

WISCONSIN COMPUTER SOCIETY

NEWSLETTER

Volume #2, Issue #3 March 1977 Don Stevens, Editor

MEETING NOTICE

Our meeting will be held at 10:30 a.m., March 5, 1977, at the MILWAUKEE SCHOOL OF ENGINEERING (Room S-341)

PROGRAM AGENDA

The meeting will begin with a tour of the Computation Center at 10:30 a.m. After the tour of the Computation Center, several rooms will be available to us for our regular business meeting.

A map is provided on the last page of this Newsletter to help you in getting to our Meeting place.

GROUP PURCHASES

The February Group Purchase Order has not been received but I am hopeful that members will be able to pick up their purchases at the meeting.

If any member is interested in the Group Purchase for March, please bring your cash or checkbook.

MEMBERSHIP DUES COLLECTION

Membership for the period thru June 1977 will be \$2.00

Many thanks to Don and Bob Senzig, and Steve Ujvarosy for the fine demonstrations of their Digital Group Computer Systems at the February meeting.

Note: The NEWSLETTER is in need of info for the upcoming issues.

PLEASE CONTRIBUTE INFO!!!!

Don Stevens
Don Stevens, Editor
Wisconsin Computer Society Newsletter
P.O. Box 159
Sheboygan Falls, Wisc. 53085

Semiconductor Specialists is pleased to announce the opening of its MPU Shop in Milwaukee.

The MPU Shop will offer microprocessors, RAM's pROMS, TTL, and CMOS IC's from Fairchild, Motorola, N.E.C., RCA, Raytheon, Signetics, and Texas Instruments for the "scratch-builders", as well as single card evaluation modules from the same manufacturers.

The complete line of Southwest Technical Products is available, as well as paper tape readers from Oliver Audio Engineering, Power Supplies from Dynamic Measurements, and hybrid crystal oscillators from Motorola.

We also stock the complete lines of AP Products and Vector Electronics covering breadboarding equipment, ribbon cable and connectors, IC test clips, edge connectors, universal plug-in circuit boards, and wire wrapping tools.

In addition, Semiconductor Specialists offers pROM programming for 1¢ per Word (i.e. 256x8 would be \$2.56) in a 24 hour turnaround time.

Several more lines will be added in the near future.

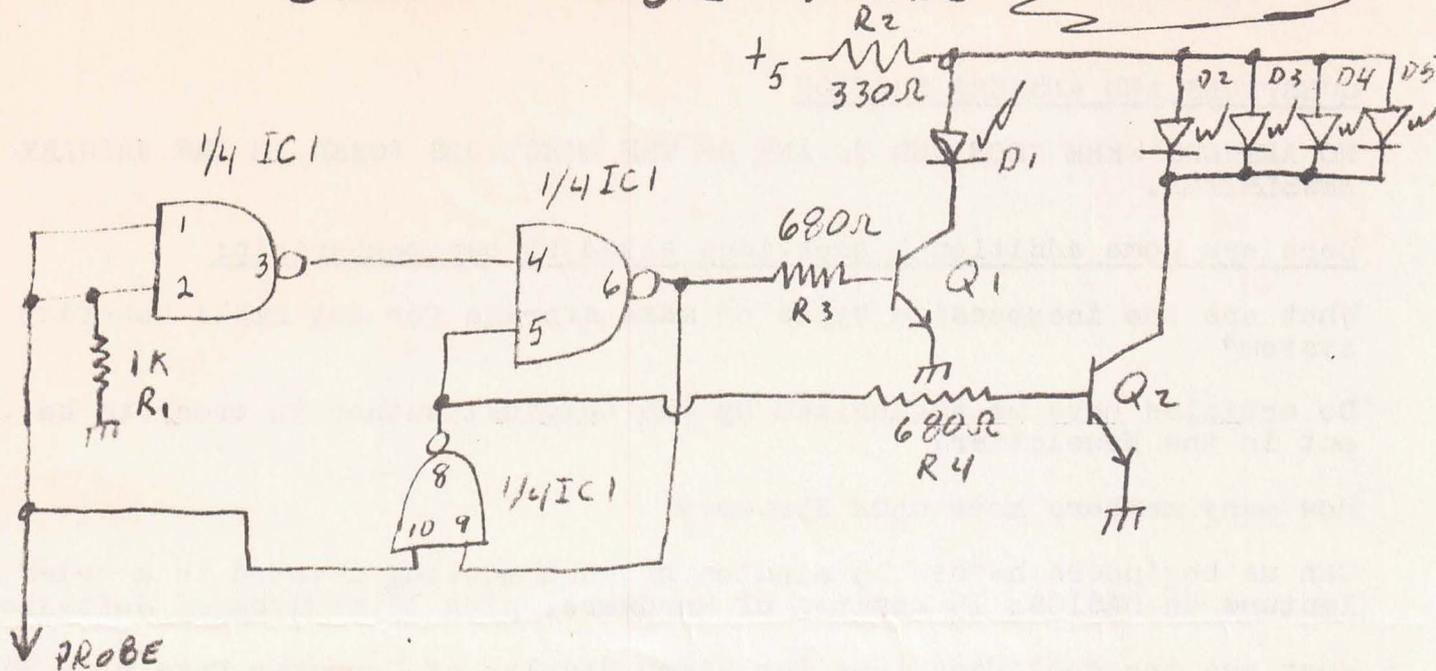
Store hours are from 9:00 - 12:00 and 1:00 - 4:00

Semiconductor Specialists
10855 W. Potter Road
Wauwatosa, Wisc. 53226

(414) 257-1330

SIMPLE LOGIC PROBE

WB9PUB

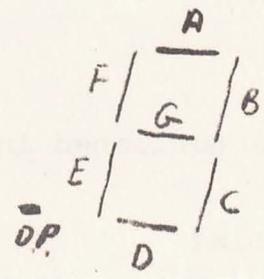


IC 1 - 7400
 Q1 & Q2 - 2N3904

R1 - R4 1/4 or 1/2 Watt Resistors
 D1 - D5 Part of 7 segment Display MAN 7
 See Text

Connect Pin 14 & R2 to Plus 5 Volts.

Connect all Grounds & Pin 7 to -5 Volts using Test Lead Wire from Circuit Board to Test Clips



D1 is the E Segment of a Common Anode Display
 D2 to D5 is the A, B, G, & F Segments of the same Display

When probe is connected to a Logic "0", Segments A, B, G, & F will light up, giving a "0" readout.

When probe is connected to a Logic "1", Segment E will light up, giving a "1" readout.

When probe is connected to a Pulsing circuit, Segments A, B, G, F, & E will light up, giving a "P" readout.

Mount parts on small circuit board, and circuit board in clear plastic tube

QUESTIONS AND ANSWERS SECTION

NO ANSWERS WERE RECEIVED TO ANY OF THE QUESTIONS POSED IN THE JANUARY NEWSLETTER.

Here are some additional questions asked by our membership:

What are the inexpensive types of mass storage for any small hobbyist system?

Do articles have to be authorized by the original author in order to be put in the Newsletter?

How many members have 6502 Systems?

Can us beginners have: 15 minutes of each meeting devoted to a brief lecture on BASICS; 15 minutes of Hardware, plus 15 minutes of Software?

What are the considerations for Video display of Computer Data on a TV set? Which circuits work?

What applications are home computers used for?

What are club members' results with various types of computers, peripherals, vendors, etc.?

Club member would like to contact other Z-80 owners to exchange software and experiences.

Has anyone else any experience with SCALBAL?

Does anyone have any memory or peripherals for sale.

Where is the Software (Z-80 & 8080)?

Club member wants to see more application & control programs published in the Newsletter.

Are Cross Assemblers between the 6800 - 6502 - 8080 available?

Club member would like to see larger club computer accessible via the telephone - Interactive Basic or Interactive Fortran capability.

How about a club timesharing network plan?

Note: The Editor would appreciate your comments and answers to the above so that this TOP SECRET INFORMATION can be passed on to interested members.

ASCII KEYBOARD HEXADECIMAL LOADER - Jim Brick

This program allows one to key Hex characters directly into memory on an ALTAIR or IMSAI machine (actually, any 8080). Each word (Hex digit pair) is echoed in LEDs (front panel LEDs on IMSAI or your own design on the ALTAIR). Backspace capability is provided. This program was written to work with a cheap SWTP keyboard hooked directly to a parallel I/P port. The address portion of the first instruction is changed to point to where loading is to begin.

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0004 ; ASCII KEYBOARD HEXADECIMAL LOADER
0005 ; WITH BACKSPACE AND ECHO (CANCEL KEY = BACKSPACE)
0006 ; FOR LEDS WITH INVERTERS, CHANGE THE 2 'CMA'
0007 ; INSTRUCTIONS TO NOP'S.
0008 ;
0009 ; BY JIM BRICK
0010 ;
00 FE 0011 INPUT EQU 0FEH ;INPUT PORT
00 FF 0012 OUTPUT EQU 0FFH ;OUTPUT PORT
00 30 0013 CANCEL EQU 030H ;KEYBOARD CANCEL CODE (SHIFTED)
0014 ;
0015 ;
0400 21 00 00 0016 HEXLDR: LXI H,0000 ;LOAD ADDRESS (CHANGE TO SUIT)
0403 31 00 10 0017 BEGIN: LXI SP,1000H ;INITIALIZE STACK POINTER
0406 CD 1E 04 0018 INLP: CALL READ ;GO READ KEYBOARD
0409 07 0019 RLC ;SWAP LEFT
040A 07 0020 RLC ; 4 BITS
040B 07 0021 RLC ; WITH RIGHT 4
040C E6 F0 0022 ANI 0F0H ;KEEP ONLY LEFT 4 BITS
040E 77 0023 MOV M,A ;SAVE IN MEMORY
040F CD 1E 04 0024 CALL READ ;GO READ KEYBOARD
0412 1F 0025 RAR ;RESTORE RIGHT 4 BITS
0413 E6 0F 0026 ANI 0FH ;KEEP ONLY RIGHT 4 BITS
0415 B6 0027 ORA M ;COMPLETE 8 BIT WORD
0416 77 0028 MOV M,A ; INTO MEMORY
0417 2F 0029 CMA ;COMPLEMENT AC FOR IMSAI LEDS
0418 D3 FF 0030 OUT OUTPUT ;ECHO WORD IN LEDS
041A 23 0031 INX H ;NEXT MEMORY LOCATION
041B C3 06 04 0032 JMP INLP ;GO GET NEXT WORD
041E DB FE 0033 READ: IN INPUT ;READ KEYBOARD
0420 07 0034 RLC ;'KP' BIT INTO CARRY
0421 D2 1E 04 0035 JNC READ ;LOOP IF 'KP' LOW (KEY STILL DO:VN)
0424 DB FE 0036 BITS: IN INPUT ;'KP' HIGH, GET NEXT CHARACTER
0426 07 0037 RLC ;'KP' INTO CARRY
0427 DA 24 04 0038 JC BITS ;LOOP IF 'KP' HI (KEY NOT PRESSLD)
042A 47 0039 MOV B,A ;SAVE AC
042B E6 80 0040 ANI 080H ;NUMERIC?
042D 78 0041 MOV A,B ;RESTORE AC
042E CA 35 04 0042 JZ TCAN ;OK IF NUMERIC
0431 D6 02 0043 SUI 02 ;-1 (SHIFTED)
0433 C6 14 0044 ADI 014H ;MAP TO A-F
0435 FL 30 0045 TCAN: CPI CANCEL ;PRESSED KEY = CANCEL?
0437 C0 0046 RNZ ;NO IF .NZ. ,RETURN
0438 2B 0047 DCX H ;DECREMENT MEMORY POINTER
0439 7E 0048 MOV A,M ;MEMORY INTO AC
043A 2F 0049 CMA ;COMPLEMENT AC FOR IMSAI LEDS
043B D3 FF 0050 OUT OUTPUT ;ECHO IN LEDS
043D C3 03 04 0051 JMP BEGIN ;GET NEXT CHARACTER
0052 END ;

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OBJECT CODE (HEX)

0400	2100	0031	0010	CD1E	0407	0707	E6F0	77CD
0410	1L04	1FE6	0FB6	772F	D3FF	23C3	0604	DBFE
0420	07D2	1L04	DBFE	07DA	2404	47E6	8078	CA35
0430	04D6	02C6	14FE	30C0	2B7E	2FD3	FFC3	0304

WANTED TO BUY - Tektronic 453 Dual Trace Scope, or equivalent
Contact Will Piette - Phone No. 784-1800

NOTICE

The Wisconsin Computer Society Radio Amateur NET will meet on 3.977 MHz at 8:00 a.m. on the last Saturday of each month. NYLES PRIEST W9KUW will be NET Control

Michael Zeidler wishes to advise us of his company, Computer Related Services, located at 2854 North Cramer Street, Milwaukee, Wisc. 53211

Persons to contact regarding Software & Hardware

Jeff Kucan 414-545-7817
1638 S. 57th Street
West Allis, Wisc. 53214 8080 Software & Hardware

Angelo L. Orlandoni 414-753-2963
Route 1, Box 133
Mt. Calvary, Wisc. 53057 6502 Software & Hardware

Nyles Priest 414-921-4669
2002 Deming Place
Fond du Lac, Wisc. 54935 Ham Radio & Microcomputer

Leroy Danner 414-694-6396
7817 - 36th Avenue
Kenosha, Wisc. 53140 6800 Software & Hardware

Allen Kossow 414-425-5773
11400 W. 7 Mile Road
Franksville, Wisc. 53126 IM6100, LSI-11, PDP-8, PDP-11
Software & Hardware

Todd L. Voros
3721 W. Juniper Court
Milwaukee, Wisc. 53209 General Software & Consulting