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THE  
SPRITE

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THE 9900 USER'S GROUP, INC.

A voluntary organization for the  
sharing of knowledge and  
resources of people having  
interests in, or ownership of  
9900 processor based Home  
Computers.



## INTRODUCTION:

The beginning of a new year! So what's new? MYARC up in North Jersey may be picking up the slack that CorComp is leaving. I'm not sure yet of the official status of CorComp. We'll keep our ear perked and let you know when we do. For those who are not aware, Craig Miller who did almost all of the software development for CorComp no longer works there. Along with him went a lot of the copyrights for the products that CorComp sells! That is an interesting development. Getting back to MYARC they have made notice that they are developing some new products as well as enhancing old ones. One feature is an 'on-line' directory. That is you can get a directory of your disk and not lose the program currently in memory. This modification is simply a chip that plugs into the current controller. They may also introduce a 32k card expandable to 128k by purchasing additional chips. Mmmmm. Where's the line form for that one? So, if anyone has a MYARC card contact them at P.O. Box 140, Basking Ridge, NJ 07920. Tel # 201-766-1700.

Let's get into some things that are not off the press! Craig Miller who I mentioned above is going to be a guest speaker at the LA 99'ers Computer Group at their January meeting. The very interesting thing about this is that Craig has consented to it being taped! The tape will then be available to other User Groups. I am sending them a tape and a mailer and we will I hope have that available for the February meeting. Regardless, whenever that tape shows up that months meeting will definitely be a MUST SEE meeting. Craig has a lot of ideas up his sleeve plus I'm sure the question and answer period will be extremely valuable. This will obviously be an important event. Don't miss it!!

Teresa Masters of the LA 99'ers managed to go to the CES show in Las Vegas and has come away with some interesting observations. That is further on under "TERRIE'S CORNER." She uses that heading in their newsletter and since the information is valuable and from her to boot, it's obviously all hers and still her corner so we'll call it that and give her max credit for good reporting.

In the local area if it's too cold to wander outside well then stay warm stick around the house on Saturday and watch 'Bits & Bytes' on WHYY TV Channel 12 at 12:00 Noon. It's a twelve part series and no matter what brand computer you have the course probably covers it. There are course materials that go along with the course if you really want to get involved. The material includes a cassette in the case of the TI and probably a diskette for some of the other computers. This is a beginners course. For more information call WHYY at (215) 351-1223, Mrs. Susan Greatorex. There is a charge for enrolling in the course but that only covers course materials etc. WHYY is doing this non-profit as a public service.

## SUPER DEBUGGER FIX: by Tom Knight

When TI finally released Super Bugger it had a "bug" in that it is supposed to be able to disassemble or dump to a disk and will not properly do this. (In my opinion, this was a TI-induced bug). I have been working in this problem and have found a solution that, so far, seems to work fine.

With no other program in memory, "S-Bug" loads from )A000 to )B96A and I will be referencing memory with this assumption.

<u>MEMORY LOCATION</u>	<u>CONTAINS</u>	<u>CHANGES TO</u>
A15A	3F20	101F
B2DE	7F00	0FFF
B2F2	3F09	1009
B32A	7F20	101F
B342	7F05	1005
B356	7F00	0FFF
B366	3F09	1009
B37A	7F00	0FFF
B382	3F09	1009

These locations are all references to either the PAB or the data buffer which is used by DSRLNK which, by the way, is included in Super Bugger as are the other utilities used by the program. It is completely stand-alone. All of the utilities are very similar to the ones that come with the Editor/Assembler cartridge.

There are three ways to make these changes:

1. Each time you load the program you can make the changes while the program is running.
2. The regular version can be changed using the "Editor" or with TI-WRITER. Be sure that on each line you also change the 'checksum' flag to an 8 (it is normally a 7).  
**ED NOTE:** Do NOT alter COMPRESSED CODE (FIXED 80) with TI WRITER! TI Writer only saves files in VARIABLE 80 format! See item 4 below.
3. To change compressed code you need Disk Fixer or something similar. You actually change the disk information. If you are familiar with the use of Disk Fixer you should have no problem, otherwise it could get very hairy.

**ED NOTE:** Tom Knight also offers to make the change for you by sending him a disk with mailer with return postage and \$2. He will also sell you the modified version for \$5. His address is 7266 Bunion Dr. Jacksonville, FL 32222. For those in a hurry or want up front service our User Group will provide the same service. If you are a group member the modification is free. All future copies could have the mod incorporated.

A SPREADSHEET PROGRAM Part 1: by Bob Delpit  
via LA 99'ers

This program is an original one which grew out of a desire to have a spreadsheet that would be simple to use, would be practical for the home, and which would not require anything more than the basic console, Extended Basic, storage medium, and a printer. It is menu driven and requires very little instruction beyond that which appears on the screen. Because of limited space, I can only present a portion of the program at a time, and I will use whatever space remains to tell a little about how that part of the program works.

The file name that I gave to the program is "DELPLAN". You can of course re-name it anything you like, as well as modify it to suit your needs. The main menu is as follows:

1. Inspect Disk
2. Load Data
3. Enter Data
4. Enter Formulas
5. Calculate
6. Save Data
7. Print Data
8. Clear Memory
9. Exit

The function of each of these should be self explanatory.

To assist you in finding your way around in the program, I have built it up from major and minor subroutines and assigned line number blocks that are related to the item number of the menu. Thus, the subroutine that allows you to see what is on the disk (item 1), has line numbers 1000-1999 assigned to it. Load Data has line numbers 2000-2999, and so forth. Minor subroutines that are driven by the menu and contained in major subroutines are assigned line number blocks of 100, 200, 300, etc. This makes it relatively easily to thread your way through the program without the use of REM statements which use up memory. Line numbers from 1 to 999 are reserved for the main program.

You will notice that most of the subroutines suggested by the main menu are not unique, making them useful for other programs. If you do not already have these in storage and you are using a disk drive, I strongly recommend that you save them with the 'MERGE' option after you key them in. By standardizing the line numbers as noted above, you can merge these subroutines into other programs in the future. But by all means you must resist the temptation to RESEQUENCE the line numbers or you will blow the whole thing!

The three unique subroutines are items 3, 4, and 5 of the Main Menu, so I'll concentrate on these first. In this

first installment I'll cover item 3, "Enter Data". The objective is to be able to run and debug the subroutine independently of the other subroutines. We will need a few lines from the main program to initialize and set up the program. These are lines 100-250. The functions of these subroutines are as follows:

Lines 3000-3020 provide a means of defining the number of rows and columns. The limit is 20 rows and 13 columns (14 columns counting column '0' which is the row name).

Lines 3030-3040 display the row names of the first 10 rows, and the column names of the first two columns, with the data entry '0.00' in each data cell.

Line 3050 generates and displays the Data Entry Marker (DEM) which consists of a pair of square brackets within which the data is entered. You will notice that the ACCEPT AT statement provides for a numeric input which accepts only a period, comma, +, E, and the digits 0 through 9.

Line 3090 is an image statement. The computer will ignore this line unless it is called up by a 'DISPLAY USING' or 'PRINT USING' statement.

Line 3100-3210 provide the logic for moving the DEM horizontally or vertically, returning to the Main Menu, or returning the screen to it's normal layout. This last item is used when the screen has been dismembered by an input error. Later we will add the CALL ERROR subroutine inherent in Extended Basic to the main program to guard against crashing the program.

Finally, line 3220 is the return line which is the means to get back to the point of origin.

```
100 REM****DELPLAN****NOVEMBER, 1984
110 REM***BY BOB DELPIT
150 DIM A$(20,13),A(20,13)
200 CALL CLEAR :: CALL SCREEN(6):: PRINT TAB(10);"MENU"
   :::TAB(6);"1.Inspect Disk":TAB(6);"2. Load Data":
   TAB(6);"3.Enter Data"
210 PRINT TAB(6);"4. Enter Formulas":TAB(6);
   "5.CALCULATE":TAB(6);"6.Save Data":TAB(6);"7.Print
   Data":TAB(6);"8.Clear Memory"
220 PRINT ::::: INPUT "Choose Option:";B
230 IF B(1 OR B)B THEN 200
240 ON B GOSUB 1000,2000,3000,4000,5000,6000,7000,8000

3000 CALL CLEAR :: CALL SCREEN(4):: INPUT "Number of
   Rows:";NR :: PRINT :: INPUT "Number of Columns:";NC
3005 IF R)20 OR C)13 THEN 3000
3010 CALL CLEAR :: INPUT "Row Heading":A$(0,0):: FOR
```

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# TIPS FROM THE TIGERCUB

#17

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My new catalog #5 is now available for \$1.00, which is deductible from your first order. It contains over 130 programs in Basic and Extended Basic at only \$3.00 each (plus \$1.50 per order for cassette, packing and postage, or \$3.00 for diskette, P&M).

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 only \$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, 5 music, 2 protection, etc., etc., all for just \$19.95 postpaid!

And if you send an order before 31 December 1984 and mention your user group, you may take a 10% discount.

My 26-Column Converter, published in Tips #15, has a bug which causes a line to disappear if the wrap-around causes it to begin with a period and you are using the format option. Here is the fix -

Change line 300 to read: 300 FOR W=1 TO 5 :: READ CH\$,R\$

Change line 280 to read:

280 DATA @,(,&),^,\*x,i,...\ In other words, your DATA items will be the "at" sign above the 2, the left

brace on the front of the F key, the ampersand on the 7 key, the right brace on the front of the G, the carat sign above the b, the tilde on the front of the W, the asterisk above the B, the whatsit? on the front of the A, the period, and the backslash on the front of the Z.

A couple of other changes will automatically turn off the automatic fill and adjust, and turn it back on. At the end of line 180, add :: FRINT #2:".NF" and change line 270 to NEXT J :: PRINT #2:".FI;AD;"

:: CLOSE #2 :: CLOSE #1 :: END

Now, as long as the text strings in your program don't contain those oddball characters, all should be well. However, the program has one more bug which is common to all 26-column converter programs, and for which I can find no really good fix. If a program line is exactly 60 characters long, the next program line will follow immediately after it instead of starting on the next line. So, load the file in the Editor mode and scan it before you print it. If any of you whiz kids (or whiz grandpas) can figure out a way to program around that problem, please let me know!

A challenge in Tips #9 was to write a 1-line XBasic program which would take only 70 seconds to scramble the numbers from 1 to 255 into a completely random sequence without duplication. Richard Mitchell, the editor of Super 99 Monthly, came up with an algorithm which is shorter than mine and runs about 10 seconds faster - but it sure does chew up a lot of memory!

```
1 DIM A(255),C(254):: RANDOM
12E :: CALL FEEK(-31806,B)::
IF B=0 OR A(B)=B THEN 1 ELSE
E C(B)=B :: A(B)=B :: D=D+1
:: IF D=255 THEN END ELSE 1
```

And if you're not subscribing to Super 99 Monthly, you should be! It's only \$12 a year, and full of very useful programs, routines and tips. The address is ByteMaster Computer Services, 171 Mustang Street, Sulphur LA 70663.

Also be sure to get the National

Ninety-Niner from the 99ers Users Group Association (3535 So. H St. #93, Bakersfield CA 93304), also only \$12 a year. Their roster of writers is beginning to look like the Who's Who of the TI world.

Danny Michael has written an assembly language program which will dump a graphics screen to a dot matrix printer (Epson or Gemini, and probably others) in less than 50 seconds - and he's giving it away. Just send him an initialized disk in a diskette mailer with an address label back to you and enough return postage. His address is Route 9, Box 460, Florence AL 35630.

Please, can ANYONE tell me where I can buy diskette mailers at a decent price? The cheapest I have found are \$0.65 each for an 11" x 5" piece of cardboard!

Somebody said they liked my Alphabet Song in the last Tips, and somebody else wanted some more routines for the speech synthesizer, so I put it all together and here's what I came up with. If you can type the alphabet without a mistake, you get an encore.

```
100 CALL CLEAR
110 PRINT " ALPHABET S
ONG"
120 FOR J=1 TO 26
130 PRINT
140 NEXT J
150 PRINT " by Ji
m Peterson": "Wait, please"
;
160 OPEN #1:"SPEECH",OUTPUT
170 DIM T$(26,2)
180 DATA 12,12,4,4,1,1,4,7,7
,8,8,10,10,10,10,12,4,4,7,8,
E,10,4,8,8,10
190 FOR J=1 TO 26
200 READ X
210 T$(J,1)="/"&STR$(X)&" "
&STR$(X/10*32)
220 T$(J,2)=CHR$(J+64)
230 NEXT J
240 T$(23,2)="DOUBLE"&"!"&"!
"&"U"
250 CALL CLEAR
260 PRINT "READY - TYPE THE
```

```
ALPHABET*
270 T=V
280 K2=64
290 CALL KEY(3,K,ST)
300 IF (ST<1)+(K<65)+(K>90)T
HEN 290
310 IF K<>K2+1 THEN 330
320 T=T+1
330 PRINT #1:T$(K-64,1):T$(K
-64,2)
340 CALL MCHAR(12,17,K)
350 K2=K
360 IF K<>90 THEN 290
370 IF T=26 THEN 370
380 GOTO 270
390 FOR K=65 TO 90
400 CALL MCHAR(12,17,K)
410 PRINT #1:T$(K-64,1):T$(K
-64,2)
420 NEXT K
430 PRINT #1:T$(1,1):"NOW IV
E":T$(3,1):"SAID MY":T$(5,1)
:"A B":T$(3,1):"SEEZ"
440 PRINT #1:T$(8,1):"WUNT Y
OU":T$(10,1):"COME AND":T$(1
2,1):"PLAY WITH":T$(1,1):"NE
"
450 GOTO 270
```

Terry Atkinson's routine to redefine the cursor has aroused some interest, so I fiddled around and came up with this version to change the cursor automatically to whatever character, normal or redefined, that you input.

```
100 !CURSOR CHANGER by Jim P
eterson
110 INPUT A$ :: A=ASC(A$)::
CALL CHARPAT(A,A$):: FOR J=1
TO 16 STEP 2 :: H$=SEG$(A$,
J,2):: CALL HEX DEC(H$,D)::
T=T+1 :: H(T)=D :: NEXT J ::
120 CALL INIT :: CALL LOAD(B
196,63,248)
130 CALL LOAD(16376,67,85,82
,83,79,82,48,8)
140 CALL LOAD(12288,H(1),H(2
),H(3),H(4),H(5),H(6),H(7),H
(8))
150 CALL LOAD(12296,2,0,3,24
0,2,1,48,0,2,2,0,8,4,32,32,3
6,4,91)
160 CALL LINK("CURSOR")!THAN
KS TO TERRY ATKINSON
170 SUB HEX_DEC(H$,D):: N=1
:: DEC=0
```

```
180 FOR J=1 TO LEN(H$):: A$=
SEG$(H$,LEN(H$)-J+1,1):: IF
ASC(A$)>58 THEN HT=ASC(A$)-5
5 ELSE HT=VAL(A$)
190 DEC=DEC+N*HT : N=N*16 :
: NEXT J
200 IF DEC<>32768 THEN D=DEC
ELSE D=-165536-DEC)
210 SUBEND
```

And of course you can always color the cursor with CALL COLOR(0,5,11) or whatever colors you like.

Most folks don't seem to know, and some folks refuse to believe, that the Memory Expansion can't store strings. If you are one of the disbelievers, plug in your Memory Expansion and try this -

```
100 FOR J=1 TO 255 :: M$=M$&
CHR$(J):: NEXT J
110 DIM A$(100):: X=X+1 :: A
$(X)=M$ :: PRINT X :: GOTO 1
10
```

Now RUN that. On my console, I get MEMORY FULL when X=43 although the SIZE command shows I have 24399 bytes of program space free (in the Expansion) - but only 204 bytes of free stack (in the console). Without the Memory Expansion I can get X up to 51, and in Basic to 53.

This can be a serious handicap if you are running a program which reads in a large number of strings from DATA statements, or generates strings while running.

Of course, when the Memory Expansion is attached, the program and the numeric variables are stored in the Expansion, leaving all the console memory available for strings - but if you do not generate strings, the console memory remains unused, because numeric data cannot overflow into it!

If your program generates more numeric variables than the Memory Expansion can hold, you can however store them in the console by converting them to strings, using STR\$, and convert them back to numbers with VAL. This will allow you store an additional 700 to 900 or more numbers. Try this -

```
100 DIM A(3000),A$(1000):: F
OR X=1 TO 3000 :: A(X)=99 ::
PRINT X :: NEXT X
110 Y=Y+1 :: A$(Y)=STR$(99)
:: PRINT Y :: GOTO 110
```

When you get MEMORY FULL, type SIZE.

Dave Henkenberger sent me a neat little routine, and I played around with it a bit. For you who are not football fans, I'd better explain that the wave is performed at football stadiums when the cheerleaders get the fans to stand and cheer, one seating section at a time, across the stadium - and those drunks on the roof are usually out of sequence.

```
90 !THE WAVE by David Henke
nberger/modified by Jim Peter
son
100 CALL CLEAR :: CALL SUBE
N(4)
110 A$="XXthe waveXX"
120 DISPLAY AT(4,19-LEN(A$)/
2):A$
130 B$="press any key to sto
p"
140 DISPLAY AT(12,14-LEN(B$)
/2):B$
150 B$="XXXXXXXXXXXXXXXX"
160 A$="XXXXXXXXXXXXXXXX"
170 FOR CH=91 TO 116 :: CALL
CHAR(CH,A$):: M$=M$&CHR$(CH
):: NEXT CH :: FOR F=8 TO 12
:: DISPLAY AT(F,1):M$ :: NE
XT F
175 FOR T=1 TO 26 STEP 5 ::
DISPLAY AT(22,T):SEG$(M$,T,1
):: NEXT T
180 FOR CH=91 TO 116 :: CALL
CHAR(CH,B$):: CALL CHAR(CH-
5,A$):: CALL SOUND(1-7*9,-7,5
$AND):: CALL KEY(3,K,ST):: I
F ST<>90 THEN STOP
190 NEXT CH :: GOTO 180
```

MEMORY FULL

Happy Hackin'

Jim Peterson

```

R=1 TO NR :: PRINT "Row";R;"Name:" :: INPUT A$(R,0)::
NEXT R :: Q=1
3020 CALL CLEAR :: FOR C=1 TO NC :: PRINT "Column";C;
"Name:" :: INPUT A$(0,C):: NEXT C :: C=1 :: X=11 ::
Y=20
3030 CALL CLEAR :: DISPLAY AT(3,1);
A$(0,0);TAB(12);A$(0,C);TAB(23);A$(0,C+1)
3040 FOR R=Q TO Q+9 :: DISPLAY AT((R-Z)*2+3,1):USING
3090: A$(R,0),A(R,C),A(R,C+1):: NEXT R :: R=0
3050 CALL HCHAR((R-Z)*2+3,X,91):: CALL
HCHAR((R-Z)*2+3,Y,93):: ACCEPT
AT((R-Z)*2+3,X-1)SIZE(-4)BEEP VALIDATE(NUMERIC):A(R,C+P)
3060 CALL KEY(Q,K,S):: IF S=0 THEN 3060
3070 IF K=8 THEN 3100 :: IF K=9 THEN 3130 :: IF K=10
THEN 3160 :: IF K=11 THEN 3190 :: IF K=6 THEN 3060 :: IF
K=82 OR K=114 THEN 3220
3080 GOTO 3060
3090 IMAGE "#####.###.###.###"
3100 IF X=11 THEN 3120
3110 CALL HCHAR((R-Z)*2+3,X,32):: CALL HCHAR((R-Z)*2+3,
Y,32):: X=11 :: Y=20 :: P=0 :: GOTO 3050
3120 IF C=1 THEN 3060 ELSE C=C+1 :: P=0 :: GOTO 3030
3130 IF X=21 THEN 3150
3140 CALL HCHAR((R-Z)*2+3,X,32):: CALL
HCHAR((R-Z)*2+3,Y,32) :: X=21 :: Y=30 :: P=1 :: GOTO 3050
3150 IF C=NC-1 THEN 3060 ELSE C=C+1 :: P=1 :: GOTO 3030
3160 IF R=NR THEN R=R+1 ELSE GOTO 3060
3170 IF R=11 THEN Q=11 :: Z=10 :: GOTO 3030
3180 CALL HCHAR((R-1-Z)*2+3,X,32):: CALL HCHAR((R-1-Z)*2
+3,Y,32):: GOTO 3050
3190 IF R=1 THEN R=R-1 ELSE GOTO 3060
3200 IF R=10 THEN Q=1 :: Z=0 :: GOTO 3030
3210 CALL HCHAR((R+1-Z)*2+3,X,32):: CALL HCHAR((R+1-Z)*2
+3,Y,32):: GOTO 3050
3220 RETURN

```

(NOTE: IN ORDER TO TEST THIS PROGRAM ENTER THE FOLLOWING)

```

999 END
1000 RETURN
2000 RETURN
4000 RETURN Note: 3000 is SKIPPED!
5000 RETURN
6000 RETURN
7000 RETURN
8000 RETURN

```

**REVIEW:** Hitchhiker's Guide to the Galaxy  
By Douglas Ferguson

Infocom's adventures have always seemed like novels. Now Infocom has taken this a step further. They have made a novel into a work of interactive fiction. The adventure is based on the novel of the same name by Douglas Adams. The novel and the adventure revolve around the mis-adventures of

Arthur Dent and Ford Prefect.

In the adventure, you play the part of Arthur Dent. You wake up one morning and find that your home is about to be demolished to make way for a new highway by-pass. As you try to stop the demolition, your friend Ford Prefect comes along and informs you that he is an alien, and that the Earth is going to be destroyed in 12 minutes to make way for a new hyperspace by-pass. Just seconds before the Earth is destroyed, you "hitchhike" aboard a passing construction cruiser. Thus starting the main part of your adventure.

If you have read the book, you will find the first part easy to get through, but the rest of the story doesn't follow the plot of the book. It wouldn't be much fun if it did. I have found the adventure to be extremely funny at times, and like most infocom's extremely puzzling. Anyone who enjoys the other infocom adventures will almost certainly enjoy Hitchhiker's Guide to the Galaxy.

Rating: \*\*\*\*

**INFOCOM HINTS:** by Larry Wittenberg

Every month I try to give all of you adventure fans a few hints to the three Zork adventures from Infocom. I also found a neat pocket book called "The Forces of Krill" a Zork adventure series pocketbook. Ask if you would like to buy one for a measly \$2.00

Zork I-

1. Just a small hint this month. Don't play with knives or skeletons found in the same room.
2. But don't forget to take his key and change.
3. Cyclops love to eat and then take a walk.
4. You want what???? His name?? Oh, ok try Odysseus or maybe Ulysses.

Zork II-

1. While your at the bank don't forget to walk through curtain and take the bread and leave twice.
2. If you manage to visit the chairman for a loan or something steal his painting while he's not there.
3. Balloon rides are nice. All you need is a cloth bag and basket. A few pieces of newspaper and a light. PS Don't forget to get in the balloon.

Zork III-

1. Technology speaking, I like gold machines better for pushing around.
2. A good jewel thief once told me that most combinations are set at 776 or was it 948 he said?
3. Take the ring and after the guard leaves put it

under the seat and sit on it. I like to travel to the South and East and take everything along on my trips.

#### BBS WRITING HINTS: by M. Baker

I notice quite a few people attempting to write their own BBS software. Not as easy a task as it first appears. Well, here are some hints I've used to make your programming easier.

1. Try to keep most TEXT on disk. One liners are exempt since RESPONSE TIME is a major factor on a BBS.

2. Insert all CR's, LF's, and start's to the top of the screen IN THE TEXT!!! That is use those TI WRITER functions to reduce programming space. As you get fancy you can even imbed screen color changes etc. If you do not have TI WRITER then simply use the CHR#() function to send special functions. Keep in mind that the RECEIVING software determines a lot. An example would be TE3. That ALWAYS prints starting at the bottom and scrolls up REGARDLESS of the control characters sent! Another example would be Screen Color. That is done by TE11. If you do not have compatible TE11 communications software screen color will NOT change!

3. Use SUBROUTINES!! This is important. If you are going to use a statement line more than 3 times it's probably worth it to be a subroutine.

4. In light of #3 then ALL I/O of one type should be handled via ONE routine!

5. Write an ERROR handling routine using ON ERROR XXXX etc. That enables you to recover from ANY complications. This is almost the MOST IMPORTANT part of your program. Without it your BBS will NOT MAKE IT THROUGH EVEN ONE SESSION!!!

6. To use the NO ENTER-NO RETURN feature OPEN your RS232 as FIXED 1.

7. Use LINPUT #1:A# for example... or you'll be sorry! Do NOT use INPUT #1. The LINPUT allows for inputting control characters. INPUT does not. So, if you did use INPUT and someone sends you a control character or the telephone company sends you 'other' things your system WILL CRASH!

#### EDITORIAL: by M. Baker

Well, it's been a long time since I got to babble in an editorial. This will be concise and short I hope. As we move into 1985 many things have happened and more I'm sure is to come. The latest frontal attack is the note I got from the local distributor stating BUY NOW!!! Tomorrow may be too late! What that means is the word is out that TI is pulling ALL TI produced software OFF THE MARKET!! Bye Bye TI-WRITER, MICROSOFT MULTIPLAN and the EDITOR ASSEMBLER. That could certainly be a problem. The other item is the direction of our group. Recently I received an anonymous message on the

bulletin board expressing concern about that. The party also wanted to know where did the Super Sketch bought by the group go? They also wanted the charter printed in the next newsletter plus and expenditure accounting. They also wanted to know how I was going to acquire the 128K card and where was the money I was to receive FOR MY 32k card going to go?

I find it amusing that after 3 years someone other than a 'select five or so' who do all the work is expressing interest. I can count on my two hands ALL the people who have contibuted time and effort again and again to this group. That is exactly why we incorporated! When we first started this group we wound up having 3 months of business meetings and no end in sight! No one could make up their mind. So, the then president and myself made a command decision, take the bull by the horns and GO FOR IT! Starting at the very NEXT meeting we we're going to start COMPUTING and doing what a User Group does! We did!

So, what's our direction today. YOU TELL ME! After 3 years I'm sort of running out of ideas. I've certainly asked enough in the newsletter and at the meetings for ideas. Let's be tottally honest. We're dealing with a computer that is not being very well supported anymore. Software is drying up, CorComo (bless their hearts) is paddling and bailing water for all their worth, a User Group over in Philadelphia recently went under due to apathy and indecision. It's no wonder things are tough! We need ideas to survive not complaints.

Anyway, where did the Super Sketch go?? Why Larry Wittenberg bought it. That was the plan all along. Buy the Super Sketch at wholesale, demo it to the group and then let Larry buy it. He originally wanted one and thats the deal we came up with. Otherwise I WOULD NOT HAVE BOUGHT IT IN THE FIRST PLACE!!! That worked out well for him and the group. Everyone did get to see a new product. Let's see, the 128k card. I don't have one. What if I did? Just like the CorComo DSDD card. I bought it with my own money but via the group so I could take advantage of the discount to the User Group. So, if I was to ever get a 128k card and did sell my 32k card it would be MY BUSINESS!! About the charter and expenditures. The original charter of way back wnen went away when we incorporated! That means group business is the responsibility of the Board of Directors and it's Stockholders. We are not big, do not at all make money worth getting excited about and the return for my time is no where near equitable.

My computer system runs on an average of 16 hours a day, 7 days a week and I haven't complained to YOU about that. I have not had enough money in the group for the last eight months to pay for the electricity, dedicated phone line, COMPUSERVE and SOURCE time that I use to get info for the group. It does cost money to do those sort of things. That now comes out of my own pocket! So PLEASE don't complain to

me about direction etc. etc. and then vanish into the night. Leave me POSITIVE notes. Usually I find that positive notes are signed.

**TERRIE'S CORNER:** by Teresa Masters, President LAG9'ers

**ED NOTE:** This is an excerpt from "TERRIES CORNER" as it appeared in TOPICS the newsletter of the LAG9'ers. Specific subject material is not out of context but was part of a larger article dealing with many subjects.

"....CES show Las Vegas Joy Warner and I attended the CES show and have some good and some bad feelings about it. In the positive vein Super Sketch has come forth with an addendum to now enable us to dump Super Sketch to BOTH disk and printer, Its nice to know our original purchase is not obsolete. Thanks to Personal Peripherals. The whole shipment was lost by the air freight company and we were not able to see it in action, but soon. ATARI SCPT has plans for more TI modules, good news for our gamers....."

"....Now the other news, I have very strong opinions on the following but, I will report the facts and let you decide, biting my toungue all the way."

\*\*\*\*\* NAVARONE \*\*\*\*\*

"Some of you are aware of the bite the hand that fed you attitude of the above. We went to their suite in Las Vegas and were shown a prototype of a drawing program which will tie into a color printer, it looked promising. We also saw th new packaging for their products that they are very proud of, looked goog for IBM, APPLE, and COMMODORE. TI stays in a plain wrapper."

\*\*\*\*\* HCM \*\*\*\*\*

"There was a booth in the convention centerlooked like HCM magazines fastened against the walls but nothing there said HCM. Just 'ON DISK' or 'ON TAPE' or on something but not HCM. The forward position of the booth had carousels and on the carousels were packaged programs (same type Navarone chose) for IBM, APPLE, and COMMODORE only! If you smell a trend you are online. Well Davud Brader spoke with us while Gary Kaplan prowled with a cocked ear, the pat on their back dialogue must be programmed by now, that is what we got. Actions speak louder than words and the carousel WITHOUT TI WAS THUNDER."

\*\*\*\*\* CORCOMP \*\*\*\*\*

"The jury is still out on this. We did not go to their suite, as George and I caled on them directly last week to check up on our investment. At that time they claim they will ship on Friday Jan 11. We will see. The track record

of responsibility to this point is poor, exposure almost non existent, credibility iffy. See following."

\*\*\*\*\* NATIONAL USA \*\*\*\*\*

"Personal private confidential letters were sent from that source to special people offering them a CORCOMP card at a special price. All well and good except with CORCOMP in Chapter 11 a questionable action. CORCOMP claims no knowledge of this but 30 cards are alot to just mysteriously appear to finance a newsletter for the next year.

Enough of that stuff, I realize my tongue escaped a bit, but I am fed up with holier than thou duplicity."

#### TEII FACTS & FIGURES:

To set screen colors with Terminal Emulator II, you need to send the right series of characters. Let's say you want to have white letters. Control-A in TEII, and CHR\$(1) in BASIC. In TI-WRITER, it's Shift-A in special mode.

ASCII 12 does the same thing, but also clears the screen. Control-L in TEII, CHR\$ in BASIC, Shift-L in TI-WRITER special mode.

ASCII 7 is the old teletype BELL command. It will produce a beep from your monitor. Control-G in TEII, CHR\$(7) in BASIC, Shift-G in TI-WRITER special mode.

First, a note on the TEII protocol manual. Almost all of the numbers are in hexadecimal. Also, when it talks ab out sending "bytes," it usua lly means characters. When a byte is represented in binary--00110110--they split it into two nyobles--0011 0110--turn that into a hex byte--36--which finally equals decimal 54, or ASCII character "6".

To change TEII screen colors, you start with the "Extended Write." That's the way TI describes the series of characters you have to give to the software to it will carry out a command. The extended write starts with these ASCII characters:

12717111271271401

...and ends with these:

127i41i

Let's explain what those numbers mean. The "27" represents ASCII character number 27, called the "ESCAPE" character. The "71" is ASCII I character number 71, a capital "G". This follows for all the numbers in this list.

After the "40", you put a character to tell TEII what you want to do. Then, more characters to give TEII exact instructions, then the "27" and "41" to tell TEII to start

carrying out the instructions. (For CIS users: the system filters out the "ESCAPE" characters. That's why these extended writes will not work here unless they're fed to you in the programming area.

Remember, to send an extended write to TEII.

To change screen colors, you must put three characters after the "40": a 43, to tell TEII what you want to do, then a character to represent the color letters you want, and another character for the screen color you want.

To change your screen colors, first you need this list of color codes:

32--Transparent  
33--Black  
34--Medium Green  
35--Light Green  
36--Dark Blue  
37--Light Blue  
38--Dark Red  
39--Cyan  
40--Medium Red  
41--Light Red  
42--Dark Yellow  
43--Light Yellow  
44--Dark Green  
45--Magenta  
46--Gray  
47--White

To set screen colors with Terminal Emulator II, you need to send the right series of characters. Let's say you want to have white letters on a dark blue screen. Here's the extended write you need:

```
1271711271271401431471361271411
```

There are three ways to do this. First, a BASIC program:

```
100 OPEN #1:"RS232"  
110 PRINT #1:CHR$(27)&CHR$(71)&CHR$(127)&CHR$(27)  
&CHR$(40)&CHR$(43)&CHR$(47)&CHR$(36)&CHR$(27)  
&CHR$(41)  
120 PRINT #1:  
130 CLOSE #1
```

The second way: in TEII, type these characters:

```
[Control-Period][Shift-G][Function-V][Control-Period]  
[Left Parenthesis][Plus Sign][Slash][Dollar Sign]  
[Control-Period][Right Parenthesis]
```

The third way, in TI-WRITER, is the same as in TEII, except for the Escape characters. IN TEII, they're typed in

with a Control-Period. In TI-WRITER, you go to Special Character Mode by typing a Control-U, type a Function-R, then a Control-U again to get back to standard mode.

Now: I'll tell you how to make other peoples' TIs talk. Remember, to send an extended write to TEII.

Also remember that the character after the 140i (left parenthesis, which is ASCII number 40) tells TEII what to do. Give it a certain character, and it will tell TEII to send the data following the character to the speech synthesizer. This can be done in two ways:

To speak text (which must be in upper case) and display it at the same time, the character must be a "&", an ampersand, ASCII number 38.

To speak text without putting it on the screen (again, the text must be in upper case), the character must be a "'", an apostrophe, ASCII number 39. So, if you want to send a talking message, follow the instructions as for color changes, except put in a character with ASCII number 38 or 39.

#### COMPUERVE PRIMER: TE2TRN Instructions

How to upload and download from CompuServe with your TI 99/4A using TE2TRN. To up/download from CIS to your TI You will need: TE II Terminal Emulator, Disk, RS232 card. To see what is available for downloading go to the programmer's area by typing PRO at any menu screen after you leave the SIG. When you get the OK prompt type R ACCESS; which takes you into the Access database. Once you are in Access you can use the command: BR0 /KEY=99 to see all the entries available.

To download, you must COPY the file into your filespace. Just simply type COPY (filename) and Access will copy the file from Access into your filespace with the same name as stored in Access; example COPY PIANO Copies the file PIANO into your filespace and it is called PIANO. Once this is done; you EXIT Access. Once you are back at the OK prompt, enter R USR:TE2TRN which activates the TI-CompuServe file transfer utility. TE2TRN will ask you to (U)pload to CompuServe or (D)ownload to the 99/4A. Type D to download. TE2TRN will then ask for the name of the file to download. Key in the name of the file to download. (as our previous example you would type PIANO) At this point TE2TRN informs your computer that a file transfer has been requested and TE2 will ask you for the disk drive number (DSK1, DSK2 or DSK3) and the name of the file as you want to call it on your disk. \*CAUTION\*: Do NOT use periods inside the filename for the name of the file otherwise you will not be able to access the file once you have downloaded it to your machine! During the transfer process, the block counts, and any error messages can be found in your TE II manual.

UPLOADING from your TI to CompuServe involves running TE2TRN and selecting U for upload. TE2TRN will ask you for the name of the file that will be stored in your CompuServe file workspace (you can use periods here as suffixes to tell the kind of file, like .EXB for Extended Basic, .ASM for Assembly source, etc.) TE2TRN will then tell you to hit CTRL 4, which will take you to the TE II file screen, where you key in the drive name and the file name you wish to upload. The transfer will then proceed until completion or an error occurs. Once the file has been uploaded, you can then SUBmit the file to Access so other people can download the file.

Enter R ACCESS at the OK prompt and key in SUB (filename). Access will ask you for Keywords and a description. Use TI 99/4A as at least one of the keywords. Once copied into Access, it will take about 24 hours for the file to be available to the rest of the system.

**Notes:**

- (1) Files uploaded by TE2TRN cannot be read by normal means as they are stored in 9-bit Ascii.
- (2) TE2TRN is an UNSUPPORTED program. CompuServe cannot be responsible for any loss of resources incurred by the use of this program.
- (3) Please do NOT SUBmit programs uploaded by TE2TRN into SIG Access as there is no method presently available to successfully download directly from the Access system for the TI 99/4A.

Questions regarding these procedures should be directed to the TI SIG coordinators whose names can be found in the MI or B commands.

Press ENTER to continue:

**EDITOR/ASSEMBLER Quick Notes:** via Lehigh 99'ers

Add this info to the front of your AL quick reference card-

R0: Can't be used as an index register.  
(NO @LABEL (R0))

If shift count operand in a shift instruction =0, count is taken from the LSNybble of R0. If all 0's, the count is 16.

R11: Return address, used by BL & RT.  
(BL: PC+2 →R11 RT: R11 →PC)

R12: CRU hardware base address.  
(top three bits and L5 ignored)

R13: WP pointer stored after BLWP \\ used  
R14: PC+2 " " " \\ to  
R15: ST " " " \\ RTWP

The instruction formats' bit image table if not outright incorrect, is misleading. Here's a correct version:

X's=don't care bit. by=flag for byte operations.

FORMAT	1	0	1	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
2 Gen																		
Jump I/O	0	0	0	1	opcode	12's compl	displacement											
Logical	0	0	1	@opcode	dest. reg.	IT	src	source	oper									
CRU	0	0	1	lopcode	bit count	IT	src	source	oper									
Shift	0	0	0	0	1	opcode	bit count	register										
1 Gen	0	0	0	0	0	1	opcode	IT	src	source	oper							
Control	0	0	0	0	0	0	1	1	opcode	0	0	0	0	0				
Immediate	0	0	0	0	0	0	1	opcode	IXX	register								
ORI/AI	0	0	0	0	0	0	1	0	@opcode	IXX	register							
(Added)	Notice the 0 0 in the quick reference is wrong!																	
XOP	0	0	1	0	1	1	vector	IT	ret	return	oper							
MPY, DIV	0	0	1	@opcode	dest. reg	IT	src	source	oper									

(ADDED)- XOP, MPY, DIV, and so-called formats III and IV are alike. XOP and CRU multi-bit are evaluated slightly differently.

The point to remember is that the 'instructions' "FORMAT" is merely a device to clarify the Ed/Asm manual. A much briefer and concise description of the form and action can be found in:

TMS 9900 Microprocessor Data Manual (MP001 Rev 1)

This thirty-eight page Shrunk and White of AL manages to get the instruction set documented in eleven pages! With good drawings yet. The better 99/4A AL books tend to simply lay out this material in their typefaces... Want one? Send to- (call TI for current pricing)

Texas Instruments  
P.O. Box 225102

\* Extended until 28 Feb. 1985

M/S 308  
Dallas Texas 75265

\* NEW REGULAR MEMBER RATES EFFECTIVE:

Due to the eagle increasing his rates for transport we are now forced to do same. Look at the stamp on this newsletter to see what we mean. The new rates will be \$19.00/year EFFECTIVE AFTER THE NEXT MEETING!!!!

MEETING DATES:

MONTH	GENERAL MEETING	SPLINTER MEETING
JAN	29	past
FEB	28	12
MAR	27	13
APR	30	15
MAY	29	14

MEETING AGENDA:

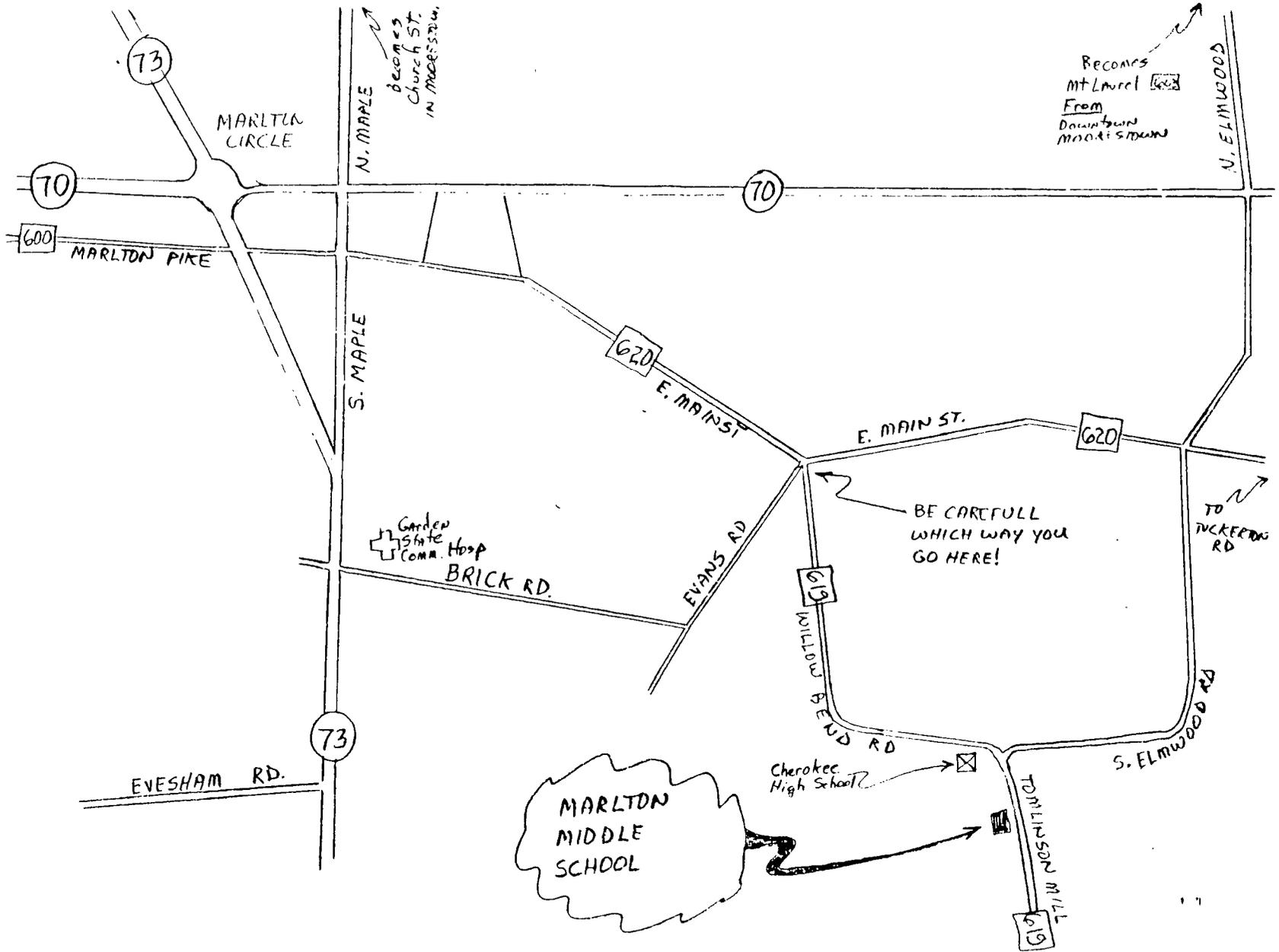
- 7:00PM - 7:15PM Introduction and new news.
- 7:15PM - 8:00PM BBS DEMO. Demo of different terminal software. TE3 & TE1200.
- 8:00PM - 8:20PM Open Question time. Door Prizes!
- 8:20PM - 9:00PM Free Period. Get together. Join the Group, order from the Group, buy from the Group.
- 9:00PM End Session. See ya next month!

\* CHARTER MEMBER DUES!!!

It's that time of year again. Charter Member dues are payable by the JANUARY meeting!! If you miss you must pay the NEW RATE to reinstate!

\* February Special Sale \*

128k from Foundation Computing.  
 Includes 'Disk Emulator' now only  
 \$180<sup>00</sup> + 6% shipping & handling (excluding <sup>local</sup> taxes)  
 Contact the Group BEFORE 21 Feb 85  
 as the order must be there by the 28th



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