

SUPERLETTER

Serving SuperBrain® Owners and Users Around the World

Aug/Sept 1982
Vol. 2, No. 4

Preliminary first-reports coming in about the new SuperBrain II and CompuStar line of computers have been positive.

Intertec seems to be installing even better, more reliable components, including a new power-supply, which is one problem of the older models. And, the new enhanced screen attributes, including the lower-case descenders, have been enthusiastically received.

Intertec appears to be healthy in these economically quiet times. We're also encouraged by Intertec's new aggressive consumer policies regarding customer support and quality control.

We will begin publishing a thorough evaluation of the new model line starting with our next issue. But if any of you are currently using any of the new models, send us your comments.

We've made arrangements to provide you a quality state-of-the-art 10MB hard-disk, with a full one year warranty, completely configured and pre-tested for the Intertec computer for \$2,500. (Plus shipping.) But we can only offer this system if there are enough orders. Let us know soon if this product interests you.

Superletter readers love programs. Several important ones are printed inside. And, through the courtesy of Dr. Ned Estridge and David Storti, we have two exclusive programs available for the users of Spellbinder and the SuperBrain. One program allows you to use non-ASCII thimbles on a NEC or similar printer. The other is a complete mailing system with sorting features and culling out of duplicates. Send us a dollar for copying and postage and we'll mail them along to you.

Your continued enthusiasm for Superletter is appreciated. Thanks for letting us know when you've found valuable information for your fellow SuperBrain and CompuStar users. We enjoy your sharing your discoveries with us.

Albert Abrams
EDITOR

Technical Corner

DISK DRIVE SPEED ON THE SUPERBRAIN MODEL I by Jonathan Platt

Rotational speed is a very important topic of discussion, especially to those of you with an abundance of CRC errors, etc. A variation of approximately more than 1.5% (3000 microseconds) per revolution from drive to drive will make data at the inner tracks unreadable. It is crucial to match the drive speed of both drives to as near a perfect setting as possible. It has been my experience that the typical rotational drift is about 300 microseconds (.15%) on a good day.

I saw some mention of power supply problems in the Feb/March issue of SUPERLETTER. I suspect that good drives such as the Tandons I have or MPis (CDC drives are truly bad on their own) aren't really as bad as the drifting indicates. More likely, it is a power supply problem where it just can't regulate the power properly, causing constant drifting. I've seen drive speeds drop 1000 microseconds per revolution just from an air-conditioner kicking on. This obviously can't be good for reads or writes when voltages are constantly fluctuating.

Some may wonder why the expensive diskette they just received from a non-SuperBrain oriented software vendor is full of CRC errors. The reason is probably one of two things; either the vendor sent the disk in non-Intertec format or the speed at which the disk was formatted and recorded does not correspond with the customer's drive speed. I've adjusted new SuperBrains where the rotational speed had been considerably off-mark. The fact that Intertec used a data separation circuit meant for a single-density system right out of a Western Digital book doesn't help matters either.

Both Information Engineering (IE) and I sell a PROM which is capable of reporting drive speed. IE will sell you a

DISKTACH program which will constantly monitor drive speed while you adjust the drive via a potentiometer on the drive board. I supply a similar program with my SOS BIOS for free. If you already bought your system from IE then I highly recommend purchasing their DISKTACH program so you can adjust your drive speeds to optimum.

In any case, adjusting the drive speed is not quite enough. If you only adjust the drive speed, you will have perfectly timed drives but you still have diskettes which were recorded at the wrong data rate. You must keep one drive (drive A) at the speed which the diskettes were recorded at and the other (drive B) at the optimal speed. Then you must format a disk on B and PIP everything from drive A over to drive B. You should also SYSGEN the diskette in drive B at this point. When you have finished copying all the diskettes from drive A to B, you may then complete the operation by adjusting drive A to the optimal speed.

For those of you who have bought my SOS and PROM or IE's system and didn't like the fact that the hardware change, necessary to enable the drive spindle shut-off feature, makes the Intertec PROM inoperable, here's one solution:

Go out to any electronic shop (e.g. Radio Shack) and buy a single-pole, double-throw miniature switch and some #30 insulated wire-wrap wire. You will also need a soldering iron and some Super-Glue.

Orienting from the component side of the PC board in its normal position, I super-glued the switch to the non-component side of the processor board at the right side edge, just south of the lowest chip on that edge such that only the toggle appears from underneath. I placed it there to be the closest to the motor-off circuit without gluing it on over any traces.

First, remove the jumper that enabled the motor-off feature. Next, solder a wire

Continued on Page 8

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Letters to the Editor

DEAR SUPERLETTER:

I got the SuperBrain to properly drive the Diablo 630 printer. Details follow.

Configure the auxiliary port for 9600 baud (corresponding to the Diablo dip switch setting), 7 bit character length, 1 stop bit, even parity, and DSR enabled.

Wire the RS232C cable as follows:

SuperBrain	Diablo 630
1-----	1
2-----	2
3-----	3
"	4-I
"	"-I
"	6-I
7-----	7
"	"
"	"
"	"
20-----	11

Robert C. Pierce
 Bob Pierce Service
 99 Golden Hinde Blvd.
 San Rafael, CA 94903
 (415) 479-4070

DEAR SUPERLETTER:

Comments on the June/July 1982 issue:

1. Opening column, p. 1, down-loads to SuperBrain disks, \$15 for single-sided, \$10 for double-sided?

2. Factory news, p. 5, announcing SuperBrain II, would be of interest to someone buying a computer, but leaves owners of "old" SuperBrains with the question: which, if any, of the new features are available for existing machines?

Your readers might be interested in a service offered by Dream Electronics of Corvallis, Oregon. They take data from the SuperBrain DD disks (or "moved" by telephone) and send you "type" composed by a Compugraphic unit on Kodak Type S paper. This is useful for someone who wants to "go to press" with something a little better than he can get from his computer printer but whose budget won't cover the re-keyboarding he would have to pay a local typesetter.

Using a text editor (such as WordStar in the "non-document" mode), the user can control the typeface, size, line length, vertical spacing and get tabulation and

special characters not in the ASCII character set. In my own case, the savings in printing costs from getting almost twice as many words on a page more than cover the cost and the improved appearance costs only the "nuisance" of learning some codes to insert in the text.

Jack E. Monroe
 1345 N. Orange Drive, #1
 Los Angeles, CA 90028

Editor's Note: *There are usually more diskettes involved with single sided mix-downs, thus the higher price. And no, none of the new SuperBrain II attributes are available for the older models as yet.*

DEAR SUPERLETTER:

We are presently becoming a member of the CP/M Users Group.

Since we have both an IMS International Series 8000 computer system with 8" floppy drives, and a SuperBrain QD (with an "SD" on order), we will be happy to provide the "mix-down" service for SuperBrain owners in the South Florida area.

We feel that the cost should be nominal, and are proposing a \$10.00 per disk charge.

Also, we will be happy to convert any other user-owned programs to or from SuperBrain format and 8" formats.

Robert H. Reilly
 Vice President, Operations
 AmeriSoft Business Systems, Inc.
 4203 Ponce De Leon Boulevard
 Coral Gables, Florida 33146
 (305) 444-1613

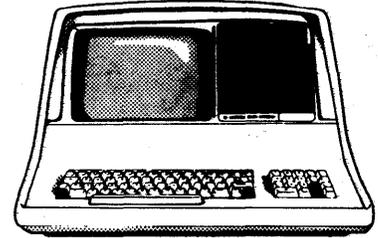
DEAR SUPERLETTER:

I recently installed IE's SB/E Prom on my SuperBrain and am pleased with the improvements in my system. Initially I had problems using the ADM 31 terminal option for WordStar, but by patching with the INSTALL program was able to get my system working.

The ADM 31's highlighting control code is the SuperBrain's blinking code. Thus, the WordStar menu would always be flashing as I attempted to edit any document. The IVON and IVOFF options must be disabled by setting all bytes in these routines to zero (0) through the INSTALL program.

Gordon L. Wong
 8052 Ainsworth Lane
 La Palma, California 90623

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Programs

LISTING FILE: SCRENDMP.ASM

Screen Dump Program for the Intertec SuperBrain

by Jonathan Platt
2804 Fairway Drive
Melbourne, Florida 32901
(305) 724-6148

These are released as public domain programs. Anyone can use them, abuse them or change them without fear of recrimination.

These assembly and Basic programs will work with my SOS BIOS or any Intertec DOS 3.0 and above. These are meant as a subroutine to be called when a screen dump to the LIST device is desired.

These programs will NOT work with the IE DOS. They don't keep their address counters at the same place as Intertec and I. You'll have to hunt for them on your own and change the value for SCRCNT. They also do not use the line display enable flag technique. So if you do find out how to implement these programs on an IE system, you won't need the line display logic portion of these subroutines.

The high bit of the character is stripped and if the character is a control character, a space is printed in its place.

```

SCRCNT EQU 0E416H ;Address of scroll counter
TOP EQU %f800H ;Start of screen map (Top-Of-Page)
LINFLG EQU 0E434H ;Row display enable flags
LPF EQU 24 ;Rows per frame
CPR EQU 80 ;Columns per row

CR EQU 13 ;Carriage-return
LF EQU 10 ;Linefeed
SPC EQU 20H ;Space character

```

Your assembly program goes here and calls SCRDMP

```

;
;
;Your assembly program goes here and calls SCRDMP
;
;
SCRDMP: EQU $

        LHL D,1 ;Get warm jump vector address
        LXI D,12 ;Offset to LIST device vector
        DAD D ;Add to base address
        SHLD LISTV+1 ;Save at LIST call location
        LHL SCRCNT ;Get scroll counter offset from Top-Of-Page

        LXI D,LINFLG ;Get a pointer to line display flags
        MVI C,LPF ;24 rows on screen

ROW:    PUSH B ;Save row counter
        XCHG ;HL = line display address
        MOV A,M ;Get line display flag
        ORA A ;Is the enable flag set?

XCHG   JZ NODISP ;No, go to next line
        MVI B,CPR ;80 characters per row

ROW1:  MVI A,0FH
        OORA H ;Mask T-O-P onto pointer
        MOV H,A
        MOV A,M ;Get character
        ANI 7FH ;Strip high bit
        CPI 20H ;Control character?
        JM CNTRL
        MOV C,A
        CALL LIST ;Print character
        JMP NXTCHR

CNTRL: MVI C,SPC
        CALL LIST ;Print a space in place of non-printing char.

```

```

NXTCHR: INX H ;Point to next character, regardless
        DCR B ;Done all characters on this line?
        JNZ ROW1 ;No, print next character

CRLF:   MVI C,CR ;Finished the line - print a CR to printer

        CALL LIST
        MVI C,LF ;Now a linefeed
        CALL LIST
        INX D ;Point to next line display flag
        POP B ;Get line count
        DCR C ;Done?
        JNZ ROW ;No, do next line
        RET ;Yup, return to calling routine

NODISP: LXI B,80
        DAD B ;Add one row to screen character pointer

        JMP CRLF

LIST:   PUSH H ;Save everybody
        PUSH D
        PUSH B
        PUSH PSW

LISTV:  CALL $$ ;Filled at init
        POP PSW
        POP B
        POP D
        POP H
        RET

DONE

```

LISTING FILE: SCRENDMP.BAS

Screen Dump Program for the Intertec SuperBrain

```

100SCRCNT = 58390!
:TOP = 63488!
:LINFLG = 58420!
:LPF = 24
:CPR = 80
:CR$ = CHR$(13)
:LF$ = CHR$(10)
:SP$ = CHR$(32)
110 TOPOFF = (PEEK(SCRCNT + 1) AND 7)*256 + PEEK(SCRCNT)
:CHRLOC = TOP + TOPOFF
:FOR ROW = 1 TO LPF
120 IF PEEK(LINFLG) = 0 THEN 170
130 FOR COL = 1 TO CPR
:IF CHRLOC = 65535! THEN CHRLOC = TOP + (CHRLOC-65536!)
140 CHR = PEEK(CHRLOC) AND &H7F
:IF CHR VAL(SP$) THEN LPRINT SP$; ELSE LPRINT CHR$(CHR);
150 CHRLOC = CHRLOC + 1
:NEXT
160 GOTO 180
170 CHRLOC = CHRLOC + 80
180 LINFLG = LINFLG + 1
:LPRINT CR$;LF$;
:NEXT
190 RETURN
200 END

DONE

```

Continued on Page 5

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PARPRNT.ASM
For the Intertec SuperBrain

Program written for use with a Centronics 737 printer and a parallel printer interface designed by M. J. Coulombe. The port addressed is A0 Hex.

Use [PmTn] in PIP, where m is in range 55-60 and n is the tab column.

When overwriting BIOS for SYSGEN use negative offset of 4180H for 64K or C180H for 32 K.

See end of this listing for ^W information.

```

OFFSET EQU 9400H ;OFFSET FOR 64 K = 9400H
; ;OFFSET FOR 32K = 1400H
;
; ORG 4AAFH + OFFSET ;BIOS ENTRY POINT FOR LST:
LIST: JMP PPRINT ;MODIFICATION OF BIOS FOR NEW LST: VECTOR
MSGOUT EQU 4DA3H + OFFSET ;LOCATION FOR VIDEO OUT
;
; ORG 4E3BH + OFFSET ;ORIGIN OF SIGN ON
; AND PARALLEL
; ;PRINTER ROUTINE
;
sgnon:
DB 'FOOBAR'S SUPERBRAIN {07/28/82}',
0AH, 0DH, 80H
;
;change to customize sign on and keep track of version
;
;.....
;
; insert user routines here
;
;.....
USRSTRT EQU $ ;USER START ADDRESS
USRSIZE EQU 5000H + OFFSET - $ ;NUMBER OF BYTES
; AVAILABLE (HEX)
USREND EQU 4FFFH + OFFSET ;USER END ADDRESS

```

PARALLEL PRINTER PORT DRIVER

written by P. L. Kelley
with assistance from M. J. Coulombe

Program assumes 737 linefeed after carriage return is not disabled and does not output linefeeds after carriage returns. Not disabling auto linefeed prevents overwriting of text if number of characters output is longer than the printer can handle. Program also keeps track of position on page and handles formfeed, half linefeed forward, half linefeed reverse, and backspace. Full linefeed reverse has not been implemented as the author sees no reason to do so. Note that when line numbers are commented on below, the author intends that they be understood as half lines not full lines.

```

PPORT EQU 0A0H
;
;
PPRINT: IN PPORT
RAR
JNC PNCN ;GO IF PRINTER IS NOT CONNECTED
RAR
RAR
JNC PNPWR ;GO IF PRINTER HAS NO POWER
RAL
JNC

```

```

PBUSY: IN PPORT
ANI 08H ;PRINTER BUSY?
JNZ PPRINT ;LOOP IF PRINTER IS BUSY
LXI H,BSFLG ;POINT TO BACKSPACE FLAG
MVI A,01H ;LOAD FLAG SET VALUE
CMP M ;TEST FOR FLAG SET
JZ BSRST
MOV A,C ;CHARACTER IN REGISTER C ON
; ENTERING ROUTINE
;TEST FOR NOT CONTROL CHARACTER

CPI 20H
JNC CHAR
CPI 08H ;TEST FOR BACKSPACE
JZ BKSP
CPI 0AH ;TEST FOR LINEFEED
JZ LFEEED ;TEST FOR FORMFEED
CPI 0CH ;TEST FOR FORMFEED
JZ FFEEED
CPI 0DH ;TEST FOR CARRIAGE RETURN
JZ CARET
CPI 1CH ;TEST FOR HALF LINEFEED FORWARD
JZ HLFFFWD
CPI 1EH ;TEST FOR HALF LINEFEED REVERSE
JZ HLFREV
CHAR: LXI H,CRFLG ;POINT TO CR FLAG
MVI M,00H ;RESET CR FLAG
INX H ;POINT TO CRLF FLAG
MVI M,00H ;RESET CRLF FLAG
OUTPUT: OUT PPORT ;PRINT CHARACTER
RET

PNCN: LXI H,PNCN ;DISPLAY PRINTER NOT
; CONNECTED MESSAGE
CALL MSGOUT
JMP PERLP
PNCNB: DB 0AH,0DH, ;*** PRINTER NOT CONNECTED ***
0AH,0DH,80H
;DISPLAY PRINTER HAS
; NO POWER MESSAGE
PNPWR: LXI H,PNPWR
CALL MSGOUT
JMP PERLP
PNPWRB: DB 0AH,0DH, ;***PRINTER HAS NO POWER ***
0AH,0DH,80H
;DISPLAY PRINTER NOT
; ONLINE MESSAGE
PNONL: LXI H,PNONLB
CALL MSGOUT
JMP PERLP
PNONLB: DB 0AH,0DH, ;*** PRINTER NOT ONLINE ***
0AH,0DH,80H
PERLP: IN PPORT
PERLPA: MOV B,A ;SAVE INPUT
MVI A,00H ;CLEAR TO GET NEW INPUT
OUT PPORT
LXI H,50000 ;WAIT AWHILE
WLOOP: DCX H
CMP H
JNZ WLOOP ;WAIT LOOP
IN PPORT ;GET NEW INPUT
CMP B ;TEST FOR ERROR STATUS CHANGE
JZ PERLPA ;LOOP IF NO CHANGE
JMP PPRINT ;RETURN IF STATUS CHANGE

CARET: CALL INCLN ;CALL LINE # INCREMENT ROUTINE
CALL INCAGN ;REPEAT LINE # INCREMENT
LXI H,CRFLG ;LOAD CARRIAGE RETURN FLAG
MVI A,01H ;LOAD THE VALUE OF THE CR
; AND CRLF FLAGS
;WHEN SET
CMP M ;TEST FOR CR FLAG ALREADY SET
JZ CRLFRP ;JUMP TO OUTPUT LF IF SET
MVI M,01H ;SET CARRIAGE RETURN FLAG
INX H ;POINT TO CRLF FLAG
CMP M ;TEST IF FLAG SET
JZ RCRLFF ;JUMP TO RESET CRLF FLAG AND
; OUTPUT LF
;OTHERWISE OUTPUT CR
;RESTORE CHARACTER
RELOAD: MOV A,C
JMP OUTPUT
CRLFRP: MVI A,0AH ;LOAD LF
JMP OUTPUT
RCRLFF: MVI M,00H ;RESET CRLF FLAG
JMP CRLFRP ;JUMP TO OUTPUT LF

INCLN: LXI H,PAGEL ;POINT TO PAGE LENGTH
MOV A,M ;LOAD PAGE LENGTH INTO A
INX H ;POINT TO LINE #
INCAGN: INR M ;INCREMENT LINE #
CMP M ;COMPARE PAGE LENGTH TO LINE #
JZ NEWPG ;JUMP IF NEW PAGE
RET

```

Programs, continued from Page 5

```

NEWPG:  MVI  M,00H  ;NEW PAGE
        RET
;
LFEEED:  LXI  H,CRFLG ;POINT TO CR FLAG
        MVI  A,00H  ;LOAD CR FLAG RESET VALUE
        CMP  M      ;COMPARE WITH FLAG
        JNZ  LFRST  ;JUMP IF LINE FEED FOLLOWS
                CARRIAGE RETURN
        CALL INCLN  ;CALL LINE # INCREMENT ROUTINE
        CALL INCAGN ;REPEAT LINE # INCREMENT
        JMP  RELOAD ;OUTPUT LF
LFRST:  MVI  M,00H  ;RESET CR FLAG
        INX  H      ;POINT TO CRLF FLAG
        MVI  M,01H  ;SET CRLF FLAG
        RET  ;DON'T OUTPUT ANYTHING
;
FFEEED:

```

Instead of linefeeds this routine outputs a space followed by a carriage return to prevent the ribbon from lifting above the print head when too much vertical paper motion occurs. The problem occurs with tractor feed paper.

```

        MVI  C,20H  ;LOAD A SPACE
        CALL PBUSY  ;OUTPUT A SPACE
        PUSH H      ;GIVE TIME
        POP  H      ;   FOR BUSY
        PUSH H      ;   SIGNAL TO
        POP  H      ;   TURN ON
        MVI  C,0DH  ;LOAD CR
        CALL PBUSY  ;OUTPUT CR
        LXI  H,LINEN ;POINT TO LINE #
        MVI  A,00H  ;TOP OF PAGE LINE #
        CMP  M      ;TEST FOR TOP OF PAGE
        RZ        ;RETURN IF AT TOP
        INR  A      ;ONE LINE BELOW TOP OF PAGE
        CMP  M      ;TEST FOR ONE LINE BELOW TOP
                OF PAGE
        JZ   HLFREV ;BACKUP ONE LINE
        JMP  FFEEED ;OTHERWISE REPEAT
;
HLFFWD:  CALL  INCLN ;CALL INCREMENT LINE # ROUTINE
        JMP  RELOAD ;OUTPUT A HALF LINEFEED
                FORWARD
;
HLFREV:  LXI  H,LINEN ;POINT TO LINE #
        MVI  A,00H  ;TOP OF PAGE LINE #
        CMP  M      ;TEST FOR TOP OF PAGE
        JZ   BOTM   ;JUMP IF AT TOP
        DCR  M      ;DECREMENT LINE #
        JMP  RELOAD ;OUTPUT A HALF LINEFEED REVERSE
;
BOTM:  INX  H      ;POINT TO LAST #
        MOV  A,M    ;LOAD A WITH LAST LINE #
        JMP  RELOAD ;OUTPUT A HALF LINEFEED
                REVERSE
;
BKSP:  LXI  H,BSFLG ;POINT TO BACKSPACE FLAG
        MVI  M,01H  ;SET THE FLAG
        JMP  OUTPUT ;OUTPUT A BACKSPACE COMMAND
;
BSRST:  MVI  M,00H  ;RESET THE BACKSPACE FLAG
        JMP  RELOAD ;OUTPUT NUMBER OF BACKSPACES
;
PAGEL:  DB   84H   ;PAGE LENGTH
LINEN:  DB   00H   ;INITIAL LINE #
LASTL:  DB   83H   ;LAST LINE #
CRFLG:  DB   00H,01H ;INITIAL CR AND CRLF FLAG
                VALUES
BSFLG:  DB   00H   ;INITIAL VALUE OF BACKSPACE
                FLAG

```

The following code gets rid of the misfeature concerning ^W. Otherwise ^W is converted to ^@ and the screen is shut off when the ^W is followed by a carriage return. Incidentally, if the misfeature is retained then a second ^W carriage return turns the display on again. Eliminating the misfeature allows the SuperBrain to be used with the full command set of Mince and (so the author has been told) Wordstar.

```

ORG 5117H + OFFSET

```

```

NOP
NOP
NOP
NOP
NOP

```

The following code is inserted to turn on read verification.

```

;
;   ORG 5B07H+ OFFSET
;
RAW:  DB  OFFH ;DISK READ AFTER WRITE
        ;00H = NO READ VERIFICA-
        ;   TION AFTER WRITE
        ;FFH = READ VERIFICATION
;
;
;   END

```

Book Review

Many people in the microcomputer industry know a lot about chips, wires and programming but may lack common business sense vital to eventual success in the marketplace.

And there have been few books, if any, that dealt with this problem, until now. Victor Wild's two-volume set of **Your Fortune in the Microcomputer Business** has filled a major void in the wild and wooly goldrush days of micros we are all experiencing.

To be honest, we did not expect much from books with such a presumptuous title, but the author delivers. At times, you not only feel you get your money's worth from these books, but you get much more.

Fortunately the author is concise, to the point, and extremely well-structured in the delivery of his main message: If you want to make it in the microcomputer industry, get organized, have specific business goals, and use street-smarts to know when to adapt to changing market conditions. Examples gleaned from real-life situations in the marketplace dramatically prove his point.

Your Fortune in the Microcomputer Business. Good reading and good business advice for the computer entrepreneur, from Wildfire Publishing, P. O. Box 420, Carpinteria, California 93013.

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-New Products-

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1623 Third Ave., #24FW
New York, N.Y. 10028
(212) 831-5229
Contact: Dale Walker

SOFTWARE:

Intertec Compatible Family of Operating Systems

Systems Integration announced the availability of two new products for the Intertec line of computers. SUPER-I/OS now supports the SB II line of computers, providing system access to the permanent Real-Time-Clock and supporting the five character attributes, mixable on a character by character basis.

Also released is the SUPER-NET family of operating systems which support the CompuStar network environment. It includes two operating systems for the DSS10/96 and the VPUx series for the VPU nodes. For the DSS10 they offer NET-I/OS, the basic service-only Network Control System. HUBMASTER is an advanced, multi-tasking background processor for the more demanding, extended networks. The VPUx series provides a flexible environment for the user who is part of a network, allowing trade-offs between total user memory and system flexibility. Record and File lockout have been implemented so that it is easy to use with existing applications software. Spooling is available in two forms, as a background task on each VPU, and as a background task on the CompuStar DSS10 which eliminates the need to tie up a VPU just to print a document. Or it can automatically monitor and service an external modem. True resource allocation is designed into the basic structure of the system and will be available in the third quarter of 1982.

Garagekeeper
Computer Assistance, Inc.
82277 Weiss Road
Creswell, OR 97426
(503) 895-2012
Contact: Patricia Swift

SOFTWARE: This computer-based inventory system is designed specifically to solve the problems facing independent garages, automotive specialty shops and small auto dealerships using QD SuperBrain and hard-disk systems.

The package is menu-driven, very user-friendly, and fast, having been written in Fortran.

Detailed printed brochures with sample reports are available to end-users and SuperBrain dealers.

D.B. Power for dBASE II
American Training International
3800 Highland Avenue, Suite 500
Manhattan Beach, CA 90266
(213) 546-4725
Contact: Frances Gaskins

SOFTWARE: With self-education software packages beginning to appear in the marketplace, we were happy to receive this one on SuperBrain format.

dBASE II, by far, is the industry's most popular data-base product. But to use it a person has to learn its own special language and commands.

That's where this program comes in. It guides an end-user, step by step, on the screen and with its hand-size booklet, through the basic set-up of dBASE II data files and the correct input of data. And this it does well.

The only missing ingredients, however, are instructions on how to set up the more complex program files (the command instructions files) that are integral to later manipulating the dBASE II data files you have created.

But as a powerful starter for learning to use dBASE II, D.B. Power does its job

admirably. The documentation and the screen instructions are written in clear, easy-to-understand English, a rarity these days. We just hope that the creators will take new dBASE II users even further in the months ahead.

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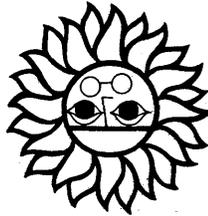
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Technical Corner, continued from Page 1 running from the middle prong of the switch to the on-chip part of the pin which had to be cut and from where you had just removed the original jumper. I ran this wire from the switch to a through-hole just to the right of the affected pin, through the hole and to the pin. Next, solder a wire running from one of the two remaining prongs to the through-hole where IE had you attach the other end of the original jumper. Finally, solder a wire running from the remaining prong to the underside of the pin-hole on the PC board that the chip pin was cut away from. The job is complete. You now have the choice of keeping power on all the time the Intertec way or using the motor-off feature which both IE and SOS support.

The reason I made this change was not for compatibility but for power supply reasons. My power supply and probably many others are only marginal. When power is applied, the switching power supply tries to come up about three times before they can get enough juice to do it. On some SuperBrains, this can be so bad that the power supply will go into a "pumping" cycle forever, never quite getting up to power and clamping down to start the cycle all over again. This is the most common problem with the SuperBrain's power supplies.

I found that the problem is worse with

the single-sided type drives which must physically load the head against the diskette surface. This draws enough current to initiate the pumping action, causing the drives to click on and off repeatedly. With a marginal power supply like mine, it may take a few hours of operation before the supply "gets tired".

With double-sided drives, the problem is not so noticeable since the heads are always against the diskette surface, but the consequences can be even more disastrous. I have discovered this out personally. The pumping action still happens, but almost imperceptibly. You may notice the head load lights on the front of the drives blink dimly a few times before actually coming on fully. With the heads already loaded against the diskette surface this power flux can (and will) destroy data on the diskette. If it doesn't get to the data, it could change some of the data address fields which the floppy disk controller uses to keep track of where it is. The most common error this produces is the infamous CRC error.

To avoid this problem, I am forced to leave the drives on all the time, lessening both my disk drive and diskette lifetimes, until a reasonable and more reliable power supply can be manufactured for the SuperBrain. I am actively pursuing a solution to this problem as well as other data integrity problems.

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