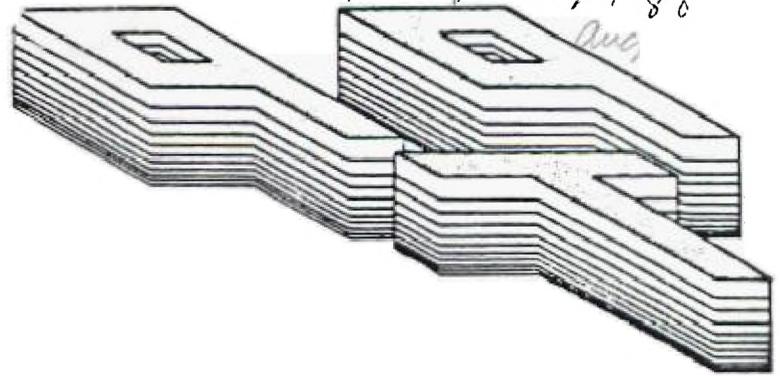


# NEWSLETTER STS

Texas Instruments  
USEAS GROUP  
TORONTO

FOR THE TI-99/4A COMPUTER



## AUGUST-SEPTEMBER, 1986 ISSUE

### FROM:

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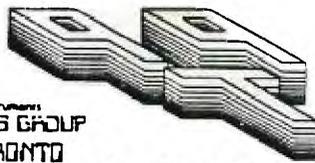


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- IN ONE WEEK -

NOTE: THIS EDITION COMPILED, EDITED AND ASSEMBLED. THANKS TO RANDY AND GIL WHO SENT/WROTE SOME OF THE ARTICLES HEREIN. -EDITOR.



9T9 USERS GROUP  
TORONTO

**EXECUTIVE COMMITTEE**  
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**NEWSLETTER EDITOR**  
Steve Mickelson (657-1494)

**MEMBERSHIP FEES**  
FULL MEMBERSHIP \$25.00 / year  
NEWSLETTER SUBSCRIPTION \$15.00 / year

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 our president in writing at the club address on the front cover or call and leave a message with his answering machine.

The meetings are held on the last Tuesday of each month, at the York Woods Public Library in Downsview, starting at 7:30 pm. The library is at 1785 Finch Ave West, just west of Keele St. The entrance to the library is on Finch Avenue.

#### COMMERCIAL ADVERTISING

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

FULL PAGE	(6" x 7 1/2")	\$40.00
HALF PAGE	(6" x 3 1/2")	\$20.00
QUARTER PAGE	(3" x 3 1/2")	\$10.00

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.

#### 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, and/or 9T9 Users Group can be held liable for any damage to the user's equipment. All such projects are done at your own risk!

**EDITORIAL: Summer Meetings**

**-by Randy Rosetto, Secretary ,V-P**

I would like to suggest that we re-think the need to continue to have 9T9 User Group meetings during the summer months. Being on the executive, I would like my summer off from some activities so that my family and I can enjoy the summer season to do other things that do not include the computer.

I have come to feel this way because of a general lack of support from the membership. We, the executive, have time and time again asked for letters to the editor, articles, questions and other inputs to help stimulate the 9T9 User Group and keep it an informative club. But this is still not good without the volunteers to carry it out. It seems to me that the Toronto club may be too selfish or too shy! Why don't you want your programming discovery in Basic or Xbasic published? Why don't you want that technical fix or bug or modification published? Don't you realize that that one bit of information may be just what a user who may only subscribe to this newsletter, is looking for.

Everyone must realize that the newsletter is the lifeline of the club, especially to those who cannot attend meetings regularly. I am sure that some of you were wondering just what was happening when you didn't receive this newsletter a couple of times this summer. Well, if you get the drift of my comments you will understand that some times I'm just too tired or involved with other personal matters to bother to turn my computer on.

Therefore, for the coming meeting on September 30th I would recommend a motion to take a summer holiday for the months of July and August, so that, come fall we can come back renewed, revitalized and hopefully, with more revolutionary news about our TI99/4A HOME COMPUTER.

After all we are only volunteers.

Randy Rosetto.

\*\*\*\*\*

**\* DRIVER WANTED \* DRIVER WANTED \* DRIVER WANTED \* DRIVER WANTED \***

I'VE JUST STARTED A NEW JOB AND AM IN CHARGE OF A WAREHOUSE AND THE COMPANY NEEDS A NEW TRUCK DRIVER TO PICK UP AND DELIVER CONSTRUCTION TYPE MATERIALS AND HELP OUT IN THE WAREHOUSE. THE LOCATION IS IN THE 401/McCOWAN AREA. IF INTERESTED CALL RANDY ROSETTO AT 297-6341(WORK) OR 469-3468(HOME) AFTER 7 PM.

\*\*\*\*\*

**COMPUTER FEST '86: "Bring It Back Home"**

That is essentially the theme of "The computer show for the rest of us" to be held at 222 Queen's Quay West beside the Harbourfront Antique Market in beautiful downtown Toronto on Saturday, October 18, 1986 between 10 a.m. and 6 p.m. The 9T9 User Group will have a booth there to solicit memberships and demo the computer hardware and software, to the many closet TI owners that we know are out there. So, if you love your TI, bring someone who thinks it's just a toy to this show. If you've been to the other computer shows over the last 2 years you know that this has to be the one for the Home Computer users and not big biz.

Gil Tennant and I will be working the show, with a couple of other people, and would be pleased to see you there!

Randy Rosetto

GRAM KRACKER TUTORIAL PART I of IV  
-by Terry Atkinson

Like most of you, when I purchased my GK, I instantly went to work saving modules to disk and took advantage of the support programs on the demo disk. The end result was TI-Writer and Editor Assembler in grams 1 2 and Extended Basic in Banks 1 2. It didn't take me long to figure out that when you go from the title screen to the 1st menu, that you have all of those foreign language options from the TI Writer Cartridge, followed by E/A XBasic.

At first I thought, "Oh well, I can get used to that." But it wasn't until about a week later that I decided that I couldn't. The 7 TI Writer Selections plus E/A Ex Basic filled the whole screen. This made it nearly impossible to add any other modules or Basic programs to the GK memory.

After days of experimenting and some help from a tutorial, I found that all that was needed was to load TI Writer into the gram space then use the search function of the editor to find the word "PROCESADOR". When you've found it you must then move back 5 bytes. This can be done by placing the cursor on the "P" in PROCESADOR and then press FCTN 6 5 times. Take note of the number in the upper left corner of the screen. This is the byte that you will be changing.

Press FCTN + to switch to HEX. Then place your cursor on the byte to be changed and enter 60CB.

That's all there is to it. The only other thing you need to do is to save your new module to disk. After that you can use the GK Utility disk to move TI Writer to gram 1 or 2.

Well that's it for cleaning up the selection menu. I don't know if these changes will work with all versions of TI Writer. But it's worth a try.

In my next GK fixes we will cover how to move some of the MG XB Calls for Extended Basic (these are the ones sitting in the middle of no-where in your GK memory.)

\*\*\*\*\*

What this program does is explained in lines 33 and 34.

```
1 ! TEXT128 BY ERIK OLSON
2 ! 11-March-86
3 ! This version uses A/L
4 !
5 DIM H$(99)
6 DISPLAY AT(12,9)ERASE ALL BEEP:"LOADING..."
7 CALL INIT
8 CALL LOAD(16376,66,82,69,65,75,32,36,244)
9 CALL LOAD(8194,39,168,63,248)
10 CALL LOAD(9468,288,11,37,166,2,224,37,158,4,192,2,1,8,1,2,2,37,168,2,3,255,8)
11 CALL LOAD(9482,212,131,4,32,32,28,192,194,289,115,9,133,4,198,5,134,4,199,2,4,38,168)
12 CALL LOAD(9584,5,132,4,193,193,69,19,38,6,5,288,115,152,1,37,146,17,3,221,1,5,135)
13 CALL LOAD(9526,16,245,152,1,37,147,19,8,152,1,37,148,22,239,193,199,19,237,6,7,6,4)
14 CALL LOAD(9548,16,234,18,135,216,7,38,168,192,6,2,1,8,2,2,2,38,168,4,32,32,16)
15 CALL LOAD(9578,16,218,18,135,216,7,38,168,4,192,2,1,8,1,2,2,38,168,4,32,32,16)
16 CALL LOAD(9592,6,6,2,38,1,8,288,6,38,168,5,193,4,32,32,16,2,224,131,224,194,2,24)
17 CALL LOAD(9614,37,166,4,91,32,13,8,8,77,65)
```



List Of 9T9 U.G. Meetings For The Remainder Of 1986

Tuesday, September 30  
Tuesday, October 28  
Tuesday, November 25  
Tuesday, December 9

Meeting place is the York Woods Public Library, 1705 Finch Ave. West, (between Keele and Jane Streets, Downsview, Ontario. Time: 7:30 P.M. sharp !

-Steve Mickelson, Ed.

\*\*\*\*\*

Notes From The Executive Meeting

CASSETTE LIBRARIAN

NEEDED a volunteer with a basic system, console and cassette recorder to take over the cassette library and coordinate as a special, SIG(Special Interest Group), this portion of the Clubs membership needs. That is, maintain the library and make and distribute copies and write a by-line, (articles), for the newsletter. The executive feels that those with the high end systems are getting all of the attention and that the cassette users are being left out, well here is your chance to help out the club, volunteer!

S.I.G. SUPPORT

We would sure like to add to this list:

Assembly Language->Jim Ballantyne  
493-0633

Extended Basix->Emile Verkerk  
633-1451

How about others for:

Hardware repairs.

GPL.

Communications (Modems)

Business programmes.

Hardware modifications.

SEX (HA, I'VE GOT YOUR ATTENTION NOW!)

TEXT LIBRARY

Coming soon, in the next newsletter will be an complete updated list of the Text library the club owns and the procedure for borrowing same. I know, I know long overdue but who would like to volunteer to be the Text Librarian!?

DONATIONS

A very good suggestion we hope to act on soon is a Module library, therefore the Club is asking for donations of TI Modules you have duplicates of, or you do not want anymore. Lending procedures to follow.

TRIWARE PROGRAMMES

Otherwise known as Freeware and Fairware (and if in a tight seal, Tupperware,tm) will be documented and listed in the newsletter as well as a "Disk of the Month" with thanks to the special efforts of Andy Parkinson. These disks will be available at the meetings for a handling charge of \$2.00, each. We support the Triware distribution network. Each disk will have only one programme per disk with documentation if available. Triware users are strongly urged to reward the authors of these programmes for their hard work and support of our orphaned computer!

COMPLETE LIST OF TI MODULES

Also coming, next month, will be a list of All TI modules to date (corrections and additions greatfully accepted)!

That is all for now, TI'ers, Randy Rossetto, secretary, U-P.

\*\*\*\*\*

The following is a front page editorial written by Jim Ely of the VAST99 Users Group of Phoenix, Arizona. Permission to re-print granted. It sums up my opinion of the Home Computer Journal, which recently arrived at my house.

VAST 99 NEWSLETTER

JUNE 7, 1986

### HOME COMPUTING JOURNAL

June 4, 1986--The long awaited first issue of Home Computing Journal has arrived this date. One of the editorial comments in this issue of the newsletter says that HCJ hasn't arrived yet. This comment was obviously written prior to June 4, in anticipation of not receiving anything from HCJ.

At first glance at this volume of HCJ, I'm not impressed. It is 32 pages long and has an accompanying disk. If you take that 32 pages and divide it between 5 different computer types, what you get is about 6 pages devoted to each computer.

All the programs are on the disk and none are "listed" in the Journal.

The subscription rate is quite high at \$75 a year (or \$25 per issue). A number of bargains are in effect until June 30, 1986. A 2 volume mini subscription is \$35 (regular \$45) and a year (4 volumes) is \$60 (ONLY!). These are bargains?

As I had mentioned in a previous issue of the newsletter, if you had any subscription left to Home Computer Magazine, the VALUE would be fulfilled with Home Computing Journal. Well, it was real convenient for them. If you had 1 year left on your old HCM subscription (I did), this first issue is your last issue! What a VALUE! Believe me, this is my last issue.

With other publications, like MICROpendium and Super 99 Monthly, still supporting the TI 99/4a exclusively, it looks to me like the better value would be to subscribe to BOTH of these and end up getting more for your money (you get 12 issues a year delivered monthly) and paying less total (about \$45 a year for both).

Let me mention just one other thing. Barry Travers has an all-on-disk publication called The Genial Traveler Diskazine. The current subscription rate is about \$30 a year for 6 issues (1 every other month). I understand the disk is always full and you couldn't get another thing on it if you tried! I also understand there have been a number of freebies (extras) thrown in, too. This, also, is a better value than HCJ. If you would like more information about The Genial Traveler, contact Barry at 835 Green Valley Drive, Philadelphia, PA 19128. The phone number is 215-483-1379.

You know what this could be is HCJ's way of fulfilling all current subscriptions and then getting out of town! Maybe more on this in the next issue of the newsletter.

By the way, a subscription to our newsletter (if there was such a thing) would be \$12(US) a year. I think even that would be a better value for the money.

\*\*\*\*\*

### Pubnight at The Old Shamrock

Here is short and fun sprite demo you can type in yourself:

```
60 ! PUBNIGHT AT THE OLD SHAMROCK A.K.A. BEER STEIN WAVE FORM.
70 ! RUNS IN EXTENDED BASIC INTERESTING MOTION.
80 ! A MOTION DEMO MODIFIED 9/1986 STEVE MICKELSON, SOURCE TI-6780, CIS
76545,1255.
90 ! LOOKS LIKE 99 BOTTLES(MUGS) OF BEER ON THE WALL!
100 CALL CLEAR :: CALL CHAR(42,"3F7CDDDDDDDD7C3F"):: J=-1
110 FOR B=1 TO 20 :: CALL $PRITE($B,42,5,$*4,10,0,$*1):: NEXT B
120 FOR B=1 TO 20 :: CALL MOTION($B,0,$*J):: NEXT B
130 J=J*-1 :: GOTO 120
```

## Useful Document Utility

O.K. you say that you have a document in two DV-80 files and want to combine them into one. Well here is a short, but useful program originally designed to combine two DF-80 assembly routines modified for TI Writer files.

5 ! THIS VERSION OF COMBINE MODIFIED 1985 -STEVE MICKELSON WILL COMBINE TI WRITER (DV-80) FILES, TWO AT A TIME.

```
10 A=1
100 CALL CLEAR
110 PRINT "FILES TO COMBINE:"
120 INPUT "#1) DSK":C01$
130 INPUT "#2) DSK":C02$
140 PRINT: "NAME OF MERGED FILE:"
150 INPUT ") DSK":CR$
160 OPEN #1:"DSK"C01$,DISPLAY ,VARIABLE 00
170 OPEN #2:"DSK"C02$,DISPLAY ,VARIABLE 00
180 OPEN #3:"DSK"CR$,DISPLAY ,VARIABLE 00
190 CALL CLEAR
200 PRINT "PLEASE WAIT...": : :
210 PRINT "MERGING FILES..."
220 LINPUT #A:A$
230 IF EOF(A)THEN 260
240 PRINT #3:A$
250 GOTO 220
260 IF A=1 THEN A=2 :: GOTO 220
270 CLOSE #1 :: CLOSE #2 :: CLOSE #3
280 PRINT : : "MERGER COMPLETED!"
290 END
```

{ IGNORE UNDERLINES }  
IN 160, 170, 180

\*\*\*\*\*

### "SUPER CART" Module Explained

-by Gil Tennant

#### What Is A Super Cart?

Super Cart is a module which consists of both the Editor/Assembler and Mini Memory chips. Also included in the module is an 8K Ram chip and a Lithium battery to maintain power to the 8K. The module has a toggle switch on the outside which enables you to change between E/A or Mini Mem. You can also include your own favourite 8K (or less) utility and have it appear on the selection menu at power up!

#### What Can It Do?

The Super Cart allows you to switch from E/A to Mini Mem and back again without having to remove cartridges. By including your own utility (up to 8K) you can have it on the menu until you delete it or the battery goes dead. The module is also a money saver. You get 2 modules in one, for the price of one!

#### What Utilities Are Available?

Some of the utilities include: a disk cataloger, a Forth loader, an 8K memory check program, a cartridge cloning program, and many more...all of them Public Domain Software (Free).

#### What Is The Price?

The Super Cart is available from Solid State Hardware in late October for \$49.95. The number to call to reserve one (deposit required) is 288-9412 (Toronto).

## Peeks, Pokes and Tips

The following is a list of peeks and pokes for the TI-99/4A. It is re-printed by popular demand. The list is the most up-to-date I could find. If you have additions or corrections, just drop a line to the 9T9 Newsletter editor.

\*\*\*\*\*

List based on one by Scott Darling, CIS 72366,714

\*\*\*\*\*

THESE ARE ALL OF THE PEEKS POKES THAT I HAVE COME ACROSS FOR USE WITH X-BASIC AND 32K MEMORY EXPANSION (BE SURE TO DO A "CALL INIT"). THE P Q VARIABLES ARE USED FOR "PEEK" - THE NUMBERS ARE FOR "POKE" OR "LOAD". THE EXPRESSIONS ARE CALL LOAD UNLESS DESIGNATED OTHERWISE.

\*\*\*\*\*

=====

ADDRESS	VALUE(S)	MEANING IN EXTENDED BASIC
---------	----------	---------------------------

=====

		CALL VERSION(X) IF X=100 100= NEWEST VERSION OF X/B CART
0192	, P	USE (PEEK,P) IF P(<) 70 OR (>)121 THEN DO A CALL INIT
0194	,	FIRST FREE ADDRESS IN LOW MEMORY
0196	,	LAST FREE ADDRESS IN LOW MEMORY
-20672	, P	P=0 SPEECH NOT ATTACHED P=96 OR P=255 SPEECH IS ATTACHED
-31372	, 0 TO 255	VARY KEYBOARD RESPONSE
-31740	, P , Q	PUT IN DIFFERENT TO CHANGE BEEPS, WARNINGS, ETC
-31744	, 0 TO 15	CONTINUATION OF LAST SOUND (0=LOUD AND 15=SOFT)
-31748	, 0 TO 255	CHANGE THE CURSOR FLASHING AND RESPONSE TONE RATES
-31788	, 160	BLANK OUT THE SCREEN (MUST PUSH A KEY TO ACTIVATE)
	, 192	NO AUTOMATIC SPRITE MOTION OR SOUND
	, 224	NORMAL OPERATION
	, 225	MAGNIFIED SPRITES
	, 226	DOUBLE SIZE SPRITES
	, 227	MAGNIFIED DOUBLE SIZED SPRITES
	, 232	MULTICOLOR MODE (40 BY 64 SQUARES)
-31794	, P	TIMER FOR CALL SOUND (COUNTS FROM 255 TO 0)
-31804	, X , Y	RETURN TO THE TITLE SCREEN (USE "PEEK (2,X,Y)")
	, P	CHANGE THE CURSOR FLASH RATE (0 TO 255)
-31806	, 0	NORMAL OPERATION
	, 16	DISABLE QUIT KEY (FCTN =)
	, 32	DISABLE SOUND (USE NEG DUR FOR CONTINOUS SOUND)
	, 48	DISABLE SOUND QUIT KEY
	, 64	DISABLE AUTO SPRITE MOTION
	, 80	DISABLE SPRITES QUIT KEY
	, 96	DISABLE SPRITES AND SOUND
	, 128	DISABLE ALL THREE
-31808	, P , Q	DOUBLE RANDOM NUMBERS (0 TO 255) NEED "RANDOMIZE"
-31868	, 4	GO FROM EX-BASIC TO CONSOLE BASIC (NEED "NEW")
	, 8	AUTO RUN OF DSK1.LOAD
-31866	, P , Q	END OF CPU PROGRAM ADDRESS (P6+Q)
-31868	, 0	NO "RUN" OR "LIST" AFTER "BREAK" IS USED
	, 0 , 0	TURNS OFF THE 32K MEMORY EXPANSION
	, 255 , 231	TURNS ON THE 32K MEMORY EXPANSION

ADDRESS	VALUE(S)	MEANING IN EXTENDED BASIC
-31873	, 3 TO 30	SCREEN COLUMN TO START AT WITH A "PRINT"
-31877	, P	P32 = SPRITE COINCIDENCE P64 = 5 SPRITES ON A LINE
-31878	, P	HIGHEST NUMBER SPRITE IN MOTION (0 STOPS ALL)
-31879	, P	TIMER FOR VDF INTERRUPTS EVERY 1/60 OF A SEC (0 TOP 255)
-31880	, P	RANDOM NUMBER (0 TO 99) NEED "RANDOMIZE"
-31884	, 0 TO 5	CHANGE KEYBOARD MODE (LIKE "CALL KEY(K,...)")
-31888	, 63 , 255	DISABLE ALL DISK DRIVES (USE "NEW" TO FREE MEMORY)
	, 55 , 215	ENABLE ALL DISK DRIVES (USE "NEW" TO FREE DRIVES)
-31931	, 0	UNPROTECT X-B PROTECTION
	, 2	SET "ON WARNING NEXT" COMMAND
	, 4	SET "ON WARNING STOP" COMMAND
	, 14	SET "UNTRACE" COMMAND
	, 15	SET "UNTRACE" COMMAND "NUM" COMMAND
	, 16	SET "TRACE" COMMAND
	, 64	SET "ON BREAK NEXT" COMMAND
	, 128	PROTECT X/B PROGRAM
-31952	, P	PEEK P=55 THEN 32K EXPANSION MEMORY IS OFF (>55 MEANS ON
-31962	, 32	RETURN TO THE TITLE SCREEN
	, 255	RESTART X/B W/DSK1.LOAD
-31974	, P , Q	END OF VDF STACK ADDRESS (P6+Q)
-32112	, 0	SEARCHES DISK FOR ?
-32114	, 2	RANDOM GARBAGE
	, 13	SCREEN GOES WILD
	, 119	PRODUCE LINES
-32116	, 2	RANDOM CHARACTERS ON SCREEN
	, 4	GO FROM X/BASIC TO BASIC
-32187	, 0	UNPROTECT XB PROGRAM
	, 2	SET "ON WARNING NEXT" COMMAND
	, 4	SET "ON WARNING STOP" COMMAND
	, 9	SET 0 LINE NUMBER
	, 14	SET "UNTRACE" COMMAND
	, 15	SET "UNTRACE" COMMAND "NUM" COMMAND
	, 16	SET "TRACE" COMMAND
	, 64	SET "ON BREAK NEXT" COMMAND
	, 128	PROTECT XB PROGRAM
-32188	, 1	CHANGE COLOR AND RECEIVE SYNTAX ERROR
	, 127	CHANGE COLOR AND RECEIVE BREAKPOINT
-32630	, 128	RESET TO TITLE SCREEN
-32699	, 0	UNPROTECT XB PROGRAM
	, 2	SET "ON WARNING NEXT" COMMAND
	, 4	SET "ON WARNING STOP" COMMAND
	, 14	SET "UNTRACE" COMMAND
	, 15	SET "UNTRACE" "NUM" COMMAND
	, 16	SET "TRACE" COMMAND
	, 64	SET "ON BREAK NEXT"
	, 128	PROTECT XB PROGRAM
-32700	, 0	CLEAR SCREEN FOR AN INSTANT
-32729	, 0	RUN "DSK1.LOAD"
-32730	, 32	RESET TO TITLE SCREEN
-32961	, 51	RESET TO TITLE SCREEN
	, 149	SETS "ON BREAK GOTO" LOCKS SYSTEM

THE FOLLOWING LOADS REQUIRE E/A OR MM

ADDRESS	VALUE(S)	MEANING
704	, P	USE POKEV(704,P) (WHERE P IS 16 TO 31) CHANGES BACKGROUND COLOR OF CURSOR

THE FOLLOWING LOADS REQUIRE E/A OR MM

```
=====
ADDRESS , VALUE(S) MEANING
=====
-24574 , 0 I THINK THIS ALLOWS THE MINI-MEM TO USE THE 24K FOR STORAGE
-30945 , 0 WHITE EDGES
-32272 , 0 , " , -30945 , 0 ) WILL PUT YOU IN TEXT MODE
-32766 , 0 BIT MAP MODE
-32768 , 0 GRAPHICS (NORMAL MODE)
-32280 , 0 MULTI-COLOR MODE
-32352 , 107 WILL BLANK THE SCREEN, ANY KEY PRESS WILL RESTORE
=====
```

\* PASCAL LOADS

```
=====
14586 , 0 , 0 THIS ALLOWS YOU TO DO A "RUN-TIME WARM START" FROM PASCAL TO
BASIC
=====
```

ADDRESS , VALUE(S) MEANING OF THE CALL LOAD

```
=====
-31700 , 4 LAST SOUND NEVER STOPS
-31803 , 35 GOES BYE LIKE QUIT
-31962 , 255 CAUSES X-BASIC RELOAD, LOOKS FOR LOAD FILE IN DISK DRIVE #1
-32572 , 1 PRODUCES "MUSHIE" KEYBOARD
-32572 , 120 DISABLES THE KEYBOARD
=====
```

ADDRESS , VALUE(S) MEANING OF THE CALL PEEK

```
=====
-20972 , A IF A=96, THEN SYNTHESIZER IS ATTACHED; A=0 FOR NO SPEECH
-31000 , A,B GIVES A RANDOM NUMBER FROM 0 TO 255
-31079 , A VDP INTERRUPT; COUNTS 1 TO 100
-31000 , A A=RANDOM NUMBER FROM 0 TO 99
-31000 , A A=AMOUNT OF MEMORY USED
=====
```

OTHER VALUES

MEANING OF THE EXPRESSION

```
=====
-DEF ROUND = INT((((10 R)*X)+.5)/(10 R) THIS WILL ROUND THE NUMBER X TO THE
NUMBER OF R DECIMAL PLACES. IF R IS
POSITIVE, IT WILL ROUND TO THE RIGHT
SIDE OF THE DECIMAL POINT. IF R IS
NEGATIVE, IT WILL ROUND TO THE LEFT.

-DEF MD=MAX(MAX(MIN(X,Y)),
MIN(Y,Z),MIN(X,Z)
MN=MIN(MIN(X,Y),Z) USED TO FIND THE HIGHEST, (MX);
MIDDLE, (MD); AND LOWEST, (MN), OF X, Y & Z
=====
```

24K OF DATA STORAGE

If you need to work with quite a bit of data or would like to change programs, but save the data after you press CALL QUIT then you can set up the 24K of High-Memory in the PEB as a single data file called "EXPMEM2", you open this file just as you would a disk file with one exception - you must PRECEED th OPEN statement with a CALL LOAD to the location -24574 as follows:

- For INT/VAR files - 24
- For DIS/VAR files - 16
- For INIT/FIX files - 0
- For DIS/FIX files - 0

Heres and example:

If you want to open up the Expansion Memory for Display, Variable 00 files this is what you'd do:

```
100 CALL INIT
110 CALL LOAD(-24574,16)
120 OPEN #1:"EXPMEM2",RELATIVE,UPDATE,DISPLAY,VARIABLE 00
```

Then continue on as you normally would.

If you want to store both data and assembly language routines at the same time do this:

```
100 CALL INIT
110 CALL LOAD(-24574,-16)
120 OPEN #1:"EXPMEM2"
130 CALL LOAD ("DSK1.ASSM1")
140 CALL LOAD ("DSK2.ASSM2")
150 CALL LINK ("START")
160 REM CONTINUE REST OF PROGRAM
```

In the above example the 24 K of high-memory was saved for use as a DATA file (DIS/VAR 00 format) then the assembly routines were loaded. The computer will look for the best place to put the routines and will adjust the pointer accordingly. After the routines are loaded, a LINK statement starts the first routine and off we go.

If that's not enough for you, you can also use the MINI-MEMORY for 4K more of storage of assembly routines! Now that's 16K of program space, 12K of assembly routine space!

\*\*\*\*\*

### Review: Wico Trackball -by Terry Atkinson

Having used many types of joysticks including Atari (good), Wico Ball (vg) Prostick II (vg), and even the old dual TI joystics (poor), I decided to try yet another product from Wico...the Wico Trackball.

Having used it for a few days, I am now wondering how on earth I have ever done without it! I would rate it at SUPERB, and this is probably an understatement.

The Wico trackball is very easy to use. Just plug the adapter (supplied) into a wall outlet and the other end to the jack. Then plug the other line directly into the joystick port. No more fussing with a "converter" cable. The trackball is made for the TI!

For use in all tested programs, this device performs beyond my expectations. For example, with TI-ARTIST, extraordinary control is exhibited. Even for free-drawing circles, because it has a full 360 degree movement! It takes only a few minutes of practice to "get used to" this unique tool. For games, it is also excellent. For example, 4A-FLYER: with the joystick it is very hard to "steady-up" on a specific course/altitude. With the trackball, this is a piece of cake! Heck, I even made it to the second screen on Parsec for the first time with this device! My son did the majority of testing with games, as I am not much of a game player. He reports superb control in all games...in particular TENNIS. He played the computer an "expert" game, and consistantly won the match. I think that speaks for itself!

The only drawback is that it cannot be used in "two-player" games. It also cannot be used as joyst2.

I strongly recommend the purchase of the Wico Trackball as an additional joystick. As for those considering buying another joystick, I would wholeheartedly recommend the purchase of the Wico Trackball. They are available from TENEX at a mere \$14.95 (U.S.) each, or just about any TI supplier, at various prices.

## Steve's Tid Bits#2

(C)1986 -by Steve Mickelson  
Source TI6788, CIS 76545,1255

Well lot's of things are happening in the TI lately and hopefully I can cover it as many of them as possible, space permitting. I'll try to keep a header so that you can pick out topics of interest. Many thanks to Randy for comments on my article, your constructive comments are welcome!

### Tid Bits Or Not Tidbits

I've been asked how I came up with the name of this column. Some point that the Hamilton Users Group had a column back in November, 1984 (Issue #11 Vol.2, which I do happen to have) by A. Charron. Others say its from Randy Rossetto, in a latter issue of our newsletter. Then again I think I may have taken it from the TI Bits Users Group. Anyway you can figure that one out.

### Periodicals For The TI-99/4A

Home Computer Magazine was to be replaced by a "magazine on a disk" called the Home Computer Journal or HCJ. It appears that the parent company, Emerald Valley Publishing is now out of business. A new company, called Computer Technology Publishing has "risen from the ashes". Whether or not it will try another permutation/combination of the Home Computer name is any body's guess.

An investigation by the D.A. of Eugene, Oregon has apparently begun. For those of you who paid for, and have yet to receive, issues of the Home Computer Magazine or any related hardware; you are considered a legally "damaged" party and should direct queries to:

DISTRICT ATTORNEY  
CONSUMER RELATIONS  
400 LAKE COUNTY COURTHOUSE  
EUGENE, OREGON (Zip not available), U.S.A.  
(503)-687-4261

The above info courtesy Randy Ainsworth. Best of luck!

MICROpendium (sic) is one of the better TI dedicated publications. Published monthly it has a wealth of information, reviews and tips for our computer. I highly recommend this one. Write:

MICROpendium  
P.O. Box 1343  
Round Rock, Texas, 78680  
U.S.A.  
-Rates \$18.50 (US Funds)

SMART PROGRAMMER is the new publication resulting from the merger of The Smart Programmer and Super 99 Monthly. Another publication dedicated to the TI. Write:

Bytemaster Computer Services  
171 Mustang St.  
Sulphur, LA., 70663  
U.S.A.  
-Rates \$18.00 (US Funds)  
366-3160

R/D Computing Newsletter is a monthly newsletter put out by Bruce Ryan, from Haliburton, Ont. The publisher also sells various hardware and software, so that some hardware/software reviews may have some bias. This publication is dedicated to the TI. Write:

Ryte Data  
P.O. Box 210  
Mountain St.  
Haliburton, Ont., K0M-1S0  
Canada  
-Rates \$14.00(US Funds)

The Genial Traveller Diskzine is described in Jim Ely's article about the home computing Journal. It is a good value for the money.

#### Hardware For The TI-99/4A

A couple of people have asked regarding the Foundation 128K memory card for the Peripheral Expansion Box. Namely Ram Disk Software. The name of the software is QS-RAMDISK Software. It apparently makes the card a true 127File RAM-disk with no file- size or file- type restrictions. Requires the Foundation 128K card, with DSR (NOT disk file emulator) option. I hope this is helpful, as I'm not familiar with this card. Write:

Quality 99 Software  
1804 Columbia Rd., #1021  
Washington, D.C., 20009  
U.S.A.  
-Sug. Price \$49.95(US Funds)

\*Tenex sells it for \$44.95(US) Write:

Tenex Computer Express  
P.O. Box 6578, South Bend  
IN, 46660, U.S.A.  
(219)-259-7051

I was by John Hannaford's Home Computer Systems retail store, in Port Perry. He said that he plans a fall inventory clearance of TI Software, (all Cartridges reduced to \$10.00 - \$15.00. He has a good selection of other disk and cassette based software, also reduced in September. John can also get almost all of the hardware and software for TI-99/4A and the peripherals. Contact:

John Hannaford  
Home Computer Systems  
100 Water St.,  
(Box 1217)  
Port Perry, Ont., L0B-1N0  
1-416-985-3744

Several P-Boxes with various cards are available in Hamilton. Contact:

Wentworth Supplies  
303 Jackson St. West  
Hamilton, Ont., L0P-1N2  
1-416-529-0031

Price reduced software available from Marketron, in two Toronto locations. One is:

Marketron  
Toronto Dominion Centre  
Shopping Concourse  
P.O. Box 150  
Toronto, Ont., M5K-1H1

TI Software and hardware is also available from Nova Computerware:

Nova Computerware  
52 Airport Rd.  
Edmonton, Alberta, T5G-0W7  
(403)-452-0732

Original Cases to hold fourteen TI command modules are available from the Consumer's Distributing Catalog Clearance Centre at the Golden Mile Plaza, on the northeast corner of Victoria Park and Eglinton. Price is \$6.99 each. Also, TI Command Cartridges are available for \$4.99 each.

If you haven't heard yet, then Horizon RAM-Disks are available, as well as printers and monitors. Contact Gil Tennant, (see index this publication).

Last Minute Updates: The TISIG is doing well on the Source, (for those of you with MODEMS and subscribe). A couple of us users cannot get the XMODEM downloads to work. Messages have been left to STC. As I've heard no problem with American users and have successfully used XMODEM at 1200 BPS, locally, it may be a problem with DATAFAC. Will keep you informed.

Family Computing, mentioned in Tid Bits #1, has restored TI-99/4A to the front cover of both the August and September issues, however program listings and software/hardware reviews are non-existent! For those who subscribe to Compuserve, a new database run by this magazine is being set-up. For those of you who have a technical or computer tip and subscribe to Compuserve, you can submit it to Family Computing and get \$25.00 (US Funds)! Downloads will be available, too! And best of all, Compuserve has just notified all subscribers that there will be no user fee for the time it takes you to upload to this or any other database! For this new database enter GO FAMFORUM from command level, (perhaps we all can suggest more support for the TI!)

P.S. For the TISIG, on the Source, enter TISIG, at command level. Well that's it for this month, Serially yours, Steve.

\*\*\*\*\*

#### East End SIG

The East End Sig, (Special Interests Group), that usually meets at Community Centre 55 at 97 Main St. (at Swanwick) south of Gerrard St. E., is on hold, till I get my act together later on this fall.

Please note, that the room is available to the club the second Saturday of the month even without my participation but a phone call is in order to the Centre to confirm, call 691-1113.

We took advantage of this free facility last month when Ron Gries of Horizon Computer in Ohio was in town to demo a couple of items and some software one evening midweek that was convenient to his vacation schedule.

As noted in some of my other dribble elsewhere in this newsletter, (I hope Steve?), this was set up by volunteers. I would also recommend to the membership that a small donation be made to Community Centre 55 in the Clubs name to support this nonprofit organization within which some of its programmes depend on volunteers.

Randy Rossetto

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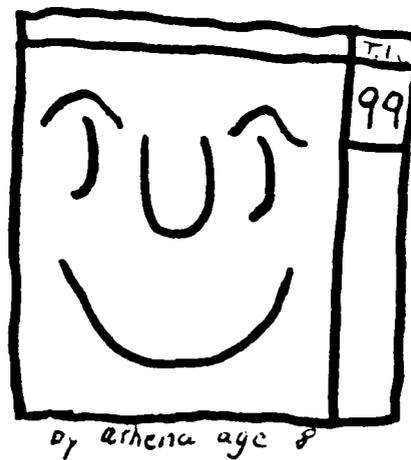
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TI Trivia

Here is a bit of trivia for you TI Runner fans. When you play the game TI Runner you find the logo of two other computer manufacturers; namely Apple and IBM, on screens #34 and #28, respectively. The question is what screen does TI appear and is there a screen with either Atari or Commodore logos?