at a time. This interrupt is used by debuggers (such as DEBUG.COM) to trace through a program and assist in program debugging.

The third type of interrupt, the software interrupt, is especially interesting since it is the type that we can control and use directly in programs that we write. In many ways software interrupts are just like subroutines in BASIC and procedures in Pascal. All software interrupts are initiated within a program by using the assembly language instruction: INT n where n is a number ranging from 0 to 255. We'll look at software interrupts in detail, but first we need to see how interrupts are handled by the computer.

The first 1024 bytes of memory in every computer in the PC family is set aside for interrupts. This area of memory is called the Interrupt Vector Table. You would think that anything with a name like that would be very complicated, but it isn't. The Interrupt Vector Table is simply a list of memory address. Each interrupt has a number and when the interrupt is called the microprocessor looks at a location in the interrupt vector table corresponding to the interrupt's number. Interrupt number 0 looks at memory location 0 in the interrupt table. Since memory addresses require four bytes of memory the next interrupt, number 1, looks at memory location 4, interrupt number 2 looks at memory location 8, and so forth. You can see that the address location in the vector table is the interrupt number multiplied by four. When the microprocessor finds the address that the interrupt points to, it goes to that memory address (In computer jar-

gon: it is vectored to the memory address.) and begins to follow the instructions of the routine at that location. It is similar to a GOSUB command in BASIC. The routine located at the address pointed to by the interrupt vector table is usually called the Interrupt Handler. When the computer is booted up, standard memory addresses, mostly pointing to interrupt handlers in ROM are loaded into the interrupt vector table, but it is possible to change these addresses once the computer is running.

Software interrupts are routines, usually written in assembly language, which the programmer locates at a specific memory location. This memory location is entered in the Interrupt Vector Table, and the routine can be called from another program. All of the BIOS services are software interrupts. The DOS services are also software interrupts, and even BASIC uses interrupts (In fact, BASIC uses almost half of the available interrupt numbers.). BIOS and DOS services use interrupts because they enable all of the members of the PC family to have the same software interface despite wide variations in hardware. This enables you to place a zero into the AH register, 3 into the AL register and invoke interrupt number 16 to set the video to the 80 x 25 color text mode on any computer in the PC family. The actual assembly language routine to accomplish this varies widely between computer models, but thanks to interrupts, the results are the same.

PCjr Compatibility Update

Here are some more letters and additions to the extensive PCjr Compatibility Software list that was published in the November 1988 issue of The Junior Report. These additions and corrections will be compiled into a new listing every few months. Thanks to all of the concerned PCjr owners below who have taken the time to write and to help their fellow jr owners in the never-ending battle to keep the jr alive.

Dear Sirs:

The software compatibility list which appeared in the November issue is very impressive! Congratulations are in order for a job well done!

However, as you pointed out yourself, it is by no means complete. Therefore, I would like to add the following programs to your list along with memory and other requirements:

Battlehawks 1942, 256K

Microsoft Works, 256K (384K for networks), ver. 1.05

Microsoft Windows, 256K, ver. 1.03, DMA

Space M*A*X, 640K, non-copy-protected version

Advanced Flight Trainer, 256K, non-copy-protected version

King's Quest IV, both 256K & 512K versions

Star Trek: 1st Contact, 256K

Star Trek: The Promethean Prophecy, 128K

Star Trek: Rebel Universe, 256K?

Labels Unlimited, 256K

MoneyMate, 256K, 720K disk storage or hard drive

ContactMate, 512K, 720K disk storage or hard drive

A note about King's Quest IV is in order. Sierra Online dropped support for the PCjr with the original 512K version that was released. It could be made to run on the jr if the jr was equipped with the Racore Drive II Plus and PC ID cartridge or PC Enterprises' new Configuration cartridge. Even so, it only ran in CGA colors and about as fast as molasses in the dead of winter! There is a 256K version, available from Radio Shack, that will run in 16 colors on the jr. Fortunately, through the efforts of Al Lowe, a Sierra employee, and Randy Pratt, a jr owner, Sierra has reversed its decision and is now shipping KQ IV as well as Police Quest 2 with support for the PCjr. I understand future releases will support the jr as well.

Steven Miller

Grand Terrace, CA

I read with great joy your software compatibility list in the November issue.....Well, here is some more infor-

mation for your next list:

Mechbrigade SSI, 256K. (I was surprised to see that Kamfgruppe would not run. In conversations with SSI, they say it will run. I think not enough memory is the problem.)

Knights of the Desert SSI, 128K

50 Mission Crush SSI, 128K

Star Command SSI, 256K (Fantastic Game)

SSI's Civil War Series, make sure you have the latest version. Early versions crash when run on the jr.

The Civil War, Avalon Hill, box says 128K, however, the only way I could get it to run properly was to run the game on my 1.2Mb disk drive and not on a 360K disk. The save game feature would not work properly with the 360K disk.

All of the following Avalon Hill games will run on a 128K PCjr with one disk drive: **Telengard, By Fire and Sword, Galaxy, Computer Football Strategy, Incunabula, Gulf Strike, and Ram!**

Reach for the Stars, 3rd Edition, SSG-Electronic Arts, requires at least 256K and setting the game's video setup to MCGA. Any other menu choice such as CGA will result in a snowy video display.

Also I set my CONFIG.SYS file to JRCONFIG.NRD -T3 -V48. The game needs extra video memory. With the game set up to run in MCGA, you won't get the full graphics of the game, but at least you will be able to play it.

Robert Young

Dover, OH

I have a PCjr with a jrHotShot upgrade board to 640K and I thought I would write and tell the readers about a few programs that will run on the jr.

Maniac Mansion

Zak McKracken and the Alien Mindbenders

Rampage

All three run in the CGA mode. And to people who have not discovered this yet, **California Games** runs fine in the Tandy 1000 mode and will display the full 16 colors.

I have also discovered that the new Sierra Online games, **King's Quest IV, Space Quest III, Police Quest II,** etc., that run on 512K and IBM EGA mode will not work on the jr, but Radio Shack sells 256K versions of all these games that will run on the jr.

I hope this information will help some people out there looking for some good software for the jr

Jim Fay

Prescott, AZ

Dear Sir or Madam,

I have a lot to ask you guys. First of all, I will tell you why I haven't subscribed yet. I don't have the money yet. I am only fifteen and in two weeks I will be sixteen. Then I will get a job and then subscribe, so it will probably be in about two months or less.

My junior is expanded to 640K with a 512K IBM sidecar. I have an Epson Apex 80 printer. I have run a lot of new programs in the past weeks and some before. My friend came over with his games and we tested them on the junior too. Here is a list of what works for me:

Star Flight, with fix for 16 colors on a PCjr color monitor

Pete Rose Pennant Fever

Earl Weaver Baseball

Battle Hawks 1942, tried Tandy mode, 16 colors came up but with lines through it. Maybe someone can come up with a fix. It works fine in the 4 color mode.

Jordan vs Bird, slam dunk contest is great.

Might and Magic

California Games, must have 640K and then go to Tandy 1000 mode and you get 16 colors. Awesome graphics dude.

Rad Warrior

Wizardry V, worked. We made backups as it said to do (not copy-protected). We came up with an error on disk B when it said to insert the disk as soon as we reached level two and inserted disk B. It would work only until we got an encounter then it wouldn't access the drive as usual at encounters. This only happened with the copy. When we tried the original, it worked. I began trying everything. I copied it about six times and once with CopyIIPCjr 5.01. I took it to Babbages. It took 256K but was self-booting. It said at the beginning that it was interpreting system, then it said putting program into expanded memory for better game play. I'm not sure if it is because of a bug or the junior. If some one does get it to work, I would be glad if they tell me how they did it.

Sorcerer Lord, tried Tandy 1000 mode and got 16 colors with lines through it (same as Battle Hawks 1942). Maybe someone can find a fix. (I had tried the expanded and compatible modes of IBM memory options on both games.) Works in 4 colors.

What does NOT work for me:

Ford Simulator, freezes up and is something to with graphics. It's OK, but not worth debugging junior for.

Pool of Radiance, this game is very good. It works on the junior with two disk drives or a hard drive. I thought I would try to run it anyway on a single disk drive. This doesn't work at all. There is a disk called the

Overlay that must be in the drive that you choose for the main drive at all times. There are six other disks you change in your other drive at certain times in the game, and you will always have a disk in this drive. So I decided to put the Overlay on a ramdisk. This didn't work because all the disks except for the save disk had to have a write protect tab. It messes up because it saves on the wrong disk. Is there anyway to write protect a ramdisk? Has anyone else solved this problem? I could start part of the game with one drive and I tried the Tndy 1000 mode. It came in 16 colors but with lines through it as in Battle Hawks and Sorcerer Lord. Works in 4 colors.

Tim Muller

Oak Grove, MO

Dear PCjr Club,

Your recent guide lists the program **Ernie's Magic Shapes** as not running on a PCjr. There was a PCjr version of this program published and may still be available. I've had this version for about two years now and I've never had a problem running it. This continues to be my daughter's (now five years old) favorite programs.

My Junior is expanded to 256K via the Racore Drive II w/o DMA. The only minor flaw in the program is that the title screen (which says CBS Software) is garbled when you boot up in extra memory. The title shows up fine when you boot up in 128K.

Thanks for the compatibility list. It makes life with the PCjr a lot simpler.

Michael Ramsey

King of Prussia, PA

Dear Dolores,

I want to add my thanks to the staff at The Junior Report for their labors at producing the software compatibility list. This is one of the most useful services that can be provided by a newsletter for PCjr owners like me.

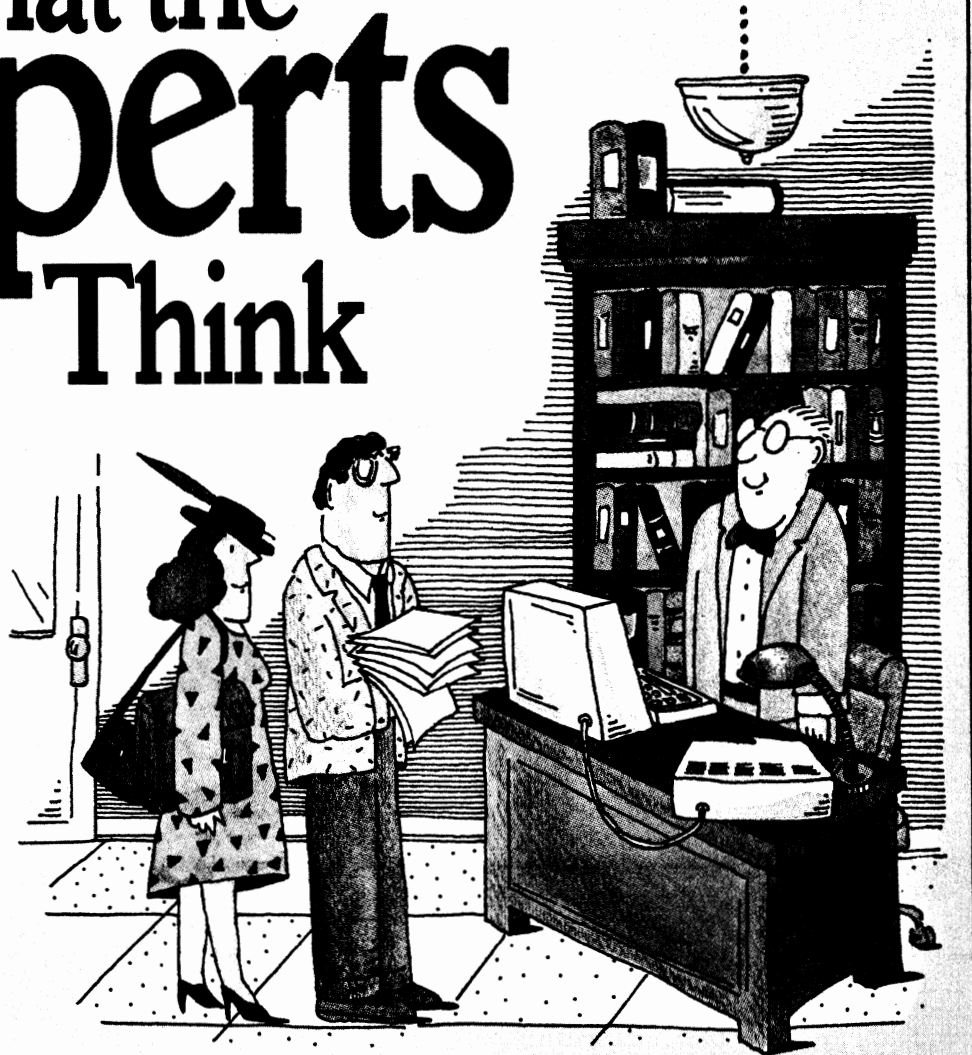
Polarware Software's excellent line of electronic coloring books: **Sesame Street Letters For You**, **Numbers Count**, and **Opposites Attract** along with the **Electronic Crayon Series** were listed as "No Data". All these programs will work in full 16 colors on jr's with 256K. Polarware purchased a PCjr with expanded memory by Microsoft so that these programs could be made compatible.

Children ages three through eight or nine will enjoy coloring and re-coloring the twenty-five or so pictures provided in each program. Their efforts can be printed on a wide range of printers. A calendar can even be added under the picture if desired. An additional feature is that while these

(Continued on page 22)

What the Experts Think

Taxes are inevitable and so are tax software programs. To sort it all out, we asked several experts to judge whether Junior can help you file your form.



The thought of preparing income tax sends shivers of dread through most people. Inevitably, there's always one more form to fill out and another instruction pamphlet to pick up from the Internal Revenue Service.

That means an often aggravating trip to your local IRS office. All too often the IRS is badly equipped to handle the spring-time onslaught of taxpayers. The buildings are either too hot or too cold, the IRS representatives too few and the parking spaces even scarcer.

The scramble, though, begins at home. Papers and more papers. Receipts scattered in different drawers and those cancelled checks you just never got around to filing in numerical order. And don't forget those last-minute records that come after the calendar year ends. Those are the ones that are from banks, employers and credit card companies and reflect such information as interest earned and paid, wages and payments for services.

With those inevitable worries in mind, it is comforting to know

that there are tax packages available that enable you to enter the right data in the right place on your return, examine multiple scenarios with ease, and help you decide whether this is the year you should income average, open an IRA (Individual Retirement Account), or dabble in real estate syndication.

Tax Imperative To evaluate the packages, *PCjr Magazine* talked with a representative from the IRS, accountants and lawyers who specialize in computers and taxes. Those opinions solidly be-

Illustration by Steve Henry

What the Experts Think

hind us, the answer to whether you should use the PCjr to do your taxes is a qualified "Yes."

Regardless of whether you use pen and pad or a software package to do taxes, it's important that you understand taxes before you begin working on your tax return. That's why Mary Ann Sipher, *PCjr Magazine's* financial consultant, advises you to do preliminary reading and familiarize yourself with current tax laws before you do your taxes with the PCjr. Sipher is a CPA who works in Albany, New York.

And, remember the purpose of tax packages is to help you do your taxes, not to train you in taxes or teach common sense. So, for instance, if you claim to have sold half your stock in IBM this year, but you're claiming the same interest income as last year, your program may not make the comparison and catch you, but, warns Sipher, the IRS might.

From the IRS Although the IRS has no fixed policy it sees advantages to using home computers for preparing taxes. According to Larry Wright, an IRS spokesman in the San Francisco office, the pluses include greater chances for computational accuracy and legibility on your tax return.

Yet, Wright said that the IRS has some concerns. It's important to remember that information entered on the computer is not a substitute for valid tax records such as receipts and cancelled checks. And, he added, you must keep an inventory of these records, including their physical whereabouts, in case of an audit.

Wright stressed that computer error is not an acceptable excuse for an inaccurate return. As an example, he cited a case in which data programmed into a service bureau mainframe used in professional tax preparation was

wrong because of missing information. The result was that thousands of returns were wrong, and eventually penalties were assessed. In another case, printer errors negated all of the computer's precision by placing alimony payments on the early withdrawal of interest line.

Wright also said that the computer cliché, GIGO, which stands for "Garbage In, Garbage Out" applies here. He suggested that people using personal computers to do their taxes use the IRS method of insuring accuracy. The IRS calls its process key verification, which means that each return is keyed into the computer once by two different people.

In any case, he stressed that blind faith in a computer should not replace sound reasoning and common sense. He advised you to evaluate software packages thoroughly and suggested three ways to do so. One would be to read software reviews—the computer industry's equivalent of consumer reports—and rely on the assessments of those you trust and check out the credentials of the software manufac-

Regardless of whether you use pen and pad or a software package to do taxes, it's important that you understand taxes.

..... turer. Wright said he wouldn't buy a program unless three independent CPAs endorsed it.

In Case of Mistakes... Who is responsible if something goes wrong or if the program is faulty or misleading? Lawyer/account-



tant C.R.E. Smith, a former income tax examiner for the California State Franchise Tax Board, gave a multi-faceted answer. If a preparer simply makes calculations and gives advice, but no judgments, the IRS will not deem the preparer liable for the outcome, explained Smith, assuming there was no criminal intent to defraud or negligence.

In a software package, this would be one that shows you the tax consequences of different options, but makes no recommendations.

Because IRS policy has determined that tax software packages merely doing arithmetic are exempt from responsibility, it may seem that you have no protection if problems crop up.

Yet there are other factors. For one, the strongest selling point of most tax packages is the planning feature, which implies a service in addition to simple calculation.

As a member of a nationwide law firm which specializes in the computer industry, Jack Russo said that software warranties and disclaimers may seem to be written so they would, in case of problems with the IRS, absolve the manufacturer of any responsibility. But that's not always the case, explained Russo, an attorney with the firm of Fenwick, Stone, Davis and West. The firm has such corporate clients as Apple, Ashton-Tate, VisiCorp, Cromemco and Sierra On-Line and smaller independent software developers—such as John Freeman, who created the popular computer game *Temple of*

Apshat. Russo's law and computer expertise is extensive. He holds a masters degree in computer and information science and is a member of both the New York and California bars.

Russo said disavowals by the manufacturer or dealer of responsibility may not hold up in court. If the advertising or promotional claims of a product promise more than the warranty, the court will uphold the advertising claim, deeming it part of the contract, and the manufacturer could be liable, he said. If the dealer who sold you the program fails to comply with government standards for making product and liability information available both he and the manufacturer could be held liable, he added. Thus, if you run into difficulties created by your tax program, you may have legal recourse even if the warranty does not seem to cover your case specifically, Russo said.

Since some software manufacturers have liability insurance, be sure to ask about it when shopping for your tax program. The insurance may give you some financial protection if you're fined because of a faulty program.

Preventing Trouble Dennis Nelson, a partner in one of the country's largest accounting firms, Laventhal and Horwath, advises those doing their taxes on the Junior to watch out for changes in tax law. Make sure, said Nelson, a Silicon Valley CPA, that you have reliable yearly updates. For instance, the laws on giving gifts to grandchildren or claiming dependents may have changed in the preceding year.

Nelson also warned against using an off-the-shelf tax package where there are problems of valuation, or where there are complexities surrounding limited

Part of the cost of the Junior may be deducted proportionate to the amount of time spent in pursuing income-related activities.

.....
partnerships and tax shelters. As a precautionary measure, you might want to have your tax preparer check the completed return.

This way, you can feel confident about using the package provided you keep on top of the yearly updates. And, should your financial package change drastically, you should check in again with your preparer or financial advisor.

Fear of Fine Print C.R.E. Smith believes that most returns are simple and do not require professional advice. You do, however, need patience to work through IRS publications.

Tax packages can help the majority of people who are capable of doing their taxes but don't. Smith said these people fall into three categories. There are those who don't because they are intimidated by the IRS' fine gray legalese, there are those who know how to do their taxes but don't want to take the time, and there are those who have the relevant facts but don't know where to place them on the return.

Smith explained that the most difficult part of preparing any return is gathering the necessary information.

Because most packages allow you to store information as it is accumulated throughout the year, the worst part of the task

can be completed when you sit down to fill out the return.

It's Deductible, Too Larry Wright from the IRS mentioned that the cost of the software programs, along with any other programs that are used to manage investments or generate income, is deductible. Wright said this means that part of the cost of the Junior may be deducted proportionate to the amount of time spent in pursuing these activities. This includes time spent tapping into networks offering financial services, such as *The Source*, he added.

Wright talked about the necessity of substantiating any deductions. In this case, it would mean keeping a log as you go of the time spent in these activities. He proposed that the Junior itself be used to keep track of the logon/logoff times, but made it clear that the IRS has good spotters who are talented at sniffing out counterfeited records.

Spirit of Self-Help Aside from saving you time and headaches and aside from helping you justify the money you paid for the Junior, there is another reason to buy a home tax preparation package: self-reliance. If you like tuning up your car, if you are pleased when you've increased your car's average miles per gallon by .089, you'll enjoy using these tax packages.

In the future, the IRS says it may allow you to send in your return on a floppy disk, rather than on paper forms. This is analogous to what is done in large banks and institutions which now transfer electronically employee payroll information to the IRS. Right now, you can be one step ahead of the game by using your PCjr to pay your dues to Uncle Sam.□

THE PCJR ISN'T DEAD YET

BY STEVEN JACOB

CONTRIBUTED BY VINCE LIESENFELD AND JOE STURGIL

It really comes as no surprise that the PCjr isn't dead yet. But to be fair, it certainly isn't getting any younger, or so we thought. We here at Legacy have long noticed the split in the ranks of PCjr owners. We are now seeing the beginning of a new group of PCjr users. There are still many of you who steadfastly believe in the PCjr. Others seem to have gotten what they wanted from their Juniors, an education in what a computer can do and the knowledge to accomplish that, and moved on to more powerful and compatible computers. With this group giving up, or trading up from their juniors, the resale value of the machines has fallen from its original list price of \$1195 to under \$200. without the monitor. Some would think that a low value like that would be how the Junior would go out; with a whimper rather than a bang.

But the lower price has created a new kind of PCjr owner. Starting with hobbyist and tinkers, the Junior is being put into new applications. Starting with simple things like interfacing to electronic scales, counting doors opening and closing, and simply measuring temperatures, the Junior has been "discovered" for what it really is. Or should I say has become, for at its current price level, the Junior has become the stand alone micro of choice for custom applications.

High RAM prices and faltering interest have put the double whammy on the PCjr. Where else can you find an MS-DOS compatible, single floppy machine with 640K of RAM for under \$400.? The internal modem slot and the cartridge slots, things that people saw as almost useless in the Junior, have become its strongest selling points. If your special application needs a special interface, you can put it

on a printed circuit board and plug it into the modem slot; a piece of cake! If your application doesn't need all the facilities of DOS, you can put your program in an EPROM and plug it into the cartridge slot. No DOS is needed.

We here at Legacy have been shifting gears to take this change in the Junior market in stride. Our PCjr Video Digitizer which will be out in February is a perfect example of a new PCjr application. The card plugs into the modem slot. The software will output the digitized pictures to the floppy in a number of formats, or you can connect to a desktop publishing machine via the serial port. The digitizer board itself should cost less than \$400., but stop and consider that you can buy a whole system; Jr digitizer, camera, and software for around \$1200. That's a lot less than some of the video digitizer boards cost for the MAC II and the PC AT all by themselves! The users of those more powerful computers would then have to add the cost of a camera and software to accomplish the same thing. New applications like this can be thought of like calculators. I have three different calculators, each of which does something the others don't.

New uses for the junior seem to be springing up right and left and here at Legacy, we aim to help them grow. So if you are, or are becoming one of these new breed of PCjr owners, call us. We can help make the Junior into what you want it to be. We have a wire wrap card that fits into the modem slot. We are working on a card with a timer that can turn the Junior on and off at specific times; great for those applications that need to do something only at intervals of time. We have a power supply card that lets you plug the Junior into your car's cigarette lighter for automotive or portable applications. Now all we need

is a low power display like a backlit LCD. Hmmmm...Oh well, back to the lab.

The article above is reprinted from The OKC Jr Orphans Chronicle. The OKC Jr Orphans Group meets every 4th Thursday of each month at 6:30 PM at One Bell Central, 800 N. Harvey, Rm. 426.

Steven Jacob is the president of Legacy Technologies, a great PCjr support company (4804 Superior Street, Lincoln, Nebraska 68504). Legacy was one of the first companies to develop PCjr products when the jr was introduced many years ago, and today, it remains one of the few companies that are still investing time and money into new and innovative PCjr products. The Junior Report thanks Legacy and other companies who continue to support the PCjr and the PCjr owner.

Some of the items that are produced by Legacy are as follows:

Legacy II Expansion Box
Legacy's second disk drive expansion unit. A legacy I and a second floppy disk drive with a true two drive controller card. A 3 1/2 inch 720K disk drive is optional \$279.

Legacy III Expansion Box
Legacy I plus a 20MB hard disk drive. The Legacy III is self-booting and provides faster disk access than an IBM PC-XT. \$695.

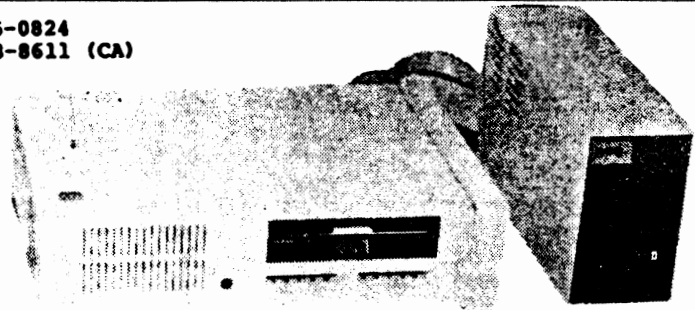
JR Synchro Cartridge
This is the software equivalent of DMA. This also patches the NMI bugs in the early DOS 2.1. This product may not be compatible with expanded keyboards and DOS versions higher than 2.1. \$25.

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FIRST PUBLISHER v.2 on the PCjr

BY JOHN DIMSDALE

The following article is reprinted from the Metro PCjr Journal, the newsletter of the Metro PCjr Users Group serving the Washington metropolitan area. The club can be contacted at The MPCjrUG, Dave Tursan, 92203 Antelope Place, Springfield, VA 22153.

Readers of "jrJournal" are already familiar with what *First Publisher* can do. For the past year, this newsletter has been produced with *First Publisher* on a PCjr. The last three monthly editions are the products of the new version, which, contrary to persistent rumors, does run on the PCjr.

The program requires 512K of memory (more memory = more fonts) and two disk drives (I've been told *First Publisher* can be run on one drive, but be prepared for a severe case of "disk-swapping tendonitis" of the wrist and elbow). A mouse is also a desirable option for all but the most occasional *First Publisher* users.

First Publisher is one of the best desktop publishers for the money, costing less than one-sixth the price of full fledged publishers from Aldus or Ventura. The program's four floppy disks provide dozens of text and graphic tools for designing and printing quality documents, from signs to flyers to newsletters to stationary.

TEXT

There are 13 fonts in various sizes and styles (bold, italics). Text can be scrolled into as many as 4 columns and can be wrapped automatically around pictures and graphics. The spacing of lines of text

and the layout of columns is done with a complex system of baselines....probably the hardest thing to learn in *First Publisher*. The manual makes a valiant effort to explain how the baselines work, but the only way to learn....is to do. Writing and editing text is cumbersome, but can be done right on the page. It is quicker and easier to edit text in a word processor before designing the document. With version 2.0, *First Publisher* can now interpret files from Microsoft Word, Multimate, Wang, WordPerfect, and WordStar, in addition to PFS:Write and ASCII.

GRAPHICS

Pictures are available in abundance. There are sample pages included with the basic program and more can be purchased. Shareware and public domain artwork is available on many electronic bulletin board systems. Scanned images may be placed in the documents and *First Publisher* also supplies rudimentary drawing tools. Once on the page, artwork can be squeezed, expanded, boxed, inverted, reversed and generally manipulated to fit available space. Any section of the picture can be magnified and modified pixel by pixel. While *First Publisher's* text handling has a couple of flaws, graphics are the program's strong point.

First Publisher supplies on-screen rulers for measuring columns, pictures, text, etc., as well as a handy feature that displays what the entire page will look like once it is printed.

Printing has proven to be the weakest link in *First Publisher*. Text that appears readable and even stylish on the screen, bleeds into blurred mush on the page....especially for smaller fonts. The larger the type, the better it prints. This User Group plans to try printing the newsletter on a laser printer (which, if successful, means you're reading it now), under the assumption that laser print will clean up some of the smaller fonts.

The manual is thorough and well written, with plenty of illustrations and tips.

All in all, *First Publisher* is simple, versatile, and cheap. If as A.J. Liebling used to say, "press freedom is guaranteed only for those who own one," then *First Publisher* is well worth the price.

First Publisher

Retail Price: \$129.

Requirements: 640K, 2 drives

Software Publishing Corporation
P.O. Box 7210 Landings Drive
Mountain View, CA 94039-7210

isher v. 2: It Works on the jr

by John Dimsdale

"I" are already familiar with what *First Publisher* can do. For the past year, this newsletter has been produced with *First Publisher* on a PCjr. The last three monthly editions are the products of the new version, which, contrary to persistent rumors, does run on the PCjr. The program requires 512K of memory (more memory = more fonts)

Sample printed text from *First Publisher*.

LETTERS FROM BLAIR

Dear Harrison,

I saw in your compatibility list a couple of programs that people have sent in for me to patch. The enclosed sheet below contains the DEBUG routines that will fix them. I also have a patch for StarGate which I'll send to you next month. The patched programs are: Digger by Windmill Software, Digdug by Atari, Hopper from PC Connection, Paratrooper, and Encounter.

Sincerely,
Blair Bieser

```
1. ENCOUNTR:
A>rename b:encountr.exe enc
A>debug b:enc
-e 3339
XXXX:3339 4F.4b
-e 34a3
XXXX:34A3 4F.4b
-w
Writing XXXX bytes
-q

A>rename b:enc encountr.exe

2. HOPPER:
A>rename b:hopper.exe hop
A>debug b:hop
-e 0337
XXXX:0337 05.04
-e 21d1
XXXX:21D1 4F.4b
-w
Writing XXXX bytes
-q

A>rename b:hop hopper.exe

3. PARA:
A>debug b:para.com
-e 2e01
XXXX:2E01 4F.4b
-w
Writing XXXX bytes
-q

4. DIGGER:
A>debug b:digger.com
-e 29c
XXXX:029C 02.06
-e 2c5
XXXX:02C5 04.06
-e 2d7
XXXX:02D7 03.06
-a 42c
XXXX:042C mov ax,0004
XXXX:042F int 10
XXXX:0431 mov si,0263
XXXX:0434 mov bl,0e
XXXX:0436 mov cx,0010
XXXX:0439 push cx
XXXX:043A mov cx,ffff
XXXX:043D loop 043d
XXXX:043F pop cx
XXXX:0440 loop 0439
XXXX:0442 nop
XXXX:0443 nop
XXXX:0444
-w
Writing XXXX bytes
-q

5. DIGDUG:
A>rename b:digdug.exe digdug
A>debug b:digdug
-a
XXXX:0100 mov cx,0010
XXXX:0103 push cx
XXXX:0104 mov cx,ffff
XXXX:0107 loop 0107
XXXX:0109 pop cx
XXXX:010A loop 0103
XXXX:010C jmp e100
XXXX:010F
-w
Writing XXXX bytes
-q

A>rename b:digdug digdug.exe
```

COMPUTER RESET - YOUR #1 SOURCE FOR PCjr PRODUCTS

"PCjr FALL SPECIALS"

IBM PCjr INTERNAL MODEM reg \$ 79 NOW \$ 29
 (includes free software - when ordering please)
 (specify the memory capacity of your PCjr)
 AVATEX 1200E external modem reg \$ 99 alone
 NOW \$ 109 with software, serial adapter cable
 and information guide for the SOURCE

jr HOTSHOT MEMORY / CLOCK / DISK DRIVE UPGRADES

jrHOTSHOT Memory Board (without memory chips) \$ 110
 256 or 512K jrHOTSHOT Memory Expansion CALL
 256 or 512K jrHOTSHOT with Real Time Clock, Calendar
 with 2nd Floppy Disk Drive Controller CALL
 256 or 512K jrHOTSHOT with Disk Drive Controller CALL
 jrHOTSHOT can control 5 1/4" or 3.5" disk drives

Our PCjr Memory & Disk drive expansions each have
 PCjr Selected Utility Software including:
 RAM DISK, File Transfer, Screen Color Control, etc. etc.
 (due to the present unstable price of memory chips)
 (we can not publish a fixed price for these memory)
 (products: please call for the current sale price)

" IBM " BRAND ACCESSORIES

PCjr JOYSTICK \$ 29
 128K MEMORY EXPANSION sidemounted unit \$ 175
 PARALLEL PRINTER ATTACHMENT \$ 79
 KEYBOARD CORD for PCjr keyboard \$ 15
 ADAPTER CABLE FOR COLOR DISPLAY
 (connects PCjr to a standard RGB color monitor) \$ 15
 BASIC Cartridge (very hard to find) \$ 95
 POWER ATTACHMENT (recommended if 2 or more side
 mounted expansions are used on the computer) \$ 55
 300 baud INTERNAL Modem (with software) \$ 79
 CARRYING CASE (great for VCR or tools also) \$ 25
 CASSETTE CABLE (usable for joystick adapter) \$ 12
 CHICKLET KEYBOARD (the original PCjr Keyboard) \$ 19
 CHICKLET KEYBOARD OVERLAYS (pkg of 5) \$ 1
 CLUSTER ATTACHMENT (local area network interface) \$ 95
 PCjr ENHANCED KEYBOARD (standard PCjr keyboard) \$ 55
 REPLACEMENT POWER TRANSFORMER \$ 45
 HARDWARE MAINTENANCE MANUAL (how to find problems) \$ 55
 TECHNICAL REFERENCE MANUAL (has schematics) \$ 39
 TV ADAPTER (connect PCjr video/audio to TV or VCR) \$ 25
 WORD/SOUND "SPEECH" ATTACHMENT (with software) \$ 109

2ND FLOPPY DISK DRIVES

MODEM SLOT SYSTEM - Controller uses modem slot
 Comes Ready to Connect

5 1/4" 360K disk drive model \$ 199
 3 1/2" 720K disk drive model \$ 219
 (720K operation requires DOS 3.2 or greater)
 Modem slot 2nd Disk Drive Kit \$ 79
 (includes controller, signal cable, software)

2nd DISK DRIVE - jrHOTSHOT SYSTEM
 Controller board mounts the microprocessor chip.
 Can be used with IBM PCjr internal modem.
 Comes Ready to Connect

5 1/4" 360K disk drive model \$ 234
 3 1/2" 720K disk drive model \$ 254
 (720K operation requires DOS 3.2 or greater)
 jr HOTSHOT drive control kit \$ 79
 (includes: controller, signal cable, software)

5 1/4" 360K 2nd Floppy Disk Drive in Case, with
 Power Supply * for use with jrHOTSHOT Upgrade or
 the above kits \$ 155

3 1/2" 720K 2nd Floppy Disk Drive in Case, with
 Power Sharing Cable for use with jrHOTSHOT Upgrade
 or the above kits \$ 145

PCjr Three Disk Drive Controller:
 modified PCjr disk drive controller with cable
 and software - with exchange \$ 89

HARD DRIVES

20 Megabyte Complete System * ready to use \$ 700
 HARD DRIVE KIT (jrSASI interface and SASI drive
 control card, for ST-406 interface drive,
 with case & power supply) \$ 125
 HARD DRIVE BUILDER KIT prototype board, instructions
 IC's, connection cable for jrSASI interface board and
 software: Requires SASI drive control card, hard drive,
 case, power supply and electronic technical skill \$ 125

RACORE PCjr EXPANSION PRODUCTS

A 5 1/4" 2nd Floppy Drive, Clock, and Parallel Port in
 a nicelooking expansion chassis mounted on top of the
 PCjr with expanded memory contained inside

DRIVE II PLUS (with DMA) \$ 340
 DRIVE II PLUS (without DMA) \$ 290
 512K memory board for the DRIVE II PLUS \$ 175

OTHER ACCESSORIES

MODEMS - Avatex 1200E 300/1200bd external \$ 99
 Avatex 1200 HC 300/1200bd external \$ 129
 (includes software)

MICE - LOGITECH SERIAL with Plus Software \$ 89
 - with serial adapter cable for the PCjr \$ 109
 - with serial adapter cable & jrCOLOR PAINT
 (limited quantity of this software) \$ 145
 Logitech paint software alone \$ 35

LARGE KEYBOARDS - 84 key AT Style with adapter \$ 116
 - 101 Key ENHANCED AT Style with Adapter \$ 132

CLOCK - PLUG IN CARTRIDGE CLOCK
 give your jr the gift of time for only \$ 42

QUICKSILVER CARTRIDGE -
 for keyboard compatability and quicker boot up \$ 29

NEW! SIAMESE SLOT ADAPTER \$30.
 (ALLOWS 2 CARTRIDGES TO GO INTO ONE SLOT)

PRINTERS ETC.

Star NX - 1000 The best of everything dot matrix
 printer for graphics, near letter quality (30 cps)
 and plain text (160 cps), built in fonts \$ 199

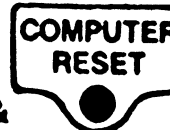
Star NX - 1000 Rainbow - same as above and with
 seven colors \$ 259.

Chrono Steel wire type printer stand \$ 19

SWITCH BOXES & CABLES -

PCjr parallel printer cable 6 foot \$ 19
 Serial male - male 6' - DB-25 connectors \$ 19
 Serial male - female 6' - DB-25 connectors \$ 19

I LOVE MY PCjr bumper stickers \$ 2 (no shipping chg)



New & Used Computers

P.O. Box 461782
 Garland, Texas 75046

(214) 276-8072

SEND FOR OUR FULL CATALOG OF PCjr
 ACCESSORIES & SERVICES

No Credit Cards: \$5 Minimum Shipping and Handling:
 Add \$2.75 for COD. All COD's sent to Cash or Money
 Order All checks held 15 days for clearance; Immediate
 shipment of stock-items when paid by Money Order or
 Cashiers Check.

OPEN ACCESS BULLETIN BOARD

for our complete list of PCjr & Other Products (214) 272-
 7920, 300 to 2400 BD, 8bits, 1 stop bit and no parity,
 no password or access fee, 24 hour operation.

CLASSIFIED AD SECTION

Wanted: IBM's Writing To Read
for the PCjr.

Jack Thomas

2112 - 11th Avenue NW

Rochester, MN 55901 (507) 281-0900

IBM PCjr 128K, single drive, parallel port, 1 joystick, Guide to Operations, PCjr sampler disk, WordStar for PCjr. \$325. UPS Paid USA.

Bill Dietz

2528 Jacaranda

Santa Ana, CA 92701 (714) 633-9493

IBM PCjr Internal Modem \$30., includes manual and shipping. Synectics Siamese Slots \$18.00 includes shipping.

Richard Schneider

89 E. Janes Rd.

Thousands Oaks, CA 91360

(805) 495-7104

PCjr sidecars: 128K memory \$135., parallel port \$40., power expansion sidecar \$50., Homeword Filer program \$15., SPLASH! (requires VGA, never used) \$50.

George Suppes

2700 56 St. N.W. #1-4

Rochester, MN 55901 (507) 288-1396

IBM PCjr 128K, single drive, color monitor, IBM compact printer, paper, parallel port, BASIC cartridge, color paint cartridge, Mouse Systems mouse, Guide to Operations, DOS 2.1 and manual. \$500.

Randy Kaiser

2616 W. 56

Davenport, IA 52806 (319) 386-2470 after 6 PM.

IBM PCjr 512K, Microsoft booster with mouse, 2 IBM sidecars, parallel port, internal modem, 2 joysticks, cartridge BASIC, Lotus 1-2-3, cartridge color paint, Andrew Tobias MYM, too much software and cartridges to list. \$1200.

Greg Martucci

872 Rensselaer Ave

Staten Island, NY 10309 (718) 984-5650

PCjr Color Monitor Cable Converter Use your PCjr monitor with an IBM or compatible color graphics board (CGA) in a standard PC. \$34.95 post paid.

S.E. Gruninger

6629 N. Whipple St.

Chicago, IL 60645 (312) 764-3113

IBM PCjr 640K, one drive, internal modem (2), speech attachment, parallel port (2), external power supply (2), joysticks (4), extra 128K IBM sidecar, PCjr color monitor, color paint cartridge w/ joystick driver, loads of software, BASIC cartridge, adapter cables, DOS, manuals, games, etc. \$600. (Will sell parts or in whole) **IBM Proprinter with cables and software \$250.**

Bob Merrill

102 Brant Court

Georgetown, KY 40324 (502) 868-5202

IBM PCjr Compact Printer good condition with 2 rolls of paper \$40. UPS Paid USA, original PCjr chicklet keyboard \$15. UPS paid USA.

Lawrence Allan

700 Chestnut St.

Neenah, WI 54956 (414) 722-2192

IBM PCjr 128K, jr color monitor, parallel sidecar, internal modem, power side, speech sidecar, keyboard and serial cables, 1 joystick. All for \$460. and I'll pay shipping. Or will sell these and other parts separately.

Hank Kennedy

813 Chisholm Vly. Dr.

Round Rock, TX 78681 (512) 255-2812

PCjr Lotus 1-2-3 1A for sale - best offer, Also WANTED - functioning Microcom ERA-2 modem for PCjr.

Alfred Woelk

28 Nutmeg Court

Ridgefield, CT 06877-3710 (203) 431-0777 evenings.

Software for sale: VP-Planner, VP INfo, DOS 2.1, DOS 3.0, Displaywrite 1 and 2, IBM Graphing Assistant, Reporting Assistant, Filing Assistant, PFS File, Easy Writer, Logo, Professional File, Professional Word, Multiplan, Personal Communications Manager, various versions of PC Tools, 123 Report Writer, Disk Optimizer, SQZ!, Sideways, Lightning, Sidekick, Copy II PC, other PCjr programs, ASK! Best offer.

Hardware: Taxan amber composite monitor, joysticks, keyboards, cables.

Alfred Woelk

28 Nutmeg Court

Ridgefield, CT 06877-3710 (203) 431-0777

512K Tecmar Sidecar \$250., BASIC cartridge \$50., IBM Writing Assistant with manual \$75., Tecmar Executive Writer and Number Works with manual \$25., Compute's First Book of IBM \$12., Icons and Images by Larsen \$12., The New Jr: A Guide to IBM's PCjr by Rosch \$12., 1001 Things to Do with Your IBM PC by Sawusch & Summers \$12., Exploring The IBM PCjr Home Computer by Norton \$12., Hands-On Basic for the IBM PCjr by Luehrmann and Pechham \$12.

Brian Lund

850 Gray Rd.

Cocoa, FL 32926 (407) 632-3143

Gorilla Banana Printer, yes, that's really the name - it's a primitive but very sturdy dot matrix from Leading Edge, with cable, manual, graphics driver software \$50., Okimate 20 Color printer, (can print in color and includes special software for the PCjr), with cable and manual \$75. Both printers have received only light use. Software: WordPerfectjr, the best-selling word processing program in aversion tailored specifically for the 128K Junior, original diskette and manual \$45., PFS File, manual and diskette and 2 copies \$55., Packet of Shareware programs - PC Write 2.71 (2 diskettes), New York Word 2.1 (2), and Freeword (1) - \$25. PCjr cartridges - Mouser and Mine Shaft \$12. each. All prices include mailing.

John Stevenson

Box 478272

Chicago, IL 60647 (312) 227-0569

Tecmar 128K JrCaptain Board with clock/calendar and printer port. \$100.

Henry Carter

3818 W. Tacon St.

Tampa, FL 33629 (813) 839-5928

PCjr 640K with color monitor new Fujica M2551 disk drive, Tecmar jrCaptain sidecar, all manuals, programs galore, joysticks, excellent. Send S.A.S.E for full details....best offer.

T.D. Gosman

9 Warner Court

Huntington, NY 11743

COMPATIBILITY UPDATE

(Continued from page 11)

are fun programs, they have learning value also.

Here is how to get 16 colors displayed using DOS 2.1. Racore users should set JRVIDEO.COM to the "/E" option. Those of us using JRCONFIG need to set "-v32" and "-t3". Microsoft users can leave the default setting in place. At the setup menu, select "Tandy 16 Color".

I will sell any of these programs to subscribers of The Junior Report for \$12.95, this is a slight discount from their retail price of \$14.95, however, I will pay UPS shipping on all orders. Junior owners with young learners can send an order to me at:

J. Martin Anderson
14337 Densmore Ave. N.
Seattle, WA 98133-7133

Or give me a call at (206) 367-5150. Thanks again for the index to compatibility.

J. Martin Anderson

Dear PCjr Report,

I received my **WordStar Professional version 5** about three weeks ago and am happy to report that so far, although I haven't yet tested all of its features, I have found it to be completely compatible with my PCjr.

MicroPro says it requires DOS 2.1 or higher, up to 460K of RAM dependent upon the features that you'll be running and two floppy drives or one floppy and one hard disk.

My PCjr is equipped with the Racore Drive II Plus w/ DMA and added 512K memory. I use DOS 2.1.

Wm. F Shimonkevitz
Springfield, VA

Dear Jr Report,

I wish to inform your readers of another great product that runs on the PCjr. It is Timeworks' new word processing program called **WordWriter PC**. It requires 256K to run and seems to be completely compatible on the jr. For the retail cost of \$49. (you may find it for only \$40.), you also get a thesaurus and a 90,000 word spell checker. Another great feature is that the commands for the word processing procedures are almost always logical (e.g ALT-B for bold text, ALT-S for save, ALT-U for underlining text, etc.)

George Suppes
Minneapolis, MN

Thanks everyone, and keep on writing.

TAXING TIMES FOR THE PCJR

(Continued from page 1)

San Diego, CA 92122-3954
(619) 453-8722

Tax Preparer

This program has been around for a while, longer than almost all of the others. This is a solid performer, but presumes some familiarity with computers and tax preparation. There are good menu selections, but not as helpful or as context-sensitive as the other two above. Works rather slowly on the jr. On the plus side, it does a lot of things automatically - like creating many forms and schedules (though the 1040 is the only IRS-approved), routes the correct information to the right form, and completes the form that should be filled out.

Forms: 1040, 1040ES, 2106, 2119, 2210, 2441, 3468, 3800, 3903, 4562, 4797, 6251, 6252, 8582, 8598, 8615.

Schedules: A,B,C,D,E,F,R,SE

Price: \$295. one drive

Cost for yearly update: \$95.

Address: HowardSoft

1224 Prospect St. Suite 150
La Jolla, CA 92037
(619) 454-0121

MEMORY EXPANSION BOARD UPGRADING SERVICES

If you want to be the first kid on your block to have 256K chips in your IBM, Tecmar, or Microsoft **expansion board**, this one's for you. **IMPORTANT** If your Junior only has 128K total, you do not have a memory expansion sidecar attached, and you CANNOT utilize this service). We will replace your 64K chips with 256K chips. We will no longer place sockets into your board, to eliminate half the possible contact points that may become loose. Send your name, address, and phone number to: The PCjr Club, Memory Board Expansions, P.O. Box 59067, Schaumburg, IL 60159-0067 to let us know if you're interested. Once we have your name, you will be notified by phone or mail when we would like for you to ship your board to us for the work, hopefully within three weeks time. The cost of mailing the board to us and insuring it will be your responsibility, and the cost and care of returning your upgraded board to you via UPS in a safe manner will be ours. Tecmar owners should send your power supply along as well, so that we can test the board with your own power supply before we do anything to it. The cost of this service will be \$165.00 (U.S. Currency). We're sorry but we can only provide this service to those in the continental U.S.A. We will guarantee the work and the 256K chips for 90 days.

EYE ON SHAREWARE

This month we have a major update of our popular Lotus clone AS-EASY-AS (#96). AS-EASY-AS v 3.0 is easier to use than earlier versions.

If it looks like LOTUS, acts like LOTUS, feels like LOTUS and is capable of all the LOTUS functions including range names and macros, cell and range cross referencing and reporting, it's either LOTUS or AS-EASY-AS.

This latest version doesn't have a manual on disk, but that's alright because it does have a demo and you will find that almost any Lotus 123 manual from your local bookstore will be nearly completely compatible. This is one of our most popular disks and one of the reasons people keep buying Shareware. If you register your disk (\$40) with the author you will be provided with a bound manual. Requires 320k.

PC-EXPERT (#147)

PC-EXPERT is designed to assist the

investment manager in technical analysis of timing stock market transactions. You will be tracking foreign exchange rates, the price of silver, gold etc. The graphic historical record displays the last twenty trading days.

The Investment Advisor is a rule based investment advisor based on economic assumptions. The rule base is constructed internally within the expert system. As a foundation for the rule system, basic economic assumptions were established using the Statistical Package for the Social Sciences (SPSS).

COURSE DISK (#148)

How would you like to play Royal Latham, the British Open course? We also have Muirfield and Great Lakes courses on this disk. As usual this disk is meant to be used with Accolade's great game- Mean 18.

GIN! (#149)

If you love Gin Rummy or even if you've never played it but you'd like to learn how, you will enjoy this disk.

How much money can you lose to a computer? In addition to regular Gin two other options are available. These are Oklahoma and Hollywood Gin. The disk comes with simple instructions and a menu. You can customize your colors too.

As with every month, let me remind you you can still order REPRINT DISK #1 this month featuring selected articles from The Junior Report issues February 1986, September 1986, and January 1987. You can read the always helpful LETTERS sections, Editor's Notes, Compatibility list, as well as the following articles: The Big Mac versus The Jr, Bruce Lee Review, The Many Thanks, The Filing Assistant as a Label Maker, King's Quest, Touchdown Football Reviews, Junior's Third Birthday, the Symphonixjr Speech Attachment, and Expansion Board Blues. After printing out the articles on your printer, you can use the diskette for something else, like ring toss.

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Please circle one or more below

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63
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REPRINT DISKS #1 #2 #3 #4 #5

Number of program disks wanted: _____ times \$5.90 = _____
 _____ times \$10.00 = _____
 Total enclosed : _____

Check here if this order has five programs or more for FREE library case _____ OR FREE single disk program _____

NAME _____

ADDRESS _____

CITY _____ ST _____ ZIP _____ PHONE # _____

Mail correct remittance and completed form to: The PCjr Club
 P.O. Box 59067, Schaumburg, IL 60159-0067

LAST MONTH'S OFFERINGS!

MAXI-READ (#143): A fast, easy-to-use package that helps you improve the impact and understandability of your writing. It gives you a "Readability Summary" of your product to show the readability/understandability of your message or text. It analyzes and reports on the "personal tone" of your message. Lists those words that are adding to the complexity and offers synonyms for frequently used long words. It enables you to print your results and your text on the screen on the printer or both.

QEDIT v2.07 (#144): Considered by many professionals to be the best editing program available. With QEDIT you can edit files as large as your computer will allow. You can do multi-file editing, viewing files through as many as eight windows. You can use the "pop-down" menus to access QEDIT's commands. The help screen can be customized to fit your own needs. It provides line drawing to create diagrams and tables. It supports up to 200-column and 100-line screens. You will be able to create your own macros which will execute a series of commands and keystrokes by pressing a single key. Incredibly QEDIT requires less than 50k of disk space.

SCREENWRIGHT PROFESSIONAL (#145): A word processing program specifically designed for screenplays and teleplays. Special care has been taken to keep SW Pro simple to use. You can concentrate on your creative writing instead of on a stack of computer manuals. You type in your screenplay using the text editor, and print it by using the formatter. The reference manual contains examples to demonstrate just how easily you can use SW PRO with your scripts. Just how many words do you think it takes to write an episode of Thirty something?

TAROT32 (#146): For those of you who are eager to know what the New Year will bring to them, I suggest you get TAROT32. Have the computer read your cards by answering a few simple questions. Avoid the Hanged Man!!!! If you believe in fortune cookies,

THE MOST POPULAR PROGRAMS IN OUR LIBRARY

PC FILE III (#1): the classic, updated, full-featured database program that has set the standard for shareware programs. Considered by many to be better than most commercial programs. Version 4.

PC WRITE (#2): this best-selling shareware program is equal to or better than most word processors on the market. This is the latest version (2.55) and will run on the single drive, 128K PCjr.

GAMES (#10): one of the best selling game disks has Combat, Dungeons & Dragons, & Global ThermNuclear War.

PC TUTORIAL (#12): a course in computer and the PC-DOS environment.

EDUCATIONAL GAMES (#18): features math exercises, thinking programs, and the classic Flashcards.

LABEL MASTER (#19): the original label making program has a variety of uses. **Requires 256K.**

GAMES (#24): Poker games, Battleship, Land Mines, Fire, Grime, and Hostages.

IMAGEPRINT (#25): A must-have printer utility that makes your dot matrix into a lean, mean, quality text producing printing machine. Can proportionally space text. Requires an Epson or IBM compatible printer.

EZ FORMS (#28): Create and print custom forms to fit every need. A business necessity. **Requires 256K.**

PCjr UTILITIES (#49): special utilities for Junior includes a print spooler, two text editors, and a program that can create special PCjr keyboard templates for WordPerfect 4.1, Reflex, PC-Write 2.55, and others.

PROCOMM 2.42 (#55): This has become the new standard in Public Domain communications software. Powerful and easy-to-use, this version is the one that works well on the Junior. **Requires 192K. TWO DISKS - \$10.00.**

AMY'S FIRST PRIMER - PCjr Version (#78): This is probably the best collection of educational games in the world of Shareware for the pre-school. Includes sing-a-long alphabet, letter-matching game, numbers-matching game, among others. Colors are spectacular.

JRCONFIG.SYS (#82): Updated version of JrCONFIG.SYS & CONFIGJR.SYS. The only must have utility for ALL PCjr owners. The most powerful and flexible software for getting a PCjr to run with expanded memory and additional disk drives. The list of special PCjr features is too lengthy to print here.

THE PCjr CLUB
P.O. Box 59067
Schaumburg, IL 60159-0067

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