

# SOLUS NEWS

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Vol. 1, No. 2

SOL Users' Society

MARCH 1978

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Subscriptions are available by membership in SOLOS. Individual dues: \$10 in U.S.A., Canada, Mexico; \$15 elsewhere. Dealer memberships (\$25) and manufacturer memberships (\$50) include special services.

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## IMPORTANT NOTICES

Due to a misunderstanding, Kilobaud magazine published that our newsletter is available for \$4, but our 1978 dues actually are \$10 (\$15 outside of USA, Canada, or Mexico). If you sent us \$4 in 1978 we've placed you on our mailing list, but we must request the balance of the dues to cover our expenses. Please send your payment to our P.O. Box shown above.

If you joined us in 1977 and haven't yet paid the 1978 dues, please take a moment now to send it. We realize that \$4 for the few 1977 issues of SOLOS NEWS seems overpriced. We plan to pay back our 1977 members with some sort of bonus for their early support.

## SOLOS BOOTH AT COMPUTER FAIRE

Processor Technology has donated the use of a commercial booth at the 2nd West Coast Computer Faire, SOLOS plans to have exhibits, handouts, and someone to answer questions at the booth for as many hours each day as possible. If you plan to come to the Faire and wouldn't mind helping to staff the booth for a one-hour slot, please let us know. Also if you have an interesting application you'd like to exhibit, contact us right away so we can make arrangements for you to get your equipment thru the security people. Let us know when you want to present your exhibit. We're especially interested in showing home-brewed versions of SOL built from the PC board, and SOL-compatible configurations of other computers.

The Computer Faire will be Friday, March 3 thru Sunday, March 5, at the San Jose Convention Center. To take part in the SOLOS booth write to SOLOS Faire Booth, Box 23471, San Jose, CA. 95153.

## BACK ISSUES

If you would like the four back-issues of volume 0, send \$2.00 (U.S.) and a self-addressed envelope to our post office box. Be sure to say this is for volume 0 back-issues. Members who joined in 1977 are entitled to the issues they are missing without charge. New members should receive back issues of the current volume (Vol. 1) automatically. Please let us know if you were left out.

EXTENSYS AT MARCH S.F. MEETING

Extensys Corporation, makers of the 64K Dynamic RAM board, will present a program on their entire product line at the March 19 meeting of the San Francisco Peninsula chapter. Ed Hartnett, marketing Vice President, will discuss the background of Extensys, their current products, and glimpses of future products. The RM64 memory board and the FOS1000 floppy disk system will be demonstrated in a SOL. If you're thinking about buying any dynamic RAM or floppy disk, it would be a good idea to attend. Ed has some interesting comments on hardware compatibility problems in SOL's. Bring a friend. Everyone is welcome. The meeting will be 1pm, Sunday afternoon, March 19, at the Stanford physics building as usual.

NEW CHAPTERS

Oakland, CA. Richard Deal, 6957 Saroni, Oakland, CA. 94611.

Montgomery, AL. Harold Drake, 759 Mulzer Blvd., Maxwell AFB, AL 36113

Address change:

Colorado Springs, CO. Larry Leraneth, 32 Frost Lane, Colorado Springs,  
Colo. 80916

LIBRARY? HELP!

If you've written to SOLUS for software or music from our library, you've probably not received an answer. The two members we were counting on to operate these services haven't had the time to make the library distribution happen yet. We have a new volunteer who has offered to take charge, but he needs some help. What we want to do is collect the software onto one or more tapes and have these reproduced with documentation by mass reproduction. We need someone to help organize it, edit the documentation, get it to the typist and the audio reproduction company, and arrange for the mailings. We have professionals we can hire to do the hard parts, but we need people to act as catalysts. (Catalyst = "a substance which accelerates the production of the products, but which may be recovered practically unchanged at the end of the reaction.")

The software library is like a snowball. To get software we need to show some initial activity that can be added to as the ball gets rolling. We have a public domain assembler, disassembler, and simulator. These tools will help more people create programs for the library. We also have programs written in various dialects of BASIC which are being made compatible with PT's BASIC/5 and their new extended BASIC that hasn't been released yet. We also have a number of musical selections for the Music System. If you'd like to receive the whole library for just a few dollars, we need to work together on it.

If you can devote some time to this project, please write to Me personally: Stan Sokolow, 1690 Woodside Road, #219, Redwood City, CA 94061.

It would be easiest for someone in the S.F. Bay Area, but some of the tasks can be sent out by mail, so volunteers from any area will be helpful. Thanks in advance.

----- SOL TERMINAL DRIVER -----  
 (USING THE SOL PARALLEL PORTS)

BY  
 I. HARTLEY WURKZ  
 JAN. 17, 1978

THIS IS A CUSTOM DRIVER WHICH ALLOWS THE SOL TERMINAL COMPUTER TO ACT AS A TERMINAL USING THE PARALLEL PORT IN A HANDSHAKING MODE.

THE PROGRAM ACCEPTS DATA FROM THE CURRENT INPUT PSEUDO PORT AND PASSES IT TO THE PARALLEL OUTPUT PORT. IT ACCEPTS DATA FROM THE PARALLEL INPUT PORT AND PASSES IT TO THE CURRENT OUTPUT PSEUDO PORT IN THE OTHER DIRECTION. THIS ALLOYS THE SOL TO PASS DATA FROM ANOTHER COMPUTER TO AN OUTPUT DEVICE AT ANY SPEED UP TO THE MAXIMUM DATA TRANSFER RATE OF THE PARALLEL PORT. (APPROXIMATELY 12 KBYTES PER SECOND).

THE PARALLEL INPUT PORT DRIVER IN SOLOS COULD BE USED HOWEVER THE PARALLEL OUTPUT ROUTINE IN SOLOS CANNOT BE USED AS CODED SINCE THE SOL 8080 LOOPS IN THE PARALLEL OUTPUT ROUTINE UNTIL EX DEVICE IS READY BUT IF THE EXTERNAL DEVICE IS ANOTHER COMPUTER LOOPING UNTIL SOL IS READY, THE HANDSHAKING FAILS.

BOTH INPUT AND OUTPUT PORT ROUTINES ARE GIVEN HERE.

THE DRIVER ALSO CHECKS FOR CONSECUTIVE CARRIAGE RETURNS WHICH CAUSE THE CURRENT LINE TO BE ERASED SO THAT COMMANDS WHICH WERE TYPED ON THE LINE CAN NOT BE CHECKED. THIS ROUTINE DOES THIS BY TESTING THE CARR RETURN READ FROM THE PARALLEL PORT TO SEE IF THE PREVIOUS CHARACTER WAS A CARRIAGE RETURN. IF NOT, THE CR IS SENT TO SOUT, BUT IF THE PREVIOUS CHARACTER WAS A CR, IT DOES NOT PRINT THE SECOND ONE. THIS HAS SOME ADVANTAGES OVER THE DRIVER WRITTEN BY MELVIN SCHEHLEIN WHICH APPEARED IN THE NOVEMBER ISSUE OF ACCESS (P. 20,21) IN THAT HIS DRIVER ALSO SKIPS CARRIAGE RETURNS IF THE CURRENT PAGE IS LONGER THAN 64 CHARACTERS (65) AND WRAPS AROUND TO THE NEXT LINE. IF GOING TO ANOTHER PRINTER SUCH AS THE SELECTRIC, WHICH HAS A WIDER LINE, TWO LINES ARE PRINTED ON THE SAME LINE. THIS TECHNIQUE DOES NOT HAVE THAT PROPERTY.

IN ADDITION, THIS DRIVER SUPPORTS THE VDM BACKSPACE FEATURE WHEN USED AS A TERMINAL WITH PROGRAMS WHICH ECHO THE DELETED CHARACTER. WHEN A 'DELETE' CHARACTER IS TRANSMITTED, THE ROUTINE NOTES THIS FACT AND SUBSTITUTES A BACKSPACE FOR THE NEXT CHARACTER RECEIVED FROM THE PARALLEL PORT CAUSING THE CURSOR TO BACKSPACE. THIS IS MUCH MORE PLEASING THAN ECHOING THE CHARACTER.

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; PORT EQUATES
00FA = STAPT: EQU 0FAH ;STATUS PORT
00FD = PDATA: EQU 0FDH ;PAR DATA PORT
0004 = PXDR: EQU 4 ;EXT DATA READY BIT
0002 = PDR: EQU 2 ;PAR DATA READY BIT
; SYSTEM EQUATES
C806 = IPORT: EQU 0C806H ;INPUT PORT BUFFER
C807 = OPORT: EQU 0C807H ;OUTPUT PORT BUFFER
C2CB = ERRIT: EQU 0C2CBH ;INPUT PORT ERROR
C2D2 = ERROT: EQU 0C2D2H ;OUTPUT PORT ERROR
C004 = SYS8: EQU 0C004H ;SYSTEM REENTRY POINT
C310 = PSCAN: EQU 0C310H ;PARAMETER SCAN ROUTINE
C33A = SCONV: EQU 0C33AH ;PARAMETER SCAN ROUTINE

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C01F =      SINP:   EQU 0C01FH      ;INPUT
C019 =      SOUT:   EQU 0C019H     ;OUTPUT
C1C0 =      COMN1:  EQU 0C1C0H     ;
C054 =      VDMOT:  EQU 0C054H     ;VDM DRIVER
C22E =      FDCOU:  EQU 0C22EH     ;CUSTOM COMMAND SEARCH
C80C =      ESCFL:  EQU 0C80CH
; *****
;          CONSTANTS
0080 =      MODE:   EQU 80H         ;MODE
001B =      ESC:    EQU 1BH
000D =      CRRET:  EQU 0DH
000A =      LF:     EQU 0AH
;
;
C900          ORG      0C900H      ;START OF DRIVER
; *****
; THIS ROUTINE IS THE PARALLEL PORT TERMINAL ROUTINE
; DATA INPUT IS FROM FIRST PSEUDO POORT FIELD
; DATA RECEIVE IS FROM SECOND PSEUDO PORT FIELD
; EXIT IS BY ALT MODE
C900 CD10C3  PTERM:   CALL    PSCAN      ;FIND FIRST PARAMETER
C903 3206C8      STA    IPORT      ;INPUT PSEUDO PORT STORE
C906 CD10C3      CALL    PSCAN
C909 3207C8      STA    OPORT
C90C AF          XRA    A           ;SET DELETE FLAG AND CR FLAG TO 0
C90D 32AAC9      STA    CRFLAG
C910 32A9C9      STA    DELFL
C913 CD1FC0      TERM1:  CALL    SINP
C916 CA36C9      JZ     TIN
C919 47          MOV    B,A         ;HERE IF DATA, SAVE IT
C91A FE80        CPI    MODE        ;IS IT A COMMAND MODE?
C91C CAC0C1      JZ     COMN1       ;YES -- GET OUT OF PTERM AND RETURN TO
C91F DA28C9      JC     TOUT        ;NON CURSOR KEY, SEND TO TERM PORT
C922 CD54C0      CALL    VDMOT      ;TO THE VDM IF IT IS A CURSOR CONTROL
C925 C336C9      JMP    TIN
C928 FE7F        TOUT:   CPI    7FH      ;IS IT A DELET CHAR?
C92A C230C9      JNZ    MODEL      ;NO, SO SKIP THE STORE
C92D 32A9C9      STA    DELFL      ;MAKE FLAG NON ZERO
C930 CD97C9      MODEL:  CALL    POUT      ;CAN SENT TO TERM PORT
C933 C230C9      JNZ    MODEL      ;BUSY IF NOT ZERO ON RETURN
C936 CDA0C9      TIN:    CALL    PIN      ;POLL PAR INPUT PORT
C939 CA13C9      JZ     TERM1      ;IF NOTHING, LOOP
;          THE HIGH ORDER BIT IS PURPOSELY NOT MASKED HERE SO THAT
;          THE EXT. DEVICE CAN SEND SCREEN CONTROL CHARACTERS TO THE
;          SOL VDM.
;          IF THIS IS NOT DESIRED, PLACE AN ANI 7FH HERE
C93C FE80        CPI    MODE        ;DO NOT ALLOW A RETURN TO SOLOS HERE
C93E CA13C9      JZ     TERM1      ;ALSO IF 80H
C941 47          MOV    B,A         ;SAVE IT
C942 FE1B        CPI    ESC        ;CONTROL CHAR IF BELOW 1B
C944 D27AC9      JNC    TERM2      ;IF A PRINTABLE CHAR, WILL HAVE A CARRY
C947 FE0D        CPI    CRRET
C949 C25AC9      JNZ    NOCR        ;SKIP COLUMN TEST IF NO CARR RET
C94C 3AAAC9      LDA    CRFLAG      ;TEST TO SEE IF LAST CHAR BIAS CR
C94F B7          ORA    A           ;SET FLAGS
C950 C213C9      JNZ    TERM1      ;DO NOT PRINT IF SO
C953 78          MOV    A,B         ;CARR RTN BACK TO A

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C954 32AAC9          STA      CRFLAG  ;MAKE NON ZERO
C957 C381C9          JMP      TERM3   ;NO, SO PRINT IT
C95A AF              NOCR:  XRA      A           ;MAKE CRFLAG ZERO
C95B 32AAC9          STA      CRFLAG
C95E 78              MOV      A,B
C95F FE0A            CPI      LF           ;TEST FOR LINE FEED
C961 CA7AC9          JZ       TERM2
C964 3A0CC8          LDA      ESCFL   ;ESCAPE FLAG
C967 B7              ORA      A
C968 C27AC9          JNZ      TERM2
C96B C5              PUSH     B
                        ;SAVE B REG
C96C 061B            MVI      B,ESC
C96E CD54C0          CALL     VDMOT   ;DISPLAY IT
C971 0607            MVI      B,7
C973 CD54C0          CALL     VDMOT
C976 C1              POP      B
                        ;RESTORE
C977 C381C9          JMP      TERM3
C97A 3AA9C9          TERM2:  LDA      DELFL   ;TEST FOR A PREVIOUS DELETE CHAR
C97D B7              ORA      A           ;ZERO IF NONE
C97E C287C9          JNZ      NPRNT   ;OTHERWISE DON'T PRINT IT
C981 CD19C0          TERM3:  CALL     SOUT   ;HERE TO PRINT TO CURRENT DEVICE
C984 C313C9          JMP      TERM1   ;AND LOOP AND LOOP AND LOOP
C987 78              NPRNT:  MOV      A,B     ;GET THE CHAR IN A
C988 FE7F            CPI      7FH     ;IS IT A DELETE CHAR?
C98A CA13C9          JZ       TERM1   ;DON' ALLOW IT IF SO
C98D 3E00            MVI      A,0     ;ZERO THE DELETE FLAG HERE
C98F 32A9C9          STA      DELFL
C992 065F            MVI      B,5FH   ;SEND A BACKSPACE INSTEAD
C994 C381C9          JMP      TERM3
                        ; *****
                        ; PARALLEL OUTPUT ROUTINE
                        ; PSEUDO PORT 02
                        ; DATA TO BE OUTPUT IS IN B
C997 DBFA            POUT:   IN       STAPT
C999 E604            ANI      PXDR     ;CHECK EXT DEVICE READY LINE
C99B C0              RNZ
C99C 78              MOV      A,B     ;DATA IN ACC
C99D D3FD            OUT      PDATA
C99F C9              RET
                        ; *****
                        ; PARALLEL INPUT ROUTINE
                        ; PSEUDO PORT 02
                        ; DATA RETURNED IN A
C9A0 DBFA            PIN:    IN       STAPT   ;GET STATUS
C9A2 2F              CMA
C9A3 E602            ANI      PDR      ;DATA?
C9A5 C8              RZ
C9A6 DBFD            IN       PDATA   ;GET DATA
C9A8 C9              RET
C9A9 00              DELFL  DB      0     ;DELETE FLAG STORAGE BYTE
C9AA 00              CRFLAG DB      0     ;CARR RETURN FLAG
C9AB                END

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CLIPPINGSSAN JOSE NEWS, WEDNESDAY, JANUARY 18, 1978

By LARRY KRAMER

Washington Post

LAKE CITY, Mich. – When a struggling young electronics firm develops a device that prolongs and protects the life of appliances and just might also cut energy consumption by 10 or 15 percent, it could be expected that the accomplishment would be hailed.

But that has not been the case for W.N. Phillips Inc., a small precision electronic equipment company in this Michigan hamlet, which manufacturers "Power Master," a device described as a transient voltage suppressor.

When Bill Phillips founded his little firm five years ago, he was trying to develop a product that would help prolong the life of appliances and other equipment that rise electric power.

Because of "surges" or "transients" that Phillips said were frequently found on power lines, some electronic equipment could be affected by the changes in voltage.

The Power Master is the name of the device Phillips designed to counteract those surges and thus lessen the wear and tear on electronic equipment. To the lay person, it is only a little black box that could be anything, since Phillips does not give out the specifications of its Power Master.

...

One example of a successful Application of Power Master is the Boston Herald-American, a large daily newspaper.

The Herald was experiencing problems with its new computerized typesetting system. Like many major newspapers, the Herald has begun the transformation to what is known as "cold-type," or photocomposition, and had begun to set the type on video display terminals, computers which appear similar to television screens with typewriter keyboards attached.

There were frequent problems at the Herald when the computer system

would "crash," causing the screens to go blank, and stories that reporters had written and typed into the computer system would disappear.

Acting on the advice of a computer consultant, Herald production man Jack Parker decided to see if the problem was related to transient in the power lines.

"We put in the Power Master units in all the areas where we had computer problems," Parker said, "because we thought we might be having line problems. We were right. It turned out that our presses were generating the transients and causing us to lose stories."

"Now," Parker said, "since we put in the units, we haven't had any problems. We are installing some additional units near the presses, because we think our presses may be affecting other customers on the same power lines."

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### **Transient protection for minis, micros and terminals**

Transtector Systems ACB100B offer transient protection for mini computers, microprocessors and computer terminals. The ACP100B plugs into any standard (grounded) wall plug to provide immediate protection from hazardous transient surge, high voltage or high line condition. In operation a multiple stage transient voltage suppressor works in 5 nanoseconds to

suppress (clip) overvoltages. After each transient the protector automatically resets to be ready for the next occurrence. The ACB100B will suppress most induced surges from lightning. However, it is not designed for direct strike. Available from stock, the APB100B is priced at \$119 for most mini applications.

**Transtector Systems**, 532 Monterey Pass Rd., Monterey Park, CA 91754. (213) 283-9278.

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6b

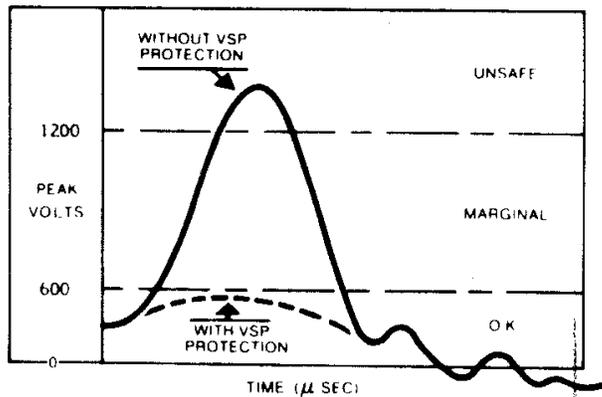
### what are voltage spikes?

Voltage spikes are brief high-voltage surges that can occur in any electrical system. Most common causes in home circuits include:

- Lightning strikes near power lines
- Switching OFF and ON appliances within the building (such as an air conditioner or oil burner furnace).

Voltage spikes of less than 600 volts pose little threat of damage to most electronic equipment. Household spikes as high as 2,500 volts have been recorded, however, and at such extreme voltages there is a high risk of destroying solid-state components that are not protected against spikes.

The GE VSP absorbs excess spike energy and allows only a safe voltage level to enter the protected equipment. This clamping action is diagrammed.



### GESP-752

VOLTAGE SPIKE PROTECTOR  
WITH GE-MOV® VARISTOR

MAXIMUM RATINGS  
**V.A.C.**  
SUPPRESSED VOLTAGE

LINE VOLTAGE  
**125V**  
**500V**

LINE CURRENT  
**@ 15.**  
@15A SURGE FOR 20μSEC.



MADE IN U.S.A.

\$10.00

A simple, compact spike protector, but notice the 20 microsecond response time. The one to the left costs 10 times as much but has a 5 nanosecond response. I have no specifications on the "Power Master."

Can anyone separate fact from fiction on these little black boxes? What do we really need? The GESP-752 may protect my SOL from damage, but it sure doesn't protect it from temporary insanity when my washing machine goes "clunk!"

--Editor

LETTERS

I am enclosing \$10 for next year's dues. I would also like to report on interfacing an Axiom EX-800 printer to the SOL. The Axiom printer does not have a ready signal, instead it has an acknowledge line which does not have the proper timing. I connected jumper J3 in the printer and wired it to the SOL's parallel output as shown:

AXIOM	SOL	FUNCTION
Pin 7	Pin 2	Signal Ground
Pin 23	Pin 19	Data Bit 6 (bit 7 not used)
Pin 21	Pin 20	Data Bit 5
Pin 19	Pin 21	Data Bit 4
Pin 18	Pin 22	Data Bit 3
Pin 17	Pin 23	Data Bit 2
Pin 16	Pin 24	Data Bit 1
Pin 15	Pin 25	Data Bit 0 (lsb)
Pin 10	Pin 17	NOT Strobe/Not Output Load
Pin 14	Pin 16	ACK/NOT XDR

A copy of the software driver is attached. It is written to be compatible with ALS-8 which explains the strange location and deleting the delete (ALS-8 outputs two deletes after each carriage return.

It should be noted that this paper can not be erased. It will take pencil and some inks. Also for fine lined permanent writing I use a test probe with 5 to 10 volts on it realize to the rest of the paper.

An Axiom rep at one of the trade shows said they in Feb. they will be coming out with a mod to print 6 lines per inch instead of the current 5. I must note however that he also said that I could get a part to convert to 8 lines/inch now for \$4-5 when I wrote the factory they quoted \$42!!! other than that I am very happy with the unit.

How often will your newsletters be coming out? Does anyone know anything about the source listing for Basic5 which was promised in PT's ads about a year ago? I assume that by now you know about MSA's 8K BASIS for Sol. It is almost the same as MITS 8k 4.0 except comes with almost no documentation i.e. they don't even give the address for the USR command; however since it is so close to the MITS that the same locations are used (for USR the user's subroutine address goes locations 0049 and 004A hex low byte first.) Also the tape routine's are not in the normal format.

I have patches for both MITS 8k and Extended 3.2 (?) which are compatible with SOLUS in addition the useless CONSOLE has been replaced with SETOUT = which does the obvious and with port 3 called it will call an Axiom routine.

```

DE30          0000 * OUTPUT DRIVER FOR AXIOM EX-800
DE30 C5       0010          PUSH    B
DE31 DB FA    0015 WAIT   IN      STAT
DE33 E6 04    0020          ANI     MASK
DE35 C2 31 DE 0025          JNZ    WAIT
DE38 78       0030          MOV    A,B
DE39 FE 7F    0035          CPI    DEL      MAKE COMPATIBLE WITH ALSO
DE3B CA 4F DE 0040          JZ    NEXT
DE3E 0E 70    0045          MVI    C,70H   DELAY TO SLOW DOWN
DE40 0D       0050 TIME   DCR    C        TO AXIOM'S SPEED
DE41 C2 40 DE 0055          JNZ    TIME

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(CONTINUED)

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DE44 D3 FD      0060      OUT      PRL
DE46 D5         0065      PUSH     D
DE47 E5         0070      PUSH     H
DE48 F5         0075      PUSH     PSW
DE49 CD 19 C0   0080      CALL     SOUT      OUT TO VDM ALSO
DE4C F1         0085      POP      PSW
DE4D E1         0090      POP      H
DE4E D1         0095      POP      D
DE4F C1         0100 NEXT  POP      B
DE50 C9         0105      RET
DE51           0110 PSW   EQU     6
DE51           0115 STAT EQU     0FAH
DE51           0120 MASK EQU     04H
DE51           0125 PRL  EQU     0FDH
DE51           0130 SOUT EQU     0C019H
DE51           0135 DEL  EQU     7FH

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DEL  007E  0035
MASK 0004  0020      (Editor's note: We tried printing directly
NEXT DE4F  0040      from the Axiom's aluminized paper that
PRL  00FD  0060      Bruce listed his letter on, but it
PSW  0006  0075  0085 didn't photograph well for the photo
SOUT C019  0080      offset plates.)
STAT 00FA  0015
TIME DE40  0055
WAIT DE31  0025

```

Bruce Barron

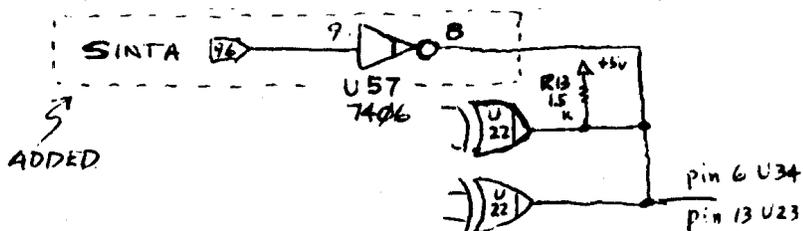
Greetings. Lee Felsenstein has been kind enough to provide the enclosed information on the necessary changes for modifying a revision D Sol-PC board for use with vectorred interrupts which includes tapping an otherwise unassociated gate! A somewhat more textual explanation will appear in ACCESS. I would have sent this information last week but instead became involved in preparing an exhibit for a show in which we're currently participating.

I agree that all change notices should specify the revision level for which the information applies. Our internally circulated engineering change notices do reflect this data. I'll see what I can do with our documentation group to effect this.

Ralph IL Palsson  
Customer Applications Manager  
Processor Technology

(*Editor: The letter above was Ralph's reply to my request for a retrofix to Rev. D-SOL's which will let them work properly with interrupts. Ralph is an unusual person in that he does what he says he'll do and in a timely manner. The accompanying blueprint he sent shows the partial schematic below and the instructions:*

"On bottom (solder) side of SOL PC Board, add jumper wires (24 AWG or smaller, insulated) from Pin 96 of J10 to Pin 9 of U57, and from Pin 8 of U57 to Pin 6 of U34."



Thanks, Ralph and Lee.)

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Did you know that the Helios II (unlike North Star, Micropolis, ICOM, and Digital Systems floppy units) does not have a physical write protect? Obviously, Processor Technology did not want to spend the extra money to make this valuable feature available. Therefore, the physical write protect slot, which is standard on all diskettes I've seen, is absolutely useless. Also Space-Byte's 16k static memories are flaky on a Helios II. I also can't get my TDL Z80 CPU to work with my Helios II, though my IMSAI 8080 works fine with it.

This is in response to Joe Maguire's Oct.25,1977 request for an 8080 driver for the Digital Group impact printer that he's hooked up to his SOL-20. Yes, I have an 8080 driver for that printer. If he needs it, tell him to write me and I'll send him a copy. Me and two other friends are working with the printer being used by the Digital Group. One of us actually bought the Digital Group printer. The interface electronics (which is just a parallel port) is actually quite simple. However, the power supply was really done crummy and dangerously. It would not be that difficult to burn-out your printer because of some software or minor hardware glitch in your system. The sloppy Digital Group power supply design for their printer really surprised my two hardware friends since they felt the design on all of Digital Group's other products was pretty solid. For example, if you turned-off the power to your computer and your printer at the same time, the fuse on the Digital Group interface board would pop! Also not all of the secondary AC is completely isolated from the digital electronics. There are other things wrong too, but would take too long to explain here. My two hardware friends are re-designing the Digital Group power supply and interface electronics to the printer, which is manufactured by Practical Automation. Redesigning the power supply is a little bit tricky because the power supply requirements of the Practical Automation printer are really strange.

Ken Young  
3311 W. 3rd Street,Apt.1-319  
Los Angeles, California 90020

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I use my SOL 20 for hobby and would like to get in touch with anyone who uses it with ham gear. I am a ham and my call sign is VE3CJC.

I would also be interested in any commercial programs that have been developed as well.

I am also trying to interface the Digital Group printer to the SOL with no luck yet. Maybe someone has already committed hari kari and I can take over from him on this problem ha ha.

E. B. Robinson  
Trenton, Ontario

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Here's something you might put in Bits & Pieces. I'd like to know how to disable the moving cursor under the short range scanner in TREK-80-that really bugs me, that thing going back and forth. Also I'm anxious to hear how that Vandenburg 16K static board works in a SOL.

Larry Leranath  
Colo. Spgs., Colo.

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I have the 32K version of the Extensys board - no operating problems, but one big gripe: the 8K blocks of memory are not re-addressable. I suppose this is no problem if you have a full 64K board, but otherwise you must physically move the chips! Since my PT software starts at 0H and my PolyBASIC at 2000H and my ALS-8 needs memory at D000H, this was very annoying. I partially solved my problem with a 4K board which I address at D000H when using ALS-8 (along with bank #8 of the Extensys) and I re-address it at 6000H when running long BASIC programs in PolyBASIC. Of course this still wastes 8K starting at 0H. When PT's 8K BASIC is released, I won't have the problem.

By the way, PT's 5K BASIC is pretty fast when run on a SOL. I did the timing comparisons as published in Kilobaud #6, and 5K BASIC came out near the top when running benchmark program #7. Only the Zapple 8K and Altair 8K running on Altair machines were any faster.

I am happy to report that the number of SOL systems in Regina has doubled since my last report - there are now two of us! I expect it to double again within the next year as there are several people interested in it after I showed off my system at the second meeting of the R.O.M.S. (Regina Organization fo Microcomputer Systems, of which I am co-founder). Good fortune for all SOL users in '78!

Bob Stek  
Regina, Saskatchewan

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I have a couple of comments concerning the Oct./Nov. 1977 SOLUS NEWS. I may have an answer to Dr. Sakurai's problem with a D+7A in a SOL. I had a similar problem. IN port would input a FF sometimes when the DAZZLER was in the bus, while if the DAZZLER wasn't in the bus the D+7A worked correctly. The problem was that I had a TI 8080 which came with the SOL, when I changed it to an Intel 8080A everything worked right. I tried two other 8080 chips and a different brank of 8080A which did not work. A Radio Shack 8080A chip did work also. I don't know why the difference in the 8080 and 8080A, but I tried everything in a different SOL and the same thing happened.

I was very interested in the article on Selectrics. I have an A-J 841 also interfaced with a 3P+S. The driver which I wrote for it for both input and output uses 100 hex bytes plus 100 hex bytes for the look-up table. If anyone is interested in this program, I would be glad to send them a copy.

Jim Dixon  
RR3 Box 151A  
Alexandria, IN 46001

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I was quite happy to hear about the formation of SOLUS in Byte Magazine. I have recently assembled a SOL-20 and am eager to start programming it. It sure would be nice to swap software with other SOL users. May I suggest that there be a column in your newsletter

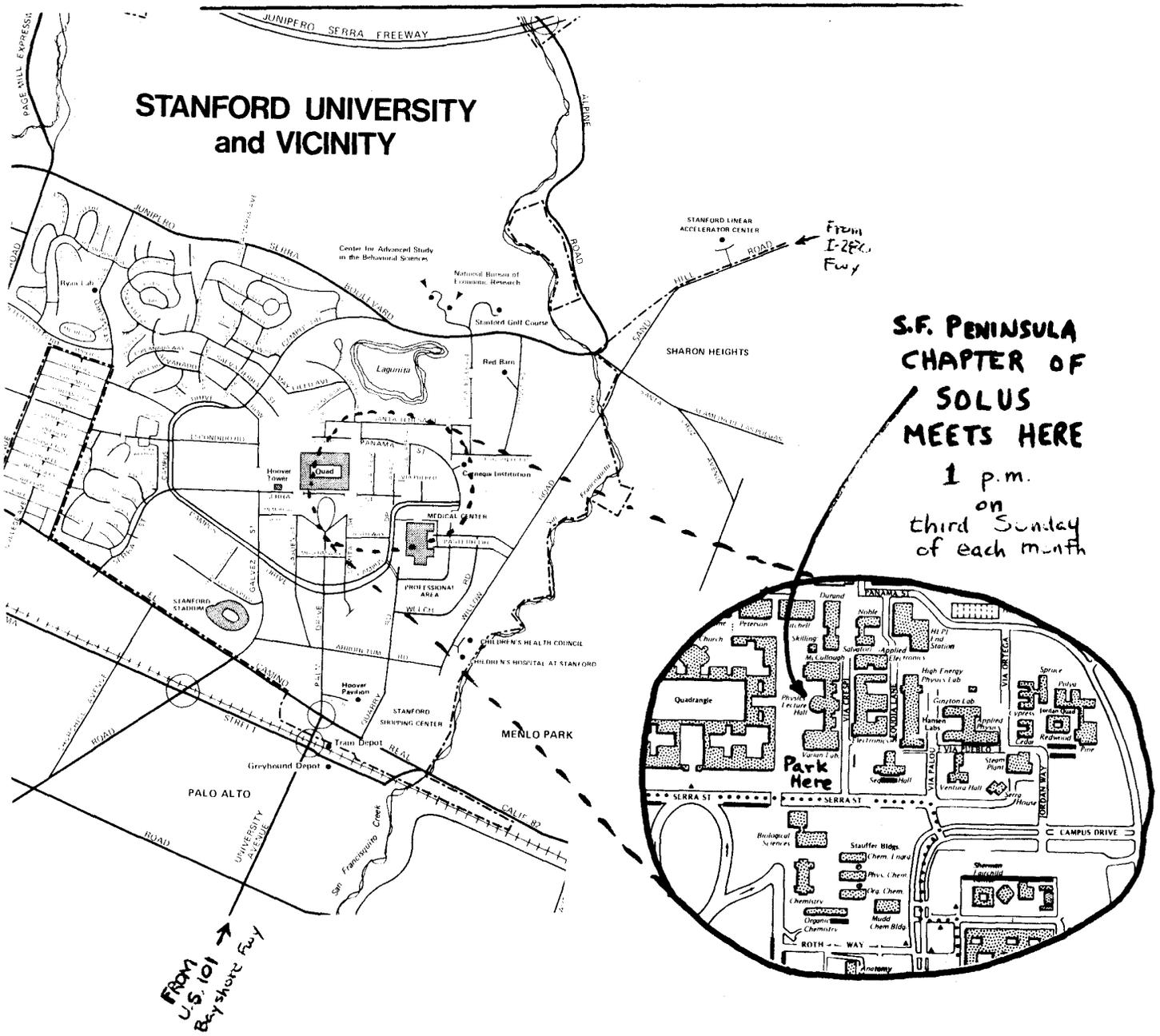
describing requirements for decent system software and an action plan for the design and implementation of this software. I don't think we can depend on Processor Tech to dream up what we really need.

Some examples of useful software we could all use are:

1. A full screen, multi-file editor with such features as: 'BLOCK' MOVE, DELETE, COPY, BLOCK MOVE  $\leftarrow \Rightarrow$  MERGE FILES; TAB SETTING. ALS-8 could be used as a base.
2. A high level compiler like PL/1, PASCAL (or if you must BASIC)
3. A linkage editor and loader

I would be quite willing to work with members to produce any of the above or to get involved with more detailed specifications.

Peter Needham  
Richmond, B.C.



LOST SOUL

The following member(s) have an incorrect address in our files and we have been unable to reach them. If you know anyone on the list please have him write to us so he can continue (or begin) receiving the mailings.

Doug S. Miller, Menlo Park, CA

CONSUMER PROTECTION

If you are ordering a 16K Static RAM from "Seattle Computer Products, Inc." using the Group Discount offered in Vol.1, No 1, please let us know so we can audit the amount of rebate they send you. We recommend you seriously consider purchasing it assembled rather than as a kit because of the 10-day return privilege and the better warranty. Never pay in advance. This board uses the same memory chip as the Artec 32K board, which we've seen used in SOL with DMA devices, so it should be fine - but one never knows for sure.

SOLUS NEWS

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F I R S T C L A S S