

## BALLISTICS SIMULATION BY SPRITES

by Tony Falco

"I shot an arrow into the air and where fell I know not where." The branch of physics which answers this question of just where an object will land is ballistics. With the program listed here you shoot your own arrows (bullets, missiles, grenades, baseballs, or whatever your imagination dictates) into the air and find out where they will land. You have more control than an artillery man. He has shells with specific velocities and can vary the angle at which the shell exits his gun. You can pick both the velocity and the angle but you will get more of a feel for the real situation if keep the velocity fixed and vary the angle. You will soon discover that the maximum range for a given velocity occurs at a 45 degree angle.

The object of the program is to pick an angle to hit a randomly placed target. You have the choice seeing the path the object follows or simply seeing the object in motion. When you hit the target the screen border will flash red and then a new target will appear.

```
10 RANDOMIZE :: CALL CLEAR :: !BALLISTIC
S SIMULATION BY SPRITES
20 DISPLAY AT(4,2):"SHOW PATH (Y/N) Y" :
: ACCEPT AT(4,18)SIZE(-1):@$
30 CALL CLEAR :: L=45 :: VV=55
40 FOR N=1 TO 14 :: CALL COLOR(N,2,15)::
NEXT N :: RR=INT(20*RND)+10
50 FOR A=1 TO 28 :: CALL SPRITE(#A,42,2,
256,1):: NEXT A :: CALL SCREEN(6)
60 CALL VCHAR(1,3,124,24):: CALL HCHAR(2
4,1,95,32):: CALL HCHAR(24,RR+1,31)
70 DISPLAY AT(4,2):"TARGET=";RR ::
80 DISPLAY AT(1,2):"ANGLE (11-86)=>";L :
: ACCEPT AT(1,18)SIZE(-2):L
90 DISPLAY AT(2,2):"SPEED (10-70)=>";VV
:: ACCEPT AT(2,18)SIZE(-3):VV
100 IF VV>70 THEN 90 ELSE V=VV/10
110 A=PI*L/180 :: R=V*V*SIN(2*A):: COSA=
COS(A):: TANA=TAN(A)
120 DISPLAY AT(3,2):"RANGE=";R :: X=0 ::
CL=(ABS(RR-R)<=1)
130 FOR XX=0 TO R-.1 STEP R/28 :: X=X+1
:: Y=(-1/(2*V*V*COSA^2))*(XX^2)+XX*TANA
140 IF @$="Y" THEN J=X ELSE J=1
150 IF Y<=24 AND Y>0 AND XX<=30 THEN CAL
L LOCATE(#J,192-8*Y,8*XX+12)
160 NEXT XX :: CALL SOUND(-100,220,0,-7,
0):: IF CL THEN CALL SCREEN(7):: GOTO 30
170 FOR D=1 TO 500 :: NEXT D :: CALL CLE
AR :: GOTO 50
```

P L U S !  
v.2.0  
The FINAL VERSION!!!  
~Utilities and Wordprocessing  
Environment~

Now available: over 1400 sectors of pure environmental and tutorial dynamite! The newest PLUS! (v.2.0) is over twice the size of the original and 10 times as potent.

EVERY SINGLE FILE from the original PLUS! has been rewritten, enhanced, debugged, and/or replaced. But it is just as user-friendly as ever. The single keypress autoloads of templates in the EDIT mode are classics of efficiency, and the format coding (for italics, underlining, etc.) have become a TI wordprocessing standard. The popular (miniscule) INSTA programs (INSTALABEL, INSTADUMP, etc.) have been increased to seven (taking up a grand total of just 19 sectors!). They are powerful and they are fast and, because of their size, are ideal for keeping on any working disk or RAM for immediate, big power for a variety of tasks.

There are now four templates (forms) for you letter writers. Just type away while PLUS! does all the formatting for you. There are three calendar programs. The popular desk calendar for personal or business needs now has so many added features that its flexibility and friendliness are ideal for almost any use. And there's a yearly calendar, a banner maker, two columnizers, a Gothic writer, some large graphic pictures (with a program to view them, color them, print them, save them, and convert them). There's even a program that lets you create your own cursor. And another that writes and prints out in Pig Latin everything YOU write. There are programs that automatically scrunch your XB programs up to 60% for faster more efficient operation.

One program (PLUS!VIEW) lets you set up a screen audio/visual presentation for club, business, or educational uses. Another lets you create 4-line strips for your console (the TI-Writer/DMI000 is done for you).

The world's tiniest (1 line) wordprocessor is also part of PLUS! And there are word counters, DV/80 printers, and a highly-praised 3-column cataloguer that prints disk envelope-size printouts of 127 files (the maximum on the TI) with your name and the date and all standard info on each. A direct-access setup program for your printer is another powerful utility available.

There are many other templates, data files, pictures, programs, graphic codes, and much more on this disk, including Barry Boone's magnificent Fairware ARCHIVER. But the major part of PLUS! is the manual/tutorial that explores every aspect of our TI wordprocessing world. The works of many writers were selected to make this manual the best tutorial and most complete reference guide for TI WRITER (FUNNELWEB) wordprocessing available anywhere at any price.

Although the vast majority of the files are original to PLUS! and can be found nowhere else, the addition of the excellent PD and permitted copyright files make PLUS! (this FINAL Version) the TI Bargain of the Decade and an environment that will provide years of pleasure and learning and practical utility.

Send \$10 Fairware donation to Jack Sughrue, Box 459, East Douglas, MA 01516 for complete disk and text materials. Thank you.

I hope you ♣ PLUS!



REFERENCE CHART

The following courtesy BBBB BBS in Clinton, MD. (301-292-1482), thanks to Bob, the sysop there:

TI BASIC ERROR CODES PERTAINING TO THE DISK SYSTEM

#:	First Digit	Second Digit	
0:	OPEN		Can't find specified disk drive
1:	CLOSE		Disk or Program is write protected
2:	INPUT		Bad Open Attribute
3:	PRINT		Illegal Operation
4:	RESTORE		Disk Full or too many files open
5:	OLD		Attempt to read past EOF
6:	SAVE		Device Error
7:	DELETE		File Error
8:	NIL		
9:	EOF		

EXTENDED BASIC ERROR CODES

10	Numeric Overflow
14	Syntax Error
16	Illegal After Subroutine
19	Name Too Long
20	Unrecognized Character
24	\$/# Mismatch
28	Improperly Used Name
36	Image Error
39	Memory Full
40	Stack Overflow
43	NEXT Without FOR
44	FOR-NEXT Nesting
47	Must Be In Subroutine
48	Recursive Subroutine CALL
49	Missing SUBEND
51	RETURN without GOSUB
54	String Truncated
56	Speech \$ Too Long
57	Bad Subscript
60	Line Not Found
61	Bad Line #
62	Line Too Long
67	Can't CONTinue
69	Command Illegal In Program
70	Only Legal In Program
74	Bad Argument
78	No Program Present
79	Bad Value
80	Nil
81	Incorrect Argument List
82	Nil
83	Input Error
84	Data Error
97	Protection Violation
109	File Error
138	I/O Error
135	Subroutine Not Found

I/O ERRORS

#:	First Digit	Second Digit	
0:	OPEN		Device Not Found
1:	CLOSE		Write Protected
2:	INPUT		Bad Open Attribute
3:	PRINT		Invalid I/O Command
4:	RESTORE		Out of Space
5:	OLD		End Of File
6:	SAVE		Device Error
7:	DELETE		File/Data Mismatch

DISK MANAGER ERROR CODES

#:	First Digit	Second Digit	
1:	OTHER		Rec not found
2:	SEEK/STEP		Cyclic Redundancy
3:	INPUT		Lost Data
4:	PRINT		Write Protect
5:	Nil		Write Fault
6:	Nil		No Disk Drive
7:	Nil		Invalid Input
8:	Nil		
9:			Special error code for Comprehensive tests.

EDITOR/ASSEMBLER ERROR CODES  
X/B ERROR EQUATES

ERRNO	>0200	2	Numeric Overflow
ERRSYN	>0300	3	Syntax Error
ERRIBS	>0400	4	Illegal after Subprgm
ERRNQS	>0500	5	Unmatched Quotes
ERRNTL	>0600	6	Name too long
ERRSNM	>0700	7	\$/# Mismatch
ORROBE	>0800	8	Option Base Error
ERRMUV	>0900	9	Improperly Used Name
ERRIM	>0A00	10	Image Error
ERRMEM	>0B00	11	Memory Full
ERRSO	>0C00	12	Stack Overflow
ERRNWF	>0D00	13	NEXT without FOR
ERRFNN	>0E00	14	FOR-NEXT Nesting
ERRSNS	>0F00	15	Must be In Subprogram
ERRRSC	>1000	16	Recursive Subprogram
ERRMS	>1100	17	Missing SUBEND
ERRRWG	>1200	18	RETURN without GOSUB
ERRST	>1300	19	String Truncated
WRRRBS	>1400	20	Bad Subscript
ERRSSL	>1500	21	Speech \$ Too Long
ERRLNF	>1600	22	Line Not Found
ERRBLN	>1700	23	Bad Line Number
ERRLTL	>1800	24	Line Too Long
ERRCC	>1900	25	Can't CONTinue
ERRCIP	>1A00	26	Illegal in Program
ERRCLP	>1B00	27	Only Legal In Program
ERRBA	>1C00	28	Bad Argument
ERRNPP	>1D00	29	No Program Present
ERRBV	>1E00	30	Bad Value
ERRIAL	>1F00	31	Incorrect ArgumentList
ERRINP	>2000	32	Input Error
ERRDAT	>2100	33	Data Error
ERRFE	>2200	34	File Error
ERRIO	>2400	36	I/O Error
ERRSNF	>2500	37	Subprogram Not Found
ERRPV	>2700	39	Protection Violation
ERRINV	>2800	40	Unrecognized Character
WRNNO	>2900	41	Numeric Overflow
WRNST	>2A00	42	String Truncated
WRNPP	>2B00	43	No Program Present
WRNINP	>2C00	44	Input Error
WRNIO	>2D00	45	I/O Error

TI-WRITER ERROR CODES

0:	Indicates Disk Controller not on; or that Diskette is not Initialized
6:	No Disk In Drive; or disk is upside down; or Drive is Not on.
7:	No Disk In Drive
00:	Illegal use of LoadF, PrintF, or an error in using those commands
02:	No file on Diskette with filename as Used
04:	Diskette is Full
06:	PrintF Command in progress was interrupted, or: Disk Door Was Opened while red light was on
07:	Invalid filename (I.E., Name too long or using invalid characters)
15:	Invalid Disk Drive Number, or Device

LOADER ERROR CODES

#:	First Digit	Second Digit	
0:	OPEN		Device Not Found
1:	CLOSE		Write Protected
2:	INPUT		Bad Open Attribute
3:	PRINT		Invalid I/O Command
4:	RESTORE		Out of Space
5:	OLD		End Of File
6:	SAVE		Device Error
7:	DELETE		File/Data Mismatch
8:			Memory Overflow
9:			Not Used
10:			Illegal Tag
11:			Checksum Error
12:			Unresolved Reference



Maze Maker  
by Steve Karasek



This program will print mazes for you to solve. It asks for the number of mazes to print, then for the level of difficulty, from 0 to 9. Level 0 is a VERY trivial maze (a child's first maze, perhaps), while level 9 is fairly challenging. The level number is printed at the top of the maze.

No matter what level you select, the maze will be printed to fill as much of the page as possible, so the lower-level mazes will have wider pathways which are easier for young children. There will always be exactly one path from Start to Finish.

The higher-level mazes take a while to compute. In particular, level 9 mazes take over 20 minutes each. You can always start up the program and come back a few hours later. The program keeps track of how far it has gone in computing each maze by displaying a line of the form M / N on the screen, where N is the number of squares in the maze and M is the number of squares the program has computed a path to. When M equals N, the maze is done and is sent to the printer.

If your printer is not named "PIO", change the name in line 110. The last part of this line sets the printer line spacing to 7/72 inch. If you do not have an EPSON-compatible printer, you will have to change this to the codes needed by your printer to set the line spacing. If you can't set it to 7/72 inch, set it to 8 or (preferably) 10 lines per inch.

The !'s and numbers at the end of each line are the checksums for Tom Freeman's CHECKSUM program, and are not needed by the maze program.

```

*****
* MAZE - THE PROGRAM *
*****

100 RANDOMIZE :: OPTION BASE
1  :: DIM M(39,39):: INPUT *
HOW MANY MAZES? *:Z :: PRINT
1223
110 INPUT "LEVEL OF DIFFICUL
TY(0-9)? ":L :: IF L(0 OR L)
9 THEN 110 ELSE OPEN #1:"PIO
",OUTPUT :: PRINT #1:CHR$(27
);"A";CHR$(7);1131
120 N=INT(L+1)*4+(L=4 OR L=9
):: X=80/N :: S=INT(X):: S=S
+(X=S)1138
130 PRINT #1:"Start";TAB(30)
;"Level";L :: FOR X=1 TO N :
: FOR Y=1 TO N :: M(X,Y)=0 :
: NEXT Y :: NEXT X :: IF N=3
9 THEN 150 1174
140 FOR X=1 TO N :: M(N+1,X)
,M(X,N+1)=16 :: NEXT X 1203
150 C,X,Y=1 :: DISPLAY ERASE
ALL AT(12,12):"1 /";N*N ::

ON ERROR 290 1059
160 W=INT(RND*4):: DX=X+(W=0
)-(W=1):: DY=Y+(W=2)-(W=3)::
K=M(DX,DY):: IF K THEN
160 1229
170 M(X,Y)=M(X,Y)+2^W :: IF
INT(W/2)*2=W THEN W=W+1 ELSE
W=W-1 1125
180 X=DX :: Y=DY :: M(X,Y)=M
(X,Y)+2^W :: C=C+1 :: DISPLA
Y AT(12,9)SIZE(4):USING "###
#" :C :: IF C=N*N THEN 240 10
53
190 IF X<N THEN IF M(X+1,Y)=
0 THEN 160 1198
200 IF Y<N THEN IF M(X,Y+1)=
0 THEN 160 1199
210 IF Y=1 THEN IF M(X,Y-1)=
0 THEN 160 1117
220 IF X=1 THEN IF M(X-1,Y)=
0 THEN 160 1116
230 X=INT(RND*N)+1 :: Y=INT(
RND*N)+1 :: IF M(X,Y) THEN 19
0 ELSE 230 1248
240 ON ERROR STOP :: PRINT #

1  :: PRINT #1:"";TAB(S+1);R
PT$( "#",S*(N-1)+1):: S=S
-1  :: S=RPT$( "#",S):: X=R
T$( "#",S)1069
250 M(N,N)=M(N,N)+8 :: FOR Y
=1 TO N :: FOR W=1 TO S :: P
RINT #1:""; :: FOR X=1 TO N
:: PRINT #1:S;1076
260 IF M(X,Y)AND 2 THEN PRIN
T #1:" ";ELSE PRINT #1:"";1
084
270 NEXT X :: PRINT #1 :: NE
XT W :: PRINT #1:""; :: FOR
X=1 TO N :: IF M(X,Y)AND
8 THEN PRINT #1:S;ELSE PRI
NT #1:X;1244
280 PRINT #1:""; :: NEXT X :
: PRINT #1 :: NEXT Y :: S=S+
1  :: PRINT #1 :TAB(S*N-4);"
Finish":CHR$(12); :: Z=Z-1 ::
IF Z>0 THEN 130 ELSE END 10
20
290 ON ERROR 290 :: RETURN 1
60 1159

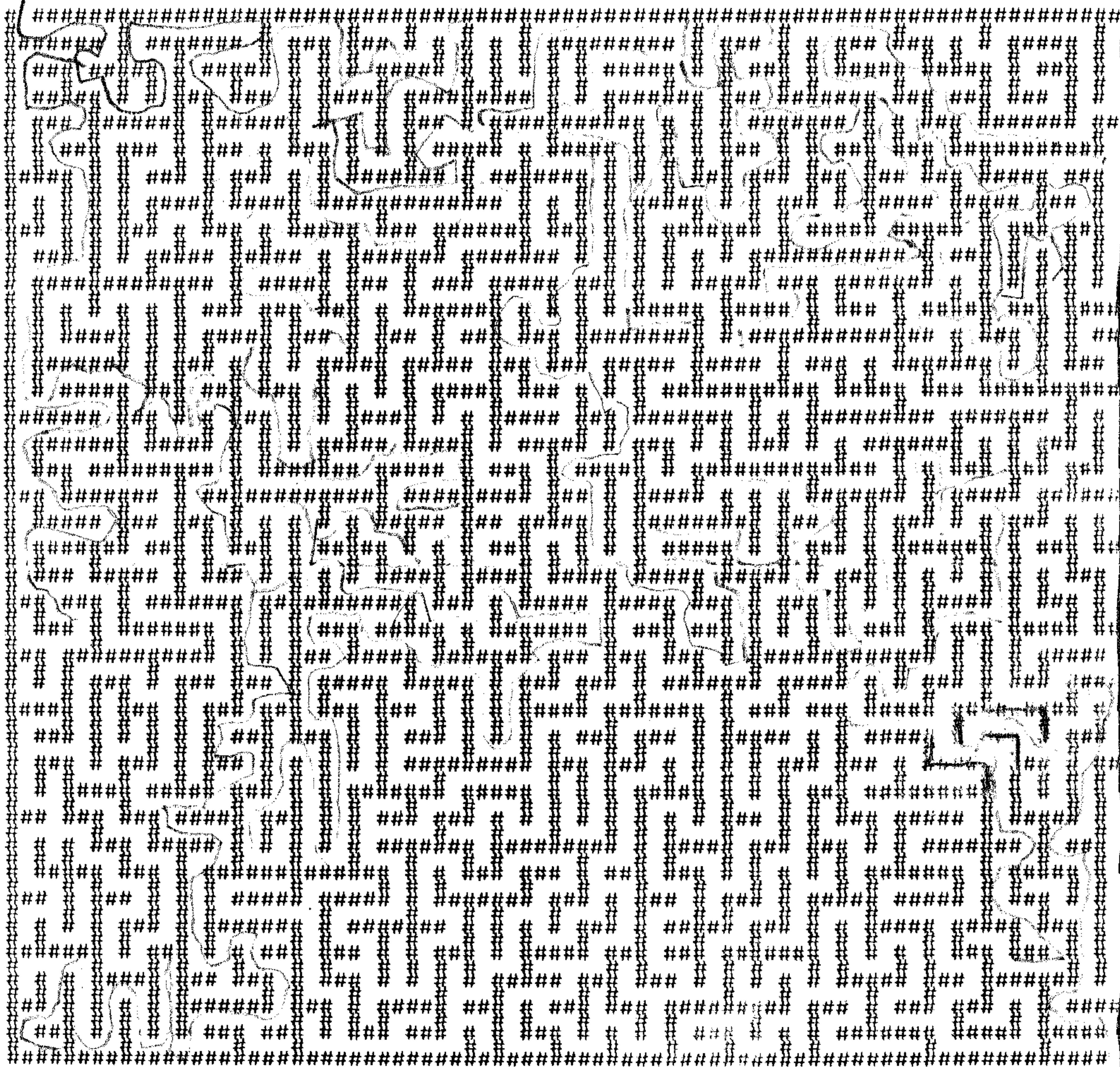
```



EXAMPLE OF A MAZE FROM "MAZE MAKER"  
by Steve Karasek

Start

Level 9



Finish



TIPS FROM THE TIGERCUB

032

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For descriptions of these send a dollar for my catalog!

I've found a bug in the Tigercub Menuloader V.05 which won't let you print a disk catalog if the disk contains the maximum 127 files. This should fix it.

```

340 I=I+1 : IF I>127 THEN K=X : GOTO 430
520 DISPLAY AT(X+5,12)SIZE(12):" 07" : ACCEPT AT(X+5,15)SIZE(3)VALIDATE(DIGIT):KD : IF KD<1 OR KD>NN THEN 520
    
```

I think that all program listings should be printed in 20-column format, exactly as they appear on the screen - it makes it so much easier to key them in without errors. I combined parts of two of my programs to make

the following. It is written for the Gemini 10X but the lines of printer control codes are annotated to help others make adjustments.

```

100 DIM K$(240):: LN=100 : DISPLAY AT(3,4)ERASE ALL:"TIGERCUB PROGLISTER": " Will convert a program": "listing to 20-column format,"
110 DISPLAY AT(7,1): "exactly as it appears on the": "screen, and print it in 4": "columns."
120 DISPLAY AT(11,1): " Program must be RESequenced": "and LISTed to disk by": "RES (enter)": "LIST DSK1.(filename) (Enter)"
130 DISPLAY AT(18,1): "Filename? DSK" : ACCEPT AT(18,14) BEEP:F0
140 OPEN #1:"DSK"&F0,DISPLAY ,VARIABLE B0,INPUT
150 IF EOF(1)=1 THEN 260 : INPUT #1:A0
160 IF LEN(A0)<80 THEN LN=LN+10 : GOTO 210
170 INPUT #1:B0 : IF POS(B0,STR$(LN),1)=1 THEN FLAG=1 : LN=LN+10 : GOTO 210
180 A0=A0&B0 : IF LEN(A0)<160 THEN LN=LN+10 : GOTO 210
190 INPUT #1:B0 : IF POS(B0,STR$(LN),1)=1 THEN FLAG=1 : LN=LN+10 : GOTO 210
200 A0=A0&B0 : LN=LN+10
210 B=1
220 L0=SEG$(A0,8,20)
230 IF L0<>" THEN 240 : IF FLAG=1 THEN FLAG=0 : A0=B0 : GOTO 160 : ELSE GOTO 150
240 X=X+1 : K$(X)=L0 : B=B+20 : IF X=240 THEN 250 : GOTO 220
250 X=0 : CALL PRINTER(K$(X)) : GOTO 220
260 CLOSE #1 : FOR J=X+1 TO 240 : K$(J)=" : NEXT J : CALL PRINTER(K$(J)) : PRINT #2:CHR$(12):: END
270 SUB PRINTER(B$(1)) : IF F=1 THEN 340 : F=1
280 OPEN #2:"PIO.LF",VARIABLE I32 : PRINT #2:CHR$(15);CHR$(27);"N";CHR$(6):!condensed print and perforation skip
290 PRINT #2:CHR$(27);"6";
    
```

- double-struck printing, optional

```

300 PRINT #2:CHR$(27);CHR$(42);CHR$(6):!download normal characters - required if lines 310-330 are used
310 PRINT #2:CHR$(27);CHR$(42);CHR$(1);CHR$(40);CHR$(8);CHR$(64);CHR$(30);CHR$(96);CHR$(17);CHR$(72);CHR$(5);CHR$(66);CHR$(61);CHR$(8):!slash the zero - optional
320 PRINT #2:CHR$(27);CHR$(42);CHR$(1);CHR$(42);CHR$(8);CHR$(8);CHR$(34);CHR$(8);CHR$(8);CHR$(62);CHR$(8);CHR$(8);CHR$(34);CHR$(8):!broaden the asterisk - optional
330 PRINT #2:CHR$(27);CHR$(36);CHR$(1):!activate redefined characters - required if lines 310-320 are used
340 FOR C=1 TO 60 : IF B$(C)="" THEN 360 : PRINT #2:TAB(10);B$(C);TAB(41);B$(C+60);TAB(72);B$(C+120);TAB(103);B$(C+180);CHR$(10)
350 NEXT C
360 SUBEND
    
```

I had trouble in debugging that program because printing the control codes gave me unwanted line feeds, and using semicolons to prevent line feeds will interfere with tabs in the first line of text. An article by Art Byers in the Central Westchester UG newsletter gave me the solution - suppress all the line feeds by opening the printer with PIO.LF, and put them back in where you need them with CHR\$(10)!

We haven't had a random music player in a long time. This one is called ECHO but I don't know where it came from.

```

100 RANDOMIZE : DEF X=INT(RND*7):: FOR B=0 TO 6 : A(B)=VAL(SEG$("247262294338349392440", (B+1)*3-2,3)) : NEXT B : B,C,D=X
110 CALL SOUND(-900,A(B),S,A(C),9,A(D),19) : D=C : C=B : B=X : GOTO 110
    
```





## PUG PERIPHERAL

JUNE 1988

A FIRST LESSON IN EXTENDED BASIC  
PROGRAMMING

by Jim Peterson

Extended Basic is nothing more than BASIC with a lot more words added. If you have learned anything about BASIC programming, it will also apply to Extended Basic.

A PROGRAM is just a numbered series of instructions to the computer, written in more-or-less-plain English, telling the computer to perform a certain task. The computer will follow these instructions in the order they are numbered, except when you tell it to GOTO or GOSUB to another part of the program.

The instructions are numbered by LINE NUMBERS. You can type these in, but it is easier to just start out by typing NUM and Enter. The computer will then automatically give you line numbers starting with 100 and advancing by 10 to 110, 120, etc. This is so that you can later squeeze more instructions in between using 105, etc. If you need to get out of automatic numbering, in order to correct a line or insert a line, just press Enter twice. To start automatic numbering again, just type NUM, space, and the next line number you want, such as NUM 130.

In Extended Basic, you can put several instructions under one line number, by putting a double colon (:) between them. But, while you are still learning, please DON'T! Why not? Well, when you tell the computer to do something it can't do, or can't understand, it will give you an ERROR message, either when you Enter the line or when you run the program, and it will tell you the line number that is causing the problem - but if you have several instructions under that line number, you won't know which one is wrong! The first instruction we will learn is PRINT. This tells the computer to print something on the bottom line of the screen, and then scroll up one line. Try entering NUM, then -

```
100 PRINT 1
110 PRINT 2
120 PRINT 3 - and RUN it.
```

Now try -

```
100 PRINT A
110 PRINT B
```

120 PRINT C - and RUN it. It printed a 0 three times, didn't it? Why? When you tell the printer to print anything other than a numeric digit (or a math symbol or decimal combined with a number) it thinks that you are telling it to print the VALUE of a VARIABLE. And if you haven't previously told it otherwise, that value is zero. Try this

```
100 A=10
110 PRINT A
```

So what is a VARIABLE? If you suffered through high school algebra, you may recall equations such as  $S \times T = D$ , where S equals speed and T equals time and D equals distance. You could give S and T any values you wanted to, in order to calculate how far something would go at a certain speed in a certain time. T and S and D are VARIABLES. We use them a great deal in programming and

you will soon see why.

Now, suppose you really wanted to print the letter A. That's easy, just put it in quotation marks and the computer will know what to do.

```
100 PRINT "A"
```

In either Basic or Extended Basic, the instruction DISPLAY works just like PRINT.

```
100 DISPLAY 999
```

```
110 DISPLAY "HELLO"
```

Text scrolling up from the bottom looks rather "cheap", compared to those computers which display text from the top of the screen downward. In Extended Basic we can put the display wherever we want by using DISPLAY AT followed by a row and column number in parentheses. There are 24 rows on the screen and 28 columns when you are using PRINT or DISPLAY.

```
100 CALL CLEAR
```

```
110 DISPLAY AT(1,1):1
```

```
120 DISPLAY AT(24,1):24
```

```
130 GOTO 130
```

We slipped in a couple of new instructions there. CALL CLEAR just erases everything on the screen (actually it fills the screen with the blank space you get by hitting the space bar). GOTO tells the computer to go to another line number. In this case, it goes back to itself over and over and keeps the program running so it will not print READY and scroll that first line off the screen. Use FCTN 4 to get out of it.

Try experimenting with DISPLAY AT to put different numbers, words or phrases wherever you want them on the screen. You will find that if you specify a row number greater than 24, the computer will just subtract 24 until it gets down to a number within range.

```
100 DISPLAY AT(25,35):"WHERE?"
```

In some programs you may see PRINT followed by # and a number or variable. This is an instruction to print to a printer, to a disk, a speech synthesizer, or whatever. Actually you can print to the screen by -

```
100 PRINT #0:"SEE?"
```

but there is usually no reason to do so.

Now, a few words about print separators. Try this -

```
100 PRINT 1:2:3
```

```
110 PRINT 1,2,3
```

```
120 PRINT 1;2;3
```

```
130 PRINT "A";"B";"C"
```

See what happens? The colon (:) causes the computer to skip to the beginning of the next line before printing again. The comma (,) causes it to jump half the width of the screen before printing again. And the semi-colon causes it to print one item right after another EXCEPT that numbers are always printed with a blank space before and after them (a negative number has a minus sign (-) instead of a blank before it). Now try -

```
100 PRINT 1:2:3:
```

```
110 PRINT 1,2,3,
```

```
120 PRINT 4
```

```
130 PRINT 1;2;3;
```

```
140 PRINT 4
```

The colon after the 3 in line 100 was useless.



JUNE 13, 1989      HAPPY COMPUTING      !!!

MUNCH OFFICERS AND NUMBERS (all in 508 area unless noted)

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Disk Librarian	Lou Holmes	617 965/3584
Tape Librarian	Walter Nowak	413 436/7675
+++++++	Jack Sughrue	476/7630

MAY MEETING. Everyone at the May meeting was very sad to learn of Jack Sughrue's accident. I am happy to report that Jack is on the mend, but it will be some time before he returns to a normal routine. We hope to see Jack at the end of the summer, at the latest. Corson was able to pinch hit for Jack and he did demo's of many of Genial's products. Luck for us he had them in his car! There were 20 members present.

JUNE MEETING. Jack was supposed to do his PLUS demo, so as a gift to the group he has made copies of PLUS Version 2 available to members for \$5.00 with all proceeds going to the club. I believe this will be for June only, so make sure to get your copy. We will also have a copy as one of the raffle items. Corson will do a Hard Disk demo and Lou Holmes might have something also. We will also have a sale and swap table set up, so bring your old stuff and new money!!

RAFFLE. Each month we have a raffle and the dollar donation per ticket helps to cover the monthly fee to rent the hall. This month's raffle will have a TI programming book, two educational game carts and at least one other item.

MONTHLY SALES. At each meeting you have the opportunity to buy and/or sell new or used hardware, software, books and original programs. Please have prices marked on any items you have to sell.

LIBRARY NOTICE. Please return any items borrowed from our library. If you can't come to a meeting or give these items to someone who will be at the meeting, please mail any library items to the group address which is listed on the cover of this newsletter. There are no late fees, we don't care how long they have been out, please return these items.

PRINTS. Reprints of any items in this newsletter is permitted as long as credit is given to M.U.N.C.H.

ARTICLES. I am always looking for articles for this newsletter, anything which interests you will probably interest other members of the TI community, so please share your ideas and opinions with all of us.

LETTER EXCHANGE EDITORS. Please note our corrected address on the front cover of this issue.

WE WISHES TO JACK FOR A SPEEDY RECOVERY.

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**Mass Users of the Ninety-nine and Computer Hobbyist**

**JUNE 1989 Monthly Newsletter Version 8.06**

*GG*

*Well*

CA

*JACK*

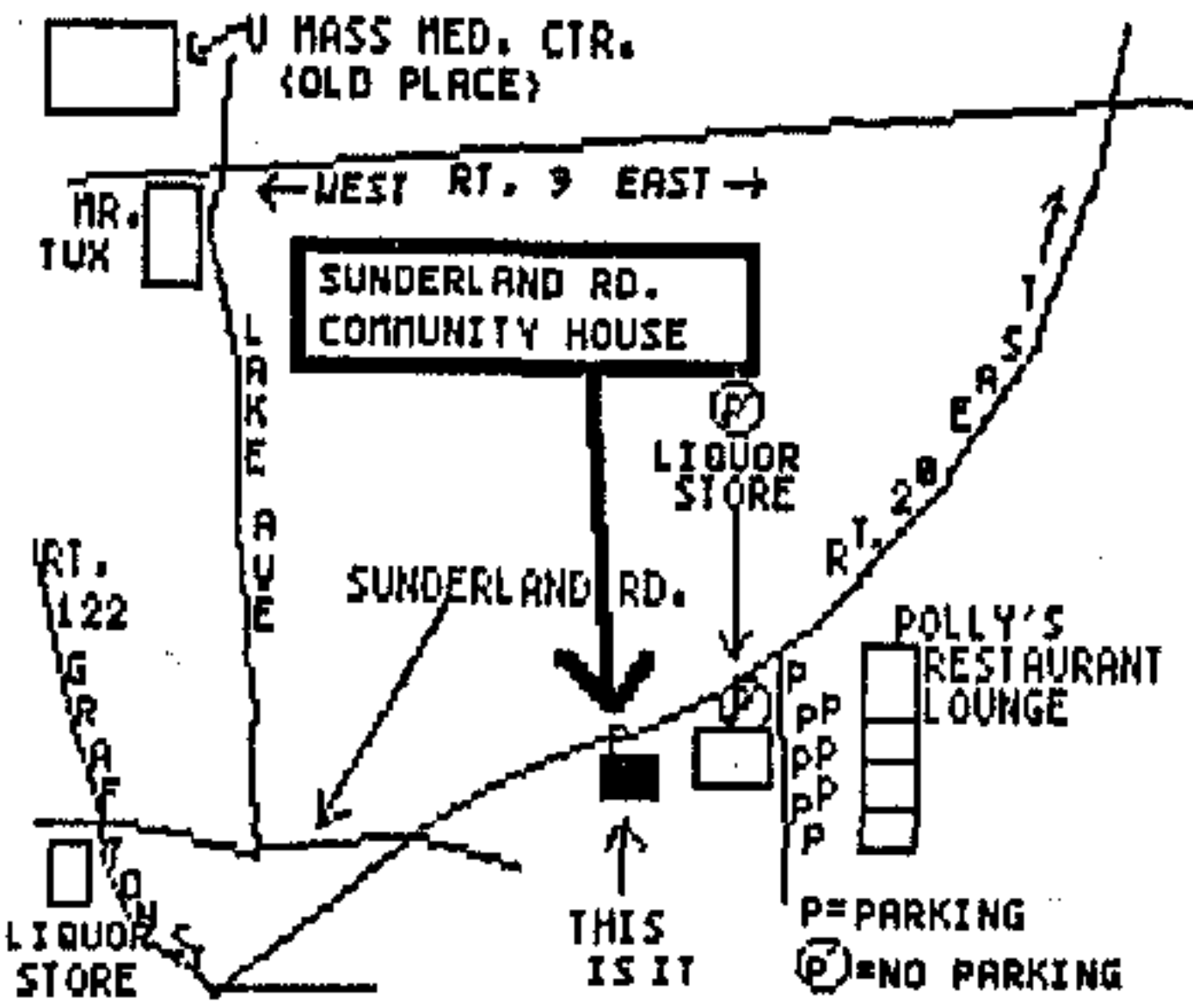
M.U.N.C.H.  
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!CORRECTED ADDRESS!

Next Meeting JUNE 13



FIRST CLASS



PS: ER: Forwarding and Address Correction Requested.