Atlanta 99/4A Computer Users Group

CALL NEWSLETTER

Volume III Number 5 May/June 1985 Atlanta, Georgia

PRESIDENTS CORNER

'BUYER BEWARE'

There is no doubt that some great buys are to be had through the mail. Quick action taken on information overheard or passed on from the rumour mill has indeed lead to some once in a lifetime deals. On the other side of the coin however, beware of the scams and frauds that abound.

Our club received a letter about a 'gentleman' up north who was asking that everybody donate equipment to him so he could start a museum dedicated to preserving the existance of the TI 99/4A. It was his intention to 'display' all this equipment and would greatly appreciate help in this endeavor by having many people just give him consoles, printers, P Boxes, etc.

Sometimes I wonder whether people are out to pull a fast one or are just not right in the head.

Remember AJ International advertising in the 99'er a couple of years ago? Did anybody ever send them money for an RS232 or 32K memory. Did anybody ever get any equipment? Have you seen or heard of them since?

One of the problems we face as User's Groups is the existence of Assistance Groups or International Users groups that are not that at all but really businesses that publicize 'assistance' but are just out to make a buck. Nothing wrong with forming a company to make a profit, just be honest about your intentions without misleading everyone. Such misrepresentation makes it harder for the legitimate user's groups. To quote G.B.Romano, "The more intergalactic the name the likelier it is to be a scam."

Ryte Data sent letters to many User's Groups about their mission to gather public opinion about the making of a new 99/4A compatible 'super computer'. For only $6 they would send you 'updates' on the progress of this computer's development. Many groups published this in their newsletters only to find out later that the computer described was indeed being developed by a particular company but the President of this company had never heard of Ryte Data or their fact finding mission.

I could continue with many more dubious enterprises but a lot is unsubstatiated suspicions and hearsay. Instead I'll say if you have evidence or worries about the validity of any companies or advertisements then voice them to either your own User's Group or BBS system, or be prepared to get taken.

Gary Matthews

MINUTES - MAY MEETING

A Thanks to all those brave souls who managed to slip by the tanks and men in Army uniforms to attend the May meeting. They were filming a movie outside the library and the normal entrances were roadblocked. We even heard that people were being told that the Public Library was closed. Also Thanks to Ed Banovatz, Melvin Carter, Paul Hickey, and Walter Limehouse for doing some calling to the membership to let them know that special equipment was being demonstrated.

Boyd Cone of Information Associates demonstrated the new cartridge and disk operating system to be marketed for the 99/4A. This is compatible to Extended Basic but gives the computer commands capability far in excess to Extended Basic, especially in the graphics area. Also demonstrated was the new Myarc 128K Ramdisk (upgradable to 512K). A Personality card was passed around. This gives the 99/4A the ability to operate a hard disk drive. A new Hayes compatible 300/1200 modem under $300 was also passed around. Boyd also gave the club an update on the marketing date for the new 99 compatible computer.

After the demonstration, spontaneous applause followed.

At a previous meeting some of the Public Domain or Freeware was made available already copied onto diskettes. At this meeting almost 70 diskettes of various programs were pre-copied and available. Less than a dozen diskettes were still available after the meeting. Since the response was so favorable, this practice will continue.

SOME THINGS ARE TOO GOOD TO PASS UP SUCH AS THIS - 'PUNN' APRIL NEWSLETTER

A TERRIBLE LOSS by Cricket Raybern

We were saddened to learn recently of the death of one of our most valued members, Someone Else. Someone's passing created a vacancy that will be difficult to fill. Else had been with us almost since the club was formed, and during that time, Someone did far more than a normal person's share of the work. Whenever leadership was mentioned, this wonderful person was looked to for inspiration as well as results.

It was often said, "Someone Else can work with that group or committee." Whenever there was a job to be done or a meeting to attend, one name was on everybody's list--"Let Someone Else do it".

Someone Else was a wonderful person sometimes appearing supernuman. But a person can only do so much. Were the truth known, everyone expected too much of Someone Else. Now Someone Else is gone, and we wonder what we are going to do.

Someone Else left a wonderful example to follow, but who is going to follow it? Who is going to do the things that Someone Else always did?

CALL NEWSLETTER

CALL NEWSLETTER is the voice of the Atlanta 99/4A Computer Users Group. P.O.Box 19841, Atlanta, GA. 30325.
It is published at least 10 times a year. The A9CUG is not affiliated with any commercial company or organization.
CALL NEWSLETTER is published by and for the members of the A9CUG to enhance their knowledge of home computers. CALL NEWSLETTER is composed of articles written and/or donated by members of our group and from articles appearing in other home computer users' groups around the world. Opinions expressed by the authors do not necessarily represent those of the Officers or members of the A9CUG.
 The A9CUG freely exchanges newsletters with other groups around the country. If another club would like to receiver our newsletter but does not have one of their own to exchange; we will gladly sent it to them. We do ask that they send $5 a year or 50 cents a newsletter to help cover costs. Membership is open to family and individuals who own or are interested in using and programming home computers. Membership includes copies of this newsletter as they are published, access to the meetings of the main group and sub groups, and the groups Public Domain Library. Annual dues are $15.00.

M E E T I N G S

The dates and times for the meetings of the Atlanta 99/4A Computer User's Group is the third Sunday of the month at the downtown Atlanta Public Library (off Margaret Mitchell Square) at 3 p.m. Whether or not to hold meetings this summer is still being considered. For more information call a club officer or 231-0992.

SOUTHSIDE chapter meetings are held the first Sunday of the month at the Clayton County Recreation Center in Jonesboro, 101 Lake Jodeco Rd., meetings begin at 3 p.m. For more information call Francis Hauke at 461-7193.

EASTSIDE chapter holds regular meetings on the first Monday of every other month. For more information call Ralph Danson at 292-3427.

t r a d i n g p o s t

FOR SALE:TRANS-STAR 315 COLOR GRAPHICS PRINTER (PIO 7 colors/ New ink cartridge 8 1/2X11paper Tractor & Friction.$225 Melvin Carter 997-2617

C L U B O F F I C E R S

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Robert Murphy	Librarian

C L U B S A L E S

Available at the Meetings

TI FORTH Members $20 Non-members $30
--- thru mail Members $25 Non-members $30
Diskettes $1.50-$2.00 Depending on brand
Cassetes Tapes C-10, C-20, C-30 $.90-$1.10
Best of 99er Magazines as well as selected issues of Home Computer Magazine.
The prepared diskettes are: $3 Mm. $4 Non-mem.
1 Line = a disk containing the following:
(Some is FREEWARE- Please Support the Authors)
SCREEN DUMP
NEATLISTER
Disko/MASSCOPY/TK-WRITER/Gothic Print/COMM99
TI-WRITER and MULTIPLAN Updates
FORTH Source Code (2 single sided disks)
Extended Basic FORTH
TAX Forms & GA Sched.84(requires MULTIPLAN)
---Although for 84, can be modified for 85---
TI Advanced Debugger
TE3C - Advanced TE3 with source code
SPRITE BUILDER - takes 2 single sided disks

The above diskettes are available through the mail at the same member/non-member cost.
NOTE: If you send us diskettes with return postage mailer there is no charge.

DISKO
Public Domain available from the Club

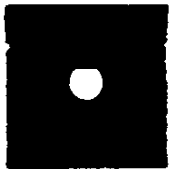
DISKO is a program that runs on the Editor Assembler that will allow you to look at (as HEX or ASCII) and change any sector of a diskette. The menu that comes with the program is humorous. Only the first two choices are functional.
I have it on good authority that the original DISKO that was submitted to TI was written by Guy Stefan Romano. The program as it first came from TI would allow you to address any sector on a double sided diskette (or single sided double density). However when stepping through the sectors in a forward direction there was a barrier in the program that would not let you go past 360 (the limit of a single sided single density diskette). Despite this 'barrier' it is still possible to address specically a sector up to 720 or step backwards if the starting sector was higher than 360.
Earl Hall posted a 'fix' on Compuserve to allow this barrier in the program to be removed. Dick Vandenburg wrote an article explaining how to implement the fix. Bob Willis implemented the fix for the club's copy of DISKO.
This article is largely copied from Dick Vandenberg.

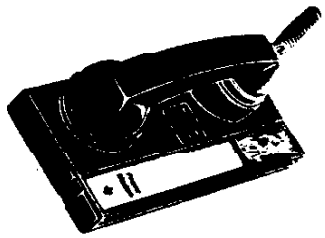
Load the code file into the ED/ASSEMBLER Editor and go to record #97. The numbers following the 3rd 'B' tag should be >0167. Change these to >02CF (720 base 10) or >059F (1440 for you DS/DD folks). Then change the '7' tag (the 6th from the last non-blank character on that line) to an '8' so that the checksum won't be checked.
Select the SAVE option of the Editor, respond N to the 'Variable -length?' prompt and save the file (as a different than the original!!!). You should now be able to load that file and access, through the PROCEED Fctn. key, the entire disk.

To run DISKO use the third option from the Editor/Assembler module. After entering DSK1.DISKO for the file name, move down to the program name and enter START.

DOCUMENTATION

Use the arrow keys to move around once you are in a sector. Fctn: E,X,S,D.
Fctn. 1 Displays Sector in HEX code
Fctn. 2 Displays Sector as ASCII
Fctn. 3 Exits the program
Fctn. 4 Moves back one Sector
Fctn. 5 Restarts Main Menu
Fctn. 6 Moves Forward one Sector
Fctn. 8 Rewrites the Sector to Disk.





A LITTLE BIT ABOUT COMMUNICATIONS

What can you say when you want to write about a topic, yet start out with a disclaimer. At the risk of sounding like I only know a little (it's true, and that little bit of knowledge was only recently acquired), I will push on.
Have you ever wondered how you can hear and speak at the same time on the phone even though we just use two wires to connect our house phone to the pole. Have you ever noticed that the phones seem to have 4 wires ready to hook up even though we just use two? Do you hear folks use terms like dedicated or leased lines, full and half duplex, and wonder just what are the differences? The answers are simple so here goes.
We have all seen a drawing of that wavy line that folks call a SINE wave. Most everyone is familiar with the idea that the number of times that line cycles up and down relates to frequency. Frequency is described as cycles per second and is referred to as Hertz. A high pitched sound could have a frequency of 8000 cycles per second or 8000 Hertz (Hz). Two of these signals can be transmitted over the phone lines at different frequencies at the same time without interferring with each others message. This principle is what allows a two way simultaneous converstaion to occur on the phone. This also refers to a term we use with modems and computers: Full Duplex.
When two separate frequency bands are used over a two wire line to provide Full Duplex operation, it is called FDM or frequency division multiplexing. Throw that term out to any computer hackers you might know and see if they know what you now know.
So, Full duplex means transmissions in both directions at the same time. Half duplex as you might guess means that you can transmit or receive but not both at the same time. A well known example of Half duplex would be a CB.
A Dedicated or Leased line usually refers to a 4 wire phone hookup where 2 wires are for transmit and the other two are to receive. It also means that the line is already connected to a specified location. No dialing, just pick up the phone and there you are. These dedicated lines are also more secure against interference since they have been designated by the phone company as not available for other circuits. When you normally dial up someone don't take for granted that the connection goes to the other party by the most direct path. The call gets routed through whatever line is available at the time, even routed out of state and back just to make a local call.
Now isn't that more than you ever wanted to know about communications.

Gary Matthews

REPEATING WORHTWHILE TIPS

From Ed York of the CIN DAY Users Group:

Some of the speech that the is listed in the back of Extended Basic Manual (Appendix L) are phrases and not just single words. It is not well documented that the speech which the Synthesizer knows as phrases must be preceeded and followed by a pound sign # before they can be properly spoken in Extended Basic. Examples of the proper command format are: CALL SAY(#WHAT WAS THAT#), CALL SAY(#READY TO START#), and CALL SAY(#THAT IS RIGHT#).

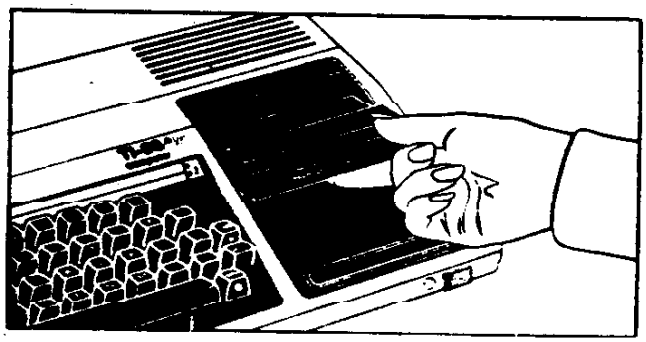
Here is a tip for Terminal Emulator II users from Mike Kelly, 4013 Honeycutt Street, San Diego, CA 92109, TIBBS phone 619-276-3173. If you are tired of the TE II screen colors, the next time you are ready to go on-line, enter all the default values and have your modem on, then type CTRL., SHIFT G, FCTN V, CTRL., SHIFT 9, SHIFT = and then choose a foreground and background color with:

! Black	' Cyan	# Dk. Green	" M. Green
(M. Red	- Magnta	$ Lt. Green	) Lt. Red
. Grey	0 D.Blue	* D. Yellow	/ White
% D. Red	+ L.Yellow		

M U L T I P L A N H I N T

From The Suncoast Beeper St. Petersburg, FL

If you use PIO with your printer, this should work to enable you to print your worksheet out in condensed print, or any way you want it. When your work sheet is done and you want a hard copy, type P then press the space bar once, then hit enter. Now, if you have your Multiplan main disk in drive 1, remove it. Place in drive 1 a disk you would like to have your worksheet on. Next type in the name you will give to your worksheet. Don't type DSK1. in front of the name. Press ENTER. Now the worksheet is on your disk in drive 1. Take the disk out if you have a one disk system. Load TI-Writer into your system now then bring up the Multiplan worksheet with the Editor in TI-Writer. You will see the first 7 lines of the worksheet as being empty. Hold down CTRL and press 0 to take you out of word wrap and place you in fixed mode. On the first line (where your cursor appears) type:
.TL 92:27,15 then press ENTER. (This coding applies to EPSON compatible printers.)
You can now print out your Multiplan spreadsheet with TI-Writer's FORMATTER and it will print in condensed print.



From Barry Traver of the Philadelphia U. G.

A brain teaser, something you may have used but never fully understood. The answer is in the EXTENDED BASIC book, but subtle, ever so subtle.

LINPUT BUG

```
100 ! LINPUT PUZZLE/BUG by B.A. TRAVER
110 ! QUESTIONS? SEND SASE TO BARRY TRAVER
120 ! 552 SEVILLE ST.  PHILA.  PA 19128
130 CALL CLEAR :: PRINT "LINPUT PUZZLE/BUG"
    :"BY BARRY TRAVER"
140 PRINT "      Can you figure out why your
    computer will not obey?"
150 PRINT "Why won't it stop when you tell it
    to?";;
160 !
170 LINPUT "Want me to Stop? (YES/NO)":M$
180 IF M$="YES" THEN STOP ELSE 170
190 END
```

The Following Program was Distributed by Jim Peterson of TIGERCUB Software. It unfurls the U.S. flag (49 stars) in just 2 lines of Extended Basic:

```
100 CALL CLEAR::CALL COLOR(2
,16,5,9,16,16,4,7,7)::A$(1)=
"********080808"::A$(2)=RPT$(
"80",7)::CALL CHAR(33,RPT$("
01",8))::CALL VCHAR(4,4,33,)

110 FOR C=5 TO 22:: X=1+ABS(
C)11)::FOR T=1 TO 13::CALL V
CHAR(5+T,C,ASC(SEG$(A$(X),T,
1)))::NEXT T::NEXT C::GOTO 1
10
```

NOTE: You must now edit line 100 by typing 100 followed by FTCN and X keys. The physical line is longer than the 5 lines allowed by EXTENDED BASIC so you must fool it by going to the last ')' and pressing FCTN and 2 (insert). Then add 20 so the line now reads CALL VCHAR(4,4,33,20) Note also that the 5 lines typed for line 100 now are spaced into the 6th line.

WHERE DOES THE CREDIT GO FOR THIS ONE

Those of you with Extended Basic may not know that the ACCEPT statement will accept up to 255 characters unedited characters (comma and quote marks are okay). It also is not screwed up by edge characters (as in LINPUT), and can be used in the Command mode. The restrictions are that the SIZE and AT options cannot be used, and the screen scrolls, just as it would with an INPUT command. A typical line would look like this:
1000 ACCEPT BEEP: X$
Try it. It is very useful for text processing applications.

Reprinted from: MSP 99 NEWSLETTER (Minneapolis-St.Paul)

Debugging the SUPER-BUGGER

By Dick Dunbar

As you may know by now if you acquired TI's Super-Bugger from the MSP 99 Program Library, the Super-Bugger has a bug. Perhaps more than one, but for now we'll concentrate on a specific bug.

If you try to assign dump or disassembly output to a disk file, it results in all of the available space on the disk specified being assigned to the file, but no recoverable data is written to it. This is caused by the PAB being destroyed when the file is assigned to disk. There is a solution to this problem. It involves modifying the object program file using the Editor/Assembler. The fix given below applies to uncompressed object files only.

As it happens, Navarone Industries is also distributing a version of this same debugger under the name Bug Fixer, and this version has the same bug. So we will provide the fix for both of these packages at the same time. The data to be changed is the same in both cases, but the address where it occurs differs between the two products.

To make this modification, you will have to enter the Editor and load your object file, then make the changes shown below. To do this, you must find the line containing the specified address (leftmost two columns below) and locate the specific data to be changed. Each line which we are concerned with begins with an "A" followed by a 4-digit hexadecimal address. Each data field starts with a "B" followed by 4 hexadecimal digits of data.

You must find the highest numbered line whose "A" address is equal to or lower than the address to be changed. Then count across the "B" fields in that line (remember to count in hexadecimal, and to count 2 for each "B" field) until you reach the specified address. You can double check that the field contains the specified original value as shown in the third column below. Then change the hexadecimal digits following the "B" to the value shown in the fourth column below.

In some cases, more than one "B" field may need to be changed on the same line. When you have changed all the "B" fields on a line, locate the check field at the end of the line. It will immediately follow the last "B" field on the line, and will contain a "7" followed by 4 hexidecimal digits. Change the "7" to an "8".

When you have made all the indicated changes, save the object file under a DIFFERENT NAME from the original, so that you have a backup in case you made a mistake. Here are the changes to be made:

Location		Original	Change
SBUG	BFIX	Contents	To
015A	015A	3F20	1020
12DE	12DC	7F00	5000
12F2	12F0	3F09	1009
132A	1328	7F20	5020
1342	1340	7F05	5005
1356	1354	7F00	5000
1366	1364	3F09	1009
137A	1378	7F00	5000
1382	1380	3F09	1009

A version of this correction was published originally in the MICROpendium. This is a modified version with the Navarone Bug Fixer correction added as well.

From CENTRAL IOWA 99/4A U.G.

If you have the book by Ralph Molesworth Introduction to Assembly Language for the TI Home Computer; There are some corrections that should be made:

```
-----PAGE 25 Lines 11&12--
11 START MOV  R11,@SAVRTN
12       LWPI WSPREG
-----PAGE 112   LABLE SG2 should be MSG2
-----PAGE 115 & 121- PBASIC SEGMENT should be
PBASIC MOVB *R2+,R1      :     DEC R3
       AB   @OFFST,R1    :     JNE PBASIC
       BLWP @VSBW        :     RT
       INC  R0           :
```

Hope the changes help some people. I know when I spend hours debugging a program and it still won't work and then find out it wasn't my fault after all; well it's a good thing my loaded 44 MAG. is in the bedroom and my computer isn't. So, if any of you have debugged a published program, let us know so we can publish it.

@@@@@@@@@@@@@@@@@@@

The A9CUG sent an order in to Jim Peterson of TIGERCUB Software. Before we could blink and turn around, the order came back filled. It even came with extras that we didn't even request. There will be a full review of his NUTS & BOLTS as well the other software that we received in the next CALL NEWSLETTER. Be it said here and now that when you order from TIGERCUB Software you get an unmistakable bargain and very good software. $1 will get his catalog which is refundable on your first order.

TIGERCUB SOFTWARE
156 COLLINGWOOD AVE
COLUMBUS, OH 43213

LAWS OF COMPUTER PROGRAMMING

The following comes from the L.A. 99ers' TOPICS newsletter Dec.1983 and Jan.1984

1. Any given program when running is obsolete.
2. Any given program costs more and takes longer.
3. If a program is useful, it will have to be changed.
4. Any given program will expand to fill all available memory.
5. If a program is useless, it will have to be documented.
6. The value of a program is proportional to the weight of its output.
7. Program complexity grows until it exceeds the capability of the programmer who must maintain it.

@@@@@@@@@@@@

The next newsletter will also have a review of the MYARC 3Z/128K RAM Disk Expansion Memory. I have been nothing but impressed since I got the card. I especially like the way it can have a calculator type power supply hooked into it, so when your entire system is powered down, the information on your Ramdisk is still there. They might even have the chips to upgrade it to 512K by the next newsletter.

COMPUTER CRAPS By RAMSOFT ENTERPRISES
Copyright 1983 All Rights Reserved

Computer Craps was written by Ramon Martinez of Ramsoft Enterprises. This program is copyrighted by Ramsoft and any attempt to sell this program for profit is a violation of the copyright. Effective October 20,1984, RAMSOFT gives the privilage to any users to copy and freely distribute this program as long as the following conditions are met:

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2. The dedication screens appearing in the program are not to be removed, modified or altered in any way.
3. No individual person (except the original author), business group or organization may charge a price, fee, commission, or realize any financial gain form the duplication of this disk.
4. The term 'USERS GROUP' in the following conditions is defined as an organization dedicated to the proliferation of computers. The USERS GROUP must NOT have any paid staff, officers, or workers to meet our definition of a USERS GROUP. The group must also exist on an intentional non-profit basis.
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If you like COMPUTER CRAPS, and you feel that this program is worth five dollars, it is requested that you send five dollars to the author at the following address:

RAMON MARTINEZ
1125 FERNDALE AVENUE
FULLERTON, CA 92631

@@@@@@@@@@@@

IMPORTANT NOTE:

THE CLUB BBS SYSTEM NEEDS A NEW SYSOP

Bob Willis, who has been operating the Club's Public Domain Library as well as the Bulletin Board System, will no longer be able to do both. He is vacating the BBS Sysop position because he does not feel he will have the time to properly devote to it. We are presently looking for someone to fill this position.

BITMAC disk media software was designed for use with the TI-99/4A home computer. It is written in TMS9900 machine language for the utmost in speed and program function. The program provides bit precision graphics generation and editing. Some of the features are:

Line, rectangle, circle, copy section, mirror, rotate, reverse video, free hand draw, 9 brush sizes, 16 colors, bit "on" color, bit "off" color, screen color, color test area, 40 column text, text on text, text on graphics, 16 color text, upper and lower case, 4 direction bit scrolling, dump to printer (two sizes), save to disk, boolean graphics enhancement, "LIFE" graphics enhancement, second computer input, X Y vector reporting, monochrome and color monitor support, trackball support, single bit erase, single bit placement, block erase, erase colors, erase all, fill, enlarge, reduce, "slide show", "oops" function.

BITMAC is icon driven and is simple to use. Included are extensive documentation, an example coprocessor program and one year warranty.

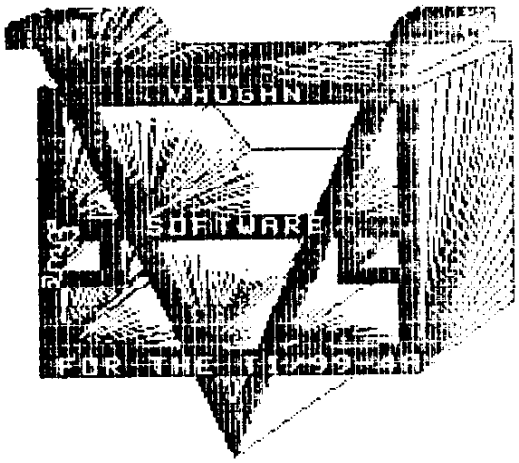
REQUIRED EQUIPMENT: Extended basic, Mini Memory or Editor Assembler module, a display monitor, joysticks, TI-99/4A computer, memory expansion and a disk drive system.

OPTIONAL EQUIPMENT: TI, Gemini or Epson printer, RS232 card, trackball, up to 5 disk drives (limited by the disk controller), second computer (any make) with RS232 interface and cable.

To Order: Send check or money order for $29.95 plus $2.00 shipping and handling to:

VAUGHN SOFTWARE
5460 Harlan #84
Arvada, CO 80002

For other inquiries please include a self addressed stamped envelope.



BITMAC

By Vaughn Software

For the

TI-99/4A COMPUTER

USERS GROUP SPECIALS

TIPS FROM THE TIGERCUB

#23

TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213

The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are now available as a full disk of 50 programs, routines and files for just $15.00 postpaid!

Nuts & Bolts is a diskfull of 100 (that's right, 100!) XBasic utility subprograms in MERGE format, ready for you to merge into your own programs. Contents include 13 type fonts, 14 text display routines, 12 sorts and shuffles, 9 data saving and reading routines, 9 wipes, 8 pauses, 6 music, 2 protection, etc., and now also a tutorial on using subprograms, all for just $19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and XBasic at only $3.00 each!(plus $1.50 per order for cassette, packing and postage, or $3.00 for diskette, PPH) I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

Several different routines have been published which will extract and save a specified series of lines out of a program, but this one by George Steffen of the L.A. 99ers is certainly the best.

```
1 !SUBROUTINE EXTRACTOR by G
eorge F. Steffen. SAVE in ME
RGE format. MERGE into any p
rogram (with line # starting
 above 8). RUN to extract
2 !selected lines. Deletes i
tself. Then BE SURE to SAVE
the selected lines in MERGE
format because the remaining
 lines are still in memory!
3 CALL CLEAR :: CALL INIT ::
 INPUT "Line numbers of rout
ine to be saved: First,Last?
      ":L,M :: G=256 :: CAL
L PEEK(-31952,H,I,J,K)
4 C=INT(M/G):: D=M-C*G :: F=
(J-6)*6+K :: FOR E=(H-6)*6+I
 TO F STEP 4 :: CALL PEEK(E,
A,B):: IF A=C AND B=D THEN 6
5 NEXT E :: PRINT :"LINE";M;
"NOT FOUND!" :: STOP !@P-
6 H=INT(E/G):: I=E-(G*H):: H
=H+6 :: C=INT(L/G):: D=L-C*G
 :: FOR E=E+4 TO F STEP 4 ::
 CALL PEEK(E,A,B):: IF A=C A
ND B=D THEN 8 !@P-
7 NEXT E :: PRINT :"LINE";L;
"not found!" :: STOP !@P-
8 E=E+3 :: J=INT(E/6):: K=E-
(6*J):: J=J+6 :: CALL LOAD(-
31952,H,I,J,K):: STOP !@P-
```

The enhancements to my Menu Loader, published in Tips #22, contained an error. Please change line 413 to read -

```
413 LINPUT #2:M$ :: PRINT M$
 :: IF EOF(2)THEN 416
```

Some folks were interested in the idea of a program that writes a program, so let's write a program that will write a program to list the token codes that you need to use to write a program that will write a program -

```
100 OPEN #1:"DSK1.TOKENLIST"
,OUTPUT,DISPLAY ,VARIABLE 16
3 :: FOR N=129 TO 254 :: L1=
INT(N/256):: L2=N-256*L1
110 PRINT #1:CHR$(L1)&CHR$(L
2)&CHR$(131)&CHR$(N)&CHR$(0)
:: NEXT N
120 PRINT #1:CHR$(255)&CHR$(
255):: CLOSE #1 :: END
```

Key that in and SAVE it just in case, then RUN it. When READY, type NEW, then MERGE DSK1.TOKENLIST. Now LIST it and you will see a list of ASCII codes 129 through 254 and their token meanings. Delete lines 171 through 175, 185, 198, 226 through 231, and 242. Change the definition of 199 to QUOTED STRING, of 200 to UNQUOTED STRING, and 201 to LINE NUMBER, and add line 255 END OF FILE.

You don't need all those exclamation points, so change the program to a DIS/VAR 80 file by LIST "DSK1.TOKENLIST". Then key in this little routine.

```
100 OPEN #1:"DSK1.TOKENLIST"
 :: OPEN #2:"PIO"
110 LINPUT #1:A$ :: PRINT #2
:SEG$(A$,1,4)&SEG$(A$,6,LEN(
A$)):: IF EOF(1)<>1 THEN 110
120 CLOSE #1 :: CLOSE #2 ::
END
```

RUN it, and print out a list of all the token codes. More on this next month - if someone buys a few programs so that I can afford another month.

Now that we've done about all that we can with the Menu Loader, here is another version to use on your finalized library disks of programs. It lacks the features that you will no longer need, but will list your programs by their full names, up to 24 characters long.

```
100 !NAMELOADER by A. Kludge
/N. Gordon/T. Boisseau/J. Pe
terson/etc.
110 CALL CLEAR :: CALL SCREE
N(5):: FOR S=1 TO 14 :: CALL
 COLOR(S,7,16):: NEXT S :: C
ALL VCHAR(1,31,1,96):: CALL
COLOR(8,2,16)
120 OPTION BASE 1 :: DIM P$(
99),N$(99)
130 ! List the full names of
 the programs on the disk in
 the DATA statements, in the
 sequence in which they are
 listed by an ordinary disk
 cataloger program
140 !Then SAVE this program
under the filename LOAD
150 DATA
160 DATA
170 DATA
180 DATA
190 DATA END
200 FOR J=1 TO 99 :: READ N$
(J):: N$(J)=SEG$(N$(J),1,24)
210 IF N$(J)="END" THEN N$(J
)=" " :: GOTO 230
220 NEXT J
230 IMAGE ##
240 DISPLAY AT(1,4):"TIGERCU
B NAMELOADER"
250 D$="DSK1." :: OPEN #1:D$
,INPUT ,RELATIVE,INTERNAL ::
 INPUT #1:P$
260 FOR X=1 TO 99 :: IF X/20
<>INT(X/20)THEN 290
270 DISPLAY AT(24,1):"Type #
 of choice or Enter 0" :: AC
CEPT AT(24,27)VALIDATE(DIGIT
)SIZE(-3):K :: IF K=0 THEN 2
80 :: IF K>0 AND K<NN+1 THEN
 390 ELSE 270
280 X=1
290 I=I+1 :: IF I>127 THEN K
=X :: GOTO 370
300 INPUT #1:P$ :: NN=NN+1
310 IF LEN(P$)=0 THEN 350
320 DISPLAY AT(X+3,2):USING
230:NN :: DISPLAY AT(X+3,5):
N$(NN):: P$(NN)=P$
330 CALL KEY(0,KK,ST):: IF S
T=0 THEN 340 :: FLAG=1 :: GO
TO 350
340 NEXT X
350 DISPLAY AT(X+4,1):" " ::
 DISPLAY AT(X+5,2):USING 230
:NN+1 :: DISPLAY AT(X+5,6):"
Terminate"
360 DISPLAY AT(X+6,1):"   C
hoice?" :: ACCEPT AT(X+6,16)
SIZE(2)VALIDATE(DIGIT):K ::
IF K<>NN AND K<>NN+1 THEN 38
0
370 IF K=NN+1 THEN CALL CLEA
R :: CLOSE #1 :: END
380 !IF K<1 OR K>99 OR LEN(P
$(K))=0 THEN 350
390 CLOSE #1
400 CALL INIT :: CALL PEEK(-
31952,A,B):: CALL PEEK(A*256
```

```
+B-65534,A,B):: C=A*256+B-65
534 :: A$=D$&PG$(K):: CALL L
OAD(C,LEN(A$))
410 FOR I=1 TO LEN(A$):: CAL
L LOAD(C+I,ASC(SEG$(A$,I,1))
):: NEXT I :: CALL LOAD(C+I,
0)
420 CALL VCHAR(1,3,32,672)::
 CALL SCREEN(8):: FOR S=0 TO
 14 :: CALL COLOR(S,2,1):: N
EXT S :: DISPLAY AT(12,2):"L
OADING ";M$(K)
430 RUN "DSK1.1234567890"
```

Last month I forgot to have anything for the kids, or anything in Basic, so -

```
100 CALL CLEAR
110 REM by Jim Peterson of
Tigercub Software
120 PRINT TAB(1);"****AUTOMA
TIC MOUSE MAZE****": : : :"
 Choose your mouse and":"wa
tch it try to find its way"
130 PRINT "through the maze.
": :"  When one of the mice
 has":"taken 50 extra steps,
 the":"cat gets it!"
140 PRINT : :"Touch any key"
150 CALL KEY(0,K,ST)
160 IF ST<1 THEN 150
170 CALL CLEAR
180 CALL CHAR(120,"0078FEFFF
E78")
190 CALL CHAR(121,"1038387C7
C7C7C38")
200 CALL CHAR(122,"3B7C7C7C7
C383810")
210 CALL CHAR(123,"001E7FFF7
F1E")
220 CALL CHAR(128,"001E61816
11E")
230 CALL CHAR(129,"384444444
4242410")
240 CALL CHAR(130,"102828444
4444438")
250 CALL CHAR(131,"007806818
678")
260 CALL SCREEN(5)
270 T1=610
280 T2=610
290 CALL CHAR(136,"FFFFFFFFF
FFFFFFF")
300 CALL COLOR(14,16,16)
310 CALL COLOR(13,2,16)
320 CALL COLOR(12,2,16)
330 R=10
340 GOSUB 1460
350 R1=10
360 C=2
370 C1=2
380 CALL HCHAR(R,C,136,2)
390 C=C+1
400 M=120
410 M2=128
420 RANDOMIZE
430 A=(INT(2*RND)+1)*2
440 B=INT(10*RND)+1
450 ON B GOSUB 470,470,470,4
70,510,510,550,550,590,590
460 GOTO 420
470 IF C+A>30 THEN 630
480 CALL HCHAR(R,C,136,A)
490 C=C+A
500 RETURN
510 IF R+A>20 THEN 540
520 CALL VCHAR(R,C,136,A)
530 R=R+A
540 RETURN
550 IF R-A<2 THEN 580
560 CALL VCHAR(R-A+1,C,136,A
)
570 R=R-A
580 RETURN
590 IF C-A<3 THEN 620
600 CALL HCHAR(R,C-A+1,136,A
)
610 C=C-A
620 RETURN
630 CALL HCHAR(R,C,136)
640 C=C+1
650 IF C<31 THEN 630
660 R2=R
670 C2=C
680 CALL HCHAR(R1,C1,M)
690 CALL HCHAR(R2,C2,M2)
700 Y=Y+1+(Y=2)*2
710 IF Y=2 THEN 1020
720 CALL HCHAR(R1,C1,136)
730 ON M-119 GOTO 800,900,74
0,850
740 IF C1=31 THEN 950
750 CALL GCHAR(R1,C1+1,G)
760 IF G=32 THEN 850
770 C1=C1+1
780 M=120
790 GOTO 950
800 CALL GCHAR(R1-1,C1,G)
810 IF G=32 THEN 740
820 R1=R1-1
830 M=121
840 GOTO 950
850 CALL GCHAR(R1+1,C1,G)
860 IF G=32 THEN 900
870 R1=R1+1
880 M=122
890 GOTO 950
900 CALL GCHAR(R1,C1-1,G)
910 IF G=32 THEN 800
920 C1=C1-1
930 M=123
940 GOTO 950
950 CALL HCHAR(R1,C1,M)
960 IF (C1=31)*(C2=2)THEN 13
20
970 IF C1<31 THEN 780
980 T2=T2-10
990 CALL SOUND(50,T2,5)
1000 IF T2=110 THEN 1340
1010 GOTO 780
1020 CALL HCHAR(R2,C2,136)
1030 ON M2-127 GOTO 1040,120
0,1090,1150
1040 CALL GCHAR(R2+1,C2,G)
1050 IF G=32 THEN 1090
1060 R2=R2+1
1070 M2=129
1080 GOTO 1250
1090 IF C2=2 THEN 1250
1100 CALL GCHAR(R2,C2-1,G)
1110 IF G=32 THEN 1150
1120 C2=C2-1
1130 M2=128
1140 GOTO 1250
1150 CALL GCHAR(R2-1,C2,G)
1160 IF G=32 THEN 1200
1170 R2=R2-1
1180 M2=130
1190 GOTO 1250
1200 CALL GCHAR(R2,C2+1,G)
1210 IF G=32 THEN 1040
1220 C2=C2+1
1230 M2=131
1240 GOTO 1250
1250 CALL HCHAR(R2,C2,M2)
1260 IF (C2=2)*(C1=31)THEN 1
320
1270 IF C2>2 THEN 780
1280 T1=T1-10
1290 CALL SOUND(50,T1,5)
1300 IF T1=110 THEN 1370
1310 GOTO 780
1320 CALL HCHAR(1,1,32,768)
1330 GOTO 330
1340 GOSUB 1460
1350 PRINT "THE CAT GOT THE
WHITE MOUSE": :
1360 GOTO 1390
1370 GOSUB 1460
1380 PRINT "THE CAT GOT THE
BLACK MOUSE": :
1390 PRINT "TO PLAY AGAIN, T
OUCH ANY KEY"
1400 CALL KEY(0,K,ST)
1410 IF ST<1 THEN 1400
1420 T1=610
1430 T2=610
1440 CALL HCHAR(1,1,32,768)
1450 GOTO 330
1460 CALL HCHAR(23,1,32,32)
1470 PRINT CHR$(128);(610-T1
)/10;TAB(28);CHR$(128);(610-
T2)/10
1480 RETURN
```

Did you know that ACCEPT AT(1,0) will accept a full line of 28 characters? Did you know that ACCEPT AT (R,0)SIZE(-28) and Enter will accept everything on row R? And did you know that ACCEPT N$ will accept a string of 255 characters?

Need a filler, so -

```
100 !MUSICAL BARGRAPH by Jim
 Peterson
110 CALL CLEAR :: CALL SCREE
N(5):: FOR J=2 TO 14 :: X=J-
(J>4):: CALL COLOR(J,X,X)::
NEXT J
120 DIM N$(13),N(13):: M$="(
08@HPX'hpx"&CHR$(128)&CHR$(1
36):: FOR J=1 TO 13 :: N$(J)
=SEG$(M$,J,1):: DISPLAY AT(J
+6,1)SIZE(1):N$(J):: NEXT J
130 X=110 :: FOR J=1 TO 13 ;
: N(J)=X*1.059463094^(J-1)::
 NEXT J
140 A=INT(13*RND+1):: B=INT(
25*RND+1):: DISPLAY AT(A+6,2
)SIZE(20):RPT$(N$(A),B):: CA
LL SOUND(B*40,N(A),0,N(A)*2+
4,0,N(A)*4+6,0)
150 DISPLAY AT(A+6,2):"" ::
GOTO 140
```

MEMORY FULL

Jim Peterson

We wish to give credit to the PUGET SOUND 99'ERS who printed this All Purpose Handy Dandy Reference sheet in their APPIL 85 Newsletter.

QUICK REFERENCE SHEET

COLOR CODES

COLOR	VALUE
TRANSPARENT	1
BLACK	2
MED. GREEN	3
LT. GREEN	4
DARK BLUE	5
LT. BLUE	6
DK. RED	7
CYAN	8
MED. RED	9
LT. RED	10
DK. YELLOW	11
LT. YELLOW	12
DK. GREEN	13
MAGENTA	14
GRAY	15
WHITE	16

PATTERN IDENTIFIER CONVERSION TABLE

0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	0	0	0	8
1	0	0	1	9
1	0	1	0	A
1	0	1	1	B
1	1	0	0	C
1	1	0	1	D
1	1	1	0	E
1	1	1	1	F

ERROR CODES

FIRST	COMMAND OR STATEMENT
0	OPEN
1	CLOSE
2	INPUT
3	PRINT
4	RESTORE
5	OLD
6	SAVE
7	DELETE
9	EOF

SECOND	TYPE OF ERROR
0	DRIVE NOT FOUND
1	DEVICE or FILE WRITE PROTECTED
2	BAD OPEN ATTRIBUTE
3	ILLEGAL OPERATION
4	OUT OF SPACE
5	ATTEMPT TO READ PAST END OF FILE
6	DEVICE ERROR or HARDWARE ERROR
7	FILE ERROR - File or disk does not exist

ASCII CODES

CODE		CODE		CODE		CODE		CODE		CODE		CODE	
30		46	.	65	A	82	R	99	c	116	t	133	GO
31		49	1	66	B	83	S	100	d	117	u	134	GOTO
32		50	2	67	C	84	T	101	e	118	v	135	GOSUB
33	!	51	3	68	D	85	U	102	f	119	w	136	RETURN
34	"	52	4	69	E	86	V	103	g	120	x	137	DEF
35	#	53	5	70	F	87	W	104	h	121	y	138	DIM
36	$	54	6	71	G	88	X	105	i	122	z	139	END
37	%	55	7	72	H	89	Y	106	j	123	{	140	FOR
38	&	56	8	73	I	90	Z	107	k	124	|	141	LET
39	'	57	9	74	J	91	[	108	l	125	}	142	BREAK
40	(	58	:	75	K	92	\	109	m	126	~	143	UNBREAK
41	)	59	;	76	L	93	]	110	n	127	DEL	144	TRACE
42	*	60	<	77	M	94	^	111	o	128		145	UNTRACE
43	+	61	=	78	N	95	_	112	p	129	ELSE	146	INPUT
44	,	62	>	79	O	96	`	113	q	130	::	147	DATA
45	-	63	?	80	P	97	a	114	r	131	!	148	RESTORE
46	.	64	@	81	Q	98	b	115	s	132	IF	149	RANDOMIZE
47	/												

CODE		CODE	
150	NEXT	167	SUB
151	READ	162	DISPLA
152	STOP	163	IMAGE
151	DELETE	164	ACCEPT
154	REM	165	ERROR
155	ON		
156	PRINT		
157	CALL		
158	OPTION		
159	OPEN		
160	CLOSE		

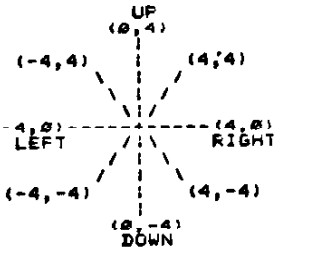
CHARACTER SETS

SET	ASCII CODES
0	30-31
1	32-39
2	40-47
3	48-55
4	56-63
5	64-71
6	72-79
7	80-87
8	88-95
9	96-103
10	104-111
11	112-119
12	120-127
13	128-131
14	136-143
15	144-151\BASIC
16	152-159/ONLY

CALL KEY VALUE OF KEYSTROKES

CODE	KEYSTROKE
1	FCTN 7
2	FCTN 4
3	FCTN 1
4	FCTN 2
5	FCTN =
6	FCTN 6
7	FCTN 3
8	FCTN 5
9	FCTN D
10	FCTN X
11	FCTN E
12	FCTN 6
13	ENTER
14	FCTN 8
15	FCTN 9

JOYSTICK RETURN VALUES



CONTROL CODES

ASC	PRESS	COMMENTS
1	CTRL A	START OF HEADING
2	CTRL B	START OF TEXT
3	CTRL C	END OF TEXT
4	CTRL D	END OF TRANS.
5	CTRL E	INQUIRY
6	CTRL F	ACKNOWLEDGE
7	CTRL G	BELL
8	CTRL H	BACKSPACE
9	CTRL I	HORIZ. TAB
10	SHFT/ENTR	LINE FEED
11	CTRL K	VERTICAL TAB
12	CTRL L	FORM FEED
13	ENTER	CARRIAGE RETURN
14	CTRL N	SHIFT OUT
15	CTRL O	SHIFT IN
16	CTRL P	DATA LINK ESCAPE
17	CTRL Q	DEVICE CONTROL 1
18	CTRL R	DEVICE CONTROL 2
19	CTRL S	DEVICE CONTROL 3
20	CTRL T	DEVICE CONTROL 4
21	CTRL U	NEG. ACKNOWLEDGE
22	CTRL V	SYNCHRONOUS IDLE
23	CTRL W	END OF TRANSMIS.
24	CTRL X	CANCEL
25	CTRL Y	END OF MEDIUM
26	CTRL Z	SUBSTITUTE
27	CTRL .	ESCAPE
28	CTRL M	FILE SEPARATOR
29	CTRL J	GROUP SEPARATOR
30	CTRL 8	RECORD SEPARATOR
31	CTRL 9	UNIT SEPARATOR
127	SHIFT V	DELETE CHARACTER

EXTENDED BASIC STATEMENTS

ACCEPT	DISTANCE	KEY	ON WARNING	SCREEN
CHAR	END	LET	OPEN	SOUND
CHARPAT	ERR	LINK	OPTION BASE	SPSET
CHARSET	FOR	LINPUT	PATTERN	SPRITE
CLEAR	GCHAR	LOAD	PEEK	STOP
CLOSE	GOSUB	LOCATE	POSITION	SUB
COINC	GOTO	MAGNIFY	PRINT	
COLOR	HCHAR	MOTION	RANDOMIZE	
DATA	IF THEN	NEXT	READ	
DEF	IMAGE	ON BREAK	REM	
DELSPRITE	INIT	ON ERROR	RESTORE	
DIM	INPUT	ON GOSUB	RETURN	
DISPLAY	JOYST	ON GOTO	SAY	

CALL LOADS

ADDRESS	PARAMETERS	DESCRIPTION
-32768	POKE 0-255	RATE of FLASH of CURSOR
-31788	POKE 192	DISABLE SPRITE action
-31804	PEEK X,Y	Returns to Title Screen
	POKE X,Y	
-31806	POKE 16	DISABLE QUIT KEY(Fctn =)
	POKE 32	DISABLES SOUND
	POKE 64	DISABLES AUTOSPRITE MOTION
-31860	POKE 4	Goes to console BASIC after 'NEW' is typed
-31860	POKE 0	Runs DSK1.LOAD
-31878	POKE 0-26	Highest # SPRITE in motion
-31886	POKE 63,255	Disables Disks,NEW fre.mem
-31931	POKE 0/128	Unprotects/Protects progrm
-31962	POKE 2	Returns to TITLE SCREEN
-31962	POKE 55	Runs DSK1.LOAD
-31952	PEEK A,B,C,D	Recovers program with LOAD
-28672	PEEK A	96=Speech Syn. 0=No Speech