

SUPERLETTER

Serving SuperBrain and CompuStar Users Around The World

Feb/Mar 1983
Vol. 3, No. 1

Word-processing is one major reason why you bought your computer. And keeping up with the leading word-processing software products is an area of high interest to us.

This issue features articles to help you better use WordStar on your SuperBrain and CompuStar. It's a popular package, but one that has often plagued Intertec users for one reason or another. Also, MicroPro recently increased the cost of their software by 40%! You will no longer see low discount prices for their products. A questionable marketing move.

Magic Wand, once the best word-processor for microcomputers, in our opinion, has undergone inexcusable deterioration at the hands of Peachtree. Intertec format was once easy to get --and it worked. Now, with the Peachtree "improvements" and changes, the INSERT function has to clear the entire screen to work, as well as REVERSE SCROLLING. A big waste of time.

We tried on several occasions to reach Peachtree to let them know about the specific needs of the SuperBrain user. All attempts failed and none of our calls were returned. At this point, we are strongly recommending that you consider other word-processors for purchase.

Lexisoft, on the other hand, has been aggressively working out the necessary changes required in the operation of Spellbinder on the new SuperBrain II. As usual, Lexisoft has been extremely responsive and desirous of making their product work perfectly. We tried out the new Spellbinder for SuperBrain II and it works like a charm, with reverse graphics effect for underlining of text. It's still, by far, the best buy in word-processing/office management software.

Another package we will hope to be reviewing soon is Benchmark. We'll keep you posted.

The graphics board we promised you for the older SuperBrain I is completed and ready for sale. It fits in easily and provides a multiple use of graphic capabilities. Com-Shute in Yokohama, Japan created the product just for the Intertec line. You get underlining, blinking, reverse video or a combination of the three on the screen. The package comes with an add-on chip board and menu-driven software. Call us for more information.

The price of Intertec stock has been slowly rising over the last few weeks which fuels our suspicion that something new is going to be presented at the NCC this Spring. The stock price rise is an interesting development.

We are now providing a new down-loading service to transfer data from one computer formatted diskette to any another format (8" or 5¼" or vice versa) within five days of an order. Our price-list is being prepared, but costs range between \$29 to \$49, plus diskette and shipping charges, depending on the amount of data on each master. This service is available now.

The dbase II vs. Selector V debate seems to have stirred some interest. There seems to be strong advocates on each side. We hope to bring you articles about both packages, as they pertain to use on the SuperBrain, in the near future.

We are preparing a special Superletter for the upcoming big NCC show. If you are interested in having an ad appear in this issue, please contact us for a rate card.

As always, thank you for your continuing support. We appreciate the contributions all of you are making. There are few other newsletters in the world devoted to a specific computer system that has such loyal subscribers.

Albert Abrams
EDITOR

Technical Corner

SuperBrain/CompuStar
WordStar Patch
for
SOS 3.X or 4.X
Intertec DOS 3.X

by
Jonathan Platt
2804 Fairway Drive
Melbourne, Florida 32901
(205) 724-6148

WSPATCH.ASM (page 6) contains commented assembly language instructions to assemble and place into the Wordstar program. The patches involved will work only with SOS or Intertec's DOS versions 3.X and 4.X. You must assemble WSPATCH with ASM to find out what values to put in which locations. The assembled listing file, WSPATCH.PRN, will give you this information.

Before patching, you must first INSTALL WordStar normally, selecting the SuperBrain as your terminal. If INSTALL has a selection for CompuStar by now and you have that machine, select CompuStar. The reason you must tell INSTALL the terminal type before using the patches below is because WordStar has its own internal patches for each terminal. If you enter your patches first and then INSTALL WordStar for the terminal type, your patches will be wiped out by the INSTALL program's patches. If the terminal type has already been selected, specifying "no change" for terminal type will preserve any terminal patches you have previously made.

Using WSPATCH.PRN, fill in the hex values with INSTALL. Once that is done, exit INSTALL patch mode and tell INSTALL everything is O.K. Alternatively, you can

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—Guest Article—

Jack E. Monroe, C.P.A.
1345 N. Orange Drive #1
Los Angeles 90028

I bought my SuperBrain primarily for word processing, using WordStar and an Epson MX-80F/T dot matrix printer.

Epson announced an upgrade kit called "Grafrax plus" (it is now standard equipment), that would make my \$500 printer produce italic characters, extended (wide) characters, very tiny characters that printers call superior and inferior (Epson says "superscript" and "subscript"), and underscores in one pass.

Installing it required me to learn more about the SuperBrain, WordStar, and the printer than I had needed to use the original equipment.

Inside the Epson case is a serial interface board which the Grafrax-plus kit says must be #8151 or 8155. The board itself doesn't have any such number; I finally found it on the outer case, just under the power cord. It turned out I had the older #8641, so I needed to update my interface in order to use the Grafrax-plus.

Along with the Grafrax kit you get an Epson printer manual written by Dr. David A. Lien of CompuSoft fame. Dr. Lien manages to cover boring technical details with a light-hearted touch. (If every computer manufacturer would hire him to prepare their manuals, we would read no more groaning complaints about documentation).

Dr. Lien's manual told me (Appendix B) what codes I needed to send from the computer to the printer to get all these wonderful tricks. But he told me how to get those codes using BASIC. Here's how to get WordStar (or similar word processors) to produce the same codes.

Point One: Computer equipment uses an eight-bit character code (ASCII) which makes 256 possible characters. WordStar uses the eighth bit of all characters internally; it's how the program "marks" those "soft hyphens" and "soft carriage returns". That leaves us with a seven-bit code, or 128 possible characters, to deal with.

Point Two: Some of those 128 characters--mostly the ones we refer to as "control" or "super shift" letters"--are interpreted by WordStar as "commands," not as characters to be retained on the disk. But we can get them onto the screen (control-S displayed as ^S) and into the disk file by pre-

ceding them with Control-P (which doesn't show up on the screen). WordStar users will recognize my description as WordStar's method for indicating words to be underlined.

Point Three: Some things can be done in more than one way. For instance, when you want words or sentences underscored, WordStar gives you two methods: enclosing the words with ^S (which will survive any reformatting operation, but rather mad-deningly refuses to underscore the space between words), or putting in your own underscore on a separate "overprint" line (reversing the virtue and drawback). You may continue to use these WordStar methods, or you can use the Epson underscore by putting the codes to "start underscore" before the words you want underscored and the codes to "stop underscore" afterward. Then you have these advantages:

1. The codes will survive WordStar reformat operations.
2. The underscore continues under spaces.
3. The printing is continuous line instead of the "broken" line.
4. The underscore prints with the character instead of taking extra lines.

Point Four: You will need to choose which Epson features you will use frequently, and whether you want to give up your SuperBrain's number pad to make it simpler to enter some of the codes needed by Epson-Grafrax. Study the code list in Appendix B carefully, and keep in mind that the N values called for in some codes have to be ASCII values (a single character), not numbers from the keyboard.

If you decide to give up using the number pad, you enter the substitute codes you want when you press those keys in one of the screen menus in the CONFIGUR program. You can change the disk operating system on the WordStar disk ONLY and still have the number pad (and time of day) for non-WordStar applications.

Point Five: You should make full use of WordStar's printer control code for your "most wanted" features because they do not interfere with WordStar's character count and line justification. Other codes will count, leaving your line "short" (and print, instead of being hidden, on any non Epson printer).

Point Six: If you use the Epson as a draft printer and a thimble or daisy wheel printer for finished work, you need to consider what effect the Epson codes will have. I recently used an NEC printer to get the final copy of

an 80 page manual. It ignored most of my Epson codes (and the .CW and .UJ codes for the NEC were ignored by the dot printer), but the ^Y caused the carbon ribbon to go into "off" mode until I removed it from the files.

Now, here are my choices:

WordStar intends their ^Y as a ribbon color switch, to control printing using a black-and-red ribbon or to get "blind" printing with a carbon ribbon. Epson can't use this. WordStar puts a ^Y in its disk files, and during the printing operation, substitutes ^Y with the control code(s) the printer needs.

You can change your WordStar program to get ^Y to give you "emphasized print" (the print head moves across the lines at half speed, striking the pins for each character twice to give a more fully formed image).

From your CP/M prompt A>, type INSTALL. Your SuperBrain will load the WordStar installation program and the screen will ask "Do you want a normal first-time installation of WordStar?" Respond "N" and you are given four choices; you want D (modify a program already installed and rewrite it in A:WS.COM). You will then be taken through a series of four choices to which your responses should be "U" (unchanged) and "Y" (to confirm). Then you are asked, "Are the modifications to WordStar now complete?" Your response should be "N" because you want to go into the "patch" part of INSTALL.

The ^Y codes are contained under two "labels," RIBBON: and RIBOFF:. There is room for five characters in each, and these are entered with a two-digit hexadecimal code (each "digit" being either a regular digit or letter A, B, C, D, E, or F). These codes are followed by an H when written to remind you that you're working in a number language closer to the computer's silicon heart.

The first character must tell WordStar how many characters it should transmit to the printer. We need two codes, ESCAPE and E, to turn on emphasized print, so you first type 02 [enter]. The screen will ask the next patch location; [enter] gives you RIBBON+0001 automatically; then 1B (hex for ESCAPE) [enter], RIBBON+0002 45 (hex for cap E) [enter]. Appendix B of the Epson manual provides both the English and the hex codes. The hex codes will do the job; I need the English to keep all of this making sense. The extra cautious can go on to RIBBON+0003 and +0004 to check that their present value is 00H and [enter] to keep them that way.

Continued on page 5

Letters to the Editor

DEAR SUPERLETTER:

I am the legitimate purchaser of the Magic Wand word processing program intended for use on the SuperBrain. I have had the program approximately 18 months. Shortly after I took delivery of the program, I realized that there were certain aspects of the program which I could not make work. I was assured that as I became familiar with the program, I would learn how to use these features.

Having become very familiar with the SuperBrain and the Magic Wand program, I now realize that there are "glitches" in the program which prevent it from operating properly. My original dealer says "how unfortunate, I no longer handle SuperBrain or Magic Wand." Peachtree who has bought the Magic Wand program says "we only bought the assets and not the liabilities. We can't help." At this point, I am turning to my fellow SuperBrain users. If there is one among us who has a SuperBrain program which functions properly, I would like to make arrangements to obtain a copy. I have been generally satisfied with the word processing program but am severely limited because of the defect particularly in the print commands.

Sincerely,
Howard Lieberman, P.E.
434 White Plains Road
Eastchester, N.Y. 10709
(914) Spencer 9-3773

DEAR SUPERLETTER:

I keep hearing of people who have a "copy" program in their CP/M operating system and most of the books on the subject indicate that there is a "copy" program that does an entire disk copy including formatting a fresh disk at a much faster speed than is performed by PIP.

Does anybody have available such a program that will run on SuperBrain version 3.0 or 3.1?

Sincerely,
Jary C. Nixon, Attorney
25 Davis Boulevard
Tampa, Florida 33606
(813) 251-0515

Editor's Note: We have just received a copy of this program. Call us for more details.

DEAR SUPERLETTER:

I have installed our printer on the MAIN port of our CompuStar Model 40. This allows the use of CTS (Clear To Send) in receiving the READY signal of our printer (a DATAROYAL IPS 5000A). This is quite useful, as pointed out in Superletter's Technical Corner Vol. 2, No. 2. With Jon Platt's SOS BIOS all one has to do is change the IOBYTE from 81H to 01H. However, with Intertec's BIOS, you must make the following patch to C540CPM.COM.

Address 203 EH -- Change D0H to F4H. This changes a JMP to the AUX port routine to a JMP to the MAIN port routine. This can be found in the BIOS listing as:

LIST:
JMP AUXOUT (DED0H)
PUNCH:
JMP MNOUT (DEF4H)

Copy the address for MNOUT in place of the address for AUXOUT in the LIST: JMP statement.

Steve Forester
Fife Corporation
P.O. Box 26508
Oklahoma City, OK 73126
(405) 755-1600

DEAR SUPERLETTER:

I have a question on the SuperBrain. In all the publications that I have I cannot find out how to format the CRT screen using Microsoft Basic. The standard command, PRINT @256, doesn't work or perhaps I don't know how to use it. HELP! And thank you.

A new SuperBrain user,
Orrin "Denny" Joiner
1644 Jason Street
San Diego, Ca 92154

DEAR SUPERLETTER:

I would like to thank you for the prompt answer to the request for back issues. This information is very useful to me since I have just switched from another home computer to the SuperBrain.

I would like to add a little more to the discussion on Okidata 83A interfacing. I have an Okidata 82A which I assume has exactly the same low speed serial protocol as the 83A and if so then 1200 Baud transmission

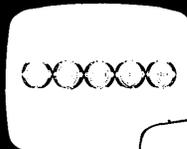
Continued on page 4

HIGH RESOLUTION GRAPHICS

FOR SUPERBRAIN, COMPUSTAR, Z-89 & TRS-80 MODEL II.

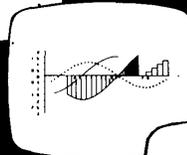
XCEL™ HARDWARE: A retrofit package for graphics display with 512 × 240 resolution. TRS-80 Mod. II, \$595. All others, \$895.

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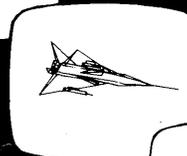
SYMBOL GENERATOR - \$175

Alternate character sets with bold face, 90° rotation, circles, quadrants, vectors, rectangles and area fills.



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Line, graph, histogram, bar graph and scatter plot with automatic annotation of axes scaling.



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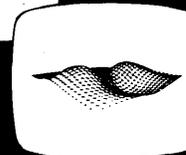
Creating, editing and viewing "wireframe" objects from any angle with scaling zoom and graphics editor.

GRAPHICS TERMINAL - \$395

Configures computer as a low cost graphics terminal.

"NEW" SCREEN PRINTER - \$65

Allows hard copy printout on most dot matrix printers.



SURFACE PLOTTER - \$395

True perspective view with hidden line removal.

SAVE UP TO \$950 ON PACKAGE PRICE OFFERS!

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TRS-80 and StarLine trademarks: Tandy Corp. SuperBrain trademark: Intertec. Data Systems
Technix and stored trademarks: Technix, Inc. CPM registered trademark: Digital Research

can be accomplished via the Auxiliary port with the following connections.

SuperBrain		Okidata
pin 3 TD	to	pin 3 RD
		pin 20 DTR to pin 6 DSR
pin 20 DSR	to	pin 11 SSD
pin 7 GND	to	pin 7 GND

This wiring is exactly as illustrated in the Microline 82A manual on page 47, illustration "b". The switch settings are identical to the ones illustrated in your April/May 1982 issue except the SSD polarity selection switch 1 on the control circuit board (the board in the back of the unit) is "on", and of course the Baud rate selection switches are set to 1200 (sw2 on, sw3 off, sw4 on).

Also, I am glad to send you the information regarding alternate character sets for the new SuperBrain II that I would like you to market for me.

The information includes a program that accesses the characters to allow plotting of curves and shapes on the screen. The format of this set is such that plotting is done similar to the Radio-Shack TRS-80, with the exception that a subroutine must be included to perform the equivalent operation of the SET command. This routine is provided in the listing of the Cycloid plotting routine.

The Cycloid program was written by John R. Sherburn and published in "MICRO" issue No. 10, 1979. John's version centered around a machine language plotting utility and worked for a Commodore Pet.

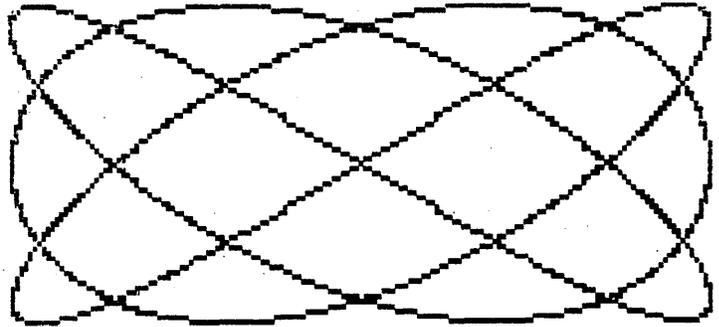
I find that this program shows well the capability of pixel graphics. The resolution 160 by 72 is adequate for representing mathematical functions if you can overlook the slightly irregular appearances caused by the unequal block sizes.

In the near future I will send you more programs illustrating ways to use the histogram characters and methods of blending characters from both sets simultaneously.

I will supply and support this character set through Superletter, and include a program example, and a set directory. I will also be glad to assist anyone who wishes to design their own custom character set. A layout sheet can be provided that will be completed with the desired character elements indicated by marking the appropriate box and identifying the character with the desired hexadecimal or decimal address below each character. The charge for custom characters will be fifty cents per character set-up fee added to the regular cost of the character set.

The price of each character set EPROM is \$60.00 plus shipping. Please have any interested subscribers or customers contact you for further information.

D. Mowrey
Dayton, Ohio



```

1 REM HIGH RESOLUTION PLOT USING PIX-GRAPHICS
2 REM
3 REM PLOT PROGRAM DESIGN BY John R. Sherburn
4 REM
5 REM SET SUB AND ADAPTATION BY Dean E. Mowrey
6 REM
10 DIM SC$(23)
20 FOR N=0 TO 23 : SC$(N)=STRING$(80,64)+CHR$(1): NEXT N
30 PRINT CHR$(12)
100 REM PICTURES FOR THE SUPERBRAIN
110 DELTA = 2 * 3.14159265# / 900
120 P=3 : Q=4
130 FOR I=0 TO 900 STEP .6
140 THETA = DELTA * I
150 Y = INT (79.5+78*COS(P*THETA))
160 X=INT (33.5+32*SIN(Q*THETA))
170 GOSUB 1000
180 NEXT I
190 IF INKEY$="" THEN 190
1000 REM SET SUB
1005 REM THE GRAPHIC SCREEN CONSISTS OF A GRID OF 160 BLOCKS ACROSS AND
1007 REM 72 BLOCKS DOWN THEREFORE THE X VALUE MUST BE BETWEEN 1 AND 72
1009 REM AND THE Y VALUE MUST BE BETWEEN 1 AND 160
1010 REM TEST SIZE OF X AND Y
1020 IF X(0 OR X)72 THEN RETURN
1030 IF Y(0 OR Y)160 THEN RETURN
1040 REM DETERMINE THE LINE NUMBER FROM X
1045 REM LN# = LINE NUMBER
1047 REM DOT# = DOT POSITION IN CHR 1 2 OR 3
1050 LN# =INT(X/3) :DOT#=INT((X/3-LN#)/.3+.5)
1060 REM DETERMINE THE CHARACTER POSITION IN THE LINE
1065 REM CP# = CHARACTER POSITION CD# = DOT POSITION
1070 CP# =INT(Y/2) : CD#=INT((Y/2-CP#)/.5+.5)
1080 REM CONVERT TO GRAPHIC CHARACTER
1090 REM FIRST CHECK SCREEN ID ARRAY FOR PREVIOUS ENTRY
1100 AX=ASC(MID$(SC$(LN#),CP#+1,1))
1110 AX = AX OR (2^(2*DOT#) * (2^CD#))
1112 IF AX>95 THEN AX=AX-64
1115 MID$(SC$(LN#),CP#+1,1)=CHR$(AX)
1120 PRINT CHR$(27);"Y";CHR$(LN# + 32);CHR$(1 + 31):
1130 PRINT CHR$(27);"S";SC$(LN#):
1140 PRINT CHR$(27);"S";
1160 RETURN
2000 REM PRINT SCREEN ON OKIDATA PRINTER
2010 LPRINT CHR$(14)
2020 FOR N=0 TO 23:LPRINT SC$(N):NEXT N
2030 LPRINT CHR$(15)
2040 RETURN
    
```

-New Products-

NAMOR

Shape, Inc.
122 Spanish Village
Suite 615
Dallas, TX 75248

SOFTWARE:

It's always been a puzzle to us why there's been a lack of quality CP/M software packages to help create and maintain professional-level mailing lists.

NAMOR is a new software product that provides all the features and functions one could want out of such a program. With it you can build lists, merge them, sort them on different fields, maintain codes, print labels and cards, and extract names from existing lists created with other software packages.

We've kept an eye on this company since it began and we've come to see how dedicated it is to individual customer support and continuous upgrading of the product with a minimum charge for new features. There was great enthusiasm for incorporating the screen codes and terminal configurations necessary for SuperBrain/CompuStar users.

Price: \$150

Continued on page 7

Guest Article *Continued from page 2*

The Epson needs two more codes, ESCAPE and F, to turn off emphasized print. Label RIBOFF: (you need to enter the colon) gets 02 (for the number of characters) [enter]; RIBOFF+0001, 1B [enter]; RIBOFF+0002, 46 [enter].

Slow going? Sure, until you've tried it. Look at the good side. When you're finished, your \$500 "cheap" printer will be printing your sentence in italics and your next sentence back in regular type while, to get the same effect, your neighbor's \$3,000 "letter quality" printer is still buzzing for a daisy wheel change.

We can speed things up by listing the codes in a table

Epson--Turn on compressed character mode: SI (that stands for Shift In, a Teletype term that may remind us of the ancient history behind the ASCII code).

WordStar--Code AA, label PALT., characters 01, code 0FH.

Note: Emphasized print and compressed characters are not compatible. If you are in emphasized print and want to go to compressed characters, you will need AY to get out of one before AA to get into the other.

Epson--Turn off compressed character mode: DC2.

WordStar--Code AN, label PSTD., characters 01, code 12H.

The next four WordStar codes don't have any purpose defined by WordStar; AQ, AW, AE, and AR are set aside just for us. Intertec generates code NUL (00H) from Control-W instead of the industry standard ETB (17H), which explains why Control-W doesn't cause the downward scroll you expect from WordStar. We will need the NUL code, but using Intertec's provision for it causes extreme operator confusion. In WordStar, AP, ESCape does NOT put an ESCape code on either the screen or disk. My solution was to combine these two codes and let WordStar give them to us from the AQ key.

Epson--NUL (00H), required value for N in some printer codes; ESCape (1BH) alerts printer that the following character is to be considered a command instead of being printed.

WordStar--Code AQ, label USR1, characters 02, codes 00H, 1BH.

Epson--Turn on double width mode to end of line: SO (0EH).

WordStar--Code AW, label USR2, character 01, code 0E.

Epson--Italic character sent on: ESC, 4 (1B, 34H).

WordStar--Code AE, label USR3, characters 02, codes 1BH, 34H.

Epson--Italic character set off: ESC, 5 (1B, 35H).

WordStar--Code AR, label USR4, characters 02, codes 1BH, 35H.

That completes my choices for "patching" WordStar. Enter 0 for the next label location, confirm your four earlier "unchanged" choices, and your SuperBrain will load your "new" WordStar so you can try out your Epson Graftrax.

Point Seven: It will help to know that the ASCII values for the digits 0 through 9 are 30 more than the digits themselves (type 5 to get a value of 35). You can figure out the other values, if needed, from Appendices A, B, and C of Dr. Lien's Epson manual.

I like to print my rough drafts "5 lines to the inch." The Epson code to set line spacing other than the standard 1/6 of an inch is ESCape, 3, N, with N representing n/216". The closest equivalent of 1/5 is 43/216; from the tables I find "+" has a value of 43, so my WordStar code is Control-P, AQ, 3, +. (This appears on the screen as AQ3+). The last two characters will add to WordStar's column register and subtract from the line length. If this is a problem, I type Control-P [return] to get an "overprint line."

If you use the more customary double spaced drafts and don't like the double spacing on the screen and double line feed codes used by WordStar's AOS 2 method, keep WordStar in single space and use a value of 72, which happens to be cap H: AQ3H will give you a double spaced print

of a single spaced file. If you still want WordStar to handle page numbering and jumps, you'll need to set. PL 33 and have the default values for top and bottom margins and footing and heading magins.

The Epson codes for underscore are ESCape, hyphen, N with N = 0 to stop underscore and N = anything else to start it. To start, I type Control-P AQ-+ (screen shows AQ-+); to stop, Control-P AQ- AQ [space]. Now you see why I put the NUL code before the ESCAPE in setting up the outputs for AQ. The second AQ will also generate an ESCape code; which would cause Epson's circuitry to gobble up my next character a la PacMan; the space prevent this. The printed result: Epson gives much variety in printing at a reasonable price.

The illustration below is an example of using many of these codes to develop an income tax worksheet. Using a pencil, it usually required about ten drafts to perfect the design and then a final drafting to make a version the typesetter could understand. Using the SuperBrain and Epson printer, it takes twice as long to get the first draft in the machine, but the revisions are very fast and the final version is ready for the typesetter.

Point Eight: At the end of each WordStar file which includes any Epson codes, you should put a code AQ@ to "reset to normal." Otherwise, printing file No. 2 (or repeating file No. 1) may give unintended results if the computer and printer have not been turned off after printing file No. 1.



12/21/82 D=125
CR-5 FOREIGN TAX CREDIT 198
 Name _____
 Citizen of-- Resident of--
 United States United States
 Use to provide alphabetic information and numeric detail when Form 1116, with partial or complete calculation of the credit, is to be produced by computer. Use a separate CR-5 for each country.
PART A--FOREIGN TAXES PAID OR ACCRUED
 Foreign Country or U.S. Possession Date(s) Paid (Jan. 1 to Dec. 31 unless noted)
 Amounts in: Foreign Currency U. S. Dollars As proof of amount attach one of:
 Withheld at) Dividends 1. _____ 4. _____ Foreign country tax return
 the source on:) Rents & Royalties 2. _____ 5. _____ Withholding statement
 Other tax accrued or paid 3. _____ 6. _____ Cancelled check
 Total (lines 4, 5, and 6) _____ 7. _____
PART B--FOREIGN TAXES AVAILABLE FOR CREDIT
 8. Amount from Line 7 above and from all other W/S CR-5 8.
 If foreign tax paid exceeds the credit, the excess MUST be carried back two years; balance may be carried forward.
 9. Carryovers from 19__ \$ _____, 19__ \$ _____, 19__ \$ _____ 9.
 10. Income excluded on Form 2555 10.
 11. Earned income subject to foreign tax less allocable deductible expenses . . 11.
 12. Line 10 divided by Line 11 12.
 13. Foreign tax (Line 7) multiplied by Line 12 13. (_____)
 14. Other reductions--Sections 901(e), 907(a), 603B, Form 5713 14. (_____)
 15. Available for credit (combine lines 8, 9, 13, and 14). Enter in Box 621, 2A 15.
PART C--GROSS INCOME FROM SOURCES OUTSIDE THE UNITED STATES
 Q Nonbusiness interest) from a DISC or) If income is in more than one category (Q, R, S, or T),
 R Dividends) former DISC) figure the credit on each category separately on annually
 S Foreign oil related income) prepared Form 1116s. Enter total credit in D/S 2A Box
 T All other income from sources outside the U.S.) 621. Leave other boxes blank.
 R T 16. Dividends 16.

(Illustration showing use of special Epson codes.)

get into DDT assembly mode and enter it with mnemonics. Then you can warm boot and save it from CP/M. That may be easier for you if you are experienced with DDT. The save size is 3EH or 62 decimal.

If you enter the patches under DDT, do not be tempted to read in the assembled file with the "R" command. This won't work since you are trying to patch only specific locations, not an entire section of code.

Once all this has been completed, WordStar is ready to run on any version of my SOS or Intertec DOS 3.X and up. It will be very fast because of the direct usage of the memory map. The clock, if displayed, will be in its correct position. The screen will be cleared at the start and end of your WordStar session. Note that this patch does not attempt to clear the ^W problem that the older Intertec DOS had. Poking around in the BIOS after some code which will change location from version to version is a very definite no-no. Intertec has since changed ^W to ^@ which does not interfere with WordStar.

Anyone wishing copies of WSPATCH.ASM or correct copies of the screen dump utilities previously printed in Superletter may send me a SASE and a note specifying which you want.

I would like to use this last paragraph to provide an acknowledgment to TriStar Data Systems in Cherry Hill, New Jersey, for their generous cooperation during the research for my last article, "Inside the SuperBrain II."

```

; SOS File WSPATCH.ASM
;
; Jonathan Platt
; 2804 Fairway Drive
; Melbourne, FL 32901
;
; Phone: (305) 724-6148
;
; This file may be used and copied as long as references to SOS
; and the author are retained.
;
; Assemble only with ASM.COM!- M80 DWs aren't assembled the same.
;

FALSE EQU 0
TRUE EQU NOT FALSE

PPIA EQU 68H ;PPI port A address (video control)

;
; MDLII selects the type of Intertec computer you have. If
; you have an old model SuperBrain or CompuStar, set MDLII to
; FALSE. If you have a new model, set MDLII to TRUE.
;
MDLII EQU TRUE

CLEAR EQU 12 ;Control code to clear screen, reset pointers
ROWS EQU 24 ;Number of rows on CRT

SPACE EQU ' ' ;"... , the final frontier."

MC&PAT EQU 02E0H ;WordStar user patch area
ATTRIB EQU 04000H ;Model II screen attribute memory address
CONOUT EQU 0DE0CH ;Console output vector
LISTST EQU 0DE2DH ;LIST device status vector
CRTPOS EQU 0E412H ;Storage for cursor offset into screen
LINFLG EQU 0E434H ;Row enable flags
VIDMAP EQU 0F800H ;Video memory map

LDIR EQU 0B0EDH ;280 LDIR instruction
SDED EQU 053EDH ;280 LD (nn),DE instruction

ORG 0264H

UCRPOS: JMP CURPOS ;User cursor position routine

ORG 02A4H

INISUB: JMP INIT ;Initialization subroutine
UNISUB: JMP INIT ;Uninitialization subroutine
    
```

```

ORG 02AAH
USELST: DB 0FFH ;Flag that last screen position available

ORG 02AEH
DELCUS: DB 0 ;No delay for cursor commands
DELMIS: DB 0 ;No miscellaneous delays
MEMAPV: DB 0FFH ;Flag that video memory map exists
MEMADR: DW VIDMAP ;Tell WordStar where the memory map is at

IF MDLII
;
; If you have a new model and you have an alternate character set
; EPROM which highlights normal characters, patch HIBIV non-zero.
; Such an EPROM, for example, could be a reverse video character
; set EPROM.
;
ORG 02B3H
HIBIV: DB 00H ;Patch non-zero for special EPROM

ENDIF

ORG MORPAT
;
; INIT will clear the screen. In doing so the following
; important events will occur:
;
; - Row enable flags disabled. Memory map clear won't be
; visible on screen (looks messy while clearing).
; - Top-Of-Page becomes actual start of video memory map.
; - Cursor offset pointer cleared to Top-Of-Page.
; - Clock offset cleared to top right corner of screen.
;
INIT: MVI C,CLEAR ;Clear screen and set pointers
CALL CONOUT
LXI H,VIDMAP ;Start from top of memory map
LXI D,VIDMAP+1 ;Point to next byte
LXI B,07FEH ;Bytes to clear
MVI M,SPACE ;Clear first byte for all to follow
DW LDIR ;Clear video memory map

; Memory cleared. Now enable screen display.
;
LXI H,LINFLG ;Enable all CRT rows
LXI D,LINFLG+1
LXI B,ROWS-1
MVI M,0FFH ;Set first row active
DW LDIR ;Flag all rows other as active

;
; This next routine clears the attribute memory if MDLII
; equate set for new model.
;
IF MDLII
; Clear out attribute memory
;
DI ;Don't let interrupts play with the banking
IN PPIA ;Get current video state
PUSH PSW ;Save it
ANI 11011111B ;Mask in attribute memory bank select
OUT PPIA ;Switch banks if not already there
LXI H,ATTRIB ;Load parameters to clear attribute memory
LXI D,ATTRIB+1
LXI B,07FEH
XRA A
MOV M,A ;Clear first byte for all to follow
POP LDIR ;Clear all character attributes
POP PSW ;Retrieve old bank select state
OUT PPIA ;Restore to old condition
EI ;Resume normal interruptions

ENDIF

RET

CURPOS: DW SDED,CRTPOS ;Store new cursor position
RET

;
; If your printer is on your LIST device, this small routine
; will test the busy status of the device. This improves response
; time while editing and printing at the same time.
;
; Do not patch in the following code if your printer is not
; on the LIST device.
;
BSYTST: CALL LISTST ;Get LIST device status (FF or 0)
INR A ;A = 0 if ready; 1 if busy
RAR ;Set CY flag = 1 if busy
; 0 if not busy

RET

ORG 0717H

CSWTCH: DB 0
HAVBSY: DB 0FFH
DB 0
LIBSY: JMP BSYTST

END
    
```



-Program #1- -Program #2-

PURPOSE: The SuperBrain uses the CTRL-W key to turn screen scrolling on and off. The Wordstar software program uses CTRL-W for line down scrolling. A method of reassigning the on/off scrolling function to CTRL-@ is presented here, which should resolve the conflict.

CHANGE: The modification was made using the DDT function of CP/M version 2.2. The only change to be made for using this procedure for the different models would be in the operating program name, i.e., SB31CPM.COM or SB32CPM.COM, etc.

The user input is underlined. Do not enter the underlining when making the change. <CR> indicates entering a RETURN.

```
A> DDT SB32CPM.COM<CR>
DDT VERS 2.2
NEXT PC
3100 0100
-S28A0<CR>
28A0 17 00<CR>
28A1 CA <CR>
-CTRL -C
A> SAVE 48 NEW32CPM.COM<CR>
```

At this point you have a version of the NEW32CPM.COM in which the screen scrolling has been assigned to CTRL -@. To install in the system, use the following procedure and assume the disk to be changed is disk A.

```
A> NEW32CPM<CR>
SYSGEN VER 1.4
SOURCE DRIVE NAME (OR RETURN
TO SKIP) <CR>
DESTINATION DRIVE NAME (OR
RETURN TO REBOOT) A<CR>
DESTINATION ON A, THEN TYPE
RETURN <CR>
FUNCTION COMPLETE
DESTINATION DRIVE NAME (OR
RETURN TO REBOOT) <CR>
```

John M. Stockberger
2 S 643 Nelson Lake Rd.
Batavia, IL 60510

-New Products-

Continued from page 4

CP+
Taurus Software
670 Market Street
Suite 815
San Francisco, CA 94102

SOFTWARE:

Remember what it was like when you first

```
; SOS File GETROM.MAC
;
; Programmer: Jonathan Platt
; Zilog Mnemonic Z80 Source Code
;
; This program will pluck the SuperBrain's or CompuStar's PROM from hid-
ing. It is to be used with DDT. The screen will flicker slightly but it's nothing to
worry about.
; Procedure:
;
; A>DDT GETROM.HEX
; DDT Version n.nn
; -G4500,aaaa ;Where aaaa is the breakpoint address (see below)
; -D100,900
; and a dump of your PROM will magically appear!
; Then, to put it in a disk file, do:
; -^C ;Reboot
; A>SAVE 8 PROMxx.COM ;Where xx is the version number (8 pages equals 2K)
; A> ;You now have a machine image COM file of the PROM
;
;
;
```

```
PPIB EQU 69H
PPICW EQU 6BH

ASEG

ORG 4500H ;Base program above bank zero

LD HL,0100H
LD DE,0101H
LD BC,4000H
LD (HL),0
LDIR ;Clean up bank zero

DI ;Musn't have interrupts with bank zero out
LD A,0AH
OUT (PPICW),A ;Generate a BUS REQ

FOO: IN A,(PPIB) ;Get CPU-2 status
RLA ;BUSAK?
JR C,FOO ;No, wait...
LD A,5 ;Yup, now switch out bank zero...
OUT (PPICW),A ;...by setting PPIC-2

LD HL,0 ;Source (PROM) starts at location zero
LD DE,5000H ;Destination - out of bank zero
LD BC,0800H ;It's a 2K PROM
LDIR ;Send data from source to destination

LD A,4 ;OK, got the data - Switch bank zero back in
OUT (PPICW),A
LD A,0BH ;Give CPU-2 its bus back
OUT (PPICW),A

EI ;Now that we're back, interrupts can happen

LD HL,5000H
LD DE,0100H
LD BC,0800H
LDIR ;Move memory image of PROM to TPA base for save

NOP
NOP ;***** SET DDT BREAKPOINT HERE *****
END
```

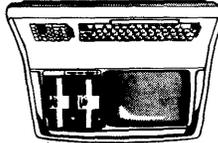
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configuration menu. What a surprise! And it worked perfectly. The only trouble is it came three years too late for us to truly enjoy its many features and sophistication. But we recommend it for all new SuperBrain users and for dealers who need to make the computer's housekeeping functions easy for their customers to use, the first time and every time.

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ter (213) 277-2410. \$50.00

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used for personal use only. Bill Lasor, 213-
797-9068.