

**\* For ALL Computerists \***

**The** WOODFIELD AREA COMPUTERIST ORGANIZATION

**WAN**®

**FREE!**  
**Vol. 1 No. 7**

**Post JULY '82**

**Inside...**

**ATARI Secrets**

**APPLE Program  
Editor**

**New News**

**TRS-80 Programs**

**6060 RAM  
Addresses**

**...and**

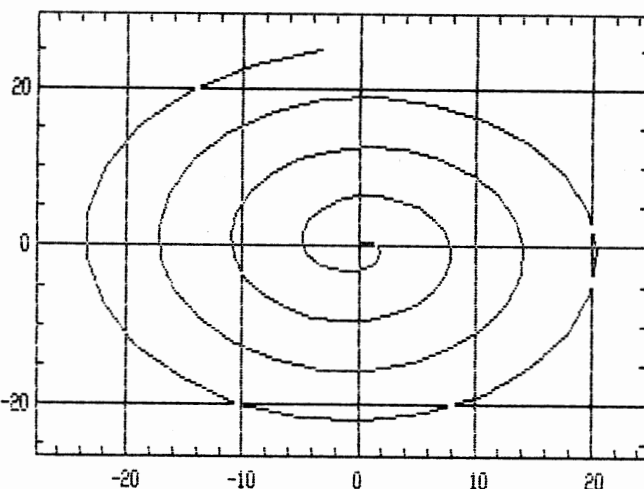
**BBS BUS**

**HARD COPY**

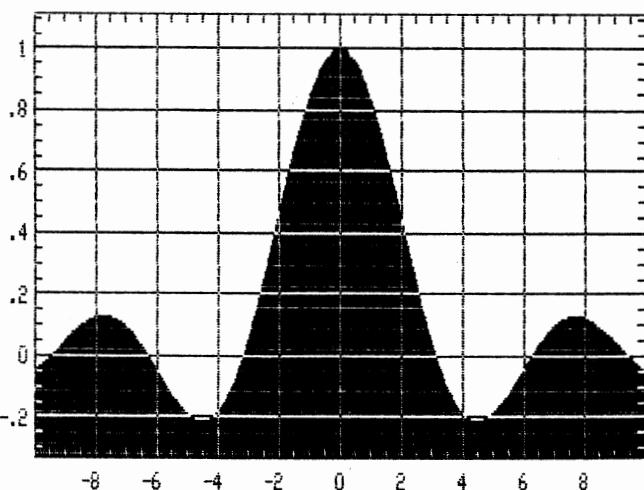
**CLUB CORNER**

**...and**

**Deals for Members!!**



**MARK SCHAUB  
REVIEWS  
AUTO PLOT FOR  
TRS-80 & MX-80  
(See Page 8)**



**HARD  
COPY**

**STEVE GIBSON**

Almost unbeknownst to the world-at-large, there is a tremendous Grass Roots movement building in America...no, it isn't Anti-Nuclear Power, or Anti-War, or Pro-ERA, or even Anti-Pro-Moral-Abortion-Morality-Liberalism...no this movement is the result of the tremendous growth in the Home Computer industry.

If you are a member of **WACO** - you are a member of this movement (HEY MOM - I'm an ACTIVIST!). By becoming part of a "club" or "organization" you join your voice (...and wallet) with that of others, and all together we speak much louder (...and hopefully clearer).

**WACO** is by no means alone in this movement though...As you look through this month's issue you'll notice "bylines" from other parts of the country...This doesn't mean that **WACO** has members from across the country...No, these are excerpts from other Club Newsletters that I receive in exchange for our newsletter...It doesn't take alot of thought to realize that this is the tip of an "Information Iceberg"...these are the programs and tips too small to gain entry into the "regular" magazines...this is the timely info that doesn't have to wait 6 months due to the "big guys" editorial backlog...and sometimes, these are the authors fed up with the attitudes of the aforementioned mag's Editors.

But we've got to do our part...scribble down that teeny weensy 2-liner that you wrote for the ZX-80 that saves phone numbers for quick access...or that big program that massages files so that an APPLE can talk to an IBM 360...take a look at the articles that Mark Schaub has in this month's issue and get some ideas...

Tons of Thanks to Mark Schaub - author and hacker - You're a shining example for all to follow!!

P.S. Does anyone out there know where I can get a hold of a legit Press Card?

### ATTENTION AUTHORS!!

...PLEASE TRY TO USE ONE OF THE FOLLOWING METHODS WHEN SUBMITTING ARTICLES, ETC.:

- 1) FLOPPY DISK - TRS-80 MODEL I SINGLE DENSITY (ANY TEXT FILE WILL DO!)
- 2) WACO HOTLINE MESSAGE - UPLOAD YOUR NON-TRS80 TEXT FILE TO THE WACO HOTLINE OR LEAVE IT IN A MESSAGE (OR MESSAGES)
- 3) PRINT IT OUT YOURSELF - 3 1/2" WIDE BY AS LONG AS YOU LIKE (USE COMPRESSED PRINT IF YOU HAVE IT)
- 4) TYPE IT OUT NEATLY - DOUBLE-SPACED ON WHITE PAPER
- 5) NEATLY WRITE IT OUT ON NOTEBOOK PAPER (AND FOLD IT NEATLY!)
- 6) SCRIBBLE IT OUT WITH CRAYONS ON THE BACK OF COCKTAIL NAPKINS FROM THE PUMP ROOM OR LA FRANCAISE (NO "GOLF EXCUSES" OR "YOU KNOW YOU'RE MARRIED WHEN..." NAPKINS PLEASE!!)

...IF YOU'LL TAKE THE TIME TO FOLLOW ANY OF THE FIRST 5 RULES ABOVE YOU'LL SAVE ME TIME AND FRUSTRATION...

THANKS - EDITOR

**WACO 2**

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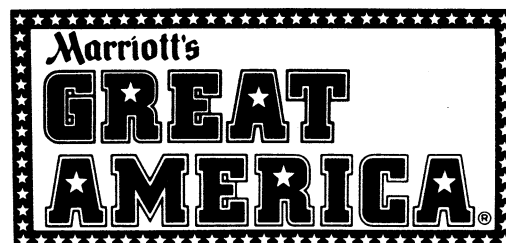
WACO

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60194-0781

Include \$11 for each ticket and 20 cents for postage.



**SECRET ATARI GRAPHICS MODES**

By Ron Kramer

(Reprinted from the GRASS - Grand Rapids Atari System Supporters)

There are many ways to redefine Atari character sets. The easiest way is with a Character Generator. But this isn't about another Character redefining program. In this article I hope to explain how to get into those "Secret" Graphics Modes. After you learn how to access these Modes you can pull out your favorite Character Generator and go to work creating multi-color Characters.

Multi-colored Characters will come in handy for your BASIC and Machine Language games. Before we go on, run this program!

```

1 GR.0
5 START=PEEK(741)+256*PEEK(742)
10 ? "START OF DIS.LIST=";START
15 FOR ADDR=START TO START+50
20 ? ADDR,PEEK(ADDR),PEEK(ADDR)+
256*PEEK(ADDR+1)
25 NEXT ADDR
    
```

After it's entered in, type RUN. After about eighteen lines pass on the Monitor, hit CTRL-1 to pause the program. Now write down that number on the far left, (the one that's 18 lines down) and save it for later.

If you have a 48K machine your number should be 39984.

What is this number you say? Well, that number is the beginning location of your Computer's display list (well the beginning of the now visible Display List). Now that you have your number, clear your Computer's memory.

Now type in - POKE(YOUR NUMBER),4 and POW!! A black line rips across your screen...and your ATARI is damaged for good!!

Not really...what you now have is a GR.0 screen with one line of "Secret" graphics on it - otherwise known as Antic Mode 4. Now type something and hit RETURN a few times. The text will scroll up, and when it hits the black Bar it will turn into multi-colored text.

Yes, there's more! Now add 1 to the number you wrote down, and type in - POKE(NEW NUMBER),4

Now you should see another line of black. Do this until the whole screen is Antic Mode 4. (HINT) - This is much easier using a FOR-NEXT loop. Such as...

```

1 FOR T=39974 TO 39995
2 POKE T,4
3 POKE 752,1:REM CURSOR OFF
4 NEXT T
6 FOR WA=1 TO 50:NEXT WA
7 A=5:B=5
8 ? CHR$(125):REM CLR SCREEN
9 IF STICK(0)=15 THEN 110
10 IF STICK(0)=14 THEN B=B-1
11 IF STICK(0)=13 THEN B=B+1
12 IF STICK(0)=11 THEN A=A-1
13 IF STICK(0)=7 THEN A=A+1
14 IF STRIG(0)=0 THEN SETCOLOR
4,STICK(0),8
15 ? CHR$(125):POS.A,B:?"* "
16 GOTO110
    
```

Plug in a Joystick and run the program above. Iti-colored "\*" around looks almost like a Space Ship. Just think how nice it would look if you used your Character Generator on it!

Multi-colored Characters, the possibilities are endless!

Ohter Antic Mode numbers - 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15.

START POKING!  
HAVE FUN!

(Program for 48K only!--For less memory insert your number in place of 39974 and insert your number+11 in place of 39995)

**THE WACO POST IS DISTRIBUTED AT:**

- COMPUTERS AND STUFF - MUNDELEIN (362-3440)
- THE VIDEO KING - SCHAUMBURG (884-6111)
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THANK-YOU FOR YOUR HELP!! IF YOU WOULD LIKE TO JOIN THIS GROWING LIST AND DISTRIBUTE THE WACO POST \* FREE \* CALL: 843-7852 (RECORDER).

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**INDUSTRY  
INSIGHTS**

=====

NEW NEWS and Info received by the Editors

=====

From THE WSYI REPORT...

Clive Sinclair has dropped another bomb on the home computer market. his brand new "Spectrum" \$200 (16k) microcomputer has a full calculator-type K/B, fully "memory mapped" Z80A CPU, a real-time clock...even an audio output and a full color display!...All of the 256X192 pixels are directly addressable for full color capability. Size of the Spectrum is a small 9 by 5 by 1 inch! A \$90 ZX microdrive (3" floppy) and RS-232 will be available...this year!

TEXAS INSTRUMENTS and Commodore are going after the discount chain store business! K-Mart will "test" sell the TI-99/4A and Commodore VIC-20 in 500 stores. Target, J C Penney and Wards also plan to carry them.

Japan's CASIO Computer Company plans to introduce a home computer in Tokyo within 60 days that will retail for \$63! Meanwhile, price cutting is bringing the price of the Apple II Computer down to nearly its \$1,000 Dealer cost. Apple is having difficulty maintaining its sales of Apple II - primarily because of the mail order sales ban. It's rumored that this decision will cost them \$20 million in volume!

Look for Wayne Green to possibly publish a Heath/Zenith Computer Magazine in much the same fashion as 80-Micro. Radio Shack cut prices on their 4k Color Computer and on their PC-1 hand-held computer.

From the Mailbox:

**GRAPHPLOT VERSION 1.0**

GRAPHPLOT is a four quadrant (or any combination thereof), X-Y plotting program for the Integral Data Systems 460, 560 and PRISM printers. It produces high quality, high resolution plots with a minimum of set-up.

System requirements are CPM Ver. 2.2, MICROSOFT BASIC Ver. 5.2 and a minimum of 48K RAM to plot 100 points.

Currently available for the HEATH/ZENITH in 5 1/4" SD Hard-Sector Disk. Inquire about other formats. Available for \$40 from Pressure Applications, 2478 Briarwood dr., San Jose, CA. 95125.

The M89 box is designed to expand the I/O power of the M89/Z89 computer. The M89 Box has room for 9 M89 peripheral boards and the BUS is wider (25 pins plus 25 pins) to allow more controlling signals. Power supply is 5V/5A, 12V/1.5A, -12V/1.5A with cooling fan and AC line filter. Contact Microflash Co. at 4916 B Carol, Skokie, IL 60077 or call (312) 677-4928 for more info.

The MARK Program Generator is a program that generates a program to analyze figures and prints a columnar report with title, column titles, and widths of your choosing. All you do is answer the computer's questions and then the Generator "disappears" and is replaced by "your" program, which you then save to disk. The resulting program is menu-driven and allows you to INPUT, ADD, DELETE, UPDATE/CORRECT, PRINT, LIST, SAVE TO DISK, LOAD FROM DISK, or SEARCH DISK for records. It will also permit you to make high-speed multiple sorts in ascending or descending order.

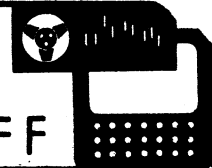
Contact Clayton Mark III (he's a WACO member) - 1780 Maple St., STE 26, PO Box 8316, Northfield, IL 60093 or call (312) 441-5790.

For a free copy of Sapana Micro Software's Software/Hardware Directory and Guide for IBM Personal Computer, or for more info about listing your product/service send your name and address to SAPANA MICRO SOFTWARE, PO BOX 748, QUINCY, IL 62301 - and be sure to tell them you saw it here!

WACO members can take advantage of a special price offer from DASITRONICS on an UV EPROM ERASER. DASITRONIC's ERASER will erase up to 15 UV EPROMs at once and is priced

(for WACO members) at \$32.50 - and that includes FREE Shipping and Handling! DASITRONICS guarantees your satisfaction or a full refund. Send Check, Money Order or COD to - DASITRONICS CORPORATION, pob 51, Rexford, NY 12149. (Non-members contact manufacturer for prices)

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# KAYCOMP II

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### SPECIFICATIONS:

**CPU:** Z-80

**RAM:** 64K BYTES

**DISC STORAGE:** TWO 5-1/4" FLOPPY-DISK  
DRIVES WITH 100K+ BYTES EACH.

**KEYBOARD:** FULL TYPEWRITER KEYBOARD PLUS  
13-KEY NUMERIC PAD

**VIDEO DISPLAY:** 9" DISPLAY, 80 COLUMNS X  
24 ROWS.

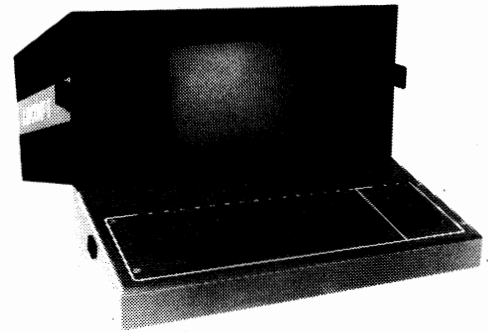
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- \* VIDEO OUTPUT
- \* PRINTER INTERFACE

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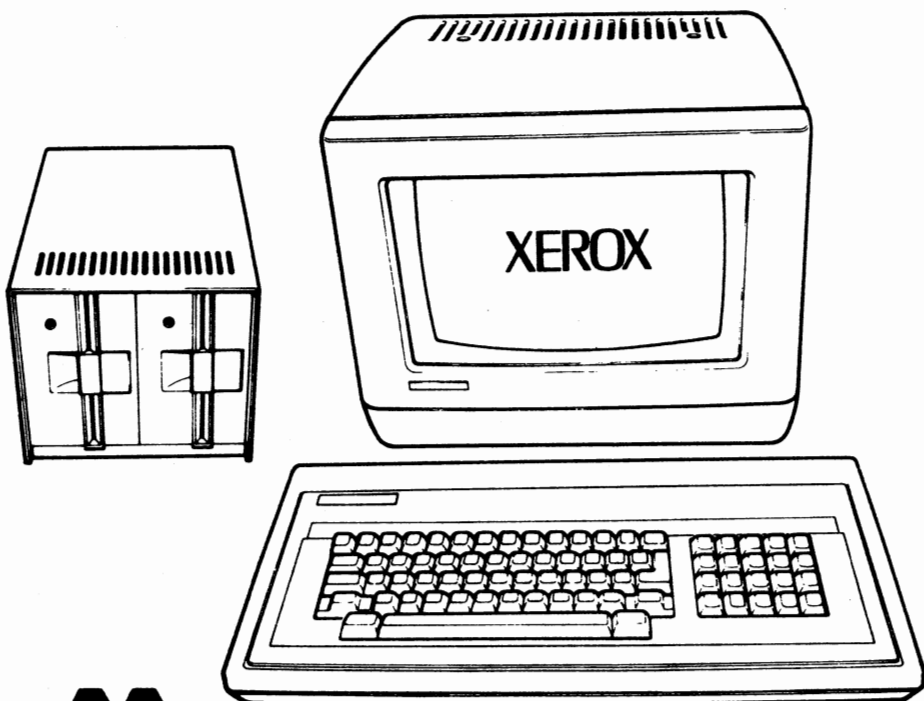
# KAYCOMP II

COME IN AND SEE THE NEW SANYO COMPUTER!

SPECIAL =>> EPSON MX-80  
W/ GRAFTRAX \$440

# The Xerox 820 Information Processor

REGISTERED TRADE MARK



**midwest microcomputers, inc.**

708 S. Main Street/Lombard, Illinois 60148/(312) 495-9889

## Components

**DISPLAY/PROCESSOR** — The 24 line/80 character display quality exceeds industry standards for desktop computers. Easy viewing is enhanced by an adjustable brightness and high-quality flicker-free screen. The display unit also contains the processor for the system, which is softloaded and uses a Z80<sup>®</sup> based micro-processor with 64K RAM memory and 4K ROM. Four ports are standard (dual serial ports and dual parallel ports) which allow you to connect the printer, communications and other devices.

**KEYBOARD** — The Xerox 820 uses a standard 96 character keyboard. Additional function keys are conveniently located to the right of the keyboard for cursor control (providing easy access to any point on the screen) and editing functions. A 10-key pad is included for convenience and speed in typing statistical documents.

**DISC DRIVES** — You can utilize two 5 1/4" single-sided disc drives that let you store approximately 40 pages. For increased capacity, you may configure the system with optional 8" single-sided discs that increase storage up to 130 pages of typed material. The disc drives are connected via a cable to the processor, allowing for easy placement on a desk top.

**PRINTER (OPTIONAL)** — The 820 features a 40 cps daisywheel printer that produces high quality copy with bi-directional printing in either 10 or 12 pitch. This is ideal for quick turnaround of documents.

**COMPATIBILITY** — Upward compatibility with 860 Information Processing Systems is offered on text created on the 820 with 8" disc drives through a separate software package offered on the 860. In addition, the 820 is an investment that will fit into your long-range plans, since *Ethernet* compatibility is available through the 872/873 Communication Server using Teletype communications mode on the 820.

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## SIG News

### ATARI

No longer "just" a SIG, the ATARI group has gone that extra step and become something extra. SIG co-ordinator Bob Schuricht has put alot of effort into "his" SIG and was rewarded for that effort by being elected President of the newly-titled, Suburban Chicago ATarians or SCAT, for short. Along with a new name, SCAT now has a permanent meeting place - The Barn in Schaumburg. Meetings will be held on the 1st Saturday of each month (for info on times and "how to get there" contact Bob at 882-1440 during the day or 894-4334 at night). Among the activities going on at those meetings will be the BASIC language lessons that have already begun.

THE REST OF 1982...

AUGUST	SOFTWARE REVIEW ASSIGNMENTS
SEPTEMBER	OFFICER NOMINATIONS & DIATRIBES
OCTOBER	ELECTIONS & SOFTWARE REVIEW COLLECTION (see below)
NOVEMBER	INSTALLATION OF NEW OFFICERS
DECEMBER	NEW MEMBER DRIVE WINNER HONORED

...IN ADDITION, DON'T FORGET THE MEMBERSHIP DRIVE THAT KICKS OFF WITH THE SEPTEMBER MEETING...SEE MARK FOR MEMBERSHIP APPLICATIONS (AND BE SURE TO PUT YOUR NAME ON THE BACK)...THE MEMBER SIGNING UP THE MOST NEW MEMBERS WINS AN AUTOGRAPHED (BY BEN BOVA) FIRST ISSUE OF OMNI, A FIRST ISSUE OF BYTE, AND A COMPLETE COLLECTION OF THE WACO POST (AUTOGRAPHED IF YOU SO DESIRE!!)...DRIVE ENDS NOVEMBER 30TH...JUST ADDED!! -> At our October meeting we'll have a guest speaker from Illinois Bell. He (or she) will be expound upon the subject "Technology of the '80's" (no, Art, not TRS80's!). Please plan to join us on October 9th - whether or not you're a member.

## CLUB CORNER

(Club Secretaries: Send your news, names, and numbers to -  
WACO  
CLUB CORNER  
PO BOX 94781  
Schaumburg, IL 60194-0781)

### ATARI

CHICAGO ATARI USER GROUP.  
1 NORTH WACKER, ROOM 214. CALL LARRY HITZ AT 727-4206  
(WEEKDAYS) AND 789-0878 (WEEKENDS).

### CACHE

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SPECIAL INTEREST GROUPS FOR: PET, TRS-80, INTERACT,  
PASCAL, LSI-11, 68XX, BALLY, FORTH, NORTHSTAR, APPLE,  
CPM/COMM -- MEET 3RD SUNDAY EACH MONTH AT DE PAUL UNIVERSITY  
(CHICAGO), AT 11:00 A.M. CALL 849-1132.

### CHICATRUG

CHICAGO TRS-80 USERS GROUP  
MEET 3RD WEDNESDAY EACH MONTH AT 203 N. WABASH, RM 110, AT  
6:00 P.M. CALL 782-9750.

### COUNTY OF LAKE APPLE CLUB

MEET 3RD THURSDAY OF EACH MONTH AT MUNDELIEN LIBRARY,  
MUNDELIEN, 470 NORTH LAKE ST. AT 6:30 P.M.  
CALL STEVE AT 367-5015.

### DAUG

DUPAGE APPLE USER GROUP  
MEET 2ND TUESDAY OF EACH MONTH AT LINCOLN CENTER IN DOWNERS  
GROVE.  
MODEM 789-0499.

### LCTUG

LAKE COUNTY TRS80 USERS GROUP  
MODEM 740-9128.

### NIAUG

NORTHERN ILLINOIS APPLE USERS GROUP  
MEET 1ST SATURDAY OF EACH MONTH AT HARPER COLLEGE, BUILDING  
E, ROOM 106.  
CALL DAVE AT 295-6078 OR 295-6926 (MODEM).

### NICCC

NORTHERN ILLINOIS COLOR COMPUTER CLUB  
MEETS 4TH TUESDAY OF EACH MONTH AT THE DES PLAINES LIBRARY,  
841 GRACELAND AVE. AT 7:30 PM. CONTACT JOHN BOWMAN 9346  
LANDING SQUARE, DES PLAINES, IL. 60016.

### NICOL

NORTHERN ILLINOIS COMPUTER OWNERS LEAGUE (A TRS-80 CLUB)  
NEXT MEETING AT OUR REDEEMERS CHURCH, 1600 W. SCHAUMBURG  
RD., SCHAUMBURG.  
FOR INFO CALL SHELDON KRAMER AT 884-1059

### SSTUG

SOUTH SUBURBAN TRS-80 USER'S GROUP  
MEET 3RD SATURDAY OF EACH MONTH AT FREEDOM HALL IN LANSING,  
IL. CALL BILL AT 841-5453.

### WACO

Woodfield Area Computerist Organization  
MEETS 2ND SATURDAY OF EACH MONTH AT THE QUINLAN & TYSON BLDG  
AT THE CORNER OF ROSELLE AND SCHAUMBURG RDS IN SCHAUMBURG.  
All computer users WELCOME!  
Call 843-7852 (Recorder) 24 hrs/day for more info.

### WACO'S NEW & USED COMPUTER CORRAL

\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*

Take a look at these beaut's!

FOR SALE: TRS80 MOD I Level II 16K, late version. Ass't  
software. Buffered cable. \$600 Complete - Call M. GATTUSO =>  
934-4458.

FOR SALE: TRS80 MOD I 48K, Line Printer, 4 Drives, Acoustic  
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## SOFTWARE REVIEW

TRS-80 Software Review by Mark Schaub

AUTO PLOT - Automatic Curve Plotter  
by Menlo Systems Palo Alto, Ca.

REQ: TRS-80 w/48K

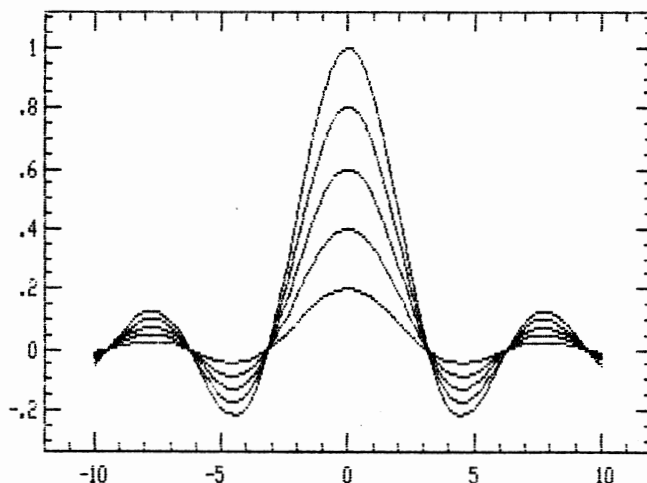
1 Disk Drive

Epson MX-80 w/Graftrax-80

If you have a use for graphs or plotting curves, AUTO PLOT is for you. I'm sure you've seen the 3-D multi-curve plots on the cover of a few of the popular computer magazines. AUTO PLOT doesn't quite produce these, but it sure comes close.

AUTO PLOT uses Disk Basic with a little help from an in-memory machine language program. It takes a lot of the hard work out of plotting curves, by doing the scaling, computations, and plotting for you. AUTO PLOT will produce 6 different kinds of graphs from your data or function. It allows you to choose LOG scaling for either axis, allows plotting more than 1 curve on the same graph, and allows you to choose between function, integral, derivative, and integrated modes. For those of you whose trig is a little rusty, these modes let you see the same formula or data in different ways.

AUTO PLOT comes on a 35 track disk with TRSDOS 2.3. It works on NEWDOS80/V2, and I suspect it will work with other DOSs. You must have the Graftrax-80 option installed in your printer or AUTO PLOT cannot work. By looking at the graphs in this newsletter, you'll see what can be done with AUTO PLOT. AUTO PLOT costs \$79.50 and is available from Menlo Systems, or EBG & Assoc. in Chicago.



AUTO PLOT - TRS-80 AND EPSON MX-80

FUNCTION

5000 Y=SIN(X)/X\*(M/5)

(ALSO ON THE FRONT COVER)



# BYTE BY BYTE

By Mark Schaub

Printing numbers in a MLP (machine language program) can be tough because of the many different kinds of numbers used in a computer. Some numbers really are numbers, some just represent numbers (ASCII), and some numbers control parts of your machine. The 3 MLPs shown below are used to move numbers around in memory and keep their meaning correct.

The first MLP will input an ASCII hexadecimal number (4 digits) from the keyboard and convert it into a 2 byte hex number in register HL. Only the numbers 0 to 9 and the letters A to F will be accepted. Pressing the <ENTER> key will end the routine early.

```

01010 HEXIN CALL 01C9H ;CLEAR THE SCREEN
01020 H1 CALL 0049H ;READ THE KBD
01035 CALL 0033H ;SHOW IT
01030 CP 13 ;IS IT A CR?
01040 RET Z ; WE'RE DONE
01050 CP '0'
01060 JR C,H1 ;IF LESS THAN 0
01070 CP '9'
01080 JR C,H2 ;IF > '9'
01090 CP 3AH
01100 JR C,H1 ;IGNORE IF < 'A'
01110 CP '6'
01120 JR NC,H1 ;IF >= '6'
01130 SUB 7 ;CHANGE A-F to number
01140 H2 AND 15
01150 ADD HL,HL ; THIS
01160 ADD HL,HL ; SHIFTS
01170 ADD HL,HL ; LEFT
01180 ADD HL,HL
01190 LD D,0 ;ZERO OUT D
01200 LD E,A
01210 ADD HL,DE
01220 JR H1 ;GET NEXT DIGIT
    
```

The next subroutine will print the number contained in the HL register as a DECIMAL number on the screen.

```

02000 DECPRT LD IX,TABLE ;SET UP POINTER
02020 D1 XOR A ;ZERO OUT A
02030 LD B,(IX+1)
02040 LD C,(IX) ;DECIMAL DIGIT
02050 OR A
02060 D2 SBC HL,BC
02070 JR C,D3 ;DIGIT DONE
02080 INC A
02090 JR D2 ;CONTINUE
02100 D3 ADD HL,BC ;RESTORE
02110 ADD A,30H ;MAKE ASCII
02120 CALL 33H ;DISPLAY IT
02130 LD A,C
02140 CP 1 ;ARE WE DONE??
02150 RET Z ; OK!!
02160 INC IX ;GET NEXT
02170 INC IX ; DECIMAL
02180 JR D1 ;NEXT DIGIT
02190 TABLE DEFW 10000
02200 DEFW 1000
02210 DEFW 100
02220 DEFW 10
02230 DEFW 1
    
```

CONT



Now that you've seen these subroutines, you may be asking what can be done with them. Just watch.

```

00010 ORG 7000H
00020 START CALL HEXIN ;GET A HEX NUMBER
00024 LD A,20H ;ASCII SPACE
00026 CALL 0033H ; SHOW IT
00030 CALL DECPRT ;PRINT DECIMAL
00040 CALL 0049H ;READ KBD
00050 CP ' ' ;SPACE BAR
00060 JR Z,START ;AGAIN
00070 JP 402DH ;BACK TO DOS
03000 END START
    
```

Match the line numbers to see where each routine goes. This routine will convert a 4 digit hex number into decimal. If you want to convert another number, just hit the space bar. If you hit any other key, you will return to DOS. For those of you who have a non-disk machine, change line 00070 to read: JP 1A19H

Next month: Using these routines and some new ones, I'll show how you can have a constant display of how much memory is available for your BASIC program, using an interrupt driven monitor. As always, if you have any questions or comments, see me at the next WACO meeting or write C/O this newsletter.

-Mark-

## COLOR COMPUTER RAM ADDRESSES

Provided by Jim Gresham in the CSRA Computer Club Newsletter:

```

000-004 BASIC STATUS POINTERS
019-01A BASIC PROGRAM START ADDR.
01B-01C VARIABLE DATA START ADDR.
01D-01E END OF VARIABLES
01F-020 END OF ARRAYS
023-024 BASIC MEMORY LIMIT
027-028 PHYSICAL MEMORY LIMIT
04F-054 FLOATING POINT BUFFER #1
05C-061 FLOATING POINT BUFFER #2
068-069 TOP OF USER STACK
06F OUTPUT CHAR. DEVICE #
070 STATUS POINTER
071 RESET FLAG (&H55)
072-073 RESTART VECTOR
07C BLOCK TYPE (CASSETTE)
07D BLOCK LENGTH
07E-07F BUFFER ADDRESS
088-089 SYSTEM CURSOR LOC ADDRESS
094 CURSOR BLINK TIME FUSE
095-096 SERIAL I/O BAUD RATE
097-098 PRINTER LINE DELAY
099 COMMA FIELD WIDTH
09A LAST COMMA FIELD
09B PRINTER LINE WIDTH
09C PRINTER LINE POSITION
09D-09E USER CALL (LAST)
09F-0A0 NEXT CHAR. FETCH ADDRESS
151-159 KEYBOARD SCAN BUFFER
15A-15D JOYSTICK POSITION VALUES
    
```





**APPLE TIPS**  
 =\*==\*==\*==\*==\*

**PROGRAM EDITOR FOR CHEAP PEOPLE**

Reprinted from the *LAUGHS* (Louisville APPLE User's Group) Newsletter:

Here's a nice little utility for all of you who are too cheap to buy PLE and too honest to steal it. It's an excellent example of how virtue (or cheapness) is rewarded.

Key this program in (or download it from the WACO Hotline - ed.). A\$= 0300 and L\$= 00CF. Now load it and then load a BASIC program that you want to edit.

If you hit CTRL-A, the screen clears, and the text width is set to 33 columns. This means that you can edit RPINT strings without running into the imbedded spaces problem--when you come to the end of a line, you don't have to move the cursor to the beginning of the next line, you can tell that the function is in effect whenever you CATALOG - the catalog will be double-spaced.

Thanks to Bill Wolfe for this routine, He's tied it into a Keyboard filter, so that you can enter lower case in BASIC if you have a lower case chip installed. Hit XXXXXX for upper case, XXXXXX for lower case.

Okay, so it doesn't do a "FIND" like PLE, and you still have to move the cursor up to the line that you want to edit using the escape codes (esc-I, esc-J, esc-M, esc-K) that you've been using with the built-in APPLE Screen Editor (see pages 52-53 of the APPLESOFT TUTORIAL). But what the heck; it's free.

\*300.03CF

```

0300- A9 13 85 38 A9 03 85 39
0308- A9 95 85 36 A9 03 85 37
0310- 4C EA 03 8E AE 03 48 C9
0318- E0 90 04 29 1F 91 28 AD
0320- B1 03 E0 00 F0 19 CA AD
0328- B0 03 C9 88 F0 11 C9 E0
0330- 90 02 29 DF DD 00 02 D0
0338- 1E AD B0 03 9D 00 02 38
0340- 6E B1 03 68 AE AE 03 20
0348- B3 03 2C B2 03 30 22 C9
0350- 9B F0 13 8D B0 03 60 68
0358- AE AE 03 20 B3 03 48 A9
0360- 00 8D B0 03 68 60 48 A9
0368- 88 8D B2 03 8D B0 03 68
0370- 60 8C AF 03 C9 E0 90 02
0378- 29 DF A0 03 D9 90 03 F0
0380- 06 88 10 F8 4E B2 03 A0
0388- 88 8C B0 03 AC AF 03 60
0390- C9 CA CB CD 9B 8C AF 03
0398- AC B1 03 10 08 AC B0 03
03A0- C0 E0 90 01 9B AC AF 03
03A8- 4E B1 03 4C F0 FD 08 04
03B0- 8D FF 00 20 1B FD 08 C9
03B8- 81 F0 02 28 60 48 9B 48
03C0- 20 58 FC A9 21 85 21 68
03C8- A8 68 A9 8D 4C BB 03 39
  
```

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Editor/Publisher  
 Steve Gibson

Technical Editor  
 Mark Schaub

TRS-80 Editor  
 Terry Deatherage

President  
 Art Kahn

Vice President/Librarian  
 Jay Jaeckel

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EDITOR  
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## LAST MEETING

Waco Minutes - 10 July 1982

### Old Business:

The meeting was brought to order at 1:40 by Pres. Art Kahn. Kirk Benson, Treasurer, and Mark Schaub, Secretary, were not present. The club bank balance is \$409. Jay Jaeckal filled in for Mark. The minutes from the previous meeting were read and approved. There was a report that JAMS (Joliet Area Message System) was down, but George Matyazek reported it is still operating. George also gave his report on diskettes. Dyan seems to be the top runner. George is going double-density in September. He recommends keeping the drives cool with a fan. The CACHE meeting is the 3rd Sunday at DePaul University Student Center.

### New Business

The main meeting was about software and hardware review. Steve Gibson is putting together a book of the reviews done by members of the club. See the newsletter for more information about the review booklet. Great America tickets are available for groups of 100 people for \$11 each, which includes parking and a lunch. The WACO picnic was cancelled due to lack of interest. The next WACO meeting is August 14th at 1:30 PM at the Quinlan & Tyson Building, 7 W. Schaumburg Rd. (This is the 1st stoplight south of Library Ln.) The topic of the next meeting is software review assignments, and also starts the membership drive. George Matyazek reported that on August 1st, Comuserve will be \$5/hr. and the Source will be \$7.75/hr. George is thinking of starting a club for the purpose of downloading programs from other boards. They will meet at George's house. The ATARI Sig will meet July 17th at 11 AM at the AVCO building in Hoffman Estates. The number for the IBM bulletin board is 674-7636.

Respectfully Submitted  
Mark Schaub, Secretary  
(recorded by Jay Jaeckal)

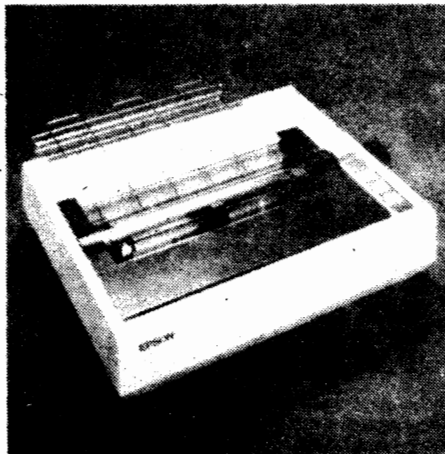
# IF YOU CAN RECOGNIZE VALUE YOU CAN SAVE \$500<sup>00</sup>

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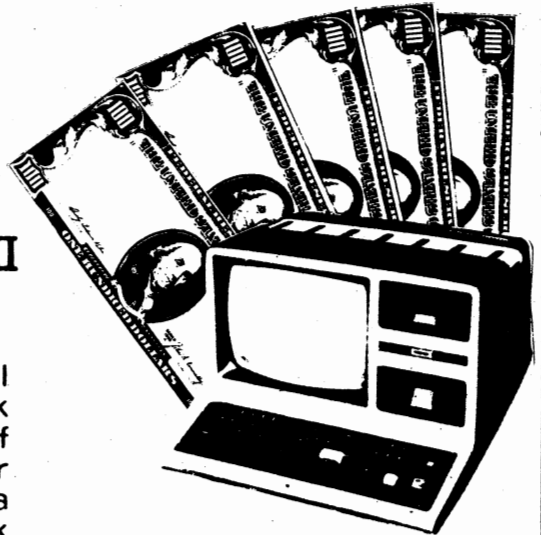
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### HOURS:

MON. THRU WED. 9 A.M.-6 P.M.; THURS. &  
FRI. 9 A.M.-8 P.M.; SAT. 9 A.M.-4 P.M.

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