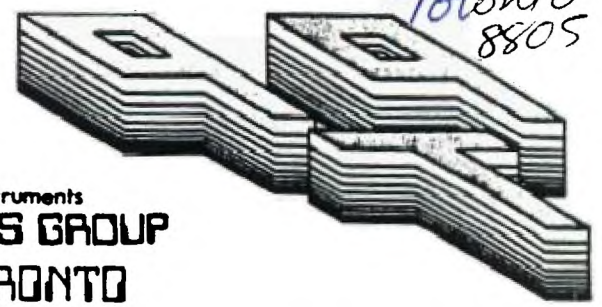


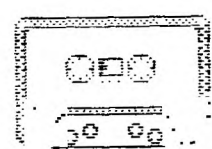
062  
Toronto  
8805



Texas Instruments  
**USERS GROUP**  
**TORONTO**

**FOR THE TI-99/4A COMPUTER**  
and compatibles

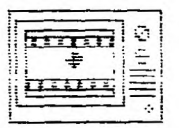
# CASSETTE INTERFACE



D-SUB FEMALE CONNECTOR  
RADIO SHACK 278-1538

1	CS1 MOTOR ON LINE TIP 1/16 SUB-MINI PLUG
2	CS1 MOTOR ON LINE SLEEVE
3	RECORD SLEEVE 1/8 MINI PLUG (2 REQS)
4	NOT CONNECTED
5	RECORD TIP 1/8 MINI PLUG (2 REQS)
6	CS2 MOTOR ON LINE 1/16 SUB-MINI PLUG TIP
7	CS2 MOTOR ON LINE SLEEVE
8	PLAY TIP 1/8 MINI PLUG (1 REQD)
9	PLAY SLEEVE 1/8 MINI PLUG (1 REQD)

# VIDEO MONITOR CORD



STANDARD 5 PIN DIN PLUG  
TO TWO PHONO PLUGS

PIN 1	POWER G+ TO MODULATOR BOX NOT USED FOR MONITOR.
PIN 2	VIDEO GROUND.
PIN 3	AUDIO OUTPUT.
PIN 4	VIDEO OUTPUT.
PIN 5	AUDIO (SYSTEM) GROUND.



Edmonton  
P.O. Box 11983  
Edmonton, AL T5J 3L1  
Edmonton, Alberta, Canada T5J 3L1  
888888

Edmonton 99'er Users Soc  
P. O. Box 11983  
Edmonton, AL T5J 3L1



# 9T9 USERS GROUP

## MEMBERSHIP FEES

FULL MEMBERSHIP      \$30.00 / year  
NEWSLETTER SUBSCRIPTION    \$20.00 / year

### EXECUTIVE COMMITTEE

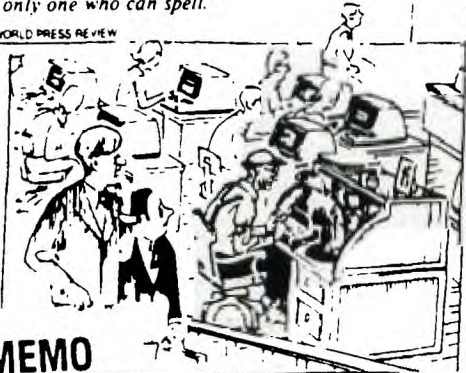
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### NEWSLETTER EDITOR

**Steve Mickelson** (657-1494)  
 Associate Ed. **Blair MacLeod** (658-1416)

*"But we can't phase him out.  
 He's the only one who can spell."*

SUPPLIES BY WORLD PRESS REVIEW



### MEMO

**TO** 11-99/4A OWNERS

**DATE** MAY 1988      **TIME** 9:30 AM  
 TO 1:00 PM

**NAME / FROM** Steve Mickelson

**OF** 9T9 Users Group

**TELEPHONE NO.** RE: MEETING DATES

<input type="checkbox"/> Please Call <input type="checkbox"/> Telephoned <input type="checkbox"/> Returned Your Call <input type="checkbox"/> Will Call Again <input type="checkbox"/> Came To See You <input checked="" type="checkbox"/> Wants To See You	<b>For Your:</b> <input type="checkbox"/> Comments <input type="checkbox"/> DO NOT Return <input type="checkbox"/> Approval <input type="checkbox"/> For Your Handling <input type="checkbox"/> Information <input type="checkbox"/> Per Your Request <input type="checkbox"/> Your File <input type="checkbox"/> Please Return <input type="checkbox"/> Lets Discuss <input checked="" type="checkbox"/> URGENT
--	---

REMARKS

**SEE DATES BELOW!  
 LAST SAT. OF THE MONTH**

MAY							JUNE							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	5	6	7	8	9	10	11	4	5	6	7	8	9	10
8	9	10	11	12	13	14	12	13	14	15	16	17	18	11	12	13	14	15	16	17
15	16	17	18	19	20	21	19	20	21	22	23	24	25	18	19	20	21	22	23	24
22	23	24	25	26	27	28	26	27	28	29	30	25	26	27	28	29	30			
29	30	31																		

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1	6	7	8	9	10	11	12	4	5	6	7	8	9	10
2	3	4	5	6	7	8	13	14	15	16	17	18	19	11	12	13	14	15	16	17
9	10	11	12	13	14	15	20	21	22	23	24	25	26	18	19	20	21	22	23	24
16	17	18	19	20	21	22	27	28	29	30	25	26	27	28	29	30				
23	24	25	26	27	28	29														
30	31																			

All memberships are household memberships. An newsletter subscription is only for those who do not wish to attend meetings, but wish to receive our newsletter and have access to our library. You are welcome to visit one of our general meetings before joining the group. If you wish more information contact either our president, in writing, at the club address on the front cover or phone him.

The meetings are usually held on the last Saturday of each month, unless stated otherwise. Consult this issue of Newsletter 9T9 for the date and time of the next meeting. Meetings are held in the main auditorium of the Gregory Public Library, in the city of York, from 9:30 AM to 1:00 PM. The library is located at 120 Trowell Ave., 5 blocks south of Eglinton Ave., 1/2 Block East of Keele St. Our BBS, The TI Tower BBS # (416)921-2731, 300/1200BPS, 24 hrs.

### COMMERCIAL ADVERTISING

Any business wishing to reach our membership may advertise in our newsletter. The rates are as follows. (width by height):

FULL PAGE (7" x 10")      \$50.00  
 HALF PAGE (7" x 5")      \$25.00  
 QUARTER PAGE (7" x 2 1/2")    \$15.00

Please have your ads camera ready and paid-for in advance. For more information contact the editor.

Don't forget, that any member wishing to place ads, may do so free of charge as long as they are not involved in a commercial enterprise.

### NEWSLETTER ARTICLES

Members are encouraged to contribute to the newsletter in the form of articles, mini programs, helpful tips, hardware modifications, jokes, cartoons and questions. Any article may be submitted in any form by mail or modem. We welcome the reprinting of any article appearing in this newsletter providing credit is given to the author and 9T9. If more information is required, call the editor. The names 9T9, Nine-T-Nine, Newsletter 9T9, 9T9 Users Group, and Nine-T-Nine Users Group are Copyright,(c), by the 9T9 Users Group of Toronto, Canada, all rights reserved.

### DISCLAIMER

Opinions expressed in this newsletter are those of the writers and are not necessarily those of the 9T9 USERS' GROUP. 9T9 cannot assume liability for errors or omissions in articles, programs or advertisements. Any hardware modification or project is presented for informational purposes, and the author, newsletter editor, staff and/or 9T9 Users Group cannot be held liable for any damage to the user's equipment. All such projects are done at your own risk!





## TId Bits #19

-By Steve Mickelson, President 9T9 Users Group, Toronto  
Comuserve 76545,1255; Delphi SMICKELSON; GENie S.MICKELSON

### May Swap Meet

The May meeting, as previously announced, will be a swap meet. I have received no word, as to whether Bob Boone will visit us next month. One member was not too clear as to what I said re: Bob's visit. Basically, due to the fact we haven't got ahold of him, (he has been travelling the Fest/Fair circuit), we don't know if Bob will come to May or June's meeting, or later in the year.

### Toronto TI Fest?

As mentioned at the April meeting, we are considering the possibility of a TI Fest here in Toronto, co-sponsored by our club. As the offer has not been made formally, I don't think it prudent to have a motion and/or form a planning committee to consider the logistics of such an event. I think we should wait and see if the offer, in fact, is genuine, and approved by the other parties involved. Such an event would do much to strengthen community ties, and bring many orphans together. Enough said, for now.

### Re Our Newsletter:

Last month's issue was particularly delightful, to me. For the first time in the last couple of years as Newsletter Editor, I can proudly say April's Newsletter 9T9 was almost 99% 9T9, content-wise. My thanks to all those who contributed to that issue! This issue has a few artist utility articles, including a review by Blair. I have uploaded the Print Wizard review to GENie, (no fee for uploads), and will do so with any other software review/tip submitted to our newsletter.

There is still a standing offer of a free copy of any software from our library, providing you submit a review for that software, for our newsletter. This offer has the provision of only one piece of software, per member, at a time. To get a second software, you must first submit a review/evaluation for the first software. If you have already purchased some software and decide to review it, then that review will entitle you to a free copy of another software of your choice.

Steve's Hard Copy is good reading with lots of tidbits and information. If you haven't checked-out our reading library, you're missing a lot.

### Z-80 Update:

Got a request for more information re: Jim Ballentine's Z80 Simulator, from Greg McGill, President of the Tri-Valley 99ers UG, via GENie mail. The best person to answer any questions, would be Jim. However, suffice to say, the simulator will run on the TI, as well as the Geneve. As I understand it, the higher clock speed of the 9918 video IC on the Adam, results in a slower execution of the ROM dump on the 4A. The 0-WAIT Geneve, on the other hand, allows the software, Antarctic Adventure, to run closer to the way it would on the Adam. Gary Bowser has made, ala Proto-board, a devise to enable ROM dumps of Adam cartridges. It seems that those with 16K, two pages of memory, will run o.k. in a regular Geneve. Cartridges that use more, (32K), will require a Geneve with expanded memory.

At April's meeting, I brought my Geneve, and we had the penguin strutting his stuff in the Z80 Simulator. As to whether this software will be released as freeware, commercial software or whatever, has still to be determined. Date of release, also, is to be announced. Stay tuned.

### Contest:

Early warning that we will have a software contest in the fall. Unlike the last one, we won't be limited to one specific program. If the program is reasonably good, it will become a winner! The software can be anything from a utility, to a game, or whatever. Prizes, to be announced. Deadline will be this fall, exact month, also, to be announced. You should have plenty of time to finish that software that's been on the back burner, or has only been an idea. Stay tuned.

## Summer Break:

Like last year, July and August will be the "summer break" period for the newsletter. However, instead of having a July/August joint issue, as well as November/December issues; May/June and August/September will become joint issues, and November and December will come out as separate issues. This will give your editor a chance to, also, have a break, this summer.

## Demo's

It was brought to my attention, that the last few times I brought a Geneve to the meeting, all that was shown was GIF Art or Myarc or a game. Many missed Wes' demo of Multiplan, last fall. I guess, sometimes we take for granted the area where the Geneve really shines, in word fuller featured word processing and in speed of execution. I will try to arrange another demo of the latest Myword, and perhaps we can ask Wes to show Multiplan again. I have included some bench marks printed in April's Issue of Micropendium, though an recent interview with Jack Riley in Computer Shopper, seemed to indicate the results for the 9640, were based on a 20 MHz unit, (current production is 12 MHz), which Myarc is planning to release in 18 months or so. I'm not sure which article is right, but in all fairness, felt obligated to point it out.

### **WAITING FOR THE HARD DISK CONTROLLER**

Like many of you, we're waiting for delivery of our Myarc Hard and Floppy Disk Controller. Seems that the company has received a lot of orders and is having trouble keeping up. Can't say that I'm surprised. Being compatible with both the TI and the Geneve, it should have wide appeal. Walt Howe's article this month isn't about M-DOS this month, but about how to structure hard-disk directories. It is equally relevant to TI and Geneve owners who are contemplating or have purchased a hard disk system.

Speaking of the Geneve, here are two charts comparing the Geneve in M-DOS mode with five other computers — Apple Macintosh, IBM-PC and clones using an 8086 CPU and IBM-PC and clones using an 8088, TI99/4A and the Geneve in GPL mode speed No. 5. The benchmark test on the Geneve was conducted last year by Myarc. Results of other computers came from an article published in *Byte Magazine*.

### **Benchmark for SIEVE of ERASTOSTHENES**

*Byte Magazine September 1981 and matching test by Myarc*

Computer	MHz	CPU	Execution time
Geneve (M-DOS)	12	9995	0.95
Apple Macintosh	8	68000	1.12
IBM-PC & clones	8	8086	1.90
Geneve (GPL-5)	12	9995	2.08
IBM-PC & clones	5	8088	4.00
TI99/4A	3	9900	6.00

### **OPERATING SYSTEMS COMPARISON**

*Computers Systems News 12/4/87 and Geneve Tech. Ref. Man.*

Features	M-DOS	OS/2	UNIX	MS-DOS	C-DOS
Multitasking	Y	Y	Y	N	Y
Graphical interface	Y	Y	N	N	N
Character interface	Y	Y	Y	Y	Y
Integrated commun.	Y	Y	Y	N	N
Memory locking	Y	N	Y	N	N
Price of software	Free	\$795	\$75-495	\$75	\$295

*C-DOS is Concurrent DOS*

We will be adding to the library, Eric Olsen's experimental assembly code which permits one to connect the 4A to a radio or other sound source, through the cassette port, using the cassette cable, and have your TV/Monitor display colours in-sync with the audio, creating a "light organ", of sorts. I hope to have these programs demonstrated soon.

The Olsen utility, as well as the one mentioned in the Ernie and Bert article are two interesting and unusual applications of the 4A. It has also been reported that utility software is in the works for the MBX voice recognition system.

Well that's it for this month, gotta put this edition to bed.

---

DOWNLOADED FROM COMPUSERVE...

May 3, 1988

Just a suggestion:

Maybe I'm a little ahead of things here, since we don't even have a GIF program for TI-Geneve yet, but I hope someone will consider a way to have GIF images available for use on the TI 99/4A, also.

As you know, the PICASSO program uses windows on an area which is a full graphics page wide. Let me suggest a possible utility program to convert GIF image files to a PICASSO compatible format or perhaps a form which will be compatible when "uncompressed" (since PICASSO files are so large). I guess this might take two files to achieve a full page in length.

I make this suggestion because it's probably a quick way to have something available for the 99/4A - when someone has time for this, of course.

R. J. Marlen  
71460,1066



# HARDCOPY

-BY STEVE FINDLAY

This month I will continue with the newsletter binder reviews. Before I do that, I would like to bring up a few points.

The PULSAR assembly language routines did arrive in the mail (as I mentioned last month) and have been accepted into the club's library. I haven't really had a chance to go over them yet but they look very promising for a beginner/learner in 9900 machine code.

Since I do type in a number of the program listings from the newsletters I read, it does take a while to complete this column. In the future, if the length of the column looks a bit short I will include some of the tips and tricks that I have picked up in some of the messages on the various various TI BSS's in my telephone travels.

## BINDER #2

This binder contains an assortment of the MSP 99 NEWSLETTER. The MSP stands for Minnesota, St. Paul. The complete address is: MSP 99 USERS GROUP, P.O. BOX 12351, ST. PAUL, MINNESOTA 55112

I would rate the layout as excellent. The latest issue in the binder is dated MARCH/APRIL 1986. There are professional looking graphics for some of the column headings and the type is always clear and easy to read. There are less program listings than in the newsletters of Binder #1 but there are still a few gems.

The following is a list of things that caught my eye:

1. A TI BASIC listing of a simple adventure game. I did type it in and found the listing spread over three different issues. I think it would probably be a good example for someone wanting to try their hand at adventure programming.
2. A review of the FOUNDATION 128K card. It was published in the Sept 1984 issue so it may be of some value to people that have acquired this card with no documentation.
3. An assembly language listing for redefinitions of characters in the EXTENDED BASIC environment. I believe a similar program was available on a past copy of the Disk Of the Month. The source code could also be used to set up a customized character set within your own program. I would venture to say that graphic characters can be included. A second listing for Mini-Memory accompanies the A/L code.
4. An announcement of the MYARC 99/8 computer (now known as the Geneve 9640) in the March 1985 issue!
5. An article on printers for beginners. (March 1985)
6. Articles on TI Writer and Formatter tips. (May 1985 and March/April 1986)
7. A tip on inputting listings from newsletters and magazines. A fellow by the name of Mike Kabala suggests using POST-IT (tm) note sheets to place under the current line you are working on or marking your spot until later. The adhesive on the sheet allows repeated moving of the sheet.
8. For those of you into FORTH or contemplating it, there are two listings for modification of the FORTH system disk. The first is a floating number routine for increased execution speed. The other is a double number word set modification. (it's all Greek to me!) Check out the June and Sept 1985 issues.
9. An Extended BASIC routine to extract subroutines from existing programs. (Sept 1985)
10. An article on fast BASIC joystick routines. (Aug 1985)



"Computer still  
in the shop, Jenkins?"

TED TROGDON, BINDER COMMUNICATIONS, INC.



Here's a few of those filler BBS messages I was talking about:

Message 105 15:34:31 11/28/86  
Re AGED CONSOLE  
To All TI  
By SUNNY AND TOM (SysOp)-WHITE ROCK BC

If you have a heat problem on your old console. Here is the fix: Take the console apart and you will see 2 chips that are heavily heat-sink ... in that they have a heat-sink bolted to the aluminum. Very carefully clean those two off, and re-plaster them with heat-sink compound (available from Radio Shack). This is POSSIBLY the source of your problems. After awhile, this compound dries out, and consequently does not conduct heat away from the chip! Sonny

Message 6 From: JOHN MARTIN1  
Sub: GOSUB IDENTIFICATION  
To: ALL Date: 07/22/86

Here's a neat trick from the LA99ers newsletter "TOPICS". Did you know that you could identify your GOSUB routines within the program line without using the "!" REM statement?

Here's an example program...

```
100 CALL CLEAR :: PRINT "HERE I GO..": :  
110 GOSUB 200 DELAY_ROUTINE :: PRINT "I'M BACK!"  
120 END  
200 FOR I=1 TO 400 :: NEXT I :: RETURN
```

Don't use any spaces in your description

Message #1 Date: 07/13/86

Public From: GENE NAILON  
To: ALL  
Title: Multiplan Slashed Zero

Here is a way to slash the zero in Multiplan.

First you find the second sector in the MP file "MPCHAR". There are several ways to do this. One way is to copy the file "MPCHAR" to a freshly formatted disk, so that this will be the first file. It will start at sector >22, so the second sector of the file will be located at sector >23.

Then using a sector editor call up this sector and about half way through the sector you will find

```
0018 2424 2424 2418
```

This is the hex description for the zero in Multiplan. Change it to:

```
0018 242C 3424 2418
```

This is the hex description for a slashed zero. Save your changes back to disk. Copy the file back to your Multiplan disk and load up Multiplan. I have only found one problem with it. When the cursor is on a cell the zero (in reverse video) will not be slashed. But when you move the cursor to another cell it will leave the zero slashed.  
-GENE NAILON

### The Better Half



"Your kissing is down 12%, your hugging is down 18%, your belching is up 23%..."

'TIL NEXT MONTH... CALL LOAD(-31962,32)

Shoe



# REVIEWING PRINT WIZARD

-By Blair MacLeod, Associate Editor, Newsletter 9T9

Print Wizard consists of several programs which gives the user the ability to design and print cards, signs, letterheads and banners. The author and distributor is Barb Berg of TRIO+ SOFTWARE.

Print Wizard comes with three disks, one program disk and two data disks, which data disk you use depends on the printer you have. On the data disks are eleven borders, six fonts and about 28 pieces of artwork. Personally, I would like to see more artwork available. Basically the only drawbacks to the program is its speed and the positioning of text where graphics appear, as the user has to be careful to place graphics and text if they don't want them to overlap one another.

The program loads and gives an attractive screen, where the user selects the type of printer (Prowriter/Epson FX or Gemini). All selections are made from the keyboard and are menu driven. Print Wizard is so user friendly that I found it easy to step through the menus without reading the documentation. However, the documentation is a comprehensive manual which includes the various borders, fonts and artwork that's available on the data disk.

I use the GENEVE 9640 solely for my computing pleasure and PRINTWIZARD runs flawlessly on it. With the GENEVE's added speed, the project being printed is not so painstakingly slow. As an example, a greeting card consisting of; 2 pieces of art, 1 border and a seven word greeting took 17 minutes to print in TI mode. It was considerably less at speed five on the GENEVE.

As an example, the menu for designing a greeting card you would have on the screen >DESIGN PRINT EXIT on the first line. The second line contains FRONT and INSIDE and along the left margin you have ART, FONT and BORDER. Then the drive where the data disk is. From there you just make your selections, your artwork, the border and the font for your text. Your artwork can then be orientated in four ways, upright, inverted, rightside or leftside. You also have the availability to have four sizes and the ability to place your artwork in specified areas. You have the option of having the artwork printed normally or in mirror aspect. Fonts can be selected from a base of six, you can toggle the size from single to double. You can have centered text, left or right aligned text. The number of characters that is printed depends on the font selected. The menuing is very well done and there is even a shadow on the indicator to add the effect of depth. Included with the programme is a utility to convert artwork & fonts created from TI-ARTIST. This area will not be reviewed as I'm not a TI-ARTIST user. Also, when positioning the artwork the area you selected turns blue. All this adds a very pleasing and professional touch to the program.

Finally, in my opinion this program is worth it, available at \$25.00 (US) (from TRIO+ Software, Box 115, Liscomb, IA 50148) the friendliness of the program is fantastic and the final product is just great! Definitely recommended!

In closing, I would like to mention that this is the first time I've reviewed a program (officially in writing to a newsletter). It surely gives the writer the opportunity to test the program in order to report its performance (hopefully as accurately as possible) and you know what? It was FUN!

---

The following was uploaded to our TI TOWER BBS, (416)921-2731:

Reprinted from the PUG (Pittsburg Computer Club Newsletter) July 1987.

## TI ARTIST BASICS

-By: Frank Zic

Having trouble loading and printing out various contents on T.I. Artist and the companion disks?? Here are step-by-step instructions for handling instance, fonts, slides, and pictures.

First, auto-load T.I. Artist in XBasic. After the Inscebot picture appears, press enter. Now the screen will show the following menu: 1)T.I. Artist, 2)Enhancements, 3)Input Device, 4)Conversions, I)Index and E)Exit.







NOTE: This is a background color setup and will not print to the printer.

To get rid of this color background it is only necessary to do the following:

Follow steps 1 and 2 above and then select Remove Grey boxes.

NOTE: This will set the background color to White, and in no way harm your drawing.

WARNING: However once this is done there is no way to get the grey and white background back. So be sure to keep a saved copy until you are sure you are done!

2> Why draw in black and White?

When you want to print. It will be easier to know what is going to be printed. There is never any question about what is foreground or background. You can always change the colors when you like.

3> When Printing LARGE.

Don't use the first or last column because these columns will not go to your printer.

Here's how you can print FULL PAGE graphics.

Design 2 screens to be printed one after the other. For example. Lets say you would like to print a boarder on an 8 1/2 X 11 sheet of paper, maybe even a letterhead.

Lets try a simple boarder. First draw the top half of the boarder, and save it to the disk. Now draw the bottom half, and save it to disk. Do not forget to use the grey and white background. It will help in this exercise.

- o Now lets print it out, and see what it looks like.
- o Be sure that your paper is set at the top of the page and the printer is on.
- o Select "+" the main menu.
- o Select READ/SAVE OPTION.
- o Select Read a saved Screen
- o Type in the file name of your top file.
- o Select Printer options.
- o Type in Your printer info. Such as PIO.CR OR RS232.CR Whichever you have. But don't forget the ".CR" at the end.
- o Select Large single/double density print.
- o Load your second file and print it. Be sure not to turn off the printer; and don't adjust paper before printing.

NOTE: The border and graphics for this article were printed with GRAPHX. The graphics characters can be found on my Fairware disk #7 CLIPART #2. There are four print styles available on this disk in 4 orientations so that they can be read from Bottom, Top, left, or right.

4> Method for saving your files.

o Why?

I've found that if I save my files this way they are easier to remember. Later when I look at the disk with a file reader the clipboards and the screens will stand out as Graphx files.

o What to do.

- o Select "+" main menu.
- o Select READ/SAVE FILES.
- o Select SAVE SCREEN.
- o Type in DSKX.P SCREEN/T, and press <ENTER>.
- o DSKX = Disk-drive number that you want to save to. Such as DSK1. DSK2. DSK3. DSK4. DSK5.
- o P\_SCREEN/T = FILENAME

P = PICTURE

= THE UNDERLINE IS USED TO SEPERATE THE NAME FROM THE "P" SYMBOL.

SCREEN = NAME TO REMEMBER

/ = SEPERATOR IF NEEDED

T/B = TOP/BOTTOM

o C CLIPB/01

o I use the same method as above for clipboards.

NOTE: The real reason for saving your files with names like this is to make it

easier to keep track of.

5> Questions about GRAPHX. Can be sent to me by E-MAIL on these BBS'S:

GENESIS TECHIE BBS - (313) 757-6157 300/1200b  
L.M.U.G. T.I.B.B.S.- (313) 291-4415 300b  
OR WRITE:

Paul E. Scheidemantle  
2762 Lovington  
Troy, Michigan 48083

PS

If you reprint the above, please forward a copy to the above.

## INTERFACING PROGRAMS FOR THE GENEVE 9640

by Charles Earl

COURTESY: The Ottawa TI99/4A Users' Group - March 1988

This article will discuss the interfacing of TI programs to run under the Geneve 9640 GPL environment. The GPL environment simulates the TI-99/4A operating system and sets the 9640 to run in TI mode.

Although most programs will run on the 9640 computer, there are a few exceptions. The cause of this incompatibility is the kscan routine. Any program which is to run successfully on the 9640 must not contain any direct cru addressing for keypresses. On occasion, programmers have done this to increase the speed of their program, but with the 9640's increased speed this is not required.

To have your program detect the 9640, check the value of address >0006. This value should be >0308 on a 9640. This is useful for making your program run under both environments without having to write multiple versions.

The display modes on the 9640 are quite complex with the exception of 40 and 80 column text mode displays. The 9640 has 128k of VDP memory. To stay compatible this memory is divided into 8 16K blocks. Paging is done by setting VDP write only register 14 to the 16K block number ranging from 0 to 7. Normally this will be set to 0. This register is not available on the TI. Any attempt to access it will crash the computer.

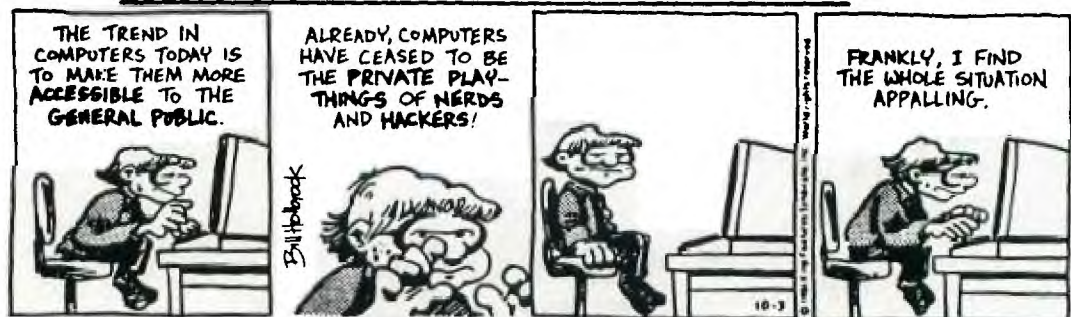
The 9640 80-column mode is very similar to TI's 40-column text mode, and the 9640's 40-column mode is identical to the TI's. To set the 9640 to 80 column mode the following VDP write only registers must be set as follows:

Register 0: On the TI this register is set to 0 for text mode. On the 9640 this register is set to >04 for 80-column text.

Register 1: For both the TI and 9640 set this register to >F0.

Register 2: This register is the base address for the screen image table times >400. With the 9640 in 80-column mode, the base address is multiplied by >1000. As well, the bits have been shifted left 2 positions and the 2 least significant bits are set to 1. For example to have an 80-column screen at VDP address >0000 a value of >03 will be loaded into this register. For VDP address >1000 a value of >07 will be loaded instead.

Not only does the 9640 have 80 columns to display, but it can also display up to 26 and a half lines. The half line is the top four pixel rows of each character on the 27th line. This is changed by pressing Ctrl-Shift-Alt. Because of this I find that it is more convenient to use the second 16k VDP block for displaying text. Fewer internal changes are required if the program you are working on uses the VDP.





Editor's Note: This article concerns the Bert and Ernie program, (which is available in the club library), and a little research through my archives yielded the ad. mentioned in the article. I put a copy of same if anyone is interested.

## ERNIE AND BERT EXPLAINED...

by Gail Wyant

COURTESY: Will County Users Group

Much amazement was expressed by those of us who viewed this program at the last meeting. The voices in it do sound like Ernie and Bert. How did the programmer do it? Upon looking at a screen listing of the program, we were mystified. The DATA statements were very strange in appearance. If printed, they look even more garbled and weird (the printer interpreted some of the data as escape and mode change commands).

We can get to the root of understanding these seemingly strange things if we examine the way Extended BASIC handles speech. Two subprograms in Extended BASIC. CALL SAY and CALL SPGET, can be used to access Extended BASIC's resident vocabulary (see your XB manual for the vocabulary list).

The CALL SAY subprogram causes a word or words in the resident vocabulary to be spoken by the computer. Try typing CALL SAY("TEXAS INSTRUMENTS"). If you ask for a word that is not in the resident vocabulary, the computer spells out the word. Try typing CALL SAY("first name").

The CALL SPGET subprogram lets you obtain the actual speech codes (allophones) that are used by the speech synthesizer to sound out a word. Try typing CALL SPGET("TEXAS INSTRUMENTS",WS), then type PRINT WS. You will see some very weird looking stuff that appears similar to the DATA statements in ERNIE AND BERT. Notice that there are many blanks in the speech code listing. This is because many of the codes cannot be printed (they do not correspond to a standard ASCII character). These speech codes also cause your printer to do strange things (treated as control characters).

The individual who wrote ERNIE AND BERT was either a speech code (allophone) expert or had the "Device". The "Device", I was informed by John Taylor (famous FreeWare programmer), appeared in some early issues of 99ER magazine. Someone was selling a device that would convert sound into Extended BASIC speech codes (allophones). I checked all of my back issues (I have all but the first five), but the closed I came to such a device was a program developed by DATAFORCE for Mini Memory. It isn't "The Device", but it turns out to be interesting in its own right so I thought you would enjoy learning about it.

The program from DATAFORCE allows the computer to listen to sounds (e.g., spoken words) through the cassette recorder and digitize the sound into the TI Mini Memory or 32K memory expansion. Approximately six words can be stored in mini memory to be repeated back through the monitor speaker. The "listen" and "repeat" functions are accessible from programs written in TI console BASIC. This technique does not use the speech synthesizer, so one isn't required. The minimum requirements to use the software are mini memory and a cassette recorder. It sounds interesting to me. I was informed by DATAFORCE that the program is still available. I talked with Dominic Melfi, the founder of DATAFORCE, about it. In addition to describing the program's operation to me, he gave me some more insight into unraveling the mystery of ERNIE AND BERT. Apparently, a command exists in Extended BASIC for parsing the speech codes a piece at a time to obtain their numeric equivalents. This may make for an interesting project in the future. Any Takers?

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March

99'er Home Computer Magazine

### A SOUND DIGITIZING EXPERIMENT

A new software product from Data Force Inc. *Sound Digitizer Experiment I*, allows the Home Computer to "listen" to sounds through the cassette recorder and "digitize" them into either the TI Mini Memory or the 32K Memory Expansion. Approximately six words can be stored in Mini Memory to be "repeated" back through the speaker.

These *listen* and *repeat* functions are accessed from programs written in TI BASIC. The TI Speech Synthesizer isn't required for this program to operate.

The minimum requirements to use the software are TI-99-4(A), TI Mini Memory cartridge, and a cassette recorder. The program, written in assembly, is available on tape for \$19.95 from Data Force Inc., 10 South 312 Hampshire Lane East, Hinsdale, IL 60521.



# poT-pourrI

by Mike Wright

COURTSEY: The Boston Computer Society TI-99/4A User Group - Jan. 1988.

## THE ART OF SURVIVAL

All good things must come to an end - or so it's said. If that is so, how can we TI users prolong the end?

Our achievements to date are legend. Each time we think the machine has been pushed to its limits, some enterprising person finds a new, better or faster way to do something.

But, let's not kid ourselves. We will never out-perform a Cray, a Vax, or an 80386-based PC. On the other hand, for most of the computing that we do, who cares?

So, how should we conservative, dedicated, satisfied-with-what-we've-got computer users proceed. It seems to me that an important element would be to harness the energy of each and every member of the TI community and put it to its most productive and synergistic use. But how is this to be done? It would seem that some form of user-supported governing body or council of elders is something that would enrich the use of our machine.

Take the case of RAM disks, when TI pulled out there were none. Today you can choose from Myarc, Corcomp, and Horizon. Scheduled to appear soon are versions from Rave and DataBiotics (Grand Ram).

From a limited resources point of view this is a crying shame. This is not meant to sound anti-capitalistic and I realize that competition is one safeguard towards realistic prices. But, in the contained TI market, it would have been nice if there were some advisory body that could have suggested an alternate path for a would-be developer. For example, how about a hard disk and controller for around \$500 and one less RAM disk?

In the world of model railroading, there is such a body. It is called the National Model Railroading Association (NMRA). It was formed in 1934 to establish standards that manufacturers could use to ensure equipment interchangeability.

We are in similar kind of boat. Once upon a time our regulatory body was Texas Instruments. We then had two different bodies who could possibly have filled the gap that TI left. The first was Charles LaFara and the International 99/4 Users-Group (IUG). The second was Don Veith and the 99'ers Association.

LaFara baled out after the publication of the May/June 1984 issue of Enthusiast 99. Don Veith's National Ninety-Ninger publication lasted until April 1986. Although the two were very different organizations, they exuded an air of authority that is lacking in our present environment.

No. This does not mean that we should all fasten our seatbelts with one click. However, wouldn't it be nice if there was one guaranteed place to obtain the latest version of program X. For example, just who does have the latest version of Funnelweb, or Birdwell's Disk Utilities, or PRBase, or Clint Pulley's C compiler?

My feeling is that it would be more orderly if there was a national body that handled distribution of public domain and user-supported software. (Unless it came direct from the author, don't you sometimes have a sneaking feeling that some well-meaning body tinkered with a file before you got your hands on a fairware package?)

The software distribution idea is not a first. Out in California is an organization called PCSIG, that handles public domain and user-supported software for the IBM PC. They publish a catalog, indexed by subject and title, that is thicker and larger than the extended basic manual. Their software is derived from authors who recognize the advantages of distributing from a central point. This is very close to what the IUG was doing.

Now let's move on to the subject of conservation of energy. Each time MICROpendium of the Smart Programmer is published, there are probably hundreds of people who end up keying in the same program. Each time someone picks up a Compute! or Steve Davis book they have not seen before they are bound to key in a program that has been keyed in hundreds of times before.

Wouldn't it be nice if you could save yourself that effort and, by showing proof of purchase, benefit from some other person's efforts so that you could use your time more productively - maybe by writing a new utility or game that would benefit other users.





Then, there is the task of information dissemination. If you look at many of the newsletters published by TI groups, you will find articles in them that originated in other newsletters. Sometimes these have been re-keyed, sometimes they are poor photocopies of poor originals.

Again, wouldn't it be nice if there was some central organization that would accept copy from users groups and turn it into typeset material which takes up far less space (equals money) when compared to the output of the trust Epson printer.

Now imagine a set of these articles, complete with quality presentation and editing, appearing as the main body in all newsletters. The only burden left on the local newsletter editor would be to publish local news - next meeting, dues are due, and election results.

Finally, would it be possible to try for some direction in the software area. Could a national organization request certain individuals or even user groups to develop certain pieces of software, complete with source code, that would benefit the community as a whole and ensure our longevity.

The path to this Utopia is strewn with difficulties. We would have to be sure that TI users really want it. (This means you have to pay some money for it). We would have to be sure that we don't step on another user group's toes. (Who does Boston think they are with such grandiose ideas? Does anyone remember 99 United?) We would have to be very correct in our dealings with users. (Where is the order I placed 9 months ago). And so on.

But, if we could pull it off, I think we could prolong and develop the use of the 99/4 for longer than anyone would have thought possible. And that seems like a worthwhile goal. How about starting with: "We, the worldwide TI users, in order to form a more perfect union..."

\*\*\*\*\*  
NOTE:

The following letter describes my experience with Innovative Programming regarding an order placed for the Grand Ram in September 1987.

Please make this file available to all who ordered this product from Innovative Programming. Encourage all who did so (in your User Group, etc) to write a similar letter of complaint.

In addition to writing a letter to the California State Consumer Affairs Dept., a letter should be written to:

U.S. Postal Service  
Regional Chief Inspector  
Western Region  
San Bruno, CA 94098-0100

Attn: Edward C. Baumgarten, Jr.  
Supervisor, Management Operations Support Center

The more letters written to these two agencies, the better change of legal action being taken. Please ENCOURAGE ALL INVOLVED TO WRITE PROMPTLY!!!

\*\*\*\*\*

218 Kaplan Avenue  
Pittsburgh, PA 15227  
(412)885-4735

April 6, 1988

California State Consumer Affairs Department  
1205 N Street  
Sacramento, CA 95814-5624

Gentlemen:

I am writing regarding an order I placed by mail with Innovative Programming, of Rohnert Park, California, on September 13, 1987.

I have enclosed a photocopy of a page from the catalog/brochure I received from Innovative Programming in August of 1987.

On September 13, 1987 I mailed an order to Innovative Programming, for two items, at a total cost of \$252.90. I have enclosed a photocopy of the original purchase order, as well as a photocopy of the money order I mailed to Innovative.

I received a letter from Innovative, dated Oct. 20, 1987, stating that there has been a slight delay of the manufacture of the products ordered, and they expect shipment by October 31, 1987. A copy of this letter is enclosed.

My next correspondence from Innovative came in a notice dated Dec. 31, 1987. It was stated that my name and order was given to DataBiotics, and that they would be shipping directly to me. I have enclosed a copy of this notice.

Now, I just received a letter from DataBiotics of Palos Verdes Estates, CA. It states that Mr. Galen Read, of Innovative Programming collected considerable sums of money for the Grand Ram Cards (the products I ordered)--money he did not report as Grand Ram sales to Databiotics. They have demanded an accounting from Mr. Read for all monies collected.

Databiotics suggested I contact Mr. Read and demand either refund of money or remittance of funds to Databiotics so the product can be shipped.

I have done this, but am quite concerned about losing my money mailed to Innovative over six months ago.

Enclosed are copies of the letter DataBiotics sent to me, the letter they sent to Mr. Read of Innovative Programming, and the letter I sent to Mr. Read.

I would appreciate your investigating the matter further, to ensure proper action is taken with regard to all monies submitted to Innovative Programming.

Thank you,

Marty Kroll Jr.

PS Here are addresses of Mr. Galen Read of Innovative Programming, and also of Databiotics:

Galen Read  
Innovative Programming  
1012 Eleanor Street  
Rohnert Park, CA. 94928

Databiotics  
P.O. Box 1194  
Palos Verdes Estates  
California 90274

