Atlanta 99/4A Computer Users Group

CALL NEWSLETTER

VOLUME IV NUMBER 6 JULY 1986 Atlanta, Georgia

PRESIDENTS CORNER

Here it is September with the newsletter heading saying JULY/AUGUST. The vast majority of our members will receive this before the September 21th meeting. And the September issue will actually get to you in the first half of October. That I am pretty well sure about. With a little luck the October issue will be mailed before October 31st.

Although we have fallen behind, there will indeed be 10 issues this year as there has been for the previous three years. The biggest boon to this and the next issues' production has been the much appreciated work by Bobby Miller and Jim Barksdale. Bobby has typed in material from other newsletters for the last four months and given me a disk with the files at the monthly meetings. He has actually asked if there is more that he can do! We need to keep ahold of this man.

Jim has given me a disk with typings from other newsletters at a recent meeting and it has come in very handy. Maybe he will do more if I bribe him with a few stacks of newsletters from other groups.

Except for the announcements and such in this issue and the next, all the articles are coming from other groups. We at least want to print them in our newsletter with the article having been retyped so the newsletter that you hold in your hands is even in appearance. If we wanted to (print costs notwithstanding) we could produce a fifty page newsletter each month that was nothing more than articles cut from other groups and pasted into ours. It will become pretty obvious real fast if we ever come to that.

Now on to the good stuff. We will sponsor another BUY/SELL SWAP MEET for the November meeting. The last one went over very well and the nest one we hope will have many more people attend with this additional lead time to spread the word. The details will follow in the next column with a heading all its own to attract more attention.

Gary Matthews

NOVEMBER SWAP MEET

Do to the success of the swap meet held in July, another one will be held in November. The club wrote a check for $1289 to the distributor who provided all that we were selling, and this was from only about forty people attending. The club received 10% of that in credit which we promptly used to obtain some of that software.

The third Sunday in November is the 16th. This next 'Swap Meet' is expected to be bigger and better than the last. Here are the reasons:

1. We have more lead time to inform members and others about it. Any help that members can provide in spreading the news will be appreciated.

2. Much of the success of the last swap meet was do to the hardware and software made available by Boyd Cone of Information Associates. Arrangements are being made to have even more available this time around.

3. A special deal is being made to have "members" place orders in advance. The details are as follows.

- Boyd Cone has offered to place orders for hardware and software through his own channels. This will allow people to get the benefit of paying a distributor price. This applies to club members only.

- The deadline for placing the order is September 30th. The reason for the deadline is to increase the likelihood of the arrival of the purchase by the November meeting. Any orders after that time to be on a special basis.

- Catalogs of equipment and software will be at the September meeting. Members will choose what they wish to order and pay the money to the club at that time. When the purchases arrive and we have been informed of the actual cost; the difference will be given to the orderer. If the order cannot be placed, the money will be refunded. If the order comes in after the November 'Swap Meet' meeting; the person who made the order will be informed as soon as it arrives.

The club will NOT make any money on this. It is being done as a 'draw' for the swap meet and as a nice thing to do. Boyd offered to order things for us at his cost and we took him up on it.

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BE AWARE - This is a good deal but approach it on the side of reality. The price break is legitimate but we have no idea what the amount will be until the orders are placed and received. I have been informed that some things you see in catalogs cost about the same for the dealers as you are able to order them for yourselves.

This is my opinion on what to do about this 'Special ordering deal'. If you were seriously considering ordering something from the advertisements or catalogs that are available then do it now, and do it this way. You may save some money on the deal.

All people (members and non-members) are welcome to come to the swap meet and bring any equipment or software they wish to sell. We hope to get a lot of people coming to sell what they no longer want and even more coming to pick up bargains. Come join us and tell a friend (BRING A FRIEND).

Side Note: The $169 price on the 300/1200 Baud Hayes compatible modem in effect during the last swap meet will be repeated. It went over so well before that a committment was made to purchase more at that price while they were available.

The reason behind such hardware and software generousity from Information Associates is practical. Much of what is being offered has dropped dramatically in price and there is no great demand for it through mail order channels. It is not worth it to warehouse these items. I understand that all this 'bulk' of TI and related stuff was going to be offered to some supply house in a one price for the whole lot deal.
This way it gets to be sold at greatly reduced prices to those who could use and enjoy the them. Boyd will get a few cents more on the dollar than the bulk deal will make and a chance to sell 'new' items at these events. I believe that most TI stuff will be disposed of after this next Swap Meeting in the manner described above.

So.... although we did this in July and will be repeating it in November; don't look upon this as a regular event. Time's running out. Here is your chance to buy and it may not again be so attractive.

CALL NEWSLETTER

CALL NEWSLETTER is the voice of the Atlanta 99/4A Computer Users Group, P.O. Box 190841, 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. It 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 other members of the A9CUG.

The A9CUG freely exchanges newsletters with other groups around the country. If another group would like to receive our newsletter but does not have one of their own to exchange; we will gladly send it to them. We do ask that they send $5 a year to cover costs.
Membership is open to family and individuals who own or are interested in using and programming home computers. Membership includes newsletters as they are printed, access to meetings, and membership privilages. Annual dues are $15.00.

MISCELLANEOUS ITEMS

There is an interesting project being considered by a man in the Chicago Users Group. He believes that it is distinctly possible to combine the circuitry of what makes up a Personality Card and a Western Digital controller into one card. If this can be logistically done then he believes that it would cost about $200 in kit form. With the cost of Hard disks dropping ($85 for an 8 Megabyte) and power supplies available for less than $50; the end result is that you could now realistically have a hard disk for a little over $350 (Remember the cost of shipping and buying the cables.) We will pass on any information that we learn about this.

The Hard disk and power supply prices quoted above came from the September issue of Computer Shopper. If you are the type to deal with mail order houses then you should be aware of some fantastic bargains in Computer Shopper that were just recently pointed out to me.
Lolir Affiliates - numerous items of interest, like Full size DSDD drives for $29, 1/3 high DSDD drives for $45, and TI keyboards $3.75.
Micro Electronics - DSDD diskettes including sleeves at 29 cents apiece in lots of 100.
Others - Printers on sale for the lowest yet. Since there were so many inexpensive buys from different companies you'll have to look for yourself.
Understand that this in no way claims that we recommend these companies, however Computer Shopper does try to keep the riff raff from advertising. There has been no problem with various items in the past ordered for the club through Comp. Shop. Along those lines - maybe a few would consider placing a bulk order through the club at the next meeting. We might save a buck on shipping.

Speaking of Computer Shopper: I noticed that they have purged their lists showing the names and addresses of Users Groups around the country. There are MANY fewer groups listed now than there were. Our group is no longer listed. That means we will have to write and inform them again of our existence. The same was done concerning their lists of BBSs.

A MAGAZINE REVIEW, by Jack Sughrue of M.U.N.C.H., Worchester, MA.

'Genial TRAVeIER', is a magazine ondisk for the 99-4A.It is the best buy of the century for anyone really interested in how our computer operates. Wait! That sounds boring.

It is a dynamic, blockbuster package of neato, peachy-keen goodies.

Nope. Even that doesn't describe what you get for your $30. For that small price you get six "flippy" disks with over 700 sectors full of games and printouts and tutorials and ready-to-run programs and some of the most bizarre menu configurations I've ever seen. These articles and programs are by the big guns in the present TI world: Jim Peterson, Barry Boone, Ron Albright, Mack McCormick and a cast of thousands. And all this is edited (with a considerable part programmed and written by) Barry Traver (afterwhom the magazine/disk is named).
Imagine my surprise when my first issure arrived with two disks chockfull on both sides. Two! The second, as was explained with an enclosed letter, was a surprise bonus! Not part of my bi-monthly subscription. A free, no-strings bonus.
Then, when time passed and my second disk hadn't arrived, I received a letter telling me of the delay and asking my patience. Gladly. This is the only subscription service I've ever belonged to that notified me of a delay and apologized in advance for it.
The second (or third, if you count the bonus) disk is even better. I'm certain they are going to get better still.
(Tonight I was earlier working on aprogram I wanted to use at school and tried out the make-your-own-cursor program from Number Two. So a little smiling face cursor grinned and blinked at me all through my paces. Kind of silly. Kind of fun.)
There wouldn't be enough room to begin to list all 128 files on the six disk sides, but the variety is great enough to please anyone with a disk drive. I would recommend a printer, too, through it is not necessary. I particularly liked the articles reviewing the books available for the TI.

Because this service is so good and so inexpensive I hope a lot of people subscribe. Send $30 to Barry Traveler,Editor, Genial Computerware, 835 Green Valley Dr., Philadelphia, PA 19128.

This comes from the VICTORIA 99'er UG,B.C., VQR 1L0: by Ron Rutledge.

CARTRIDGE CLEANING

Dirty contacts can screw-up any electrical device and the 4A is not an exception. The only place you are fairly likely to run into this problem is in using command modules. Both the module contacts and port itself can become dirty but cleaning the port itself is a big job as you have to disassemble the console. The good news is that cleaning the cartridge will almost suffice and can be done quickly without any special tools or cleaners.
All you need is a regular screwdriver, some sort of rag, a standard pencil eraserand in some cases a medium phillips screwdriver.

Remove the screw from the "C" if there is one. Then pry the clips in slots "A" and "B" outward to pop open the cartridge. If there is clop in "C" pry it back after "A" and "B" are loose. If it should bend off don't worry, it won't affect the performance of your module.

The module board can now be removed. Do this carefully and and note how the spring-loaded "door" is assembled, if there is one, so that you can put it back together if it pops out. Once you have the board removed take your rag (a facial tissue will work but something cloth is much better) and rub off any residue from the contacts, shown as "D". Remember to do the contacts on both sides if this particular modulehas them. Once the worst is removed take any soft rubber eraser and "erase" the contacts until they become dry, clean and shiny. You need to do only the outer half of the contacts as that is more than ever gets used as can be seen by the scratch marks on the contacts. Once this is done simply put the cartridge back together and go.
Some symptoms of dirty contacts are the console locking-up, strange errors where no occured before, etc (my XBcartridge giving me a syntax error when there was none, for example). Don't jump to clean a cartridge on your firsterror, it could be a lot of things like static, not having the module in tight, or a number of other things. But if you find you have a continuing problem cleaning the contacts is quick and free; and may correct what is wrong.

From TRI-VALLEY 99ER'S, SIMI VALLEY,CA.

Starting with the following:"Editor's note: This is an abbreviation and adaptation of an article that appeared in the APL SIG newsletter, THE SPFCIAL CHARACTER SET, edited by D.Bohrer. First known TI newsletter reprint, Northwest Ohio 99'ers News. January 1986, additional editing for the 99/4A by Art Byers."

- NEW LANUAGES FOR THE TI-99/4A -
by Ted. E. Bear, Pipedreams, Inc.

BASIC, LOGO, FORTH, PILOT, PASCAL - These are well known and presumably loved languages throughout the computer industry and all implemented on the99/4A. But in this best of all possible years for the now famous orphan, such famous programmers as Aon Rotbright, John Bentkey, Maig Ciller, and Tarry Braver have now implemented a whole new series of modern languages for our machine:

FIFTH.This is a precise mathematical language in which data types refer to quantities. The data types range from C, OUNCE, SHOT AND JIGGER TO FIFTH (Hence the name of the language), LITER, MAGNUM and BLOTTO. Commandsrefer to ingredients such as CHABLIS, CABERNET, GIN, VERMOUTH, VODKA, SCOTCH, BURBON, COORS, BUD and WHAT_EVER_IS_AROUND. Rumor has it that this is the largest volume of 99/4A languages that has ever been dumped into GRAM KRACKERS. You get loaded faster that way - RIGHT!

LITHP. This otherwise unremarkable language is distinguished by the absence of an "S" in its character set. Programmers and users must substitute "TH". LITHP is said to be useful inprocessing lithth. This language was developed in San Fransisco.

LAIDBACK. This language was developed at the Marin County Center for Tai Chi, Mellowness and Computer Programming (now defunct), as an alternative to the more intense atmosphere in nearby Silicone Valley. The center was ideal for programmers who liked to soak in hot tubs while they worked. Unfortunatey, few programmers could survive there because the center outlawed pizza and Cocla Cola in favor of Tolu and Perrier.

Many mourn the demise of LAIDBACK because of its reputation as a gentle and non threatening language since all error messages are in lower case. For example, LAIDBACK responded to sytax errors with the message: "i hate to bother you, but i just can't relate to that. can you find the time to try it again?".

DOGO. Developed at MIOT (Massachusettes Institute of Obediance Training). DOGO heralds a new era of computer literate pets. DOGO commands include SIT, HEEL, STAY, PLAY_DEAD and ROLL_OVER. An innovative feature of DOGO is the "puppy" graphics, a smallcocker spaniel that occassionally leaves deposits as it travels across the screen.

REAGAN. This language was developed in California, but is now widely used in Washington D.C. It is the current subset of the international bureaucratic language known as DOUBLESPEAK. Commands inclued REVENUE_ENHANCEMENT, CAP_WEINBERGER, CABINET, CHOP_WOOD, and SCENARIO. WATTand BURFORD have been removed from the commands while there is a current effort to add MEESE. The operating system used is NEW_RIGHT and the designated memory is THE_RANCH. The compile SCENARIO is a compile with NANCY followed by a link with BONZO resulting in a SNOOZE. Program bugs, called COMMIES, are removed with the GRANADA command. A program written in REAGAN commences with a LANDSLIDE and terminated with SENILITY.

VALGOL. From its modest beginning in Southern California's San Fernando Valley, VALGOL is enjoying a dramatic surge of popularity across the country and has been adopted by many of the more youthful 99/4A programmers. VALGOL commands include REALLY, LIKE, WELL, and Y*KNOW. Variables are assigned with the =LIKE and =TOTALLY operators. Other operators include the California Booleans, A* and NOWAY. Repititions of code are handled in FOR - SURE loops. Here is a sample program.

```
LIKE Y*KNOW, I MEAN> START
IF PIZZA=LIKE BITCHEN AND GUY=LIKETUBULAR
AND VALLEY GIRL=LIKE GRODY**MAX THENFOR
I=LIKE 1
TO OH*MAYBE 100
 DO*WAH - (DITTY**2)
 BARF(I)=TOTALLY GROSS OUT
   SURE-LIKE BAG THIS PROGRAM REALLY
LIKETOTALLY (Y*KNOW)
IM*SURE
 GOTO*THE MALL
```

VALGOL is characterized by its unfriendly error messages. For example when the user makes a syntax error, the interpeter displays the message:
- GAG ME WITH A SPOON!

Melvin Carter is a very prompt Secretary. It is my fault that the minutes have not surfaced in a newsletter before now.
Gary Matthews

MINUTES OF THE MAY MEETING,
SUNDAY MAY 18, 1986

President Gary Matthews called our meeting to order and also gave the Treasurer's Report.
We discussed the advantages and aspects of our users' group meeting at Georgia Tech, maybe as early as the July meeting.
There will be a meeting as scheduled on Sunday, June 15, even though it is Father's Day. This was discussed and agreed upon by those members who attended the meeting.
There will ba price reductions taken on some of the items such as software and back issues of magazines that our users group has for sale.
There is another new BBS here in the metro Atlanta area for the TI users to enjoy. Brad Cook of Fairburn, GA is the Sysop who is operating "The Elite 99'er BBS". The number to call is 964-2670.
It was announced that Ralph Fowler's TIBBS program will become Fairware available in June.
Bobby Miller showed us a system where he had made a separate console box for the alpha-numeric keypad and to the right of this he had put in 10 keypad with a cable running to the main console. He said that this made it easier for him to use with more freedom and flexibility without having the big fire hose cable there all the time.
Finally Gary Matthews gave us another demonstration of the Gram Kracker for the TI.

Melvin Carter
Secretary

CALL KEY

Orginally, by George F. Steffen, LA99ers, by way of the DELAWARE VALLEY USERS GROUP.

Several months ago, Jim Peterson of TIgerclub raised a question concerning the CALL KEY subprogram. He question the TI Manual's explanation of the status variable, saying that the only time he could cause it to reach a value of -1 way by holding down the key. I wrote a explanation and sent it to him, but his further comments lead me to believe he did not understand my explanation. If he can not understand this then most programmers probably do not, so I will attempt a full explanation.

First, the reason for the status variable. After all, in basic programs, it is used mainly to tell when a key has been pressed. This could have been included in the CALLKEY subprogram itself or the programmer can tell when a key has not been pressed by the key variable having avalue of -1. There must be some other good reason for adding a variable. There is and it has to do with debounce and repeat key.

We tend to think that an electrical switch, when closed, makes a contact which stays that way until we turn itoff. It may appear that way to ourslow senses, but the contacts will actually hit, bounce open and close again. When we hit a key, some provision must be made to keep the computer from putting the character on the screen more than once. This is taken care of partially in the construction of the keys where there are two separate contacts so that one could close before the other and then the second would close as the first opens. This helps, but, in the immediate mode, when the computer has nothing else to do, it would still show two separate key pushes if it were not slowed down by software. For a brief period after an initial key push, an open switch followed a repeat of the previous key is ignored. If a different key is pressed, the computer will treat it is a new key and will show it. Have you ever missed the key you were attempting to press and hit two keys at once? You may have seen one character appear, then the second, and the first again. This is because the one key made contact slightly ahead of the first, it bounced open just as the second key made contact, and the second key bounced open as the first closed again. After that, since the first key remained closed, the computer stopped putting the characters on the screen.

If you keep the key down, the computer will eventually start repeating the character. You may think that the computer is working full speed in displaying these characters, but if it had not been slowed down, it could fill the whole screen before you could let go of the key.

As I stated earlier, when in the immediate mode, the computer has nothing to do but scan for key presses. Also, the normal use of CALL KEY in BASIC does the same thing. However, this is not necessarily always true. In Extended Basic, when LISTing a program to screen, for instance, the computer executes the scan one time after each line. If it detects a newkey, it stops the LIST. When the scan is stopped, it keeps looking and when it again detects a new key, it starts the LIST again. If it did not have the status variable to tell it the same key was still down, it would keep stopping and starting the LIST. Have you ever restarted a list and then hit the same key again to stop or ever tried to use the CLEAR key to get out of the LIST? The first key push will restart the LIST, but then the computer ignores you even though you may release and repush the key. What has happened is that you released and repushed the key while the computer was LISTing a line. By the time the computer has finished the line and gone to scan, you have pused the key again so that this is the same key that was pushed during the previous execution of the scan.

When the computer finds a new key pressed, it continues its scan, checking for SHIFT, CONTROL, FUNCTION or ALPHA LOCK. If it finds the same key pressed, it does not recheck those. Therefore, if you press or release one of those keys while a character, is repeating on the screen, it will have no effect; the same character will continue repeating.

For those of you who are interested in exactly how this works, I recommend you get Millers' Graphic Explorer and watch the keyboard scan in action.

TIPS FROM THE TIGERCUB

#38

TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213

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```
*****************************
*                           *
*  Tips from the Tigercub   *
*  Vol. 3 is now ready.     *
*  Another 62 programs,     *
*  routines, tips, tricks.  *
*  from Nos. 25 thru 32.    *
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*  two Tips disks $27 or    *
*  all 3 for $35 postpaid.  *
*                           *
*****************************
```

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For descriptions of these send a dollar for my catalog!

I have discovered a rare bug in the 28-Column Converter, published in Tips #1@, which will cause an I/O 25 ERROR if the very last line of the program being converted happens to have exactly 8@ characters. You can fix it by adding a line -

```
215 IF EOF(1)=1 THEN 26@
```

-

There is also a rare bug in the SIDEWAYS subroutine on my Nuts & Bolts #2 disk, which prevents turning some redefined character sets sideways. If you are one of those who BOUGHT that disk from me, you can fix it by changing the L=LEN(B$) in line 21639 to L=64.

I was in too much of a hurry to go fishing when I put the last couple of Tips together. In the Gordian Knot in Tips #35, I left out some essential instructions. Please add -

```
131 DISPLAY AT(11,1):" When
you cross your track,":"pres
s O to go over, U to go":"un
der, C to go across."
```

To make that fit, you will have to change the DISPLAY AT in line 13@ to (8,1), in line 14@ to (15,1) and in line 15@ to (2@,1), also the ACCEPT At in 16@ to (2@,11). And this change will prevent a lockup when you reach a border -

```
2@@ D=D-1 :: IF ABS(D-D2)=2
OR R+(D=1)=@ OR R-(D=3)=25 O
R C+(D=4)=2 OR C-(D=2)=31 TH
EN 18@ :: GOSUB 51@ :: IF D<
>D2 THEN GOSUB 45@
```

I wrote the dulcimer music in Tips #36 in Basic, but I forgot to test it in Basic. It actually runs much better in Extended Basic, but will run fairly well in Basic if you delete the delays in lines 28@ and 3@@.

If you liked the ESCHER ART in Tips #37, these modifications will improve it considerably -

```
11@ DISPLAY AT(12,1):"Press
-": :" O for new pattern":"
B to change background":" F
to change foreground":" R to
 reverse colors": : :"Any ke
y to start"
28@ A=INT(6*RND+3):: H=INT(2
4/A):: RX=24-H*A :: HC=INT(2
8/A):: CX=28-HC*A :: W=ABS(H
C/2=INT(HC/2))-(RX>@):: DIM
M(8,8):: FOR P=1 TO A
33@ IF K<>66 THEN 346
34@ BC=BC+1+(BC=16)*15 :: IF
 BC=F THEN 34@ ELSE 347
346 IF K<>7@ THEN 36@ :: F=F
+1+(F=16)*15 :: IF F=BC THEN
 346
347 FOR S=7 TO 14 :: CALL CO
LOR(S,F,BC):: NEXT S :: GOTO
 31@
35@ ! **DELETED LINE **
36@ IF K<>ASC("R")THEN 31@ :
: T=F :: F=BC :: BC=T :: GOT
O 347
6@@ GOSUB 9@@ :: FOR T=1 TO
A :: DISPLAY AT(R-1+T,C):M$(
V,T):: NEXT T :: NEXT C
6@1 IF CX>@ THEN AA=A :: GOS
UB 8@@
6@5 GOSUB 1@@@ :: NEXT R
6@6 IF RX=@ THEN 61@
6@7 GOSUB 1@@@ :: FOR C=1 TO
 A*HC STEP A :: GOSUB 9@@ ::
 FOR T=1 TO RX :: DISPLAY AT
(R-1+T,C):M$(V,T):: NEXT T :
: NEXT C
6@8 IF CX>@ THEN AA=RX :: GO
SUB 8@@
8@@ GOSUB 9@@ :: FOR T=1 TO
AA :: DISPLAY AT(R-1+T,C):SE
G$(M$(V,T),1,CX);:: NEXT T :
: RETURN
9@@ V=V+1+(V=4)*4 :: RETURN
1@@@ V=V+W :: V=V+(V)>4)*4 ::
 RETURN
```

I had a letter from a teacher who was using the PRK module to keep student grades, and wanted to know how to average them. It can be done, but is so impractical that I wrote this program. While I was at it, I speeded up the loading and saving to cassette greatly by converting the grades to an ASCII string and combin- the student's name and all grades into one record.

```
1@@ DIM N$(5@),T(5@,2@)
11@ CALL CLEAR
12@ PRINT "       TEACHER'S
HELPER": : : :
13@ REM  - by Jim Peterson
14@ PRINT "(1)CREATE A FILE?
":"(2)ADD TO FILE?":"(3)LOAD
 A FILE?":"(4)SAVE A FILE?":
"(5)PRINT A FILE?"
15@ PRINT "(6)CORRECT A FILE
?":"(7)COMPUTE AVERAGES?":"(
8)QUIT?"
16@ CALL KEY(@,K,S)
```

```
17@ IF (S=@)+(K<49)+(K>56)TH
EN 16@
18@ ON K-48 GOTO 19@,25@,61@
,8@@,38@,99@,112@,151@
19@ X=@
2@@ INPUT "SUBJECT? ";S$
21@ GOSUB 137@
22@ INPUT "TEST #? ":N
23@ GOSUB 144@
24@ GOTO 14@
25@ PRINT :;:"(1)ADD NAMES?"
:"(2)ADD GRADES?"
26@ CALL KEY(@,K,S)
27@ IF (S=@)+(K<49)+(K>5@)TH
EN 26@
28@ ON K-48 GOTO 29@,31@
29@ GOSUB 137@
3@@ GOTO 14@
31@ INPUT "TEST #? ":Q
32@ IF T(1,Q)=@ THEN 35@
33@ PRINT :;:"TEST #";STR$(Q
);" ALREADY RECORDED"
34@ GOTO 14@
35@ N=Q
36@ GOSUB 144@
37@ GOTO 14@
38@ CALL CLEAR
39@ PRINT "OUTPUT TO":"(1)SC
REEN?":"(2)PRINTER?"
4@@ CALL KEY(@,K,S)
41@ IF (S=@)+(K<49)+(K>5@)TH
EN 4@@
42@ IF K=49 THEN 46@
43@ INPUT "PRINTER DESIGNATI
ON? ":P$
44@ OPEN #2:P$
45@ F@=2
46@ PRINT "PRESS ANY KEY TO
PAUSE": :
47@ PRINT #F@:S$: :
48@ FOR J=1 TO X
49@ PRINT #F@:"";N$(J)&" ";T
AB(18);
5@@ FOR K=1 TO HN
51@ PRINT #F@:T(J,K);
52@ NEXT K
53@ CALL KEY(@,K,S)
54@ IF S<>@ THEN 53@
55@ NEXT J
56@ PRINT #F@
57@ IF F@=@ THEN 14@
58@ F@=@
59@ CLOSE #2
6@@ GOTO 14@
61@ PRINT :;:"(1)CASETTE?":"
(2)DISK?"
62@ CALL KEY(@,K,S)
63@ IF (S=@)+(K<49)+(K>5@)TH
EN 62@
64@ ON K-48 GOTO 65@,67@
65@ OPEN #2:"CS1",INPUT ,FIX
ED
66@ GOTO 69@
67@ INPUT "FILENAME? DSK":F$
68@ OPEN #2:"DSK"&F$,INPUT
69@ INPUT #2:X,HN,S$
7@@ FOR J=1 TO X
71@ INPUT #2:K$
72@ N$(J)=SEG$(K$,1,POS(K$,C
HR$(255),1)-1)
73@ K$=SEG$(K$,POS(K$,CHR$(2
55),1)+1,255)
74@ FOR K=1 TO HN
75@ T(J,K)=ASC(SEG$(K$,K,1))
-5@
76@ NEXT K
77@ NEXT J
78@ CLOSE #2
79@ GOTO 14@
8@@ PRINT :;:"(1)CASETTE?":"
(2)DISK?"
81@ CALL KEY(@,K,S)
82@ IF (S=@)+(K<49)+(K>5@)TH
EN 81@
83@ ON K-48 GOTO 84@,86@
84@ OPEN #2:"CS1",OUTPUT,FIX
ED
85@ GOTO 88@
86@ INPUT "FILENAME? DSK":F$
87@ OPEN #2:"DSK"&F$,OUTPUT
88@ PRINT #2:X:HN:S$
89@ FOR J=1 TO X
9@@ K$=""
91@ FOR K=1 TO HN
92@ K$=K$&CHR$(T(J,K)+5@)
93@ NEXT K
94@ PRINT #2:N$(J)&CHR$(255)
&K$
95@ K$=""
96@ NEXT J
97@ CLOSE #2
98@ GOTO 14@
99@ CALL CLEAR
1@@@ INPUT "STUDENT'S NAME?
":Q$
1@1@ FOR J=1 TO X
1@2@ IF N$(J)=Q$ THEN 1@6@
1@3@ NEXT J
1@4@ PRINT :;:"NAME NOT FOUN
D": :
1@5@ GOTO 14@
1@6@ INPUT "CORRECT WHICH TE
ST? (@ TO QUIT) ":C
1@7@ IF C=@ THEN 111@
1@8@ PRINT :;:N$(J);"'S TEST
 #";STR$(T(J,C)): :
1@9@ INPUT "CORRECT TO? ":T(
J,C)
11@@ GOTO 1@6@
111@ GOTO 14@
112@ CALL CLEAR
113@ PRINT "OUTPUT TO":"(1)S
CREEN?":"(2)PRINTER?"
114@ CALL KEY(@,K,S)
115@ IF (S=@)+(K<49)+(K>5@)T
HEN 114@
116@ IF K=49 THEN 12@@
117@ INPUT "PRINTER DESIGNAT
ION? ":P$
118@ OPEN #2:P$
119@ F@=2
12@@ PRINT #F@:S$
121@ FOR J=1 TO X
122@ PRINT #F@:N$(J);" AVERA
GE ";
123@ FOR K=1 TO HN
124@ TT=TT+T(J,K)
125@ NEXT K
126@ AV=TT/HN
127@ TAV=TAV+AV
128@ PRINT #F@:AV
129@ TT=@
13@@ NEXT J
131@ PRINT #F@:"CLASS AVERAG
E ";TAV/X
132@ TAV=@
133@ IF F@=@ THEN 136@
134@ F@=@
135@ CLOSE #2
136@ GOTO 14@
137@ PRINT :;:"STUDENT'S NAM
ES - ":"type END when finish
ed": :
138@ X=X+1
139@ M$="NAME #"&STR$(X)&" "
14@@ INPUT M$:N$(X)
141@ IF N$(X)<>"END" THEN 13
8@
142@ X=X-1
143@ RETURN
144@ FOR J=1 TO X
145@ M$=N$(J)&"'S GRADE? "
146@ INPUT M$:T(J,N)
147@ NEXT J
148@ IF N<HN THEN 24@
149@ HN=N
15@@ RETURN
151@ END
```

The reason that 5@ is added to the value in line 92@, before saving, and subtracted again in line 75@ after loading, is because of a quirk of the computer that I don't recall seeing in print anywhere. Did you know that INPUT will read a string beginning with ASCII @, 2, 4, 7, 1@, 12, 14, 18, 2@, 26, 27, 31, 32, or 44 as a null string (a blank), and will drop these characters at the end of a string? And ASCII 32 will be dropped at the beginning or end of a string. And ASCII @ within a string, or ASCII 34 anywhere, will crash, while ASCII 44 within a string will lose the rest of the string. I should have known what ASCII @, 32 (the space), 34 (quotes) and 44 (comma) would do, but why the others?

LINPUT will accept anything, of course, but I wanted to keep this in BASIC for the teachers who are struggling along without the XBasic module or disk drive.

Chick De Marti published in LA 99ers TOPICS the surprising discovery that PRINT USING and DISPLAY USING can read the IMAGE format from a variable, array or string!

Which led me to some fooling around -

```
1@@ !PRINT USING DEMO by Jim
 Peterson, based on a discov
ery by Chick De Marti
11@ CALL CLEAR :: RANDOMIZE
:: CALL SCREEN(5):: FOR S=2
TO 14 :: CALL COLOR(S,S,S)::
 NEXT S
12@ N=INT(13*RND+1):: C$=CHR
$(8*N+32-(N=4)*11)
13@ FOR J=N TO 12 :: A$=RPT$
(" ",J)&"@"&RPT$(" ",26-J*2)
&"@" :: PRINT USING A$:C$,C$
 :: NEXT J
14@ FOR J=12 TO N STEP -1 ::
 A$=RPT$(" ",J)&"@"&RPT$(" "
,26-J*2)&"@" :: PRINT USING
A$:C$,C$ :: NEXT J :: GOTO 1
2@
```

Here is one last Tigercub challenge. What is the longest possible one-liner? And what is the longest possible one-liner that actually does something?

MEMORY FULL

Jim Peterson

Johnson Space Center TI-99 UG, Houston TX
A PREVIEW of SUPERBUG II,ver 2.0, by
Edgar L. Dohmann.

Two major new features of ver 2.0 are the ability to load and save program files. The load feature will operate in similar fashion to option 5 of the Editor/Assembler. However, if you want to load the program into a different area from its default location, this can be done with the new version of SUPERBUG II.

The save program file is similar to the SAVE utility on the disk supplied with Editor/Assembler. However, with SUPERBUG II, the SFIRST, SLAST, and SLOAD labels do not have to be DEFined in the object file. You supply the starting and ending address when you activate the save function and it saves the program in the same way the SAVE utility does.

Other changes from version 1.0 are mainly cosmetic but a few remaining bugs are also fixed. The remainingchanges include:

1) The J command is changed so the border colors are also changed when screen colors are changed.

2) A bug in the M and D commands is fixed. This bug only showed up when memory dumps crossed address >8000.

3) A bug in the D command to an external device is fixed. This bug only showed up when VDP or GROM memory was dumped to an external device.

4) The Q and E commands have been improved, especially for the SUPERSPACE version of the program.

5) The small character sets are automatically loaded when the program is started up from Console BASIC or from SUPER SPACE.

6) The Console BASIC startup now works like the Extended BASIC startup. Inversion 1.0, the initial prompts were not visible from Console BASIC.

7) The leading zero is removed from registers R0 through R9 in the disassembler. This allows the code produced to be easily reassembled.

8) A bug in disassembly of JMP instructions is fixed so the operand value will reassemble properly.

9) A modification for writing to GRAM is added for compatibility with GRAMKRACKER.

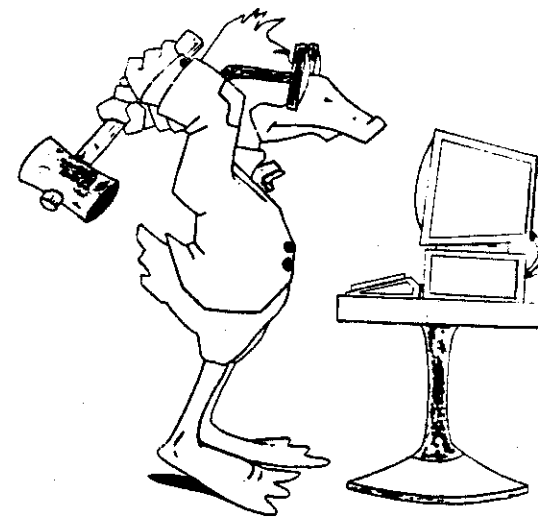
There are still a few additional features I would like to add to the program but it is a full 8K in size at the present time and that is all that will fit into SUPER SPACE. I am trying to do a little more code squeezing and if I can save enough space, there maybe a few more goodies added. Any such addition features may have to wait for version 3.0, however.

The distribution of disk for version 2.0 will not have a complete manual on the disk as with version 1.0. For onething, with the additional information to describe new features, the complete manual will not fit. In the secondplace, I feel that the manual-on-a-disk feature was an experiment that did not work out well.

This program will be released underthe Fairware concept by Edgar L.Dohmann, Rt. 5 Box 84, Alvin, TX 77511.If you use it sent the author a contribution.

***NOTE TO EDITOR: Several of the newsletters carried the following article. ***

This article was downloaded from Compuserve and appeared in the DELAWARE VALLEY USERS GROUP.

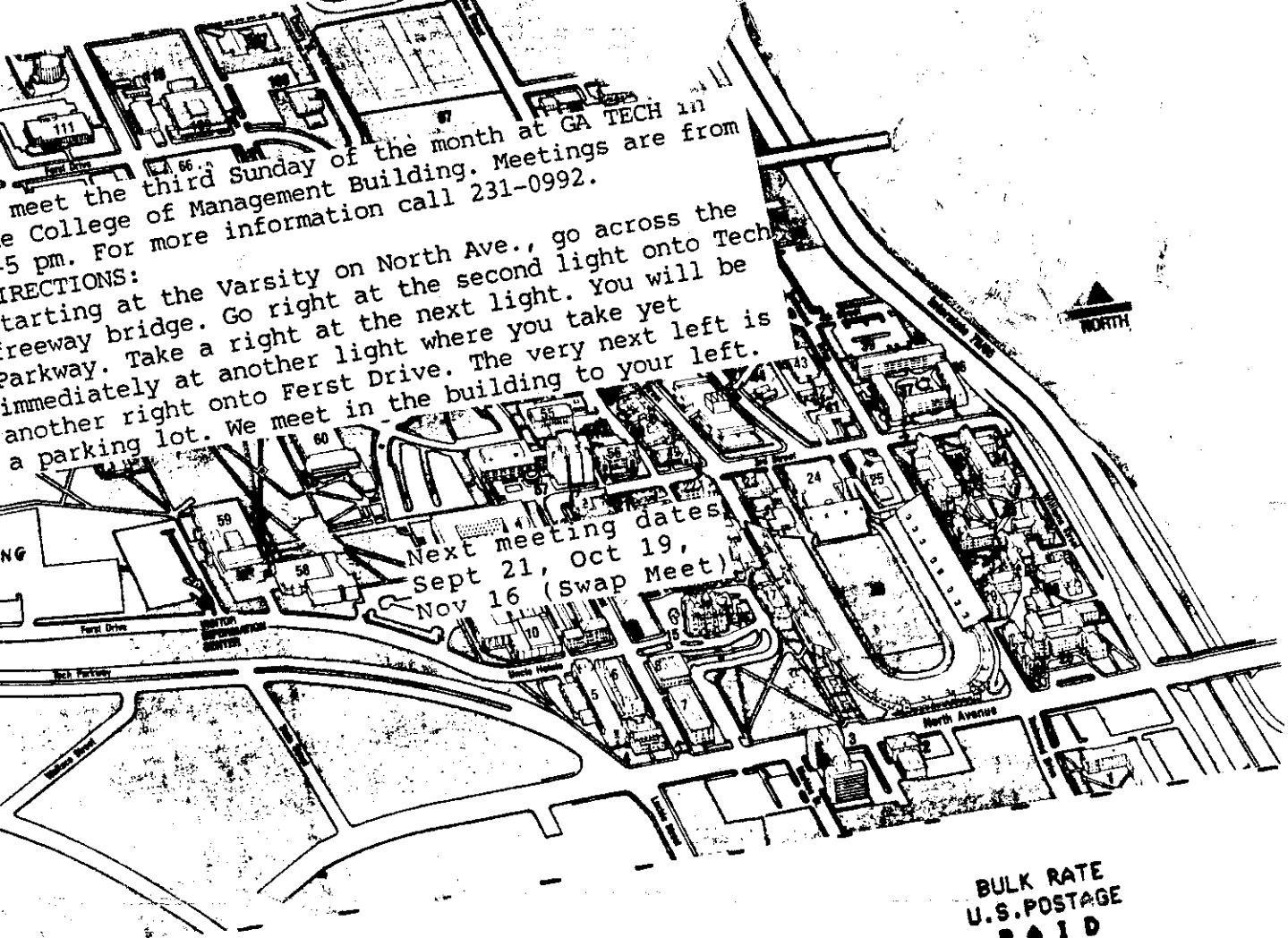


"HIT ANY KEY TO CONTINUE"

meet the third Sunday of the month at GA TECH in
e College of Management Building. Meetings are from
-5 pm. For more information call 231-0992.

IRECTIONS:
tarting at the Varsity on North Ave., go across the
reeway bridge. Go right at the second light onto Tech
Parkway. Take a right at the next light. You will be
immediately at another light where you take yet
another right onto Ferst Drive. The very next left is
a parking lot. We meet in the building to your left.

Next meeting dates
Sept 21, Oct 19,
Nov 16 (Swap Meet)



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* DUES ARE DUE THIS MONTH
** DUES WERE DUE LAST MONTH
*** THIS IS YOUR LAST NEWSLETTER