THE SECOND RAINBOW BOOK OF

SIMULATIONS

16 Great New Programs for the Tandy® Color Computer

From the publishers of THE RAINBOW®
The Color Computer Monthly Magazine

The Rainbow Bookshelf™

THE SECOND RAINBOW BOOK OF SIMULATIONS

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Special Thanks to: Charlie Springer, Contest Judge

Foreword

The Second Rainbow Book of Simulations demonstrates Falsoft, Inc.'s continuing commitment to fulfilling the needs of the CoCo Community — keeping you informed and entertained, and, as a result, helping to maintain the interest and innovation that keeps our Community growing and thriving, something from which we all certainly benefit.

The Second Rainbow Book of Simulations is our sixth entry for the Rainbow Bookshelf, a series of publications dedicated to the Tandy Color Computer. We hope you find this one as enjoyable and educational as our others, or perhaps it will serve as an introduction to our Bookshelf series, where you'll be able to extract a wealth of informative and entertaining material that will enhance the time with your CoCo. We want to be receptive to your needs, so we also encourage your suggestions for future publications.

I want to thank editor Jerry Semones, who reviewed the programs and wrote the prefaces for each Simulation; Tamara Dunn, who served as senior editor; Judy Colgate, the art director; and Graham "Pip" Pullen, who did the illustrations. However, the people who truly made it possible are those who spent innumerable hours creating and programming the Simulations — your participation is most appreciated. These programs are, of course, available on cassette if you want to save the time of typing them in (see the ad on Page 176).

So sit down with your CoCo and let the challenge begin — you'll find a variety of Simulations for your undertaking!

— Lonnie Falk

Introduction

I remember when I first saw the Radio Shack Color Computer in the autumn of 1981. Dan Downard was glowing with excitement as he set it next to my Model 1 TRS-80. Dan and I grew up together, having met on the "air" in 1960 while sharing our Ham radio interests.

In those days, the thought of a computer in the Ham shack was never considered. They were large and expensive machines, useful mainly in the business world. So we were content to "ragchew" and work "DX" and satisfy ourselves exploring the mysteries of the vacuum tube.

The Silicon Revolution changed all that. Transistors and integrated circuits led to home computers and have changed the way we all live.

I'll never forget buying my first computer. It was in January 1979 that I brought my Model 1 home. I felt as though I was on the threshold of something great. At that time computers were just getting started in the home market, so there was a lot of room for new ideas to be developed. I then got an old Teletype machine for next to nothing and used it as a printer. It worked fine, but was dreadfully slow and you would not believe the noise it made!

Not to be outdone, even before he had purchased his shiny new CoCo, Dan was poking his nose around various "Hamfests" in search of bargains as he proceeded to design and build his first computer around the 6809 microprocessor. So it was not surprising to see his excitement when Radio Shack released the Color Computer with this very chip as its heart. "Look at this," he boasted, "my computer has a built-in RS-232 port and a place to plug in disk drives and joysticks. And just wait until you see the color graphics!"

I couldn't stand it. I would have to get myself one of these little gray wonders. This new machine could run circles around my Model 1 — I bought my Color Computer in August 1982. It came with 16K, and for another $100 or so, I upgraded it to 64K and Extended Color BASIC. In a short time I had attached most of the popular peripherals available for my CoCo.

In those three years computers made a major impact on my life, and they continue to do so. Look at your own life within the last 10 years. It's a pretty safe bet that you didn't have a computer back then or were even considering having one. Most of us were still being amazed and amused at the new flood of TV games such as "Pong." Remember them? You probably still have one somewhere, along with that old UHF TV tuner and other "outdated" junk you can't even give away.

The CoCo is an amazing machine and those of us in the CoCo Community share a similar quest: We continue to search for better programs, different applications and new ventures for our computers. Although our interests are varied, our goals are the same: We want to use our computers in a way that will make our lives more enjoyable.

This *Second Rainbow Book of Simulations* represents the interests and desires of many programmers who have sought to make their computers simulate something either real or imaginary. The 16 programs contained here are varied, indeed, and I believe there is something for everyone. From the stock market to outer space, from serious to just plain fun, they represent thousands of hours of work on the part of the authors, who wish to share their experiences with you. All of these programs were submitted as entries in The Second RAINBOW Simulation Contest and judged by Charlie Springer, who also judged and edited our first book of Simulations.

Our sincere thanks go to everyone who entered the contest. You are to be commended for your spirit of challenge and dedication to the CoCo Community. And thanks to Dan Downard, who is also THE RAINBOW's technical editor, as his excitement and zeal for the Color Computer has sparked my enthusiasm and challenged my own skills.

I hope everyone shares this excitement and accepts the challenge your CoCo offers. All of these programs are the result of a dream and, no matter how simple or complex, they are all expressions of the programmer's creativeness. These Simulations are just another example of how computers have changed our lives.

— Jerry Semones

Jerry Semones works in the Advanced Logistics Department of the Physical Distribution Operation at General Electric's Appliance Park in Louisville, Kentucky. His hobbies, besides his CoCo, include Ham radio under the call sign K4FJK; he has been licensed for 27 years. He also does reviews and program evaluations for THE RAINBOW.
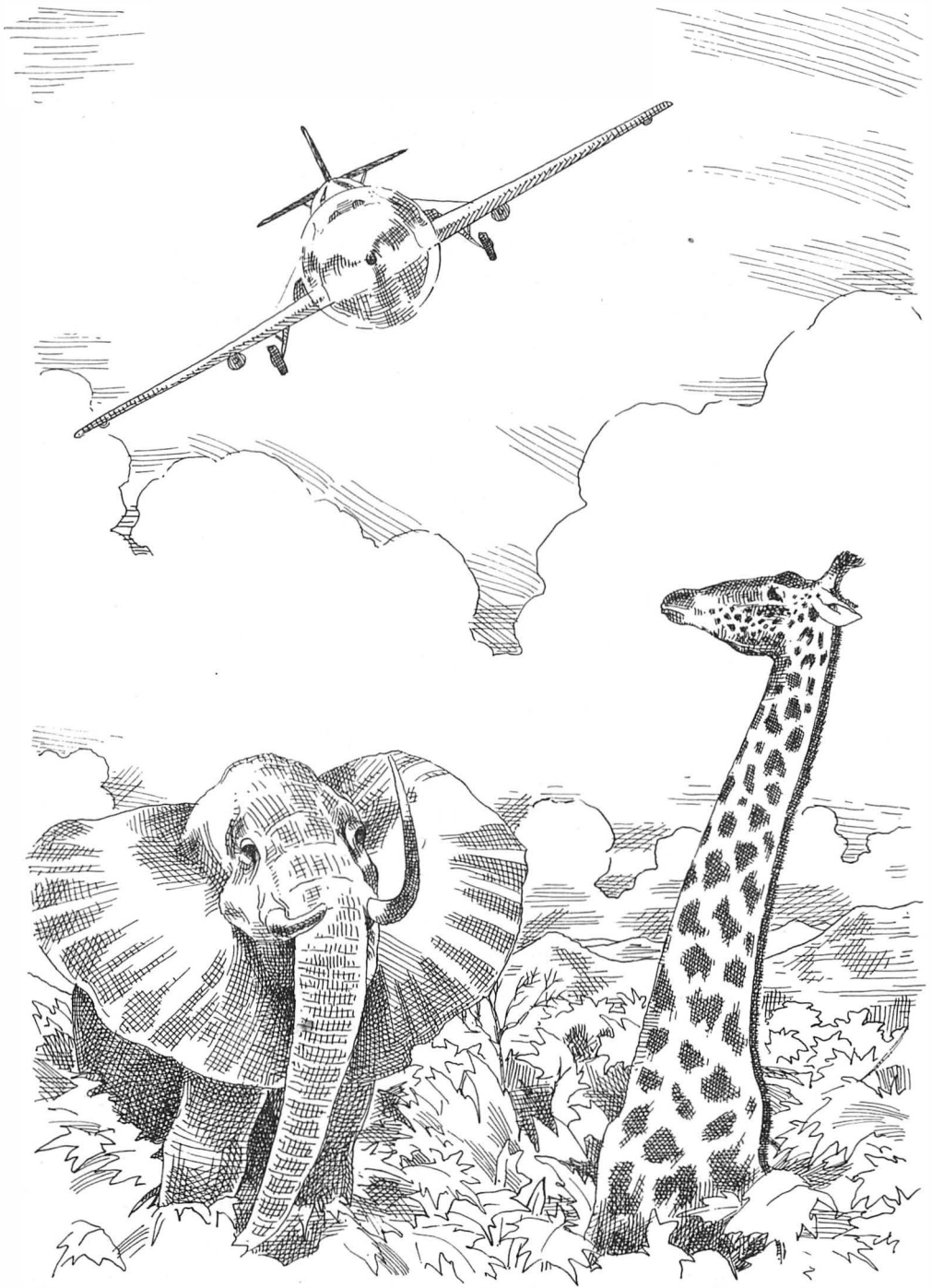
BUSH PILOT

Program by Duane S. Wood

A s a skilled bush pilot, you are expected to fly a small plane in some very tight spots while shuttling big game hunters in and out of the dense jungle.

Bush Pilot features a colorful title screen and smooth graphics movement of your airplane using the left- and right-arrow keys as a guidance system. The object is to safely guide the plane through a series of mazes without crashing into the walls.

Two listings are provided; when loaded and run they poke data into memory and allow you to save a machine language version for later use. With it, all you have to do is CLOADM or LOADM and EXEC. There are three choices at the opening menu: Option 1 to display the high scores, Option 2 to start the game and Option 3 to quit. You should always use Option 3 to exit the program. If you press Reset, the interrupt vector will not be correct and, if you have Disk BASIC, the drive will not turn off when it is accessed.

Each game begins with three airplanes, as indicated in the upper left corner of the screen. The score is centered at the top of the screen and the level of difficulty is shown in the upper right corner. At the start of each flight, your plane automatically moves through the first maze. You must control the plane's direction by using the left- and right-arrow keys. It will probably take a few "test flights" to get the feel of the controls, so don't worry if you crash at first.

You must maneuver the plane through the maze to the red/blue "finish line," after which another flight immediately begins. After every two flights, you advance to the next skill level and a new maze. Each level gets progressively faster. There are 16 skill levels — the game continues after Level 16, but at the same speed. You are rewarded an extra plane after every four levels of advancement or a maximum of nine planes. At Level 1 you are awarded 10 points for each one-third second of unobstructed flight. At Level 2, 20 points; Level 3, 30 points; and so on up to Level 9, where you are awarded a maximum of 90 points per one-third second of successful flight.

Let's get started. Just load and run each of the two listings and follow the prompts. After these two BASIC programs poke the data into your computer's memory, you will be able to (C)SAVEM"PILOT",&H3000,&H397C,&H3000. Have fun with this one and remember that good bush pilots are made, not born!

Duane Wood is a student at the University of North Carolina at Chapel Hill where he is studying computer science. He has won awards for projects in natural language processing at both state and local levels. He hopes to pursue a career as a systems analyst.

PILOT 1   16K ECB

```
10 REM *** BASIC DRIVER FOR 'PIL
OT' BY DUANE WOOD. ALL RIGHTS RE
SERVED
20 PMODE0,1
30 PCLEAR1:CLEAR200,&H2FFF:CLS
40 PRINT"POKING DATA..."
50 C=0
60 FOR X=12288 TO 13500:READ A:C
=C+A:POKE X,A:NEXT
70 IF C<>114529 THEN PRINT"DATA
ERROR":END
80 PRINT"SAVE THIS, ENTER AND RU
N PART 2"
90 END
100 DATA 142,63,28,134,46,167,12
8,140,63,103,37,249,111,128,140,
63,133,37,249,252
110 DATA 1,13,253,63,5,198,128,1
42,4,0,231,128,140,6,0,37,249,14
2,4,169
120 DATA 16,142,55,217,134,4,183
,63,13,198,15,166,160,167,128,90
,38,249,48,136
130 DATA 17,122,63,13,38,239,204
,5,195,221,136,142,56,21,23,4,14
0,204,5,236
140 DATA 221,136,142,56,48,23,4,
129,204,5,133,221,136,142,56,86,
```

```
23,4,118,142
15Ø DATA 4,16Ø,166,132,139,16,13
8,128,167,128,14Ø,5,34,37,243,14
2,Ø,15Ø,173,159
16Ø DATA 16Ø,Ø,38,6,48,31,38,246
,32,225,129,49,39,12,129,5Ø,16,3
9,Ø,137
17Ø DATA 129,51,39,117,32,2Ø9,19
8,96,23,4,219,2Ø4,4,42,221,136,1
42,56,57,23
18Ø DATA 4,55,134,49,183,63,13,1
42,4,132,16,142,63,28,2Ø6,63,1Ø3
,52,16,159
19Ø DATA 136,173,159,16Ø,2,134,4
6,173,159,16Ø,2,134,32,173,159,1
6Ø,2,198,15,166
2ØØ DATA 16Ø,173,159,16Ø,2,9Ø,38
,247,134,32,173,159,16Ø,2,198,6,
166,192,139,48
21Ø DATA 173,159,16Ø,2,9Ø,38,245
,53,16,48,136,32,182,63,13,76,18
3,63,13,129
22Ø DATA 54,37,19Ø,142,19,136,17
3,159,16Ø,Ø,16,38,255,27,48,31,3
8,244,22,255
23Ø DATA 2Ø,252,63,5,253,1,13,13
4,53,183,255,3,28,239,126,16Ø,23
2,142,63,22
24Ø DATA 198,6,111,128,9Ø,38,251
,2Ø4,Ø,Ø,253,63,1,198,1,247,63,3
,2Ø4,1
25Ø DATA 3,253,63,18,2Ø4,16,1,25
3,63,2Ø,2Ø4,6,Ø,253,63,8,127,63,
Ø,2Ø4
26Ø DATA 35,193,253,63,11,127,63
,14,2Ø4,Ø,1,253,63,15,134,2Ø,183
,63,17,23
27Ø DATA 4,39,142,8Ø,Ø,48,31,38,
252,142,53,47,191,1,13,134,53,18
3,255,3
28Ø DATA 28,239,32,2,141,28,141,
58,23,Ø,146,252,63,15,253,63,181
,23,Ø,243
29Ø DATA 23,1,16,23,1,37,23,1,93
,23,1,98,32,226,142,63,133,16,19
Ø,63
3ØØ DATA 11,134,16,183,63,13,198
,3,166,128,168,164,167,16Ø,9Ø,38
,247,49,168,29
31Ø DATA 122,63,13,38,237,57,246
,63,15,39,57,84,37,28,182,63,9,3
8,16,252
32Ø DATA 63,11,195,Ø,1,253,63,11
,134,6,183,63,9,32,33,74,74,183,
63,9
33Ø DATA 32,26,182,63,9,129,6,38
,14,252,63,11,131,Ø,1,253,63,11,
127,63
34Ø DATA 9,32,5,76,76,183,63,9,2
46,63,16,38,1,57,84,37,1Ø,19Ø,63
,11
35Ø DATA 48,136,64,191,63,11,57,
19Ø,63,11,48,136,192,191,63,11,5
7,182,63,16
36Ø DATA 177,63,182,38,82,182,63
,15,177,63,181,38,74,77,39,6Ø,68
,37,69,182
37Ø DATA 63,9,129,6,38,31,142,63
,133,16,142,56,1Ø9,182,63,14,198
,32,61,49
38Ø DATA 171,134,16,183,63,13,23
6,161,237,129,111,128,122,63,13,
38,245,134,2,142
39Ø DATA 63,133,198,16,1ØØ,128,1
Ø2,128,1Ø2,128,9Ø,38,247,74,38,2
39,5Ø,98,252,63
4ØØ DATA 15,253,63,181,22,255,32
,57,125,63,9,38,4,141,8,32,235,1
34,2,141
41Ø DATA 4Ø,32,229,142,63,133,16
,142,56,1Ø9,182,63,14,198,32,61,
49,171,134,16
42Ø DATA 183,63,13,111,128,236,1
61,237,129,122,63,13,38,245,57,1
82,63,9,38,1
43Ø DATA 57,198,16,142,63,181,1Ø
4,13Ø,1Ø5,13Ø,1Ø5,13Ø,9Ø,38,247,
74,38,239,57,19Ø
44Ø DATA 63,11,16,142,63,133,134
,16,183,63,7,183,63,13,198,3,166
,Ø,129,17Ø
45Ø DATA 16,39,1,19Ø,166,164,164
,132,39,3,127,63,7,166,16Ø,17Ø,1
32,167,128,9Ø
46Ø DATA 38,23Ø,48,136,29,122,63
,13,38,22Ø,125,63,7,16,39,Ø,155,
57,19Ø,63
47Ø DATA 2Ø,48,31,38,252,57,122,
63,8,134,191,183,255,2,182,255,Ø
,129,247,38
48Ø DATA 27,182,63,Ø,129,1,39,7,
134,6,183,63,8,32,67,125,63,8,39
,1
49Ø DATA 57,134,6,183,63,8,32,54
,134,223,183,255,2,182,255,Ø,129
,247,38,27
5ØØ DATA 182,63,Ø,129,2,39,7,134
,6,183,63,8,32,47,125,63,8,39,1,
57
51Ø DATA 134,6,183,63,8,32,34,12
7,63,Ø,125,63,8,39,1,57,134,6,18
3,63
52Ø DATA 8,57,134,1,183,63,Ø,182
,63,14,76,129,8,38,1,79,183,63,1
4,32
53Ø DATA 16,134,2,183,63,Ø,182,6
```

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3,14,74,42,2,134,7,183,63,14,182
,63,14
540 DATA 72,142,57,109,48,134,23
6,132,253,63,15,57,26,16,134,52,
183,255,3,190
550 DATA 63,11,134,8,183,63,13,1
34,16,100,128,104,128,100,128,48
,136,29,74,38
560 DATA 244,142,48,0,23,255,70,
190,63,11,122,63,13,38,228,122,6
3,19,16,38
570 DATA 253,136,198,128,23,1,17
5,142,63,127,16,142,63,22,198,6,
166,160,161,128
580 DATA 34,10,16,37,252,204,90,
38,243,22,252,198,198,4,247,63,1
3,142,63,121
590 DATA 49,6,206,63,22,198,6,16
6,192,161,128,34,40,37,3,90,38,2
45,16,140
600 DATA 63,127,39,15,52,32,142,
63,127,166,130,167,6,172,228,38,
248,53,32,206
610 DATA 63,22,198,6,166,192,167
,160,90,38,249,32,13,48,52,122,6
3,13,38,196
```

```
620 DATA 16,142,63,103,32,214,20
4,4,160,221,136,142,56,69,23,0,1
84,182,63,13
630 DATA 198,15,61,195,63,28,52,
6,142,63,88,172,228,39,8,166,130
,167,15,172
640 DATA 228,38,248,198,15,173,1
59,160,0,39,250,129,8,38,13,172,
228,39,242,92
650 DATA 48,31,173,159,160,2,32,
233,129,13,38,16,134,32,173,159,
160,2,167,128
660 DATA 90,38,247,50,98,22,252,
42,129,32,37,209,129,90,34,205,1
73,159,160,2
670 DATA 167,128,90,38,196,50,98
,22,252,20,26,16,134,52,183,255,
3,142,64,0
680 DATA 23,254,90,182,63,21,76,
183,63,21,132,1,16,39,252,158,12
5,63,20,39
690 DATA 3,122,63,20,182,63,21,1
28,2,132,7,129,7,38,11,182,63,19
,76,129
700 DATA 10,39,3,183,63,19,182,6
3,18,76,129,10,39
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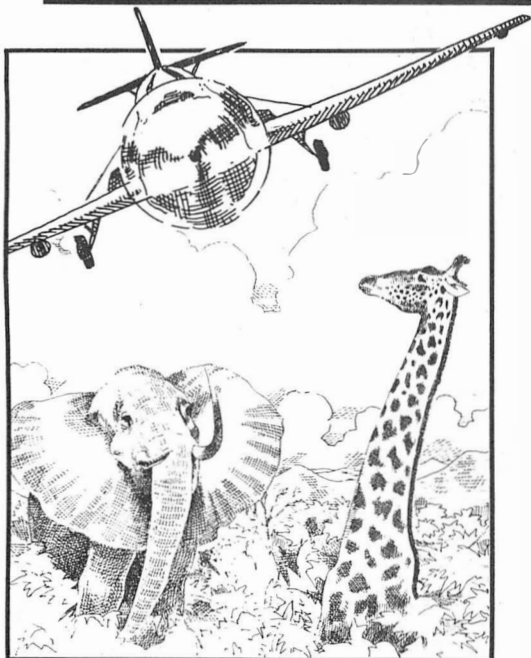
PILOT 2


```
5 REM *** PART 2
10 REM *** BASIC DRIVER FOR 'PIL
OT' BY DUANE WOOD. ALL RIGHTS RE
SERVED
15 PMODE0,1
20 PCLEAR1:CLEAR200,&H2FFF:CLS
30 PRINT"POKING DATA..."
35 C=0
40 FOR X=13501 TO 14716:READ A:C
=C+A:POKE X,A:NEXT
45 IF C<>105369 THEN PRINT"DATA
ERROR":END
50 PRINT"SAVE THIS, SAVE THE ML
GAME BY  TYPING:
        (C)SAVEM'PILOT',&H3000,
&H397C,  &H3000"
60 END
70 DATA 3,183,63,18,142,63,4,166
,130,76,129,10,38,9,140,63,1,39,
6,111
80 DATA 132,32,240,167,132,22,25
2,93,166,128,39,6,173,159,160,2,
32,246,57,142
90 DATA 63,22,16,142,14,44,134,6
,183,63,4,52,32,166,128,198,7,61
```

```
,195,55
100 DATA 147,31,3,198,7,166,192,
67,167,164,49,168,32,90,38,245,5
3,32,49,33
110 DATA 122,63,4,38,222,57,142,
14,33,182,63,19,198,7,61,195,55,
147,31,2
120 DATA 198,7,166,160,67,167,13
2,48,136,32,90,38,245,57,122,63,
17,39,4,182
130 DATA 255,2,59,142,63,26,246,
63,18,247,63,10,79,230,134,92,19
3,10,38,7
140 DATA 111,134,74,129,251,38,2
42,231,134,122,63,10,38,234,141,
139,198,20,247,63
150 DATA 17,182,255,2,59,79,183,
255,34,183,255,194,183,255,196,1
83,255,202,183,255
160 DATA 198,142,4,0,231,128,140
,6,0,37,249,57,134,248,183,255,3
4,183,255,195
170 DATA 183,255,197,183,255,203
,183,255,199,142,14,0,111,128,14
0,38,0,37,249,142
180 DATA 14,0,134,255,167,128,14
0,15,64,38,249,182,63,3,38,4,134
,5,32,6
190 DATA 129,6,37,2,128,5,74,142
,54,60,77,39,14,16,174,128,16,14
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34,192,167,169
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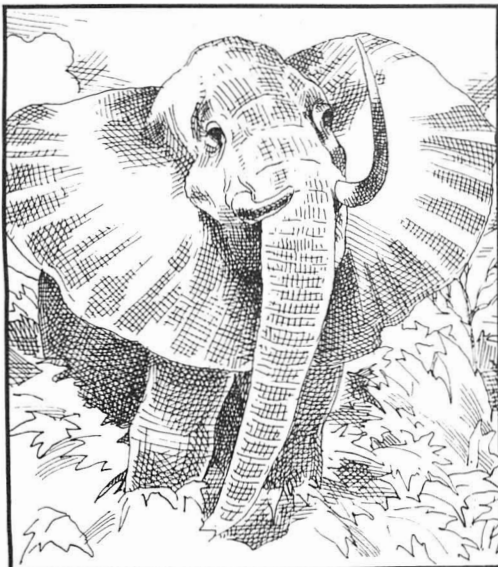


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210 DATA 14,0,16,172,132,39,5,49
,168,32,32,242,48,2,32,227,16,17
4,129,16
220 DATA 140,255,255,39,17,134,2
55,167,169,14,0,49,33,16,172,132
,35,245,48,2
230 DATA 32,230,109,128,39,19,16
,174,129,134,170,167,169,14,0,16
,172,132,39,21
240 DATA 49,168,32,32,242,16,174
,129,134,170,167,169,14,0,49,33,
16,172,132,35
250 DATA 245,23,254,187,23,254,2
31,142,63,1,16,142,14,60,134,3,1
83,63,4,23
260 DATA 254,181,57,1,32,23,224,
1,63,23,255,5,134,23,230,1,76,8,
236,5
270 DATA 147,14,19,10,25,18,249,
18,12,18,236,255,255,1,32,1,62,2
3,224,23
280 DATA 254,14,6,14,18,5,147,5,
153,10,25,10,30,18,236,18,248,25
5,255,0
290 DATA 10,153,10,158,0,0,1,32,
23,224,1,63,23,255,10,134,23,198
,5,148
300 DATA 15,244,15,236,18,236,1,
90,9,122,14,26,18,250,255,255,1,
32,1,62
310 DATA 23,224,23,254,5,128,5,1
47,10,134,10,141,15,236,15,243,1
8,236,18,249
320 DATA 255,255,255,1,65,5,97,0
,0,1,32,23,224,1,63,23,255,5,133
,11
330 DATA 133,20,134,23,198,16,12
,19,108,11,144,14,144,5,147,8,11
5,1,86,2
340 DATA 118,2,121,4,121,255,255
,1,32,1,62,23,224,23,254,16,0,16
,11,5
350 DATA 133,5,146,11,133,11,143
,8,115,8,119,14,144,14,158,19,10
8,19,121,2
360 DATA 118,2,120,4,121,4,126,2
55,255,255,5,166,11,102,0,0,1,32
,23,224
370 DATA 1,63,23,255,20,6,23,198
,15,172,19,108,20,18,23,210,15,1
52,18,248
380 DATA 7,53,15,117,5,165,10,22
9,1,81,10,241,255,255,1,32,1,62,
23,224
390 DATA 23,254,5,133,5,139,10,2
29,10,240,7,21,7,24,11,251,11,25
4,15,128
400 DATA 15,151,255,255,255,5,16
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,255,5
41Ø DATA 134,23,198,1,74,18,1Ø6,
5,175,23,2Ø7,255,255,1,32,1,62,2
3,224,23
42Ø DATA 254,5,143,5,154,9,148,9
,158,14,15,14,26,18,243,18,254,2
55,255,255
43Ø DATA 19,3Ø,23,222,Ø,Ø,56,68,
68,68,68,68,56,16,48,16,16,16,16
,56
44Ø DATA 56,68,4,24,32,64,124,56
,68,4,24,4,68,56,68,68,68,124,4,
4
45Ø DATA 4,124,64,64,12Ø,4,4,12Ø
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,4,4
46Ø DATA 4,4,56,68,68,56,68,68,5
6,124,68,68,124,4,4,124,142,14Ø,
138,148
47Ø DATA 158,128,17Ø,128,128,19Ø
,188,186,2Ø4,2Ø6,2ØØ,139,131,138
,128,154,128,17Ø,128,128
48Ø DATA 186,128,186,128,2Ø2,128
,138,128,128,128,154,128,17Ø,128
,128,186,128,186,128,2Ø2
49Ø DATA 128,136,128,128,148,156
,128,172,172,168,188,188,184,128
,2ØØ,128,49,41,32,72
5ØØ DATA 73,71,72,32,83,67,79,82
,69,83,32,32,32,5Ø,41,32,66,69,7
1,73
51Ø DATA 78,32,Ø,51,41,32,81,85,
73,84,32,Ø,72,73,71,72,32,83,67,
79
52Ø DATA 82,69,83,Ø,69,78,84,69,
82,32,89,79,85,82,32,78,65,77,69
,58
53Ø DATA Ø,4Ø,67,41,32,49,57,56,
52,32,66,89,32,68,85,65,78,69,32
,87
54Ø DATA 79,79,68,Ø,1,128,1,128,
1,128,1,128,7,224,31,248,121,158
,225,135
55Ø DATA 129,129,1,128,1,128,1,1
28,1,128,3,192,7,224,1,128,24,4,
63,14
56Ø DATA 7,252,Ø,248,Ø,12Ø,Ø,248
,1,216,3,14Ø,7,12,62,12,28,6,6Ø,
6
57Ø DATA 2Ø,4,Ø,Ø,Ø,Ø,Ø,Ø,1,128,
Ø,192,Ø,192,Ø,96,Ø,96,64,48
58Ø DATA 96,48,255,255,255,255,9
6,48,64,48,Ø,96,Ø,96,Ø,192,Ø,192
,1,128
59Ø DATA 2Ø,4,6Ø,6,28,6,62,12,7,
12,3,14Ø,1,216,Ø,248,Ø,12Ø,Ø,248
6ØØ DATA 7,252,63,14,24,4,Ø,Ø,Ø,
Ø,Ø,Ø,1,128,7,224,3,192,1,128
61Ø DATA 1,128,1,128,1,128,129,1
29,225,135,121,158,31,248,7,224,
1,128,1,128
62Ø DATA 1,128,1,128,32,4Ø,96,6Ø
,96,56,48,124,48,224,49,192,27,1
28,31,Ø
63Ø DATA 3Ø,Ø,31,Ø,63,224,112,25
2,32,24,Ø,Ø,Ø,Ø,Ø,Ø,1,128,3,Ø
64Ø DATA 3,Ø,6,Ø,6,Ø,12,2,12,6,2
55,255,255,255,12,6,12,2,6,Ø
65Ø DATA 6,Ø,3,Ø,3,Ø,1,128,32,24
,224,252,63,224,31,Ø,3Ø,Ø,31,Ø
66Ø DATA 27,128,49,192,48,224,48
,124,96,56,96,6Ø,32,4Ø,Ø,Ø,Ø,Ø,Ø
,Ø
67Ø DATA Ø,1,2,1,2,Ø,2,2,Ø,2,1,2
,1,Ø,1,1
```
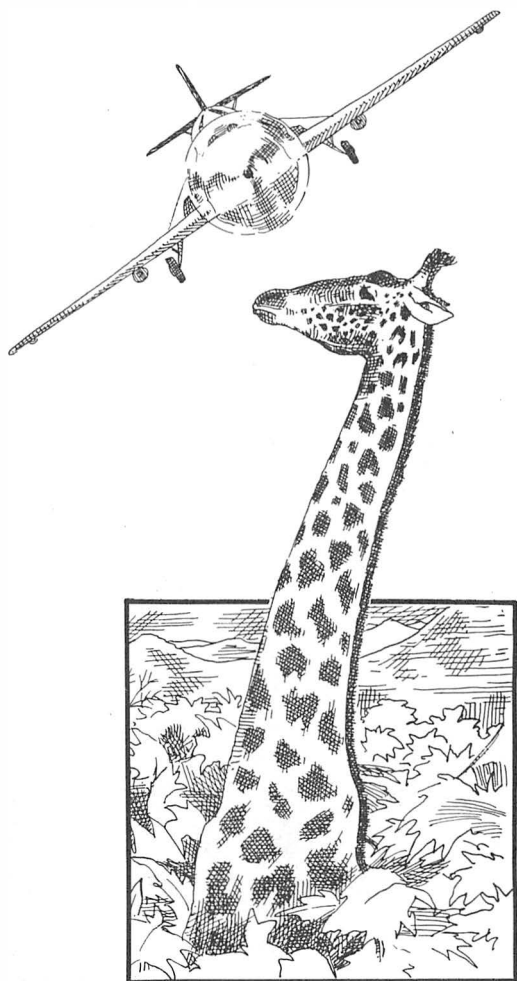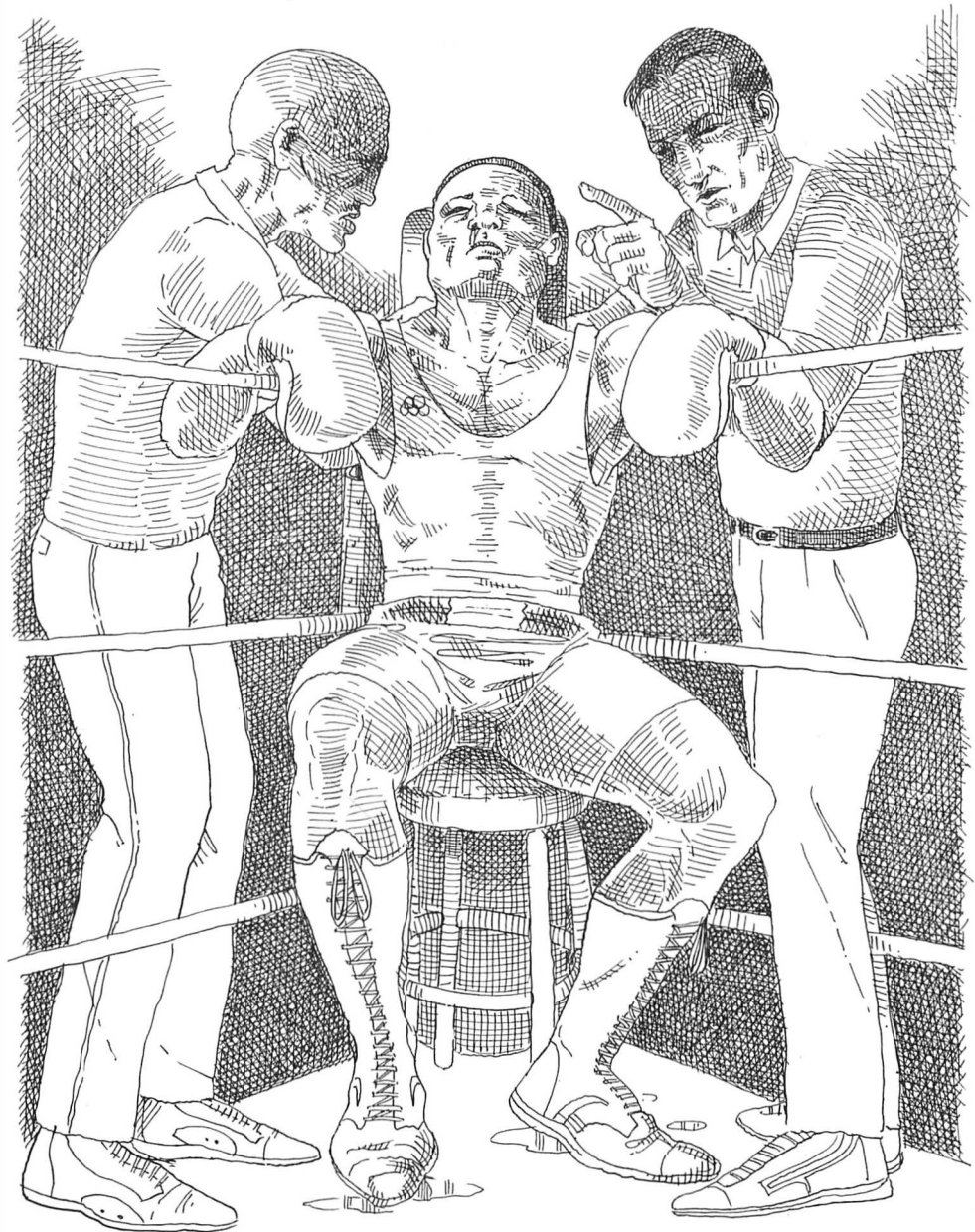
OLYMPIC BOXING

Program by Dr. Bob Tyson

"OK, Rocky, it's the eighth round and you're getting the best of him. Just keep him after you, get in some left jabs and stomach punches and let's win this one!"

Olympic Boxing is a Simulation of boxing as conducted on the World Class Amateur level. You are the head coach of the U.S.A. Olympic Boxing Team in the 1984 games.

After loading and running the program, you are greeted with the five colored rings and the familiar musical theme. You then choose the weight class in which the upcoming bout is to be fought from this list:

1) Light flyweight
2) Flyweight
3) Bantamweight
4) Featherweight
5) Lightweight
6) Light welterweight
7) Welterweight
8) Light middleweight
9) Middleweight
10) Light heavyweight
11) Heavyweight

Either the semifinal or final round can be selected, and once you have chosen the weight class, your opponent is assigned by the computer. The actual fighters' names from the 1984 Olympics are used to add realism to the contest.

The two fighters chosen have boxing characteristics that help determine the outcome of the match. You, as coach, are capable of altering the outcome by inserting strategies before or during the round, or whenever the strategies menu appears. Although international boxing rules prohibit coaching during the fight, this Simulation allows it, because without this feature it would become little more than a spectator's program.

As your opponent's strategy is developed by the computer and you control your fighter, the result of each blow is printed near the top of the screen, similar to how it would be announced on TV. Each round lasts three minutes, and a countdown timer is provided at the top of the screen.

Block graphics representing the fighters appear at the bottom of the screen during the bout and the flag of the winner's country is presented at the end of the match.

So get ready, the bell is about to ring. It's time to go for the gold!

Bob Tyson has a doctorate in physics. He is a senior systems engineer with United Technologies Optical Systems in West Palm Beach, Florida, doing research in high-energy laser systems. Dr. Tyson is also president of Ankia Research, a Color Computer software development company.

BOXING   32K ECB

```
10 CLEAR 300:DIM N$(2,3),S(2,7),
PT(2),PR(2),KD(2),CL(2),WR(2),SR
(2),MV(2),PM(2),S$(2),T$(5),D$(4
),M$(3)
20 T=RND(TIMER):S$(1)="   RIGHT"
:S$(2)="   LEFT":T$(1)="JAB":T$(
2)="HOOK":T$(3)="CROSS":T$(4)="U
PPERCUT":T$(5)="COMBINATION"
30 D$(1)="BACKPEDALS":D$(2)="DUC
KS":D$(3)="BLOCKS IT":D$(4)="TAK
ES IT ON HIS GLOVE"
100 GOSUB 8000
120 CLS:PRINT"YOU MANAGE THE USA
 BOXING TEAM  IN THE 1984 OLYMPI
C GAMES.  THE U.S. FIGHTERS HAVE
 MADE IT TO   THE SEMI-FINALS.
YOU CAN CHOOSESEMI-FINAL OR FINA
L MATCHES.    THE SITUATION IS U
NDER YOUR CON-TROL.":PRINT"    G
O     F O R     I T  !!"
130 PRINT:PRINT"ENTER ANY KEY TO
 CONTINUE"
131 G$=INKEY$:IF G$=""THEN 131 E
LSE 140
140 CLS:PRINT@65,"ENTER WEIGHT C
LASS"
150 PRINT"1 =LIGHT FLYWEIGHT":PR
INT"2 =FLYWEIGHT":PRINT"3 =BANTA
MWEIGHT":PRINT"4 =FEATHERWEIGHT"
:PRINT"5 =LIGHTWEIGHT":PRINT"6 =
LIGHT WELTERWEIGHT"
152 PRINT"7 =WELTERWEIGHT":PRINT
```

```
"8 =LIGHT MIDDLEWEIGHT":PRINT"9
=MIDDLEWEIGHT":PRINT"10=LIGHT HE
AVYWEIGHT":PRINT"11=HEAVYWEIGHT"
160 INPUT WT:WT=INT(WT):IF WT<1
OR WT>11 THEN 160
170 RESTORE
180 K=WT-1
182 IF K=0 THEN 190
184 FOR I=1 TO 3:READ N1$,N2$,N3
$:FOR J=1 TO 7:READ N:NEXT J:NEX
T I
186 K=K-1:GOTO 182
190 READ N$(1,1),N$(1,2),N$(1,3)
:FOR J=1 TO 7:READ S(1,J):NEXT J
200 CLS:PRINT"THE U.S. FIGHTER I
S:":PRINT N$(1,1);" ";N$(1,2):GO
SUB 999
210 PRINT:PRINT"IS THIS A FINAL
OR A SEMI-FINAL MATCH? <F> OR <S
>?"
220 M$=INKEY$:IF M$="" THEN 220
ELSE IF M$="S" OR M$="F" THEN 23
0 ELSE 220
230 IF M$="F" THEN 235 ELSE 240
235 FOR I=1 TO 3:READ N$(2,1):NE
XT I:FOR J=1 TO 7:READ S(2,J):NE
XT J
240 READ N$(2,1),N$(2,2),N$(2,3)
:FOR J=1 TO 7:READ S(2,J):NEXT J
250 CLS:PRINT"THE OPPOSING FIGHT
ER IS":PRINT N$(2,1);" ";N$(2,2)
," FROM":PRINT N$(2,3):FOR K=1 T
O 4:GOSUB 999:NEXT
260 GOSUB 980:FOR I=1 TO 8:GOSUB
 999:NEXT
270 CLS:PRINT"WHEN ASTERISKS APP
EAR, YOU HAVE ABOUT EIGHT SECOND
S TO INPUT    YOUR STRATEGY.  YO
UR FIGHTER MAYOR MAY NOT HEAR TH
EM.":GOSUB 999
290 RD=1:IF S(1,3)<S(2,3) THEN C
T=1 ELSE CT=2
295 GOTO 1134
300 TIMER=0:CLS:PRINT@9,"R O U N
 D ";RD:PRINT:PRINT:GOSUB 970 'S
TART ROUND
310 C1=RND(10):C2=RND(10):FOR I=
1 TO 7:C1=C1+S(1,I):C2=C2+S(2,I)
:NEXT I   'CONTINUE ROUND
320 IF FLAG=1 OR FLAG=2 THEN S(F
LAG,3)=S(FLAG,3)-.3
325 'DETERMINE FIGHTER IN CONTRO
L
330 IF C1>=C2 THEN CT=1 ELSE CT=
2
350 IF RND(10)>8 THEN CT=3-CT
400 P1=S(CT,3)-S(3-CT,5)+S(CT,1)
-S(3-CT,7)+10:IF SR(CT)=5 AND SR
(3-CT)=2 THEN P1=P1+3 ELSE IF SR
(CT)=1 THEN P1=P1-2 'PROBABILITY
 OF HIT
410 P2=30-P1  'PROB. OF MISS
420 P3=INT((S(1,4)+S(2,4))/4):IF
 SR(1)=1 AND SR(2)=1 THEN P3=3 E
LSE P3=P3+1   'PROB. OF CLINCH
429 'PROB. OF RING MOVEMENT
430 P4=1:IF SR(1)=1 THEN 432 ELS
E IF SR(2)=1 THEN 434 ELSE 440
432 IF SR(2)=3 OR SR(2)=4 THEN P
4=3 ELSE 440
434 IF SR(1)=3 OR SR(1)=4 THEN P
4=3 ELSE 440
440 R=RND(P1+P2+P3+P4)
450 IF R<P1 THEN 700 ELSE IF R<P
1+P2 THEN 800 ELSE IF R<P1+P2+P3
 THEN 900 ELSE 500
500 'RING MOVEMENT
510 I=RND(4):ON I GOTO 511,520,5
30,540
511 PRINT @96,"THE FIGHTERS MOVE
 OUT TO THE    CENTER OF THE RIN
G":PRINT:GOTO 550
520 PRINT @96,N$(CT,2)+" HAS ":P
RINT N$(3-CT,2)+" PINNED AGAINST
                 THE CORNER":PS=
-2*CT+5
525 S(CT,3)=S(CT,3)+.3:FLAG=CT:G
OTO 550
530 PRINT @96,N$(CT,2)+" HAS ":P
RINT N$(3-CT,2)+" PUSHED UP AGAI
NST              THE ROPES":PS=-
2*CT+5:GOTO 550
540 PRINT @96,"THE FIGHTERS ARE
CIRCLING EACH   OTHER":MV(3-CT)=M
V(3-CT)+1:PS=2
550 MV(CT)=MV(CT)+1:GOTO 1100
700 PRINT @96,N$(CT,2)+" CONNECT
S "
702 K=RND(5):IF K=5 THEN 707
705 PRINT" WITH A "+S$(RND(2))+"
 "+T$(K):PRINT:GOTO 710
707 PRINT" WITH A COMBINATION":P
RINT
710 PR(CT)=PR(CT)+RND(2)+1:IF K<
4 THEN SU=1 ELSE SU=3
715 SU=SU+CT-1:GOSUB 6000
720 R=S(CT,1)+2*S(CT,2)+S(CT,7)-
S(3-CT,6)    'CHANCE OF KNOCKDOWN
730 IF R>5 AND S(3-CT,4)<5 THEN
765
740 IF R>4 AND S(CT,4)>8 AND S(3
-CT,4)<10 THEN 755    'CUT
750 S(3-CT,4)=S(3-CT,4)-1:PRINT:
GOTO 1100   'HIT FIGHTER LOSES E
NDURANCE
755 PRINT@96,N$(3-CT,2);:ON RND(
```

```
5) GOTO 756,757,758,759,760
756 PRINT " HAS A BLOODY NOSE":R
=1:GOTO 761
757 PRINT " HAS A CUT RIGHT EYE"
:R=2:GOTO 761
758 PRINT " HAS A CUT LEFT EYE":
R=2:GOTO 761
759 PRINT " HAS A SWOLLEN EYELID
":R=1:GOTO 761
760 PRINT" HAS A BAD GASH":PRINT
"ABOVE HIS EYE":R=3:GOTO 761
761 PRINT:PRINT:IF R=3 AND S(3-C
T,4)<2 THEN 1300    'TKO?
763 S(CT,3)=S(CT,3)+R:S(3-CT,4)=
S(3-CT,4)-3:IF S(3-CT,4)<0 THEN
S(3-CT,4)=0
764 GOTO 1100
765 GOSUB 999:PRINT:PRINT N$(3-C
T,2)+" IS DOWN !!":SU=4+CT:GOSUB
6000
770 R=RND(7)+INT(.5*S(CT,1)+S(CT
,2))
775 PRINT@160,"THE COUNT":FOR K=
1 TO R
780 PRINT K:FOR I=1 TO 2000:NEXT
:IF K=10 THEN 795
785 NEXT K
787 KD(CT)=KD(CT)+1:IF KD=3 THEN
1300
790 PR(CT)=PR(CT)+RND(5)+2:S(3-C
T,4)=S(3-CT,4)-5:IF S(3-CT,4)<0
THEN S(3-CT,4)=0
791 CLS:GOTO 1100
795 PRINT"OUT !!":GOSUB 999:GOTO
1400
800 'PUNCH MISSED
810 R=RND(4):PRINT @96,N$(CT,2)+
" THROWS A ":PRINT S$(RND(2))+"
"+T$(R):IF R=4 THEN SU=9 ELSE SU
=7
820 R=RND(4):PRINT N$(3-CT,2)+"
"+D$(RND(4)):PM(CT)=PM(CT)+1:IF
R=1 THEN PS=PS+3-2*CT
830 SU=SU+CT-1:GOSUB 6000:GOTO 1
100
900 'CLINCH
910 PRINT @96,N$(1,2)+" AND "+N$
(2,2):PRINT"GO INTO A CLINCH":PR
INT:SU=11:GOSUB 6000
920 CL(CT)=CL(CT)+1
930 GOTO 1100
970 PRINT"******** CHOOSE STRATE
GY ******":PRINT"1=COVER UP":PRI
NT"2=MOVE INSIDE":PRINT"3=MOVE O
UTSIDE & JAB":PRINT"4=MOVE OUTSI
DE AND BACKPEDAL":PRINT"5=GO FOR
 KNOCKOUT"
972 I=700:SR(2)=RND(5)
973 G$=INKEY$:I=I-1:IF I<=0 THEN
 G$=STR$(RND(5)) ELSE IF G$="" T
HEN 973
974 SR(1)=0:IF VAL(G$)<0 OR VAL(
G$)>5 THEN 973
975 SR(1)=VAL(G$):CLS:RETURN
980 CLS:PRINT"CHARACTERISTICS AR
E:"
981 PRINT N$(1,2);STRING$(13," "
);N$(2,2):PRINT S(1,1);"        S
PEED         ";S(2,1):PRINTS(1,
2);"   PUNCHING POWER     ";S(2,
2):PRINT S(1,3);"    AGGRESSIVENE
SS    ";S(2,3):PRINT INT(S(1,4)
);"     ENDURANCE         ";INT(S(
2,4))
982 PRINT S(1,5);"  DEFENSIVE SK
ILL      ";S(2,5):PRINT S(1,6);"
DEFENSIVE STRENGTH   ";S(2,6):PR
INT S(1,7);"     EXPERIENCE
  ";S(2,7)
984 RETURN
999 FOR I=1 TO 2500:NEXT:RETURN
1100 FOR I=1 TO 30:PRINT@9,"R O
U N D ";RD:T=INT((10800-TIMER)/6
0):IF T=40 OR T=80 OR T=120 THEN
 1250
1110 IF T>1 THEN 1150
1120 RD=RD+1:FOR I=1 TO 2:PT(I)=
PT(I)+PR(I)+MV(I)-CL(3-I):S(I,4)
=S(I,4)+INT(.2*PR(I))-.1*PM(I)-I
NT(.1*PR(3-I)):NEXT
1125 IF RD=4 THEN 1200
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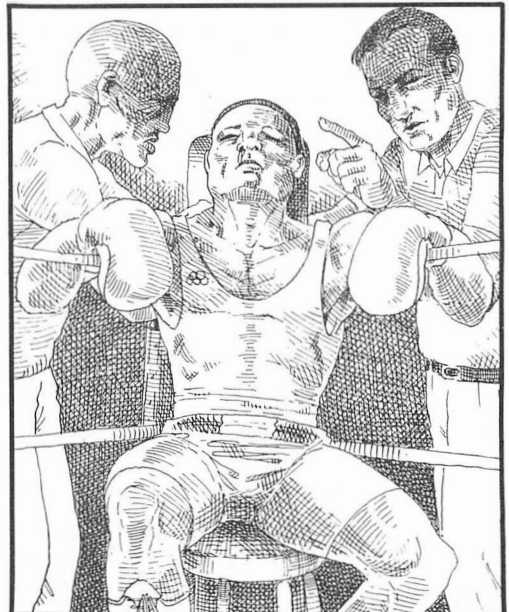
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1130 IF S(1,4)<Ø THEN S(1,6)=S(1        1,Ø:PCLS1
,6)-1                                   5Ø1Ø ON R+1 GOTO 51ØØ,5Ø2Ø,59ØØ
1131 IF S(2,4)<Ø THEN S(2,6)=S(2        5Ø2Ø 'US FLAG
,6)-1                                   5Ø21 K=44
1134 FOR I=1 TO 2:CL(I)=Ø:WR(I)=        5Ø22 COLOR 4,2:LINE(47,K)-(219,K
Ø:KD(I)=Ø:MV(I)=Ø:PR(I)=Ø:PM(I)=        +8),PSET,BF
Ø:NEXT                                  5Ø23 COLOR 2,4:IF K>=132 THEN 5Ø
114Ø GOTO 3ØØ                           25 ELSE LINE(47,K+8)-(219,K+16),
115Ø PRINT@4Ø," TIME ";INT(T/6Ø)        PSET,BF
;":";INT(T-INT(T/6Ø)*6Ø):NEXT I         5Ø24 K=K+16:GOTO 5Ø22
116Ø GOSUB 7ØØØ:GOTO 31Ø                5Ø25 COLOR 3,2:LINE(47,44)-(133,
12ØØ CLS:PRINT"THE FIGHT IS OVER        98),PSET,BF
 !!":PRINT:PRINT"BOTH BOXERS ARE        5Ø26 FOR X=1 TO 7:FOR Y=1 TO 5
 WAITING FOR THE JUDGES DECISION        5Ø27 PSET (44+X*11,42+Y*1Ø,2)
 ...":GOSUB 999:GOSUB 999               5Ø28 NEXT Y,X
121Ø PRINT:PRINT" THE WINNER IS.        5Ø29 FOR X=1 TO 6:FOR Y=1 TO 4
..":PRINT:PRINT                         5Ø3Ø PSET (49+X*11,47+Y*1Ø,2)
122Ø IF PT(1)>PT(2) THEN 1221 EL        5Ø31 NEXT Y,X
SE IF PT(2)>PT(1) THEN 1225 ELSE        5Ø32 GOSUB 81ØØ:STOP
 123Ø                                   51ØØ A$=LEFT$(N$(2,3),2)
1221 PRINT "THE AMERICAN BOXER":        51Ø1 IF A$="CU"THEN GOSUB 515Ø E
PRINT N$(1,1)+" "+N$(1,2):R=1:GO        LSE IF A$="E." THEN GOSUB 52ØØ E
TO 5ØØØ                                 LSE IF A$="KO" THEN GOSUB 525Ø E
1225 PRINT N$(2,1)+" "+N$(2,2):         LSE IF A$="SO" THEN GOSUB 53ØØ E
PRINT" FROM ";N$(2,3):R=Ø:GOTO 5        LSE IF A$="PO" THEN GOSUB 535Ø E
ØØØ                                     LSE IF A$="JA" THEN GOSUB 54ØØ
123Ø IF Z$="F" THEN 1232 ELSE 12        51Ø2 IF A$="W."THEN GOSUB 545Ø E
33                                      LSE IF A$="HU" THEN GOSUB 55ØØ E
1232 PRINT"THE JUDGES RULE A DRA        LSE IF A$="GR" THEN GOSUB 555Ø E
W !!       TWO GOLD MEDALS ARE A        LSE IF A$="FR" THEN GOSUB 56ØØ E
WARDED":R=2:GOTO 5ØØØ                   LSE IF A$="IT" THEN GOSUB 565Ø E
1233 IF RND(2)=1 THEN 1221 ELSE         LSE IF A$="SW" THEN GOSUB 57ØØ
1225                                    51Ø3 IF A$="ME"THEN GOSUB 575Ø E
124Ø IF CT=1 THEN R=1 ELSE R=Ø          LSE IF A$="IR" THEN GOSUB 58ØØ E
1245 GOTO 5ØØØ                          LSE IF A$="AU" THEN GOSUB 585Ø
125Ø GOSUB 981:GOSUB 97Ø                511Ø GOSUB 81ØØ:STOP
126Ø GOTO 115Ø                          515Ø COLOR 3,1:LINE(1,8Ø)-(171,1
13ØØ T=(1Ø8ØØ-TIMER)/6Ø IF T<1 T        84),PSET,BF:COLOR 2,1:FOR I=Ø TO
HEN T=1                                  1:LINE(1,1ØØ+I*4Ø)-(171,12Ø+I*4
131Ø CLS:PRINT @128,"THE WINNER         Ø),PSET,BF:NEXT
BY                       TECHN          516Ø COLOR 4,1:LINE(1,8Ø)-(71,13
ICAL KNOCKOUT:":T=18Ø-T:PRINT"          2),PSET:LINE(71,132)-(1,184),PSE
AT ";INT(T/6Ø);":";INT(T-INT(T/6        T:PAINT(4Ø,13Ø),4,4
Ø)*6Ø):PRINT "OF ROUND ";RD             5165 PAINT(4Ø,13Ø),4,4
132Ø PRINT N$(CT,1)+" "+N$(CT,2)        517Ø COLOR 2,1:DRAW"BM4Ø,13Ø;L1Ø
:PRINT "   OF   "+N$(CT,3):GOTO         F8R2U2L1U2L1U2L1U2L1D2L1D2L1
124Ø                                    D2L1D2L1D2R2E8":PAINT(38,132),2,
14ØØ T=(1Ø8ØØ-TIMER)/6Ø:IF T<1 T        2
HEN T=1                                 518Ø RETURN
141Ø CLS:PRINT @128,"THE WINNER         52ØØ COLOR 3,1:LINE(1,8Ø)-(171,1
BY                       KNOCKOU         15),PSET,BF:COLOR 4,1:LINE(1,115
T:":T=18Ø-T:PRINT"   AT ";INT(T/6        )-(171,15Ø),PSET,BF:COLOR 2,1:LI
Ø);":";INT(T-INT(T/6Ø)*6Ø):PRINT        NE(1,15Ø)-(171,184),PSET,BF
 "OF ROUND ";RD                         521Ø CIRCLE(82,134),25,1:COLOR 1
142Ø PRINT N$(CT,1)+" "+N$(CT,2)        ,4:DRAW"BM82,159;U4ØF25H25G25"
:PRINT "   OF   "+N$(CT,3):GOTO         522Ø RETURN
124Ø                                    525Ø COLOR 2,4:LINE(1,8Ø)-(171,1
5ØØØ GOSUB 999:PMODE 1,1:SCREEN         84),PSET,BF:COLOR 4,2:CIRCLE(86,
```

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132),22,4:DRAW"BM66,132;F5R1ØE1Ø
R1ØF5":PAINT(86,136),3,4:PAINT(8
6,128),4,4
526Ø COLOR 3,1:DRAW"BM64,1Ø2;G2Ø
;BH6;E2Ø;BH6;G2Ø":DRAW"BM1Ø8,1Ø2
;F8;BF4;F8;BE6;H2Ø;BE6;F8;BF4;F8
"
527Ø DRAW"BM64,162;H2Ø;BG6;F8;BF
4;F8;BG6;H2Ø":DRAW"BM1Ø8,162;E8;
BE4;E8;BF6;G8;BG4;G8;BF6;E8;BE4;
E8"
528Ø RETURN
53ØØ COLOR 4,2:LINE(1,8Ø)-(171,1
84),PSET,BF:COLOR 2,4:DRAW"BM24,
1Ø4;E2G4E2F12H2G3L4U2L2G4E4R2D2R
4E5U2R2U3L2U2H2":RETURN
535Ø COLOR 2,1:LINE(1,8Ø)-(171,1
36),PSET,BF:COLOR 4,1:LINE(1,136
)-(171,184),PSET,BF:RETURN
54ØØ COLOR 2,4:LINE(1,8Ø)-(171,1
84),PSET,BF:CIRCLE(86,132),24,4:
PAINT(86,132),4,4:RETURN
545Ø COLOR 3,1:LINE(1,8Ø)-(171,1
15),PSET,BF:COLOR 4,1:LINE(1,115
)-(171,15Ø),PSET,BF:COLOR 2,1:LI
NE(1,15Ø)-(171,184),PSET,BF
546Ø RETURN
55ØØ COLOR 4,2:LINE(1,8Ø)-(171,1
15),PSET,BF:COLOR 2,1:LINE(1,115
)-(171,15Ø),PSET,BF:COLOR 1,2:LI
NE(1,15Ø)-(171,184),PSET,BF
551Ø COLOR 3,1:DRAW "BMØ,79;R172
D1Ø6L172U1Ø6"
552Ø RETURN
555Ø COLOR 3,4:LINE(1,8Ø)-(171,1
84),PSET,BF:COLOR 2,4:LINE(72,8Ø
)-(92,184),PSET,BF:LINE(1,122)-(
171,142),PSET,BF:RETURN
56ØØ COLOR 3,2:LINE(1,8Ø)-(57,18
4),PSET,BF:COLOR 2,1:LINE(57,8Ø)
-(115,184),PSET,BF:COLOR 4,1:LIN
E(115,8Ø)-(171,184),PSET,BF:RETU
RN
565Ø COLOR 1,2:LINE(1,8Ø)-(57,18
4),PSET,BF:COLOR 2,1:LINE(57,8Ø)
-(115,184),PSET,BF:COLOR 4,1:LIN
E(115,8Ø)-(171,184),PSET,BF:RETU
RN
57ØØ COLOR 4,2:LINE(1,8Ø)-(1Ø4,1
84),PSET,BF:COLOR 2,4:LINE(45,94
)-(6Ø,17Ø),PSET,BF:LINE(14,123)-
(9Ø,138),PSET,BF:RETURN
575Ø GOSUB 565Ø:CIRCLE(86,132),2
Ø,3:CIRCLE(86,125),2Ø,3,1,.1,.4:
PAINT(86,12Ø),4,3:RETURN
58ØØ GOTO 565Ø
585Ø COLOR 4,1:LINE(1,8Ø)-(171,1
15),PSET,BF:COLOR 2,1:LINE(1,115
)-(171,15Ø),PSET,BF:COLOR 4,2:LI
NE(1,15Ø)-(171,184),PSET,BF
586Ø RETURN
59ØØ A$=LEFT$(N$(2,3),2)
59Ø1 IF A$="CU"THEN GOSUB 515Ø E
LSE IF A$="E." THEN GOSUB 52ØØ E
LSE IF A$="KO" THEN GOSUB 525Ø E
LSE IF A$="SO" THEN GOSUB 53ØØ E
LSE IF A$="PO" THEN GOSUB 535Ø E
LSE IF A$="JA" THEN GOSUB 54ØØ
59Ø2 IF A$="W."THEN GOSUB 545Ø E
LSE IF A$="HU" THEN GOSUB 55ØØ E
LSE IF A$="GR" THEN GOSUB 555Ø E
LSE IF A$="FR" THEN GOSUB 56ØØ E
LSE IF A$="IT" THEN GOSUB 565Ø E
LSE IF A$="SW" THEN GOSUB 57ØØ
59Ø3 IF A$="ME"THEN GOSUB 575Ø E
LSE IF A$="IR" THEN GOSUB 58ØØ E
LSE IF A$="AU" THEN GOSUB 585Ø
59Ø5 GOTO 5Ø2Ø
6ØØØ PRINT @256,STRING$(224,CHR$
(128));
6ØØ5 IF PS>3 THEN PS=3 ELSE IF P
S<1 THEN PS=1
6Ø1Ø IN=288+(PS-1)*11
6Ø2Ø ON SU GOSUB 61ØØ,62ØØ,63ØØ,
64ØØ,65ØØ,66ØØ,67ØØ,68ØØ,69ØØ,69
5Ø,616Ø
6Ø3Ø PRINT @1,""
6Ø4Ø RETURN
61ØØ PRINT@IN,CHR$(196);CHR$(2Ø6
);CHR$(192);CHR$(161);CHR$(2Ø5);
CHR$(2ØØ);
611Ø PRINT@IN+32,CHR$(2Ø7);CHR$(
2Ø7);CHR$(2Ø4);CHR$(172);CHR$(2Ø
7);CHR$(2Ø7);
612Ø PRINT@IN+64,CHR$(175);CHR$(
175);CHR$(192);CHR$(192);CHR$(19
1);CHR$(191);
613Ø PRINT@IN+96,CHR$(197);CHR$(
2Ø2);CHR$(192);CHR$(192);CHR$(19
7);CHR$(2Ø2);
614Ø PRINT@IN+128,CHR$(197);CHR$
(2Ø3);CHR$(192);CHR$(192);CHR$(1
99);CHR$(2Ø2);
615Ø RETURN
616Ø PRINT@IN,CHR$(196);CHR$(2Ø6
);CHR$(162);CHR$(2Ø5);CHR$(2ØØ);
617Ø PRINT@IN+32,CHR$(2Ø7);CHR$(
2Ø7);CHR$(188);CHR$(2Ø7);CHR$(2Ø
7);
618Ø PRINT @IN+64,CHR$(175);CHR$
(175);CHR$(192);CHR$(191);CHR$(1
91);
619Ø PRINT@IN+96,CHR$(197);CHR$(
2Ø2);CHR$(192);CHR$(197);CHR$(2Ø
2);
6195 PRINT@IN+128,CHR$(197);CHR$
```

```
(2Ø3);CHR$(192);CHR$(199);CHR$(2
Ø2);:RETURN
62ØØ PRINT@IN,CHR$(196);CHR$(2Ø6
);CHR$(178);CHR$(192);CHR$(2Ø5);
CHR$(2ØØ);
621Ø PRINT@IN+32,CHR$(2Ø7);CHR$(
2Ø7);CHR$(188);CHR$(2Ø4);CHR$(2Ø
7);CHR$(2Ø7);
622Ø PRINT@IN+64,CHR$(175);CHR$(
175);CHR$(192);CHR$(192);CHR$(19
1);CHR$(191);
623Ø PRINT@IN+96,CHR$(197);CHR$(
2Ø2);CHR$(192);CHR$(192);CHR$(19
7);CHR$(2Ø2);
624Ø PRINT@IN+128,CHR$(197);CHR$
(2Ø3);CHR$(192);CHR$(192);CHR$(1
99);CHR$(2Ø2);
625Ø RETURN
63ØØ PRINT@IN,CHR$(196);CHR$(2Ø6
);CHR$(192);CHR$(161);CHR$(2Ø5);
CHR$(2ØØ);
631Ø PRINT@IN+32,CHR$(2Ø7);CHR$(
2Ø7);CHR$(2Ø3);CHR$(174);CHR$(2Ø
7);CHR$(2Ø7);
632Ø PRINT@IN+64,CHR$(175);CHR$(
175);CHR$(192);CHR$(192);CHR$(19
1);CHR$(191);
633Ø PRINT@IN+96,CHR$(197);CHR$(
2Ø2);CHR$(192);CHR$(192);CHR$(19
7);CHR$(2Ø2);
634Ø PRINT@IN+128,CHR$(197);CHR$
(2Ø3);CHR$(192);CHR$(192);CHR$(1
99);CHR$(2Ø2);
635Ø RETURN
64ØØ PRINT@IN,CHR$(196);CHR$(2Ø6
);CHR$(178);CHR$(192);CHR$(2Ø5);
CHR$(2ØØ);
641Ø PRINT@IN+32,CHR$(2Ø7);CHR$(
2Ø7);CHR$(189);CHR$(199);CHR$(2Ø
7);CHR$(2Ø7);
642Ø PRINT@IN+64,CHR$(175);CHR$(
175);CHR$(192);CHR$(192);CHR$(19
1);CHR$(191);
643Ø PRINT@IN+96,CHR$(197);CHR$(
2Ø2);CHR$(192);CHR$(192);CHR$(19
7);CHR$(2Ø2);
644Ø PRINT@IN+128,CHR$(197);CHR$
(2Ø3);CHR$(192);CHR$(192);CHR$(1
99);CHR$(2Ø2);
645Ø RETURN
65ØØ PRINT @IN,CHR$(196);CHR$(2Ø
6);
651Ø PRINT @IN+32,CHR$(2Ø7);CHR$
(2Ø7);CHR$(172);
652Ø PRINT @IN+64,CHR$(175);CHR$
(175);
653Ø PRINT @IN+96,CHR$(197);CHR$
(2Ø2);STRING$(4,192);CHR$(177);
654Ø PRINT @IN+128,CHR$(197);CHR
$(2Ø3);CHR$(192);CHR$(2Ø3);CHR$(
195);CHR$(191);CHR$(2Ø7);CHR$(19
9);
655Ø RETURN
66ØØ PRINT @IN+5,CHR$(192);CHR$(
2Ø5);CHR$(2ØØ);
661Ø PRINT @IN+37,CHR$(188);CHR$
(2Ø7);CHR$(2Ø7);
662Ø PRINT @IN+69,CHR$(192);CHR$
(191);CHR$(191);
663Ø PRINT @IN+96,CHR$(192);CHR$
(162);CHR$(192);CHR$(192);CHR$(1
92);CHR$(192);CHR$(197);CHR$(2Ø2
);
664Ø PRINT @IN+128,CHR$(2Ø3);CHR
$(2Ø7);CHR$(175);CHR$(195);CHR$(
199);CHR$(192);CHR$(199);CHR$(2Ø
```
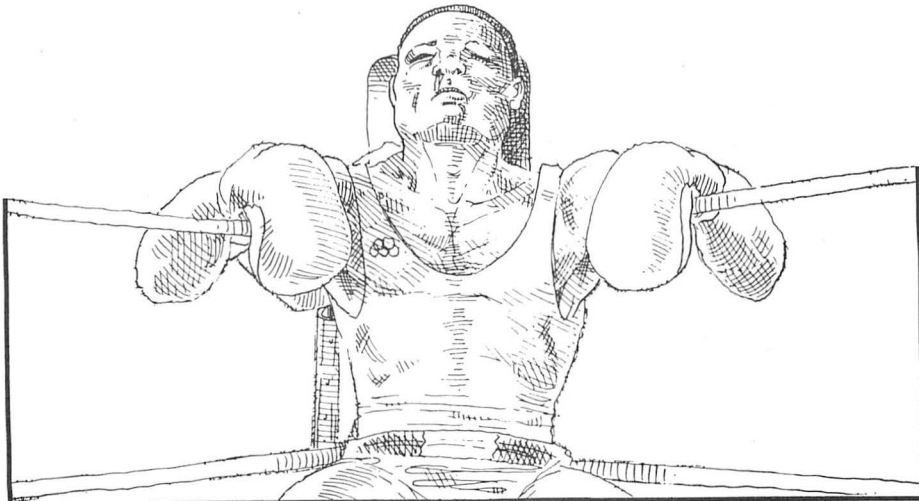
```
2);
6650 RETURN
6700 PRINT@IN,CHR$(196);CHR$(206
);CHR$(192);CHR$(192);CHR$(192);
CHR$(205);CHR$(200);
6710 PRINT@IN+32,CHR$(207);CHR$(
207);CHR$(204);CHR$(172);CHR$(18
0);CHR$(207);CHR$(207);
6720 PRINT@IN+64,CHR$(175);CHR$(
175);CHR$(192);CHR$(192);CHR$(19
2);CHR$(191);CHR$(191);
6730 PRINT@IN+96,CHR$(197);CHR$(
202);CHR$(192);CHR$(192);CHR$(19
2);CHR$(197);CHR$(202);
```
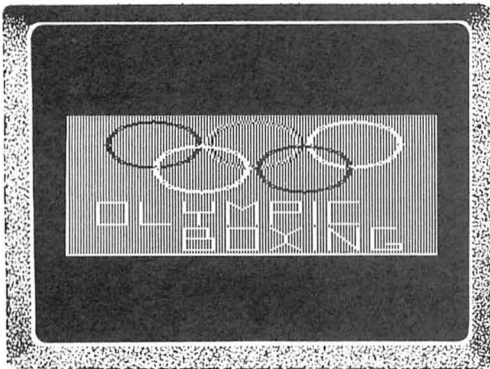


```
6740 PRINT@IN+128,CHR$(197);CHR$
(203);CHR$(192);CHR$(192);CHR$(1
92);CHR$(199);CHR$(202);
6750 RETURN
6800 PRINT@IN,CHR$(196);CHR$(206
);CHR$(192);CHR$(192);CHR$(192);
CHR$(205);CHR$(200);
6810 PRINT@IN+32,CHR$(207);CHR$(
207);CHR$(168);CHR$(188);CHR$(20
4);CHR$(207);CHR$(207);
6820 PRINT@IN+64,CHR$(175);CHR$(
175);CHR$(192);CHR$(192);CHR$(19
2);CHR$(191);CHR$(191);
6830 PRINT@IN+96,CHR$(197);CHR$(
202);CHR$(192);CHR$(192);CHR$(19
2);CHR$(197);CHR$(202);

6840 PRINT@IN+128,CHR$(197);CHR$
(203);CHR$(192);CHR$(192);CHR$(1
92);CHR$(199);CHR$(202);
6850 RETURN
6900 PRINT@IN,CHR$(196);CHR$(206
);CHR$(192);CHR$(192);CHR$(192);
CHR$(205);CHR$(200);
6910 PRINT@IN+32,CHR$(207);CHR$(
207);CHR$(203);CHR$(174);CHR$(18
0);CHR$(207);CHR$(207);
6920 PRINT@IN+64,CHR$(175);CHR$(
175);CHR$(192);CHR$(192);CHR$(19
2);CHR$(191);CHR$(191);
6930 PRINT@IN+96,CHR$(197);CHR$(
202);CHR$(192);CHR$(192);CHR$(19
2);CHR$(197);CHR$(202);
6940 PRINT@IN+128,CHR$(197);CHR$
(203);CHR$(192);CHR$(192);CHR$(1
92);CHR$(199);CHR$(202);
6945 RETURN
6950 PRINT@IN,CHR$(196);CHR$(206
);CHR$(192);CHR$(192);CHR$(192);
CHR$(205);CHR$(200);
6960 PRINT@IN+32,CHR$(207);CHR$(
207);CHR$(168);CHR$(189);CHR$(19
9);CHR$(207);CHR$(207);
6970 PRINT@IN+64,CHR$(175);CHR$(
175);CHR$(192);CHR$(192);CHR$(19
2);CHR$(191);CHR$(191);
6980 PRINT@IN+96,CHR$(197);CHR$(
202);CHR$(192);CHR$(192);CHR$(19
2);CHR$(197);CHR$(202);
6990 PRINT@IN+128,CHR$(197);CHR$
(203);CHR$(192);CHR$(192);CHR$(1
92);CHR$(199);CHR$(202);
6995 RETURN
7000 FOR C1=1 TO 7:FOR C2=1 TO 2
7010 IF S(C2,C1)<0 THEN S(C2,C1)
=2
7020 NEXT C2,C1
7030 RETURN
8000 PMODE 1,1:SCREEN 1,0:PCLS2
8010 CIRCLE(58,40),35,1:CIRCLE(1
28,40),35,3:CIRCLE(198,40),35,4:
CIRCLE(93,75),35,4:CIRCLE(163,75
),35,1:CIRCLE(58,40),33,1:CIRCLE
(128,40),33,3:CIRCLE(198,40),33,
4:CIRCLE(93,75),33,4:CIRCLE(163,
75),33,1
8020 DRAW"BM20,120;R20D30L20U30;
BR30;D30R20BR20U15L10U15D15R20U1
5;BR10;D30U30;F10E10D30;BR10U30R
20D15L2UBR30;BU15;D30;BR30;L20U3
0R20"
8030 DRAW"BM80,156;D30R20U15L20R
16U15L16;BR30;D30R20U30L20;BR30;
F10E10G10D10G10E10F10;BR10;U30;B
R10;D30U30;M+20,+30;U30;BR10;R16
L16D30R20U8L10"
8100 PLAY"T3;L2;O2;EG;L8;P32;G;L
4;CDE;L8;DC;L4;DDD;L8;ED;L8;C;;L
12;CD;L8;E;L8;D;L2;C"
8105 PLAY"L2;O2;EG;L8;P32;G;L4;C
DE;L8;DC;L4;DDD;L8;ED;L8;C;;L12;
CD;L8;E;L8;D;L1;C"
8110 PLAY"O2;L4;B;L8;G#;P32;L4;B
```

24
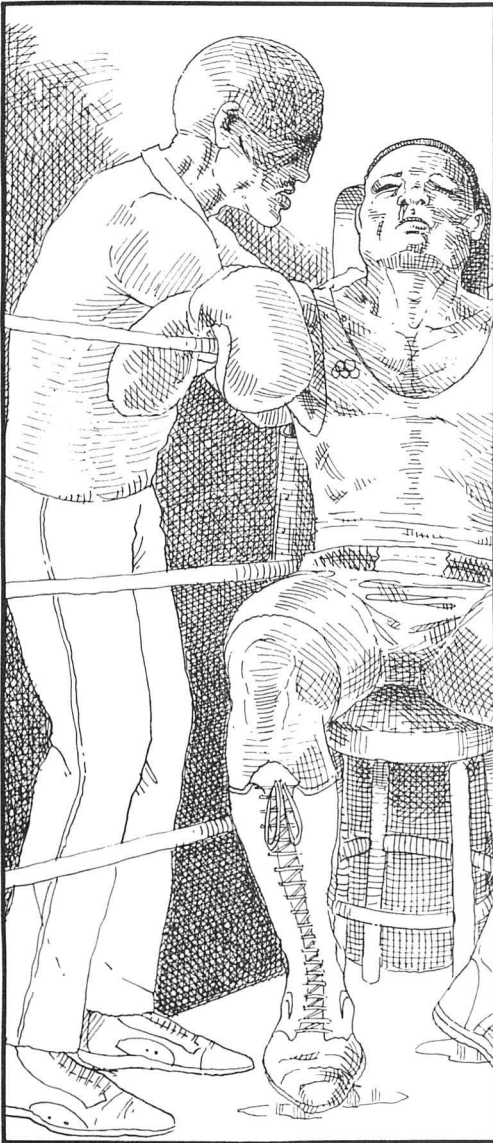
```
;L8;G#;P32;L4;F#;L8;F#;F#;L4;F#;
L8;B;L2;G#;L4;B;L8;G#;L4;B;L8;G#
;L4;F#;L8;F#;F#;L4;F#;L8;B;L1;E"
89ØØ RETURN
9ØØ1 DATA TOM,REYNOLDS,USA,2,2,4
,15,5,2,5
9ØØ2 DATA HECTOR,RUIZ,CUBA,2,4,2
,14,5,3,2
9ØØ3 DATA RUDOLF,HECHT,E. GERMAN
Y,5,3,4,17,3,2,3
9ØØ4 DATA RICKY,THOMAS,USA,2,4,4
,18,3,2,3
9ØØ5 DATA YUNG,KOO,KOREA,4,2,5,2
3,4,3,2
9ØØ6 DATA ALEXANDR,RIVSKY,SOVIET
 UNION,5,2,5,17,3,5,4
9ØØ7 DATA BILL,CHANDLER,USA,2,5,
3,19,3,2,2
9ØØ8 DATA JACEK,SLURASKA,POLAND,
2,4,2,19,2,3,4
9ØØ9 DATA DATE,TAKATA,JAPAN,2,2,
3,11,2,4,2
9Ø1Ø DATA ROD,WASHINGTON,USA,5,5
,2,23,2,2,4
9Ø11 DATA ANGEL,SUAREZ,CUBA,2,2,
4,18,2,4,5
9Ø12 DATA ALWIN,RICHTER,W. GERMA
NY,2,3,2,24,3,3,3
9Ø13 DATA TIM,DRAKE,USA,4,4,3,12
,5,4,2
9Ø14 DATA ZIL,MAGYAR,HUNGARY,3,5
,4,12,2,4,2
9Ø15 DATA TOMM,KOSTIAS,GREECE,4,
2,4,23,2,3,5
9Ø16 DATA HARVEY,PEDERSON,USA,3,
4,3,17,4,2,2
9Ø17 DATA YUNG DOK,KOSAN,KOREA,4
,5,2,22,2,5,4
9Ø18 DATA PIERRE,TAUSAUD,FRANCE,
2,2,4,23,2,4,4
9Ø19 DATA JOHN,MENNINGER,USA,2,4
,2,16,4,2,5
9Ø2Ø DATA VLADMIR,CHERONSKY,SOVI
ET UNION,3,2,5,16,4,2,3
9Ø21 DATA FABIO,ZIOLOTTO,ITALY,2
,4,3,23,2,4,5
9Ø22 DATA BRUCE,SMITHSON,USA,2,4
,5,21,3,3,4
9Ø23 DATA KARL,STAUB,SWITZERLAND
,3,2,2,16,4,4,5
9Ø24 DATA IMELIO,CABRON,MEXICO,3
,2,3,23,5,2,2
9Ø25 DATA CHARLES,BARBARINO,USA,
4,5,5,21,2,3,4
9Ø26 DATA GREGOR,THUMER,E. GERMA
NY,3,3,3,15,2,2,4
9Ø27 DATA TOMAS,MARTINEZ,CUBA,2,
4,5,16,2,4,5
9Ø28 DATA MARK,WOODRUFF,USA,2,2,
4,19,2,2,4
9Ø29 DATA MORGAN,TAYLOR,IRELAND,
4,2,3,18,2,3,2
9Ø3Ø DATA PYTOR,BONZIVSKY,SOVIET
 UNION,5,2,5,13,5,5,4
9Ø31 DATA BOBBY,CRAIG,USA,3,5,4,
23,2,3,3
9Ø32 DATA ANTON,HAAS,AUSTRIA,5,2
,2,17,2,3,2
9Ø33 DATA YURI,ZEBNOV,SOVIET UNI
ON,4,2,2,2Ø,2,5,2
```
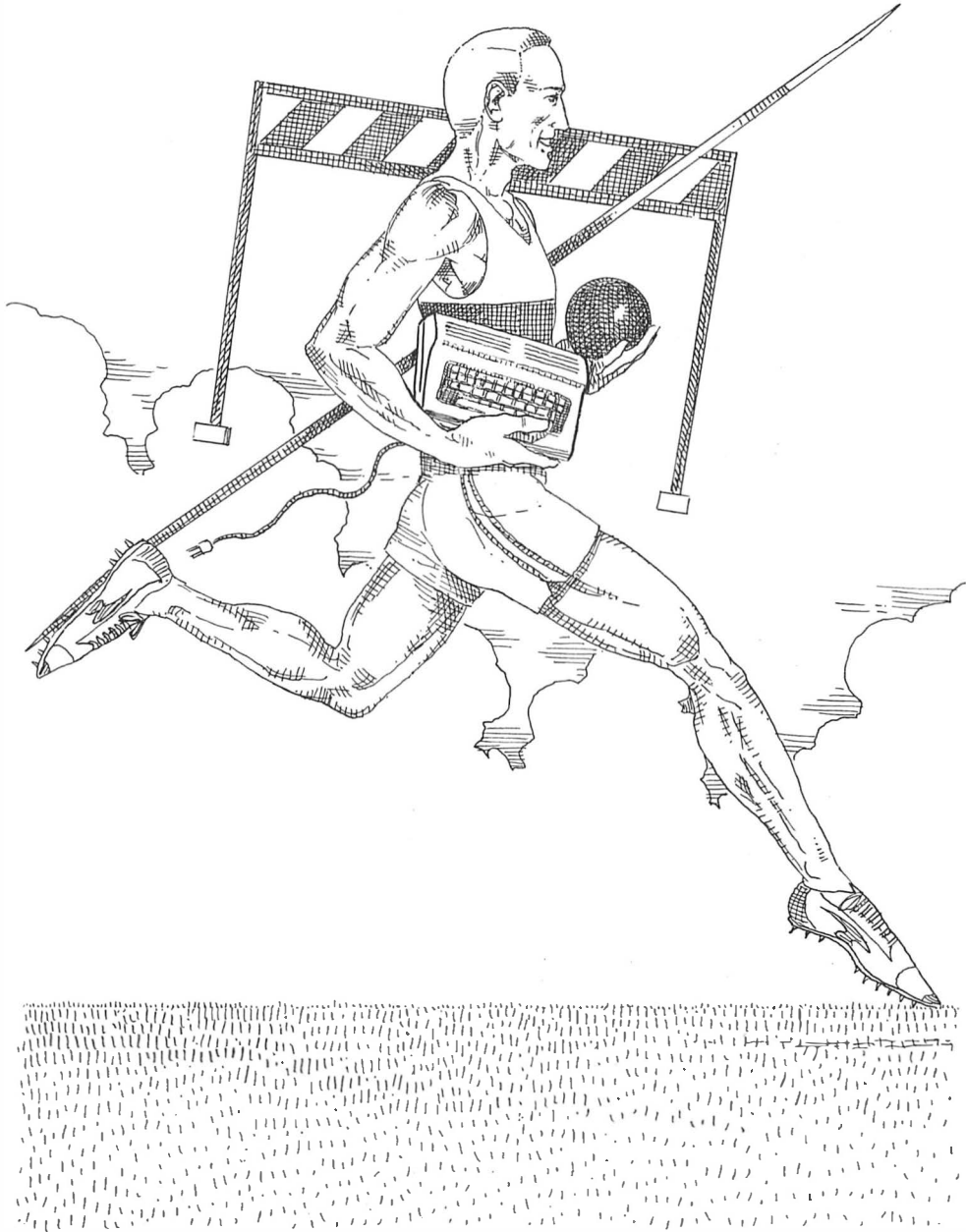
OLYMPIC DECATHLON

Program by L. Curtis Boyle

You have trained and trained over the past four years in preparation for one of the Olympic's most difficult events — the Decathlon.

In this Simulation, you must qualify for each of the 10 events making up the Decathlon before you can advance to the next event.

The events and minimum qualifications are as shown:

1) 100-Meter dash	Under 11.5 seconds
2) Long jump	Eight or more meters
3) Shot put	20 or more meters
4) High jump	2.25 or more meters
5) 400-Meter dash	Under 50 seconds
6) 110-Meter hurdles	Under 16 seconds
7) Discus throw	Over 50 meters
8) Pole vault	Over five meters
9) Javelin throw	Over 90 meters
10) 1500-Meter run	Under 250 seconds

This Simulation uses a speed-up POKE in Line 1, so remove the 65495,0 before running if your CoCo can't handle the high speed.

Upon running, you are greeted with a red or

blue square. If the square is red, press ENTER, or press Reset if the square is blue and run again (repeat as necessary to get the graphics square red). After pressing any key, a short menu appears and asks if you would like to see the demo or start the games. Since this is your first time at the Olympics, select '2' for the demo and watch the familiar colored rings appear, followed by a runner with a torch who lights the Olympic flame. After the flame is lit and the credits are presented, type C to continue to the next screen, which contains a description of the Decathlon events. Pressing any key at this point enables you to start the games.

The first event is the 100-meter dash, which you must complete in 11.5 seconds or less. If you do, you are automatically advanced to the next event, and so on. Different keyboard keys are used to run, jump and throw in each of the events. If you don't qualify, you are given the option to quit or start over. Don't be discouraged if you don't qualify the first time. It takes good hand-to-eye coordination for these events.

Don't settle for second best. You know you are the best and now it's your destiny to stand on the center pedestal and shine! This time the gold medal goes around your neck!

L. Curtis Boyle is an aspiring programmer from Saskatoon, Saskatchewan. He also wrote Ringquest *for* The Second Rainbow Book of Adventures.

OLYMPICS   32K ECB

```
Ø CLEAR6ØØ,&H7FE6:PCLEAR8:DIMCC$
(47):FOR A=1 TO 47:READ LL$,CC$(
A):NEXT:FOR A=&H7FE6 TO &H7FFE:R
EADA$:POKEA,VAL("&H"+A$):NEXT
1 POKE65495,Ø:PMODE4:SCREEN1,1:P
MODE3:PCLS3:PMODE4
2 IF INKEY$=""THEN2
3 CLS:INPUT"<1> START THE GAMES
        OR <2> SEE THE DEMO";Q
4 PMODE4,5:PCLS:SCREEN1,1:FORA=8
Ø TO 19ØSTEP5Ø:FORB=3Ø TO 35STEP
5:CIRCLE(A,5Ø),B:NEXT:PAINT(A,82
),1,1:PAINT(A-32,5Ø),1,1:NEXT
5 CIRCLE(1Ø5,75),3Ø:CIRCLE(1Ø5,7
5),35:PAINT(98,1Ø7),1,1:CIRCLE(1
55,75),3Ø:CIRCLE(155,75),35:PAIN
T(155,1Ø7),1,1:PAINT(123,75),1,1
:PAINT(73,75),1,1:PAINT(137,75),
1,1:PAINT(187,75),1,1
6 PAINT(1Ø5,42),1,1:PAINT(155,42
),1,1:PAINT(14Ø,45),1,1:PAINT(12
Ø,45),1,1:PAINT(125,9Ø),1,1:PAIN
T(13Ø,55),1,1
7 DIM G(1,17),H(1,17),I(1,17),T(
1,12),J(1,17),K(1,17),L(1,18),M(
1,17)
8 PMODE4,1:PCLS:DRAW"BM19,1UFGHE
D3NL5G1ØNH2E5D5L2":GET(Ø,Ø)-(2Ø,
18),L,G
9 PCLS:DRAW"BM7,1ØNR2D5R5G2NL2E2
```

```
R3GHEF":GET(Ø,Ø)-(2Ø,17),M,G
1Ø PCLS:DRAW"BM15,5UFGHED3F4NE3H
4LL4ND2R4D3F6NR2H6G3H3G"
11 GET(3,Ø)-(23,17),G,G
12 PCLS:DRAW"BM15,5UFGHED3G3NF2E
3D3NE3D3L3ND2R3D3R2"
13 GET(Ø,Ø)-(2Ø,17),H,G
14 PCLS:DRAW"BM15,5UFGHED3GNFEDN
FD4G3ND2E3D5R2"
15 GET(Ø,Ø)-(2Ø,17),I,G
16 PCLS:DRAW"BM1Ø,6UFGHED2NF3G5F
6E2":GET(Ø,Ø)-(2Ø,17),J,G
17 PCLS:DRAW"BM12,3UFGHED2NF3G5L
6D2":GET(Ø,Ø)-(2Ø,17),K,G
18 PCLS:DRAW"BM7,3R6D2GLD3GHU3LH
U2E3F3"
19 POKE178,2:PAINT(9,2),,1
2Ø GET(4,Ø)-(13,12),T,G
21 IFQ=1THEN4Ø
22 PMODE4,5
23 LINE(Ø,18Ø)-(255,18Ø),PSET:PO
KE178,2:PAINT(Ø,181),,1
24 A$="T255A"
25 DRAW"BM21Ø,18ØC1E2U5H2L2U2R23
D2L2G2D5F2"
26 FOR A=Ø TO 17ØSTEP1Ø:PUT(A,16
Ø)-(A+2Ø,177),G,PSET:PUT(A+21,16
Ø)-(A+3Ø,172),T,PSET:PUT(A+3,16Ø
)-(A+23,177),H,PSET:PUT(A+25,16Ø
)-(A+34,172),T,PSET:PUT(A+7,16Ø)
-(A+27,177),I,PSET:PUT(A+28,16Ø)
-(A+37,172),T,PSET:PLAYA$:NEXT
27 LINE(A+18,16Ø)-(A+27,172),PRE
SET,BF
28 FOR A=1 TO 4:PCOPYA+4 TO A:NE
XT A
29 DRAW"BM62,13ØS12":AA$="OLYMPI
C":GOSUB155:DRAW"BM4Ø,16Ø":AA$="
DECATHLON":GOSUB155:DRAW"BM2,6S4
":AA$="COPYRIGHT 1984 BY COLORNO
VA SOFTWARE":GOSUB155:DRAW"BM2,2
Ø":AA$="WRITTEN":GOSUB155
3Ø DRAW"BM2,3Ø":AA$="BY L.":GOSU
B155:DRAW"BM2,4Ø":AA$="CURTIS":G
OSUB155:DRAW"BM2,5Ø":AA$="BOYLE"
:GOSUB155
31 DRAW"S4BM2Ø8,169E6F3EF2E4F5":
POKE178,2:PAINT(21Ø,168),,1:PMOD
E4,1:DRAW"BM2Ø8,169E2R2E2FE5F3EF
3EF4":POKE178,2:PAINT(21Ø,168),,
1:COLOR1
32 FORA=1TO46Ø:NEXT:PMODE4,5:SCR
EEN1,1:FORT=1TO46Ø:NEXTT:PMODE4,
1:SCREEN1,1
33 IF INKEY$<>"C"THEN32
34 PMODE4:SCREEN1,1
35 PCLS:DRAW"BM2,8":AA$="WELCOME
 TO THE OLYMPIC DECATHLON!":GOSU
B155:DRAW"BM2,18":AA$="IN THIS E
XCITING SIMULATION YOU WILL":GOS
UB155:DRAW"BM2,28":AA$="COMPETE
IN 1O DIFFERENT EVENTS FROM":GOS
UB155:DRAW"BM2,38":AA$="THE GAME
S INCLUDING:"
36 GOSUB155
37 DRAW"BM2,48":AA$="1OO METER D
ASH":GOSUB155:DRAW"BM2,58":AA$="
LONG JUMP":GOSUB155:DRAW"BM2,68"
:AA$="SHOT PUT":GOSUB155:DRAW"BM
2,78":AA$="HIGH JUMP":GOSUB155:D
RAW"BM2,88":AA$="4OO METERS":GOS
UB155:DRAW"BM2,98":AA$="11O METE
R HURDLES"
38 GOSUB155:DRAW"BM2,1Ø8":AA$="D
ISCUS THROW":GOSUB155:DRAW"BM2,1
18":AA$="POLE VAULT":GOSUB155:DR
AW"BM2,128":AA$="JAVELIN":GOSUB1
55:DRAW"BM2,138":AA$="15OO METER
S":GOSUB155
39 DRAW"BM2,148":AA$="IN ORDER T
O CONTINUE IN THE COMPETIT-":GOS
UB155:DRAW"BM2,158":AA$="ION, YO
U MUST GET A GOOD ENOUGH SCORE":
GOSUB155:DRAW"BM2,168":AA$="TO Q
UALIFY FOR THE NEXT EVENT.":GOSU
B155:GOSUB152
4Ø COLOR1:SCREEN1,1:PCLS:DRAW"BM
1ØØ,1Ø":AA$="1ST EVENT:":GOSUB15
5:DRAW"BM42,9ØS12":AA$="1OO METE
```
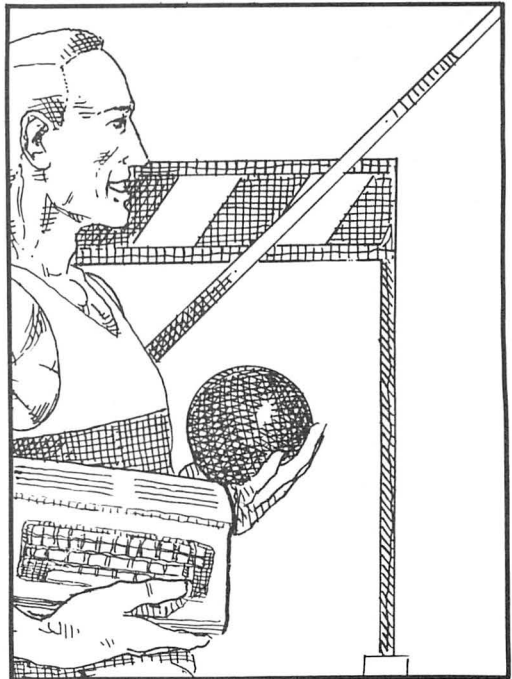
```
R":GOSUB155:DRAW"BM9Ø,14Ø":AA$="
DASH":GOSUB155:B=8Ø:TI=11.5
41 GOSUB152
42 POKE&H7FE8,&H8Ø:POKE&H7FE7,&H
1C:PMODE4,1:SCREEN1,1
43 GOSUB154
44 PLAY"T255":DRAW"BM2,2Ø":AA$="
LEFT ARROW IS LEFT FOOT FORWARD.
":GOSUB155:DRAW"BM2,6Ø":AA$="RIG
HT ARROW IS RIGHT FOOT FORWARD."
:GOSUB155:DRAW"BM2,1ØØ":AA$="STA
RT ON LEFT FOOT.":GOSUB155:SOUND
1ØØ,1Ø
45 A=Ø:TIMER=Ø
46 IFS>=B THENT=TIMER:GOTO49ELSE
A$=INKEY$:IFA$=CHR$(8)ANDA=ØTHEN
A=1:PUT(2Ø,162)-(4Ø,179),G,PSET:
PLAY"A":EXEC&H7FE6:S=S+1:GOTO46
47 IFA$=CHR$(9)ANDA=1THENA=Ø:EXE
C&H7FE6:PUT(2Ø,162)-(4Ø,179),H,P
SET:PLAY"A":S=S+1:GOTO46
48 GOTO 46
49 FORA=1TO12:PLAY"T12":N=A;":NEX
T:LINE(Ø,Ø)-(255,179),PRESET,BF:
DRAW"BM2,1Ø":GOSUB51:AA$="YOUR T
IME WAS"+C$+" SECONDS.":GOSUB155
:IF T/4Ø-1.5<TI THENDRAW"BM2,4Ø"
:AA$="YOU QUALIFIED!!":GOSUB155:
GOTO53
5Ø DRAW"BM2,4Ø":AA$="SORRY, YOU
DIDN'T QUALIFY":GOSUB155:SOUND1,
2Ø:CLS:INPUT"DO YOU WANT TO QUIT
 THE GAMES    <Y/N>";A$:IFA$="Y"T
HENCLS:ENDELSERUN
51 C$=STR$(T/4Ø-1.5):FORQ=1TOLEN
(C$):IFMID$(C$,Q,1)="Ø"THENMID$(
C$,Q,1)="O":NEXT ELSE NEXT
52 RETURN
53 GOSUB15Ø:IFB=32ØTHEN1Ø2ELSEIF
B=12ØØTHEN149
54 PCLS:DRAW"BM1ØØ,1ØS4":AA$="2N
D EVENT:":GOSUB155:DRAW"BM8Ø,1ØØ
S12":AA$="LONG":GOSUB155:DRAW"BM
8Ø,15Ø":AA$="JUMP":GOSUB155:GOSU
B152
55 GOSUB154:DRAW"C1BM2,1Ø":AA$="
PRESS THE RIGHT ARROW TO SPEED U
P":GOSUB155:DRAW"BM2,4Ø":AA$="PR
ESS SPACE BAR TO JUMP":GOSUB155:
SOUND1,1Ø:S=9Ø
56 C=C+1:IFC>98 THEN61ELSEA$=INK
EY$:IFA$=CHR$(9)THENS=S-1Ø:IFS<1
THENS=1
57 IFA$=" "THEN62
58 IFP=ØTHENPUT(2Ø,162)-(4Ø,179)
,G,PSET ELSE PUT(2Ø,162)-(4Ø,179
),H,PSET
59 P=1-P:FORQ=1TOS:NEXT:EXEC&H7F
E6:IFC>7ØTHENLINE(247,18Ø)-(255,
191),PSET,BF
6Ø GOTO 56
61 PMODE2,1:PCLS:PMODE4,1:DRAW"B
M2,1Ø":AA$="YOU RAN RIGHT INTO T
HE SAND!":GOSUB155:GOTO5Ø
62 X=5Ø/S:IFX=5ØTHENX=5
63 LINE(2Ø,178)-(4Ø,178),PRESET:
Y1=16Ø:Y2=177:FOR A=1TOX:PUT(2Ø,
Y1)-(4Ø,Y2),K,PSET:C=C+1:EXEC&H7
FE6:PLAY"T255A":Y1=Y1-5:Y2=Y2-5:
NEXT:FORA=1TO5:C=C+1:PUT(2Ø,Y1)-
(4Ø,Y2),H,PSET:EXEC&H7FE6:PLAY"T
255A":NEXT
64 FOR A=1 TO X+2:EXEC&H7FE6:PUT
(2Ø,Y1)-(4Ø,Y2),J,PSET:C=C+1:PLA
Y"T255A":Y1=Y1+5:Y2=Y2+5:NEXT:JD
=(3*X+2)/1.8:LINE(Ø,Ø)-(255,5Ø),
PRESET,BF:DRAW"BM2,1Ø":GOSUB66:A
A$="YOUR JUMP WAS"+C$+" METERS L
ONG.":GOSUB155
65 DRAW"BM2,4Ø":IFVAL(C$)>7.99TH
ENAA$="YOU QUALIFIED!!":GOSUB155
:GOSUB15Ø:GOTO68ELSEGOTO5Ø
66 C$=STR$((C-98)/2-(RND(5)/1Ø))
:IFVAL(C$)<ØTHENC$="O"
```

To run *Olympic Decathlon* from a disk-based system, change the following lines:

```
42 POKE&H7FE8,&H8Ø:POKE&H7FE7,&H
24:PMODE4,1:SCREEN1,1

1Ø3 FOR P=Ø TO 255STEP64:LINE(P,
175)-(P+1,179),PSET,B:NEXT:DRAW"
BM2,1Ø":AA$="PRESS THE RIGHT ARR
OW TO SPEED UP":GOSUB155:DRAW"BM
2,4Ø":AA$="PRESS SPACE BAR TO JU
MP":GOSUB155:POKE&H7FE7,&H23:POK
E&H7FE8,&HEØ:SOUND1,1Ø:TIMER=Ø
```

```
139 PCLS:DRAW"BM1ØØ,1ØS4":AA$="9
TH EVENT":GOSUB155:DRAW"BM7Ø,1ØØ
S12":AA$="JAVELIN":GOSUB155:DRAW
"BM8Ø,15Ø":AA$="THROW":GOSUB155:
GOSUB152:POKE&H7FE7,&H24:POKE&H7
FE8,&H8Ø

219 DATA8E,23,Ø,A6,84,1Ø,8E,ØØ,1
F,E6,Ø1,E7,8Ø,31,3F,26,F8,A7,8Ø,
8C,26,ØØ,26,EB,39
```

```
67 RETURN
68 PCLS:DRAW"BM100,10S4":AA$="3R
D EVENT:":GOSUB155:DRAW"BM80,100
S12":AA$="SHOT":GOSUB155:DRAW"BM
90,150":AA$="PUT":GOSUB155:GOSUB
152
69 PCLS:DRAW"BM2,10":AA$="PRESS
THE SPACE BAR AS FAST AS YOU":GO
SUB155:DRAW"BM2,20":AA$="CAN TO
THROW.":GOSUB155:LINE(2,30)-(80,
90),PSET,B:LINE(0,180)-(255,180)
,PSET:POKE178,2:PAINT(0,181),,1
70 A$="BM9,89U20HU10E4NR8U3H3U8E
3R10F3D2GDBL2LBR3F3L3DNL3D2L4D3B
U12BR5L6D3LLU3G4D4":A1$="BD6BR2D
20F5END10NE16GH5U20BR5BU2F2D12GD
DGND2E13NF5U2H3U3E2ND3E2ND4R2ND4
F2D2D6GND5EU6BL8UE4R4F4D4G4":S1$
=A$+A1$
71 A2$="BD10BR2R2ONF3E15NF5U2H4U
3E2ND3E2ND4R2ND4F2ND7BD2BL8UE4R4
F4D4G4D6F2G18L17ND21BU9NU4BD9L6"
:S2$=A$+A2$:DRAW"C1;XS1$;":SOUND
1,10
72 FOR A=9 TO 255STEP8:LINE(A,17
6)-(A,179),PSET:NEXT:DRAW"BM76,1
65C1":AA$="10":GOSUB155:DRAW"BM1
56,165":AA$="20":GOSUB155:DRAW"B
M236,165":AA$="30":GOSUB155:DRAW
"BM110,150":AA$="METERS":GOSUB15
5
73 A=0:TIMER=0
74 IF INKEY$=" "THENA=A+1
75 IFTIMER>85THEN76ELSE74
76 DRAW"C0;XS1$;C1;XS2$;":FORN=1
TO8*A:PSET(N,175):PLAY"T255A":PR
ESET(N,175):NEXT:PRESET(N,180)
77 LINE(0,0)-(255,90),PRESET,BF:
DRAW"BM2,10":GOSUB79:AA$="YOU TH
REW THE SHOT PUT"+A$+" METERS":G
OSUB155:DRAW"BM2,20":IFA>19THENA
A$="YOU QUALIFIED!!!":GOSUB155EL
SEGOTO50
78 GOSUB150:GOTO81
79 A$=STR$(A):IFA=10 THENA$=" 10
" ELSE IF A=20 THEN A$=" 20" ELS
EIFA=30 THEN A$=" 30"
80 RETURN
81 PCLS:DRAW"BM100,10S4":AA$="4T
H EVENT:":GOSUB155:DRAW"BM80,100S
12":AA$="HIGH":GOSUB155:DRAW"BM8
0,150":AA$="JUMP":GOSUB155:GOSUB
152
82 PCLS:LINE(0,180)-(255,180),PS
ET:POKE178,2:PAINT(0,181),,1:COL
OR1:LINE(200,175)-(255,180),PSET
,B:POKE178,1:PAINT(201,176),,1:C
OLOR1:LINE(198,169)-(199,180),PS
ET,B
83 LINE(2,50)-(90,120),PSET,B:LI
NE(9,60)-(9,100),PSET:LINE(9,100
)-(80,100),PSET
84 DRAW"BM2,10":AA$="PRESS RIGHT
 ARROW TO SPEED UP":GOSUB155:DRA
W"BM2,20":AA$="PRESS SPACE BAR F
IRST TO STOP RUN-":GOSUB155:DRAW
"BM2,30":AA$="NING, AND THE 2ND
TIME TO JUMP":GOSUB155
85 S=90:A=0:X=1
86 IFX>178THEN91
```
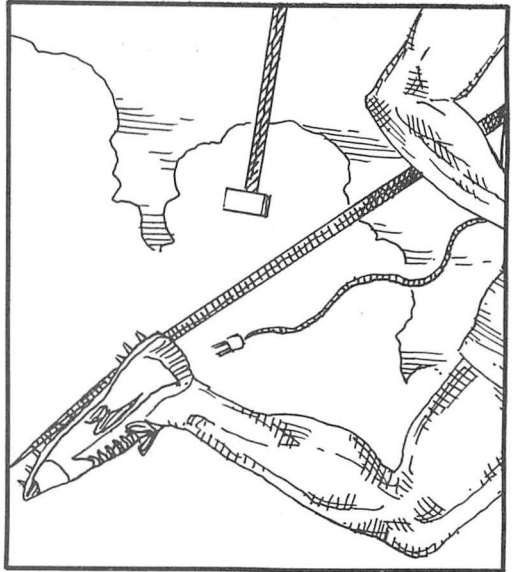


```
87 A$=INKEY$:IFA$=CHR$(9)THENS=S
-10:IFS<1THENS=1
88 IFA$=" "THEN92
89 IFA=0THENPUT(X,162)-(X+20,179
),G,PSET ELSEPUT(X,162)-(X+20,17
9),H,PSET
90 A=1-A:FORB=1TOS:NEXT:X=X+4:GO
TO86
91 LINE(0,0)-(255,40),PRESET,BF:
DRAW"BM2,10":AA$="YOU RAN RIGHT
INTO THE BAR!!!":GOSUB155:GOTO50
92 FOR A=.99 TO .75 STEP-.01:CIR
CLE(9,100),40,1,1,A,1
93 FORB=1TOS:NEXT:IFINKEY$=" "TH
EN95
94 NEXT
95 S=((100-S)/10)/2:A=(1-A)*10+(
S/2)
96 Y=161:FOR B=1TOS:PUT(X,Y)-(X+
20,Y+18),L,PSET:X=X+S:Y=Y-A:NEXT
97 FORB=1TOS:PUT(X,Y)-(X+20,Y+17
),M,PSET:X=X+S:Y=Y+A:NEXT
```

```
98 FOR A=168 TO 175:IF PPOINT(19
8,A)<>Ø OR PPOINT(199,A)<>ØTHEN9
9ELSENEXT:C$=" 1":GOTO1ØØ
99 B=(175-A)*.25+1:LINE(Ø,Ø)-(25
5,4Ø),PRESET,BF:DRAW"BM2,1Ø":AA$
="YOU JUMPED"+STR$(B)+" METERS":
GOSUB155:DRAW"BM2,2Ø":IFB>=2.25T
HENAA$="YOU QUALIFIED!!!":GOSUB1
55ELSE5Ø
1ØØ GOSUB15Ø
1Ø1 PCLS:DRAW"BM1ØØ,1ØS4":AA$="5
TH EVENT":GOSUB155:DRAW"BM1ØØ,1Ø
ØS12":AA$="4ØØ":GOSUB155:DRAW"BM
7Ø,15Ø":AA$="METERS":GOSUB155:GO
SUB152:B=32Ø:TI=5Ø:GOTO42
1Ø2 PCLS:DRAW"BM1ØØ,1ØS4":AA$="6
TH EVENT":GOSUB155:DRAW"BM1ØØ,1Ø
ØS12":AA$="11Ø":GOSUB155:DRAW"BM
8Ø,13Ø":AA$="METER":GOSUB155:DRA
W"BM6Ø,16Ø":AA$="HURDLES":GOSUB1
55:GOSUB152:GOSUB154:A=Ø:S=9Ø:B=
-3
1Ø3 FOR P=Ø TO 255STEP64:LINE(P,
175)-(P+1,179),PSET,B:NEXT:DRAW"
BM2,1Ø":AA$="PRESS THE RIGHT ARR
OW TO SPEED UP":GOSUB155:DRAW"BM
2,4Ø":AA$="PRESS SPACE BAR TO JU
MP":GOSUB155:POKE&H7FE7,&H1B:POK
E&H7FE8,&HEØ:SOUND1,1Ø:TIMER=Ø
```
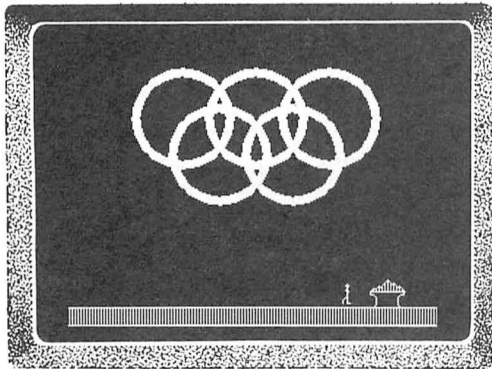


```
1Ø4 A$=INKEY$:IFA$=CHR$(9)THENS=
S-1Ø:IFS<1THENS=1
1Ø5 IFA$=" "THEN11Ø
1Ø6 IFA=ØTHENPUT(2Ø,162)-(4Ø,179
),G,PSET ELSEPUT(2Ø,162)-(4Ø,179
),H,PSET
1Ø7 FORQ=1TOS:NEXT:IFB=ØTHEN1Ø9E
LSEIFB/8=INT(B/8) THENLINE(Ø,Ø)-
(255,4Ø),PRESET,BF:DRAW"BM2,1Ø":
AA$="YOU RAN RIGHT INTO A HURDLE
!!!":GOSUB155:GOTO5Ø
1Ø8 IF(B-4)/8=INT((B-4)/8)THENFO
RA=ØTO256STEP64:LINE(A,175)-(A+1,
```

```
,179),PSET,B
1Ø9 LINE(2Ø,175)-(4Ø,179),PRESET
,BF:A=1-A:EXEC&H7FE6:B=B+1:IFB>1
Ø4THENT=TIMER-2ØØ:GOTO111ELSE1Ø4
11Ø PUT(2Ø,157)-(4Ø,174),K,PSET:
EXEC&H7FE6:FORQ=1TOS*1.5:EXEC&H7
FE6:B=B+2:LINE(2Ø,156)-(4Ø,16Ø),
PRESET,BF:GOTO1Ø6
111 LINE(Ø,Ø)-(255,4Ø),PRESET,BF
:GOSUB51:DRAW"BM2,1Ø":AA$="YOU R
AN THE HURDLES IN"+C$+" SECONDS"
:GOSUB155:IFVAL(C$)<16THENDRAW"B
M2,2Ø":AA$="YOU QUALIFIED!!!":GO
SUB155:GOSUB15ØELSEGOTO5Ø
112 PCLS:DRAW"BM1ØØ,1ØS4":AA$="7
TH EVENT":GOSUB155:DRAW"BM7Ø,1ØØ
S12":AA$="DISCUS":GOSUB155:DRAW"
BM8Ø,15Ø":AA$="THROW":GOSUB155:G
OSUB152:PCLS:DRAW"BM2,1Ø":AA$="P
RESS THE SPACE BAR TO RELEASE DI
SC-":GOSUB155
113 DRAW"BM2,2Ø":AA$="US":GOSUB1
55:S=9Ø:FORA=172 TO 32STEP-1Ø:LI
NE(2Ø,A)-(255,A),PSET:NEXT:FOR A
=175TO35STEP-2Ø:DRAW"BM14,=A;":A
A$="5":GOSUB155:NEXT:FORA=165 TO
 45STEP-2Ø:DRAW"BM14,=A;":AA$="O
":GOSUB155:NEXT
114 B=1:FOR A=165 TO 35STEP-1Ø:D
RAW"BMØ,=A;":AA$=STR$(INT(B)):MI
D$(AA$,1,1)="":GOSUB155:B=B+.5:N
EXT:S=9Ø
115 X$="BM13Ø,185":DRAWX$+"C1NU1
Ø":P=1:GOSUB118:DRAWX$+"CØNU1Ø":
DRAWX$+"C1NE1Ø":P=2:GOSUB118:DRA
WX$+"CØNE1Ø":DRAWX$+"C1NR1Ø":P=3
:GOSUB118:DRAWX$+"CØNR1Ø":DRAWX$
+"C1NF1Ø":P=4:GOSUB118:DRAWX$+"C
ØNF1Ø":DRAWX$+"C1ND1Ø":P=5:GOSUB
118:DRAWX$+"CØND1Ø"
116 DRAWX$+"C1NG1Ø":P=6:GOSUB118
:DRAWX$+"CØNG1Ø":DRAWX$+"C1NL1Ø"
:P=7:GOSUB118:DRAWX$+"CØNL1Ø":DR
AWX$+"C1NH1Ø":P=8:GOSUB118:DRAWX
$+"CØNH1Ø":S=S-5:IFS<1THENS=1
117 GOTO115
118 FORB=1TOS:NEXT:IFINKEY$=" "T
HEN119ELSERETURN
119 IFP>2ANDP<8THEN122ELSEA=(1ØØ
-S)/1Ø:IFP=1THENA=A*3.3 ELSEIFP=
8ORP=2THEN A=A*2.8
12Ø X=13Ø:A=A+RND(5):IFP=8THENQ=
-1ELSEIFP=2THENQ=1ELSEQ=Ø
121 FORB=1TOA*3.3:PSET(X,172-B):
PLAY"T255A":PRESET(X,172-B):X=X+
Q:NEXT:PSET(X,172-B)
122 LINE(Ø,Ø)-(255,2Ø),PRESET,BF
:IFP=1THENB=A*1.6+6ELSEIFP=2ORP=
```

```
8THENB=A*1.9ELSEC$=" O":GOTO124
123 C$=STR$(B):FORA=1TOLEN(C$):I
FMID$(C$,A,1)="Ø"THENMID$(C$,A,1
)="O":NEXTELSENEXT
124 DRAW"BM2,1Ø":GOSUB52:AA$="YO
U THREW THE DISCUS"+C$+" METERS"
:GOSUB155
125 DRAW"BM2,2Ø":IFVAL(C$)>49.99
THENAA$="YOU QUALIFIED!!!":GOSUB
155ELSEGOTO5Ø
126 GOSUB15Ø
127 PCLS:DRAW"BM1ØØ,1ØS4":AA$="8
TH EVENT":GOSUB155:DRAW"BM9Ø,1ØØ
S12":AA$="POLE":GOSUB155:DRAW"BM
8Ø,15Ø":AA$="VAULT":GOSUB155:GOS
UB152:GOSUB154:LINE(198,15Ø)-(19
9,179),PSET,B:LINE(2ØØ,175)-(255
,179),PSET,B:B=Ø:P=Ø
128 POKE178,1:PAINT(2Ø1,176),,1:
COLOR1:DRAW"BM2,1Ø":AA$="PRESS T
HE SPACE BAR AS FAST AS YOU":GOS
UB155:DRAW"BM2,2Ø":AA$="CAN TO V
AULT":GOSUB155:SOUND1,1Ø:FORA=2Ø
TO14ØSTEP4:IFP=1THENPUT(A,162)-(
A+2Ø,179),G,PSETELSEPUT(A,162)-(
A+2Ø,179),H,PSET
129 LINE(A+25,17Ø)-(A+5Ø,17Ø),PS
ET:P=1-P:NEXT:TIMER=Ø
13Ø IFINKEY$=" "THENB=B+1
131 IFTIMER<=5ØTHEN13Ø
132 LINE(A,162)-(A+2Ø,179),PRESE
T,BF:LINE(A+21,17Ø)-(A+45,17Ø),P
RESET:PUT(A+1Ø,14Ø)-(A+3Ø,157),J
,PSET:LINE(A+5Ø,179)-(A+25,149),
PSET:TIMER=Ø
133 IFINKEY$=" "THENB=B+1
134 IFTIMER<=5ØTHEN133
135 LINE(A+5Ø,179)-(A+25,149),PR
ESET:LINE(A+1Ø,14Ø)-(A+3Ø,157),P
RESET,BF:LINE(A+5Ø,179)-(A+5Ø,14
9),PSET:FORP=132TO156:PUT(A+6Ø,P
)-(A+8Ø,P+17),M,PSET:NEXT
136 B=B*.2:C$=STR$(B):FORA=1TOLE
N(C$):IFMID$(C$,A,1)="Ø"THENMID$
(C$,A,1)="O":NEXTELSENEXT
137 LINE(Ø,Ø)-(255,14Ø),PRESET,B
F:DRAW"BM2,1Ø":AA$="YOU VAULTED"
+C$+" METERS":GOSUB155:IFB>=5THE
NDRAW"BM2,2Ø":AA$="YOU QUALIFIED
!!!":GOSUB155ELSEGOTO5Ø
138 GOSUB15Ø
139 PCLS:DRAW"BM1ØØ,1ØS4":AA$="9
TH EVENT":GOSUB155:DRAW"BM7Ø,1ØØ
S12":AA$="JAVELIN":GOSUB155:DRAW
"BM8Ø,15Ø":AA$="THROW":GOSUB155:
GOSUB152:POKE&H7FE7,&H1C:POKE&H7
FE8,&H8Ø
14Ø GOSUB154:DRAW"BM2,1Ø":AA$="P

RESS SPACE BAR TO SPEED UP JAVEL
IN":GOSUB155
141 PUT(2Ø,162)-(4Ø,179),G,PSET:
B=Ø:TIMER=Ø
142 IFINKEY$=" "THENB=B+1
143 IFTIMER>=1ØØTHEN144ELSE142
144 LINE(2Ø,162)-(4Ø,179),PRESET
,BF:LINE(4Ø,17Ø)-(55,17Ø),PSET:F
OR A=1TOB*3.4:PLAY"T255AAAAAA":E
XEC&H7FE6:NEXT:LINE(4Ø,17Ø)-(55,
17Ø),PRESET:LINE(4Ø,17Ø)-(5Ø,18Ø
),PSET:LINE(Ø,Ø)-(255,4Ø),PRESET
,BF
145 C$=STR$(B*3.4):FORA=1TOLEN(C
$):IFMID$(C$,A,1)="Ø"THENMID$(C$
,A,1)="O":NEXTELSENEXT
146 DRAW"BM2,1Ø":AA$="YOU THREW
THE JAVELIN"+C$+" METERS":GOSUB1
55:IFB*3.4>9ØTHENDRAW"BM2,2Ø":AA
$="YOU QUALIFIED!!!":GOSUB155ELS
EGOTO5Ø
147 GOSUB15Ø
148 PCLS:DRAW"BM92,1ØS4":AA$="1Ø
TH EVENT":GOSUB155:DRAW"BM9Ø,1ØØ
S12":AA$="15OO":GOSUB155:DRAW"BM
7Ø,15Ø":AA$="METERS":GOSUB155:GO
SUB152:B=12ØØ:TI=25Ø:GOTO42
149 FORB=1TO5Ø:FORA=1TO1ØØ:CLSRN
D(8):NEXT:PRINT"YOU WON THE DECA
THLON!!!!!!!!!!!!":PLAY"AGFAFADEE
ECECEEBBEBBEGFFGDAE":CLS:PRINT"y
ou won the decathlon!!!!!!!!!!!"
:PLAY"AGAFGADECEFEGDADEDED":NEXT
:END
15Ø DRAW"BM6Ø,14ØS4":AA$="PRESS
'C' TO CONTINUE":GOSUB155
151 IFINKEY$<>"C"THEN151ELSERETU
RN
152 DRAW"BM4Ø,19ØS4":AA$="PRESS
ANY KEY TO CONTINUE":GOSUB155
153 IFINKEY$=""THEN153ELSERETURN
154 PCLS:LINE(Ø,18Ø)-(255,18Ø),P
SET:POKE178,2:PAINT(1,181),,1:CO
LOR1:FORQ=1TO255:PRESET(RND(255)
,RND(9)+18Ø):NEXT:RETURN
155 'CHAR-GEN FOR ZEROS, PUT O
       37 CHARACTER ACROSS
       TO START AT MIDDLE, DRAW
       AT Ø,1Ø3
156 FOR XX=1 TO LEN(AA$)
157 IF MID$(AA$,XX,1)=" " THEN D
RAW CC$(1):GOTO 171
158 IF ASC(MID$(AA$,XX,1))>64 TH
EN DRAW CC$(ASC(MID$(AA$,XX,1))-
63):GOTO171
159 IF ASC(MID$(AA$,XX,1))>48 AN
D ASC(MID$(AA$,XX,1))<58 THEN DR
AWCC$(ASC(MID$(AA$,XX,1))-21):GO
```

33

```
TO 171
160 IF MID$(AA$,XX,1)="/"THEN DR
AWCC$(37):GOTO171
161 IF MID$(AA$,XX,1)="?" THEN D
RAWCC$(38):GOTO 171
162 IF MID$(AA$,XX,1)="!" THEN D
RAWCC$(39):GOTO 171
163 IF MID$(AA$,XX,1)="." THEN D
RAW CC$(40):GOTO171
164 IF MID$(AA$,XX,1)=":" THEN D
RAW CC$(41):GOTO171
165 IF MID$(AA$,XX,1)=";" THEN D
RAWCC$(42):GOTO171
166 IF MID$(AA$,XX,1)="," THEN D
RAWCC$(43):GOTO171
167 IF MID$(AA$,XX,1)="'" THEN D
RAWCC$(44):GOTO171
168 IF MID$(AA$,XX,1)="-" THEN D
RAWCC$(45):GOTO171
169 IF MID$(AA$,XX,1)="+" THEN D
RAWCC$(46):GOTO171
170 IF MID$(AA$,XX,1)="=" THEN D
RAWCC$(47):GOTO171
171 NEXT:RETURN
172 DATA" ","BM+7,0"
173 DATA"A","U4;E2;F2;D2;NL4;D2;
BM+3,0"
174 DATA"B","U6;R3;F1;D1;G1;NL3;
F1;D1;G1;L3;BM+7,0"
175 DATA"C","BM+1,-0;H1;U4;E1;R2
;F1;BM+0,+4;G1;L2;BM+6,0"
176 DATA"D","U6;R3;F1;D4;G1;L3;B
M+7,0"
177 DATA"E","NR4;U3;NR2;U3;R4;BM
+3,+6"
178 DATA"F","U3;NR2;U3;R4;BM+3,+
6"
179 DATA"G","BM+1,-0;H1;U4;E1;R2
;F1;BM+0,+2;NL1;D2;G1;L2;BM+6,0"
180 DATA"H","U3;NU3;R4;NU3;D3;BM
+3,0"
181 DATA"I","BM+1,0;R1;NR1;U6;NL
1;R1;BM+4,+6"
182 DATA"J","BM+0,-1;F1;R1;E1;U5
;NL1;R1;BM+3,6"
183 DATA"K","U3;NU3;R1;NE3;F3;BM
+3,0"
184 DATA"L","NU6;R4;U1;BM+3,+1"
185 DATA"M","U6;F2;ND1;E2;D6;BM+
3,0"
186 DATA "N","U6;F1;D1;F2;D1;F1;
NU6;BM+3,0"
187 DATA"O","BM+1,0;H1;U4;E1;R2;
F1;D4;G1;L2;BM+6,0
188 DATA"P","U6;R3;F1;D1;G1;L3;B
M+7,3"
189 DATA"Q","BM+1,0;H1;U4;E1;R2;
F1;D3;G1;NH1;NF1;G1;L1;BM+6,0
190 DATA"R","U6;R3;F1;D1;G1;L2;N
L1;F3;BM+3,0"
191 DATA"S","BM+0,-1;F1;R2;E1;U1
;H1;L2;H1;U1;E1;R2;F1;BM+3,+5"
192 DATA"T","BM+2,+0;U6;NL2;R2;B
M+3,+6"
193 DATA"U","BM+0,-1;NU5;F1;R2;E
1;U5;BM+3,6"
194 DATA"V","BM+0,-6;D2;F1;D1;F1
;ND1;E1;U1;E1;U2;BM+3,+6"
195 DATA"W","NU6;E2;NU1;F2;U6;BM
+3,6"
196 DATA"X","U1;E4;U1;BM-4,0;D1;
F4;D1;BM+3,0"
197 DATA"Y","BM+0,-6;D2;F2;ND2;E
2;U2;BM+3,6"
198 DATA"Z","NR4;U1;E4;U1;L4;BM+
7,6"
199 DATA"1","BM+1,0;R1;NR1;U6;G1
;BM+6,+5"
200 DATA"2","NR4;U1;E1;R1;E2;U1;
H1;L2;G1;BM+7,+5"
201 DATA"3","BM+0,-1;F1;R2;E1;H2
;E2;H1;L3;BM+7,6"
202 DATA"4","BM+3,0;U2;NR1;L3;U1
;E3;D3;BM+4,3"
203 DATA"5","BM+0,-1;F1;R2;E1;U2
;H1;L3;U2;R4;BM+3,+6"
204 DATA"6","BM+4,-5;H1;L2;G1;D4
;F1;R2;E1;U1;H1;L3;BM+7,+3"
205 DATA"7","U1;E4;U1;L4;BM+7,+6
"
206 DATA"8","BM+1,-0;H1;U1;E1;H1
;U1;E1;R2;F1;D1;G1;NL2;F1;D1;G1;
L2;BM+6,0"
207 DATA"9","BM+0,-1;F1;R2;E1;U4
;H1;L2;G1;D1;F1;R2;BM+4,+3"
208 DATA"/","U1;E4;U1;BM+3,6"
209 DATA"?","BM+0,-5;E1;R2;F1;D1
;G2;BM+0,+1;D1;BM+5,+0"
210 DATA"!","BM+2,+1;U1;BM+0,-2;
U5;BM+5,7"
211 DATA".","BM+2,0;U1;BM+5,+1"
212 DATA":","BM+2,-1;U1;BM+0,-2;
U1;BM+5,+5"
213 DATA";","BM+1,0;E1;BM+0,-1;U
1;BM+5,+4"
214 DATA",","BM+2,0;NU1;G1;BM+6,
-1"
215 DATA"'","BM+1,-5;E2;BM+4,+7"
216 DATA"-","BM+0,-3;R4;BM+3,+3"
217 DATA"+","BM+2,-1;U2;NU2;NL2;
R2;BM+3,+3"
218 DATA"=","BM+1,-2;R3;BM-3,-2;
R3;BM+4,+4"
219 DATA8E,1B,0,A6,84,10,8E,00,1
F,E6,01,E7,80,31,3F,26,F8,A7,80,
8C,1E,00,26,EB,39
```
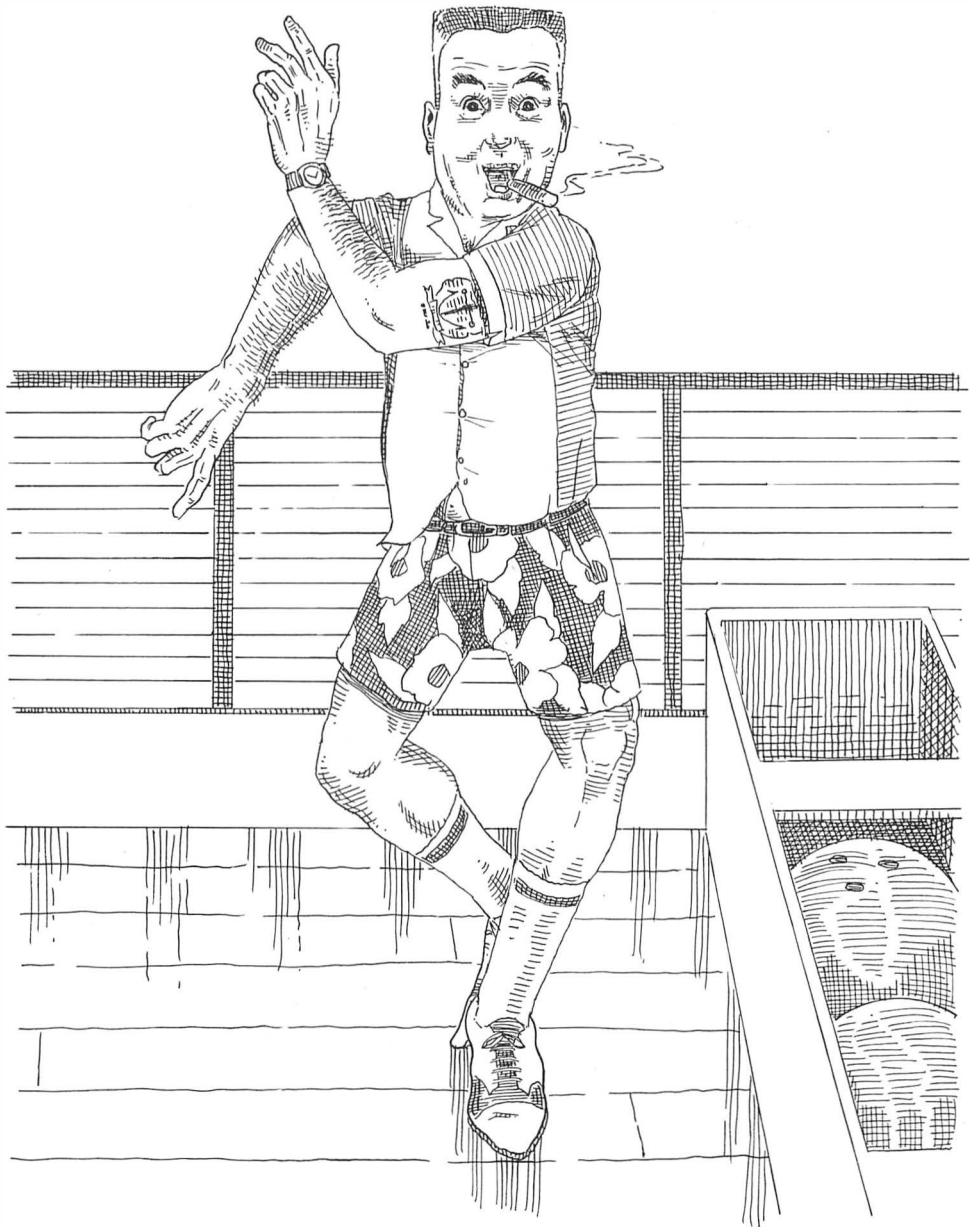
COCO'S BOWLING ALLEY

Program by Floyd Keirnan

P eople have competed in various forms of bowling for thousands of years. Archaeologists discovered equipment for a game resembling bowling buried with an Egyptian child, evidence that the sport dates back to around 5200 B.C. Today it's one of the most popular indoor sports in America. Every year in the United States about 39 million people roll balls down gleaming wooden lanes to try to knock down the 10 pins.

One of the reasons for bowling's popularity is the ease with which the game can be learned. Scoring is also easy to learn.

After loading and running *CoCo's Bowling Alley*, you are greeted with a demo screen followed by two short screens of instructions. Fast and slow speeds can be selected as well as three skill levels. The easiest level includes a flashing vector that assists you in guiding your ball.

The right joystick firebutton is used to release the ball, which is positioned at random behind

the foul line. Speed and angle of release are interrelated. The forward position of the joystick controls the 'Y' increment of ball movement and, because of the alley angle to the X,Y coordinates, the farther the control is moved forward the more to the left the ball will go. Once the ball is released, there is no further control.

Leaving the joystick in an approximate left-right center position causes a straight ball to be thrown. In a left position a left curve is rolled and in a right position a right curve is rolled. When the ball enters the pin area it encounters a map of windows that determines which pins fall and which remain standing.

There are two splits possible, a 7-10 and a 2-7-10. The 7-10 can be picked up in the usual fashion by hitting the 10-pin thin on the right side. The 2-7-10 can be picked up by a hit on the left side of the 2-pin.

You will find this Simulation surprisingly realistic. CoCo automatically keeps score for you, also. So if the real bowling alley is closed, you can just load in *CoCo's Bowling Alley* and keep trying for that perfect 300!

Floyd Keirnan earned a bachelor's degree from Massachusetts Institute of Technology and worked as an electronics engineer for 26 years. He lives in Orange, California, and divides most of his time between the computer room and the garden.

BOWLING   32K ECB

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2 CLS:PRINT@261,"COCO'S BOWLING
ALLEY":FOR Q=ØTO5ØØ:NEXT:PMODE4,
1:PCLS
3 GOSUB34
4 'FOR TRS 8ØCC♦WITH A 32K RAM A
ND EXTENDED BASIC.
5 'BY FLOYD KEIRNAN,2598 ROBINHO
OD PL.,ORANGE,CALIF.
6 CLS:PRINT@98,"BALL IS POSITION
ED RANDOMLY      BEHIND THE FOUL
 LINE.":PRINT@16Ø,"SPEED AND ENG
LISH ARE CONTROLLED    BY THE RI
GHT JOYSTICK."
7 PRINT@227,"SPEED ^ ;  LEFT CUR
VE <--":PRINT@258,"STRAIGHT 'CT'
; RT CURVE -->"
1Ø PRINT@417,"PRESS 'S'(NORMAL)/
'F'(FAST) TO CONTINUE"
25 A$=INKEY$:IF A$="" THEN 25
26 IF A$="S" THEN POKE 65494,Ø:C
LS
27 IF A$="F" THEN POKE 65495,Ø:C
LS
28 PCLS2:CLS
29 PRINT@13Ø,"PRESS THE RED BUTT
ON ON THE       JOYSTICK TO THROW
THE BALL":PRINT@226,"SPEED '^' C
ONTROLS THE BALL       RELEASE ANG
LE":PRINT@322,"PRESS 'E' FOR EAS
Y,WITH DIR.^":PRINT@354,"PRESS '
M' FOR MEDIUM,":PRINT@386,"OR 'H
' FOR A HARDER GAME":FR=1
3Ø B$=INKEY$:IF B$="" THEN 3Ø
31 IF B$="E" THEN ER=6
32 IF B$="H" THEN ER=RND(12)
33 IF B$="M" THEN ER=RND(8)+2
34 DRAW "BM21,15;S8;G1L2H1U4E1R2
F1;BM+4,+5;H1U4E1R2F1D4G1L2;BM+1
Ø,-1;G1L2H1U4E1R2F1;BM+4,+5;H1U4
E1R2F1D4G1L2;BM+7,-5;E2;BM+4,+6;
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```
F1;R2;E1;U1;H1;L2;H1;U1;E1;R2;F1
"
36 DRAW"BM9,3Ø;S4;U6R3F1D1G1NL3F
1D1G1L3;BM+8,Ø;H1U4E1R2F1D4G1L2;
BM+6,Ø;NU6E2NU1F2U6;BM+3,6;NU6R4
U1BM+4,+1;R1NR1U6NL1R1;BM+4,+6;U
6F1D1F2D1F1NU6;BM+4,+Ø;H1U4E1R2F
1;BM+Ø,+2;NL1D2G1L2;BM+1Ø,+Ø;U4E
2F2D2NL4D2;BM+3,+Ø;NU6R4U1;BM+3,
+1;NU6R4U1;"
37 DRAW"BM+3,+1;NR4U3NR2U3R4;BM+
3,+Ø;D2F2ND2E2U2":SCREEN1,1:IF F
R<>Ø THEN 45
39 DRAW "BM12,189;S4;U6R3F1D1G1N
L3F1D1G1L3;BM+8,-6;D2F2ND2E2U2;B
M+8,+6;U3NR2U3R4;BM+2,+Ø;D6R4;BM
+3,+Ø;H1U4E1R2F1D4G1L2;BM+6,-6;D
2F2ND2E2U2;BM+3,+Ø;D6R2E2U2H2L2;
BM+1Ø,+Ø;D3ND3R1NE3F3;BM+3,+Ø;NR
4U3NR2U3R4;BM+4,+Ø;D6;BM+5,+Ø;U6
R3F1D1G1NL3F1D2;
4Ø DRAW "BM+4,+Ø;U6F1D1F2D1F1NU6
;BM+4,+Ø;U4E2F2D2NL4D2;BM+4,+Ø;U
6F1D1F2D1F1NU6"
41 GOSUB 3ØØØ:K=65:Y=J=18Ø:FR=Ø
45 B=1:ST=Ø
5Ø LINE(Ø,18Ø)-(133,1Ø),PSET  'D
RAW ALLEY
6Ø LINE (Ø,192)-(138,1Ø),PSET
7Ø LINE (125,192)-(185,1Ø),PSET
8Ø LINE(134,192)-(189,1Ø),PSET
82 CIRCLE(161,44),44,,1,.65,.87
84 CIRCLE(35,7Ø),15,1:CIRCLE(36,
62),3,1:CIRCLE(42,68),3,1:CIRCLE
(31,73),3,1:LINE(8,115)-(35,84),
PSET
85 LINE(7,18Ø)-(128,18Ø),PSET
87 DRAW"BM15Ø,192;U1ØL3U2R36D2L3
5R32D1Ø":DRAW"BM15Ø,178;R6L3U4"
88 CIRCLE(153,17Ø),6,,1.2,.9,.6:
DRAW"BM147,17Ø;R12"
89 CIRCLE(153,172),1,,2
9Ø CIRCLE(143,12),3,,2 'SET PINS
1ØØ CIRCLE(155,12),3,,2
11Ø CIRCLE(154,2Ø),3,,2
12Ø CIRCLE(165,12),3,,2
13Ø CIRCLE(164,2Ø),3,,2
14Ø CIRCLE(175,12),3,,2
15Ø CIRCLE(155,28),3,,2
16Ø CIRCLE(144,2Ø),3,,2
17Ø CIRCLE(145,28),3,,2
18Ø CIRCLE(146,36),3,,2
185 S1=Ø:S2=Ø
186 SCREEN1,1
19Ø GOTO 43Ø
2ØØ CIRCLE(X,Y),Z  'DRAW BALL
22Ø CIRCLE(X,Y),Z,4  'ERASE BALL
225 IF Y>5Ø THEN 32Ø
227 IF X=>187 THEN FOR Y=Y TO Ø
STEP -1Ø:CIRCLE(X,Y),Z:CIRCLE(X,
Y),Z,4:NEXT Y
229 REM PIN WINDOWS, 1ST BALL
23Ø IF B=1 AND X>168 AND X<181 A
ND Y>8 AND Y<24 THEN GOSUB 2ØØØ:
GOSUB21ØØ:B=2:Y=1:S1=1
24Ø IF B=1 AND X>163 AND X<172 A
ND Y>1Ø AND Y<32 THEN GOSUB 2ØØØ
:GOSUB 2Ø6Ø:GOSUB 2Ø9Ø:GOSUB 21Ø
Ø:Y=1:B=3:S1=3
245 IF B=1 AND CC=2 AND X>138 AN
D X<148 AND Y>4Ø AND Y<5Ø THEN G
OSUB2ØØØ:GOSUB2Ø1Ø:GOSUB2Ø2Ø:GOS
UB2Ø3Ø:GOSUB2Ø4Ø:GOSUB2Ø5Ø:GOSUB
2Ø6Ø:GOSUB2Ø8Ø:GOSUB2Ø9Ø:Y=1:B=8
:S1=8
268 IF B=1 AND CC=2 AND X>125 AN
D X<135 AND Y>25 AND Y<45.6 THEN
 GOSUB2ØØØ:GOSUB2Ø2Ø:GOSUB2Ø4Ø:G
OSUB2Ø5Ø:GOSUB2Ø7Ø:GOSUB2Ø8Ø:GOS
UB2Ø9Ø:Y=1:B=11:S1=6
27Ø IF B=1 AND X>142 AND X<157 A
ND Y>25 AND Y<37 THEN GOSUB 2ØØØ
:GOSUB2Ø1Ø:GOSUB2ØØØ:GOSUB15ØØØ:
GOSUB2ØØØ:GOSUB15ØØØ:GOSUB2ØØØ:G
OSUB2Ø2Ø:GOSUB2Ø3Ø:GOSUB2Ø4Ø:GOS
UB2Ø5Ø:GOSUB2Ø6Ø:GOSUB2Ø7Ø:GOSUB
2ØØØ:GOSUB2Ø8Ø:GOSUB2Ø9Ø:GOSUB21
ØØ:Y=1:B=6:S1=1Ø
272 IF B=1 AND CC=2 AND X>131 AN
D X<142 AND Y>32 AND Y<49 THEN G
OSUB2ØØØ:GOSUB2Ø1Ø:GOSUB2ØØØ:GOS
UB15ØØØ:GOSUB2ØØØ:GOSUB15ØØØ:GOS
UB2ØØØ:GOSUB2Ø2Ø:GOSUB2Ø3Ø:GOSUB
2Ø4Ø:GOSUB2Ø5Ø:GOSUB2Ø6Ø:GOSUB2Ø
7Ø:GOSUB2ØØØ:GOSUB2Ø8Ø:GOSUB2Ø9Ø
:GOSUB21ØØ:Y=1:B=6:S1=1Ø
274 IF B=1 AND X>154 AND X<164 A
ND Y>1Ø AND Y<4Ø THEN GOSUB 2ØØØ
:GOSUB 2Ø3Ø:GOSUB 2Ø5Ø:GOSUB 2Ø6
Ø:GOSUB 2Ø8Ø:GOSUB 2Ø9Ø:GOSUB 21
ØØ:Y=1:B=4:S1=6
28Ø IF B=1 AND X>149 AND X<154 A
ND Y>24 AND Y<48 THEN GOSUB 2ØØØ
:GOSUB 2Ø1Ø:GOSUB 2Ø3Ø:GOSUB 2Ø4
Ø:GOSUB 2Ø6Ø:GOSUB 2Ø
8Ø:GOSUB 2Ø9Ø:Y=1:B=7:S1=7
288 IF B=1 AND CC=2 AND X>138 AN
D X<148 AND Y>4Ø AND Y<5Ø THEN G
OSUB2ØØØ:GOSUB2Ø1Ø:GOSUB2Ø2Ø:GOS
UB2Ø3Ø:GOSUB2Ø4Ø:GOSUB2Ø5Ø:GOSUB
2Ø6Ø:GOSUB2Ø8Ø:GOSUB2Ø9Ø:Y=1:B=8
:S1=8
29Ø IF B=1 AND X>143 AND X<149 A
ND Y>34 AND Y<49 THEN GOSUB 2ØØØ
:GOSUB 2Ø1Ø:GOSUB 2Ø2Ø:GOSUB 2Ø3
Ø:GOSUB 2Ø4Ø:GOSUB 2Ø5Ø:GOSUB 2Ø
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60:GOSUB 2080:GOSUB 2090:Y=1:B=8       254 THEN 470 ELSE 452
:S1=8                                  452 IF B$="E" THEN 455 ELSE 450
300 IF B=1 AND X>129 AND X<144 A       455 AA=JOYSTK(0):AG=(JOYSTK(1)+1
ND Y>35 AND Y<48 THEN GOSUB 2000       00)/12
:GOSUB 2010:GOSUB 2020:GOSUB 203       458 LINE(K,J)-(K+AG,170),PSET
0:GOSUB 2040:GOSUB 2050:GOSUB 20       459 FOR Q=0TO1:NEXT Q
60:GOSUB 2070:GOSUB 2080:GOSUB 2       460 LINE(K,J)-(K+AG,170),PRESET
090:Y=1:B=9:S1=9                       465 GOTO 450
318 IF B=1 AND CC=2 AND X>125 AN       470 Y=J:Z=8:X=K
D X<144 AND Y>25 AND Y<47 THEN G       475 CIRCLE(K,J),7,4
OSUB2000:GOSUB2020:GOSUB2040:GOS       480 IF B=1  GOTO 200
UB2050:GOSUB2070:GOSUB2080:GOSUB       500 REM 2ND BALL WINDOWS
2090:Y=1:B=11:S1=6                     520 IF B=2 AND X>164 AND X<172 A
320 IF B=1 AND X>136 AND X<151 A       ND Y>16 AND Y<32 THEN GOSUB 2000
ND Y>18 AND Y<40 THEN GOSUB2000:       :GOSUB2060:GOSUB 2090:Y=1:S2=2
GOSUB 2020:GOSUB 2040:GOSUB 2050       540 IF B=2 AND X>=140 AND X<157
:GOSUB 2070:GOSUB 2080:GOSUB 209       AND Y>25 AND Y<48 THEN GOSUB 200
0:Y=1:B=11:S1=6                        0:GOSUB 2010:GOSUB 2020:GOSUB203
338 IF B=1 AND CC=2 AND X>114 AN       0:GOSUB 2040:GOSUB 2050:GOSUB 20
D X<130 AND Y>23 AND Y<44.5 THEN       60:GOSUB 2070:GOSUB 2080:GOSUB 2
 GOSUB2000:GOSUB2040:GOSUB2070:G       090:Y=1:S2=9
OSUB2080:Y=1:B=13:S1=3
340 IF B=1 AND X>130 AND X<149 A
ND Y=>13 AND Y<36 THEN GOSUB 200
0:GOSUB 2040:GOSUB 2070:GOSUB 20
80:Y=1:B=13:S1=3
349 REM ESTABLISH 1ST BALL THROW
350 E=ABS(JOYSTK(0)-32)
352 IF E<15 THEN CC=0:GOTO 369
'STRAIGHT BALL
364 IF Y>170 THEN 365
365 IF Y>170 AND JOYSTK(0)<16 TH
EN CC=1  'LEFT CURVE
366 IF Y>170 AND JOYSTK(0)>46 TH
EN CC=2  'RT CURVE
367 IF CC=1 THEN 370
368 IF CC=2 THEN 372
369 X=X+10:GOTO 375
370 X=X+20*(Y/300):GOTO 375            542 IF B=2 AND CC=2 AND X>128 AN
371 IF Y<1 THEN Y=1                    D X<140 AND Y>42 AND Y<50 THEN G
372 X=X+(25/(Y/40))                    OSUB2000:GOSUB2010:GOSUB2020:GOS
375 IF Y>170  THEN V=27-JOYSTK(1       UB2030:GOSUB2040:GOSUB2050:GOSUB
)/5  'VELOCITY                         2060:GOSUB2060:GOSUB2070:GOSUB20
379 Y=Y-V-ER+6  'DIFFICULTY FACT       80:GOSUB2090:Y=1:S2=9
OR                                     560 IF B=2 AND X>129 AND X<151 A
390 Z=Z-.2                             ND Y>29 AND Y<40 THEN GOSUB 2000
400 IF Y<1 THEN Y=1:X=141:Z=6:GO       :GOSUB 2020:GOSUB 2040:GOSUB 205
SUB16000:GOSUB 1030                    0:GOSUB2070:GOSUB2080:GOSUB 2090
410 GOTO 200                           :Y=1:S2=6
430 K=RND(50)+40  'POSITION BALL       562 IF B=2 AND CC=2 AND X>124 AN
432 IF FR=0 THEN J=188:K=70:B=15       D X<140 AND Y>26 AND Y<48 THEN G
:V=25:FOR Q=0TO2000:NEXT  'TITLE       OSUB2000:GOSUB2020:GOSUB2040:GOS
 PAGE                                  UB2050:GOSUB2070:GOSUB2080:GOSUB
433 LINE(7,180)-(128,180),PSET         2090:Y=1:S2=6
434 CIRCLE(K,J),7                      570 IF B=2 AND X>154 AND X<164 A
440 IF FR=0 THEN FR=FR+1:GOSUB 4       ND Y>24 AND Y<40 THEN GOSUB2000:
70                                     GOSUB2030:GOSUB 2050:GOSUB2060:G
450 P=PEEK(65280):IF P=126 OR P=
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OSUB 2Ø8Ø:GOSUB 2Ø9Ø:Y=1:S2=5
58Ø IF B=2 AND X>134 AND X<149 A
ND Y>1Ø AND Y<36 THEN GOSUB 2ØØØ
:GOSUB2Ø4Ø:GOSUB 2Ø7Ø:GOSUB 2Ø8Ø
:Y=1:S2=3
597 GOSUB 15ØØ
6ØØ IF B=3 AND X>154 AND X<164 A
ND Y>24 AND Y<4Ø THEN GOSUB 2ØØØ
:GOSUB 2Ø3Ø:GOSUB 2Ø5Ø:GOSUB 2Ø8
Ø:Y=1:S2=3
61Ø IF B=3 AND X>14Ø AND X<155 A
ND Y>19 AND Y<45 THEN GOSUB 2ØØØ
:GOSUB 2Ø1Ø:GOSUB 2Ø2Ø:GOSUB 2Ø3
Ø:GOSUB 2Ø4Ø:GOSUB 2Ø5Ø:GOSUB 2Ø
7Ø:GOSUB2Ø8Ø:Y=1:S2=7
628 IF B=3 AND CC=2 AND X>122 AN
D X<14Ø AND Y>3Ø AND Y<44 THEN G
OSUB2ØØØ:GOSUB2Ø2Ø:GOSUB2Ø4Ø:GOS
UB2Ø5Ø:GOSUB2Ø7Ø:GOSUB2Ø8Ø:Y=1:S
2=5
63Ø IF B=3 AND X>136 AND X<152 A
ND Y>19 AND Y<4Ø THEN GOSUB2ØØØ:
GOSUB2Ø2Ø:GOSUB2Ø4Ø:GOSUB2Ø5Ø:GO
SUB2Ø7Ø:GOSUB2Ø8Ø:Y=1:S2=5
638 IF B=3 AND CC=2 AND X>12Ø AN
D X<145 AND Y>2Ø AND Y<4Ø THEN G
OSUB2ØØØ:GOSUB2Ø4Ø:GOSUB2Ø7Ø:GOS
UB2Ø8Ø:Y=1:S2=3
64Ø IF B=3 AND X>135 AND X<149 A
ND Y>6 AND Y<36 THEN GOSUB 2ØØØ:
GOSUB2Ø4Ø:GOSUB2Ø7Ø:GOSUB2Ø8Ø:Y=
1:S2=3
66Ø GOSUB 15ØØ
67Ø IF B=4 AND X>153 AND X<16Ø A
ND Y>24 AND Y<41 THEN GOSUB 2ØØØ
:GOSUB 2Ø1Ø:Y=1:S2=1
7ØØ IF B=4 AND X>135 AND X<155 A
ND Y=>24 AND Y<48 THEN GOSUB2ØØØ
:GOSUB2Ø1Ø:GOSUB 2Ø2Ø:GOSUB 2Ø4Ø
:GOSUB2Ø7Ø:Y=1:S2=4
7Ø8 IF B=4 AND CC=2 AND X>123 AN
D X<14Ø AND Y>25 AND Y<45 THEN G
OSUB 2ØØØ:GOSUB2Ø4Ø:GOSUB2Ø7Ø:Y=
1:S2=2
71Ø IF B=4 AND X>134 AND X<153 A
ND Y=>9 AND Y<35 THEN GOSUB2ØØØ:
GOSUB 2Ø4Ø:GOSUB2Ø7Ø:Y=1:S2=2
75Ø GOSUB15ØØ
77Ø IF B=7 AND X>165 AND X<179 A
ND Y>2 AND Y<28 THEN GOSUB 2ØØØ:
GOSUB21ØØ:Y=1:S2=1
773 IF B=7 AND CC=2 AND X>131 AN
D X<14Ø AND Y>35 AND Y<48 THEN G
OSUB 2ØØØ:GOSUB2Ø25:GOSUB21ØØ:GO
SUB2Ø7Ø:S2=3:Y=1
775 IF B=7 AND X>133 AND X<145 A
ND Y>25 AND Y<4Ø THEN GOSUB 2ØØØ
:GOSUB 2Ø25:GOSUB21ØØ:GOSUB2Ø7Ø:
S2=3:Y=1
78Ø IF B=7 AND X>134 AND X<151 A
ND Y>19 AND Y<44 THEN GOSUB 2ØØØ
:GOSUB2Ø2Ø:GOSUB2Ø7Ø:Y=1:S2=2
788 IF B=7 AND CC=2 AND X>126 AN
D X<132 AND Y>2Ø AND Y<35 THEN G
OSUB 2ØØØ:GOSUB2Ø7Ø:Y=1:S2=1
79Ø IF B=7 AND X=>135 AND X=<15Ø
 AND Y>3 AND Y<29 THEN GOSUB2ØØØ
:GOSUB2Ø7Ø:Y=1:S2=1
795 GOSUB15ØØ
8ØØ IF B=8  AND X>178 AND X=<185
 AND Y>5 AND Y<24 THEN GOSUB 2ØØ
Ø:GOSUB 2125:GOSUB 2Ø7Ø:Y=1:S2=2
8Ø2 IF B=8 AND CC=2 AND X>138 AN
D X<165 AND Y>2Ø AND Y<34 THEN G
OSUB2ØØØ:GOSUB21ØØ:Y=1:S2=1
8Ø3 IF B=8 AND CC=2 AND X>125 AN
D X<145 AND Y>1Ø AND Y<35 THEN G
OSUB2ØØØ:GOSUB 2Ø7Ø:Y=1:S2=1
8Ø5 IF B=8 AND X>165 AND X<18Ø A
ND Y>1 AND Y<26 THEN GOSUB 2ØØØ:
GOSUB 21ØØ:Y=1:S2=1
81Ø IF B=8 AND X>133 AND X<152 A
ND Y>1 AND Y<28 THEN GOSUB2ØØØ:G
OSUB2Ø7Ø:Y=1:S2=1
82Ø IF B=9 AND X>164 AND X<185 A
ND Y>4.5 AND Y<24 THEN GOSUB2ØØØ
:GOSUB21ØØ:Y=1:S2=1
822 IF B=9 AND CC=2 AND X>16Ø AN
D X<18Ø AND Y>15 AND Y<3Ø THEN G
OSUB2ØØØ:GOSUB21ØØ:Y=1:S2=1
825 GOSUB 15ØØ
89Ø IF B=11 AND X>168 AND X<181
AND Y>8 AND Y<24 THEN GOSUB 2ØØØ
:GOSUB21ØØ:S2=1
895 IF B=11 AND X>155 AND X<172
AND Y>1Ø AND Y<32 THEN GOSUB2ØØØ
:GOSUB 2Ø6Ø:GOSUB21ØØ:Y=1:S2=2
898 IF B=11 AND CC=2 AND X>132 A
ND X<159 AND Y>32 AND Y<46 THEN
GOSUB 2ØØØ: GOSUB 2Ø1Ø:GOSUB 2Ø3
Ø:GOSUB 2Ø6Ø:GOSUB 21ØØ:Y=1:S2=4
9ØØ IF B=11 AND X>139 AND X<157
AND Y>25 AND Y<47 THEN GOSUB 2ØØ
Ø:GOSUB2Ø1Ø:GOSUB 2Ø3Ø:GOSUB2Ø6Ø
:GOSUB 21ØØ:Y=1:S2=4
915 GOSUB 15ØØ
938 IF B=13 AND X>165 AND X<182
AND Y>8 AND Y<24 THEN GOSUB2ØØØ:
GOSUB21ØØ:S2=1
94Ø IF B=13 AND X>164 AND X<172
AND Y>16 AND Y<32 THEN GOSUB 2ØØ
Ø:GOSUB 2Ø6Ø:GOSUB2Ø9Ø:GOSUB 21Ø
Ø:Y=1:S2=3
945 IF B=13 AND X>154 AND X<164
AND Y>24 AND Y<4Ø THEN GOSUB2ØØØ
:GOSUB 2Ø3Ø:GOSUB2Ø5Ø:GOSUB 2Ø6Ø
```
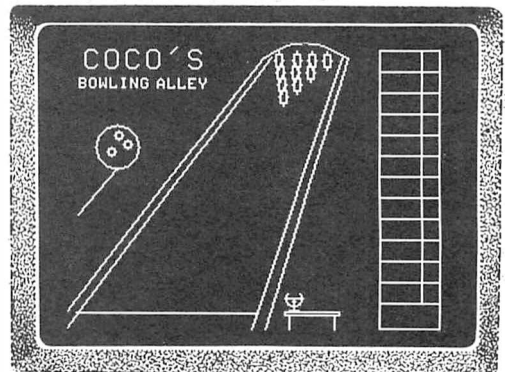
```
:GOSUB2Ø9Ø:GOSUB 21ØØ:Y=1:S2=5           :S2=6
948 IF B=13 AND CC=2 AND X>132 A         986 IF B=14 AND X>13Ø AND X<149
ND X<153 AND Y>27 AND Y<49 THEN          AND Y>13 AND Y<36 THEN GOSUB2ØØØ
GOSUB 2ØØØ:GOSUB 2Ø1Ø:GOSUB 2Ø2Ø         :GOSUB 2Ø4Ø:GOSUB 2Ø7Ø:GOSUB 2Ø8
:GOSUB 2Ø3Ø:GOSUB 2Ø5Ø:GOSUB 2Ø6         Ø:Y=1:S2=3
Ø:GOSUB 2Ø9Ø:GOSUB 21ØØ:Y=1:S2=7         99Ø GOSUB 15ØØ
95Ø IF B=13 AND CC<>2 AND X>138          999 REM ERASE FALLEN PINS
AND X<154 AND Y>26 AND Y<48 THEN         1ØØØ CIRCLE(146,36),6,4,.4:CIRCL
 GOSUB2ØØØ:GOSUB 2Ø1Ø:GOSUB2Ø2Ø:         E(145,28),6,4,.4:CIRCLE(144,2Ø),
GOSUB2Ø3Ø:GOSUB2Ø5Ø:GOSUB2Ø6Ø:GO         6,4,.4:CIRCLE(155,28),6,4,.4:CIR
SUB2Ø9Ø:GOSUB21ØØ:Y=1:S2=7               CLE(175,12),6,4,.4:CIRCLE(164,2Ø
958 IF B=13 AND CC=2 AND X>126.5         ),6,4,.4:CIRCLE(165,12),6,4,.4:C
 AND X<14Ø AND Y>3Ø AND Y<4Ø THE         IRCLE(154,2Ø),6,4,.4:CIRCLE(155,
N GOSUB 2ØØØ:GOSUB 2Ø2Ø:GOSUB 2Ø         12),6,4,.4:CIRCLE(143,12),6,4,.4
5Ø:GOSUB 2Ø9Ø:Y=1:S2=3                   :CIRCLE(17Ø,16),6,4,.4
96Ø IF B=13 AND X>136 AND X<151          1ØØ5 CIRCLE(153,14),6,4,.4
AND Y>18 AND Y<4Ø THEN GOSUB2ØØØ         1Ø1Ø RETURN
:GOSUB2Ø2Ø:GOSUB2Ø5Ø:GOSUB2Ø9Ø:Y         1Ø2Ø REM BALL RETURN
=1:S2=3                                  1Ø3Ø X=141:Z=6
965 GOSUB 15ØØ                           1Ø4Ø CIRCLE(X,Y),Z
97Ø IF B=14 AND X>168 AND X<181          1Ø5Ø LINE(Ø,192)-(138,1Ø),PSET:L
AND Y>8 AND Y<24 THEN GOSUB 2ØØØ         INE(Ø,18Ø)-(133,1Ø),PSET
:GOSUB 21ØØ:Y=1:S2=1                     1Ø6Ø CIRCLE(X,Y),Z,4
972 IF B=14 AND X>164 AND X<172          1Ø7Ø X=X-8
AND Y>16 AND Y<32 THEN GOSUB 2ØØ         1Ø8Ø Y=Y+1Ø
Ø:GOSUB 2Ø6Ø:GOSUB 2Ø9Ø:GOSUB 21         1Ø9Ø Z=Z+.1
ØØ:Y=1:S2=3                              11ØØ IF Y=>17Ø THEN Y=17Ø:X=9:Z=
974 IF B=14 AND X>154 AND X<164          7:CIRCLE(X,Y),Z:GOSUB 3ØØØ
AND Y>24 AND Y<4Ø THEN GOSUB 2ØØ         111Ø IF Y=>17Ø THEN GOSUB 1ØØØ:G
Ø:GOSUB 2Ø3Ø:GOSUB 2Ø5Ø:GOSUB 2Ø         OSUB 19Ø
6Ø:GOSUB 2Ø8Ø:GOSUB 2Ø9Ø:GOSUB 2         113Ø GOTO 1Ø4Ø
1ØØ:Y=1:S2=6                             15ØØ SCREEN1,1 'ESTABLISH 2ND B
976 IF B=14 AND X>14Ø AND X<157          ALL THROW
AND Y>25 AND Y<37 THEN GOSUB 2ØØ         15Ø1 E=ABS(JOYSTK(Ø)-32)
Ø:GOSUB2Ø1Ø:GOSUB2Ø2Ø:GOSUB 2Ø3Ø         15Ø2 IF E<15 THEN CC=Ø:GOTO 15Ø9
:GOSUB2Ø4Ø:GOSUB2Ø5Ø:GOSUB2Ø6Ø:G         15Ø3 IF Y>17Ø AND JOYSTK(Ø)<16 T
OSUB2Ø7Ø:GOSUB2Ø8Ø:GOSUB2Ø9Ø:GOS         HEN CC=1
UB21ØØ:Y=1:S2=1Ø                         15Ø4 IF(Y>17Ø AND JOYSTK(Ø)>46)
978 IF B=14 AND X>149 AND X<154          OR T=Ø THEN CC=2
AND Y>24 AND Y<48 THEN GOSUB2ØØØ         15Ø5 IF CC=1 THEN 151Ø
:GOSUB2Ø1Ø:GOSUB2Ø3Ø:GOSUB2Ø4Ø:G         15Ø6 IF CC=2 THEN 1512
OSUB2Ø5Ø:GOSUB2Ø6Ø:GOSUB2Ø8Ø:GOS         15Ø9 X=X+1Ø:GOTO 1514
UB2Ø9Ø:Y=1:S2=7                          151Ø X=X+2Ø*(Y/3ØØ):GOTO 1514
98Ø IF B=14 AND X>144 AND X<149          1511 IF Y<1 THEN Y=1
AND Y>34 AND Y<49 THEN GOSUB2ØØØ         1512 X=X+(25/(Y/4Ø))
:GOSUB2Ø1Ø:GOSUB2Ø2Ø:GOSUB2Ø3Ø:G         1514 IF Y>17Ø THEN V=27-JOYSTK(1
OSUB2Ø4Ø:GOSUB2Ø5Ø:GOSUB2Ø6Ø:GOS         )/5
UB2Ø8Ø:GOSUB2Ø9Ø:Y=1:S2=8                1515 IF FR<2 AND T=Ø THEN V=2Ø
982 IF B=14 AND X>139 AND X<144          1516 IF V>Ø THEN Y=Y-V
AND Y>35 AND Y<48 THEN GOSUB 2ØØ         1518 Z=Z-.2
Ø:GOSUB2Ø1Ø:GOSUB2Ø2Ø:GOSUB2Ø3Ø:         152Ø IF Y<1 THEN Y=1:X=15Ø:B=1:G
GOSUB2Ø4Ø:GOSUB2Ø5Ø:GOSUB2Ø6Ø:GO         OSUB 1Ø3Ø
SUB2Ø7Ø:GOSUB2Ø8Ø:GOSUB2Ø9Ø:Y=1:         153Ø CIRCLE(X,Y),Z
S2=9                                     154Ø IF T=1 THEN CIRCLE(X,Y),Z,4
984 IF B=14 AND X>136 AND X<151          1542 IF X>188 THEN FOR Y=Y TO Ø
AND Y>18 AND Y<4Ø THEN GOSUB2ØØØ         STEP -1Ø:CIRCLE(X,Y),Z:CIRCLE(X,
:GOSUB2Ø2Ø:GOSUB2Ø4Ø:GOSUB2Ø5Ø:G         Y),Z,4:NEXT Y
OSUB2Ø7Ø:GOSUB2Ø8Ø:GOSUB2Ø9Ø:Y=1         1545 IF Y>5Ø THEN 99Ø ELSE 155Ø
```

```
1550 ON B GOTO 200,520,600,670,7
30,000,770,800,820,830,890,920,9
38,970,17000
1560 RETURN
2000 SOUND 175,1
2005 RETURN
2009 REM DRAW FALLEN PINS
2010 CIRCLE(146,36),3,4,2:CIRCLE
(146,36),6,,.4
2015 RETURN
2020 CIRCLE(145,28),3,4,2:CIRCLE
(145,28),6,,.4
2022 RETURN
2025 CIRCLE(145,28),3,4,2:CIRCLE
(164,20),3,,2:CIRCLE(164,20),3,4
,2:CIRCLE(170,16),6,,.4
2027 RETURN
2030 CIRCLE(155,28),3,4,2:CIRCLE
(155,28),6,,.4
2035 RETURN
2040 CIRCLE(144,20),3,4,2:CIRCLE
(144,20),6,,.4
2045 RETURN
2050 CIRCLE(154,20),3,4,2:CIRCLE
(154,20),6,,.4
2055 RETURN
2060 CIRCLE(164,20),3,4,2:CIRCLE
(164,20),6,,.4
2065 RETURN
2070 CIRCLE(143,12),3,4,2:CIRCLE
(143,12),6,,.4
2075 RETURN
2080 CIRCLE(155,12),3,4,2:CIRCLE
(155,12),6,,.4
2085 RETURN
2090 CIRCLE(165,12),3,4,2:CIRCLE
(165,12),6,,.4
2095 RETURN
2100 CIRCLE(175,12),3,4,2:CIRCLE
(175,12),6,,.4
2105 RETURN
2125 CIRCLE(175,12),3,4,2:CIRCLE
(155,12),3,,2:CIRCLE(155,12),3,4
,2:CIRCLE(153,14),6,,.4
2127 RETURN
2990 REM DRAW SCORE SHEET
3000 DRAW"BM 210,5;D185R40U185L1
2D168L28R40U14L40U14R40U14L40U14
R40U14L40U14R40U14L40U14R40U14L4
0U14R40U14L40U14R40
3001 IF FR=0 THEN RETURN
3005 DRAW"BM170,178;R6L3U4":CIRC
LE(173,170),6,,1.2,.9,.6:DRAW"BM
167,172;R10"
3100 GOTO 12018
3200 GOTO 1110
12000 REM LOGIC FOR FRAME SET-UP
 AND SCORING
12018 IF FR=11 AND A1<10 THEN 12
600
12019 IF B=15 THEN S2=S2+1
12020 IF B=6 OR B=1 OR FR=12 THE
N GOTO 12030 ELSE GOTO 1110
12030 ON FR GOSUB 12500,12510,12
520,12530,12540,12550,12560,1257
0,12580,12590,12600,12610
12031 GOSUB 1000
12032 IF T=0 AND FR=1 THEN T=1:G
OTO 6
12033 C1=A1:C2=A2:A1=S1:A2=S2
12035 FR=FR+1:B=1:GOTO 50
12500 IF S1=10AND FR=1  THEN DRA
W"C3; BM241,15":GOSUB 12700
12502 IF FR=1 AND  S1<10 AND S1+
S2=10 THEN DRAW"BM241,15":GOSUB
12710
12503 IF FR=1 AND S1+S2<10 THEN
DRAW"BM207,15": GOSUB 12750
12510 IF FR=2 AND S1=10 THEN DRA
W"BM241,29":GOSUB 12700
12512 IF FR=2 AND S1<10 AND S1+S
2=10 THEN DRAW"BM241,29":GOSUB 1
2710
12514 IF FR=2 AND A1<10 AND A1+A
2=10 THEN DRAW"BM207,15":GOSUB 1
2730
12515 IF FR=2 AND A1=10 AND S1<1
0  THEN DRAW"BM207,15":GOSUB 127
40
12516 IF FR=2 AND S1+S2<10 THEN
DRAW"BM207,29":GOSUB 12750
12520 IF FR=3 AND S1=10 THEN DRA
W"BM241,43":GOSUB 12700
12522 IF FR=3 AND S1<10 AND S1+S
2=10 THEN DRAW"BM241,43":GOSUB 1
2710
12523 IF FR=3 AND C1=10 AND A1=1
0 THEN DRAW"BM207,15":GOSUB12760
12525 IF FR=3 AND A1=10 AND S1<1
```


43
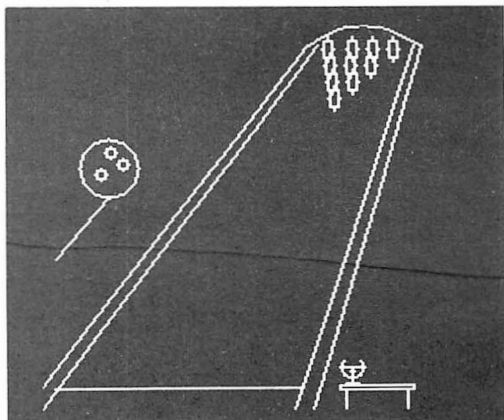
```
Ø THEN DRAW"BM2Ø7,29":GOSUB 1274
Ø
12526 IF FR=3 AND A1<1Ø AND A1+A
2=1Ø THEN DRAW"BM2Ø7,29":GOSUB 1
273Ø
12528 IF FR=3 AND S1+S2<1Ø THEN
DRAW"BM2Ø7,43":GOSUB 1275Ø
1253Ø IF FR=4 AND S1=1Ø THEN DRA
W"BM241,57":GOSUB 127ØØ
12532 IF FR=4 AND S1<1Ø AND S1+S
2=1Ø THEN DRAW"BM241,57":GOSUB 1
271Ø
12533 IF FR=4 AND C1=1Ø AND A1=1
Ø THEN DRAW"BM2Ø7,29":GOSUB1276Ø
12534 IF FR=4 AND A1<1Ø AND A1+A
2=1Ø THEN DRAW" BM2Ø7,43":GOSUB
1273Ø
12535 IF FR=4 AND A1=1Ø AND S1<1
Ø THEN DRAW "BM2Ø7,43":GOSUB 127
4Ø
12536 IF FR=4 AND S1+S2<1Ø THEN
DRAW"BM2Ø7,57":GOSUB 1275Ø
1254Ø IF FR=5 AND S1=1Ø THEN DRA
W"BM241,71":GOSUB 127ØØ
12542 IF FR=5 AND S1<1Ø AND S1+S
2=1Ø THEN DRAW"BM241,71":GOSUB12
71Ø
12543 IF FR=5 AND C1=1Ø AND A1=1
Ø THEN DRAW "BM2Ø7,43":GOSUB 127
6Ø
12544 IF FR=5 AND A1<1Ø AND A1+A
2=1Ø THEN DRAW "BM2Ø7,57":GOSUB
1273Ø
12545 IF FR=5 AND A1=1Ø AND S1<1
Ø THEN DRAW"BM2Ø7,57":GOSUB 1274
Ø
12546 IF FR=5 AND S1+S2<1Ø THEN
DRAW"BM2Ø7,71":GOSUB1275Ø
1255Ø IF FR=6 AND S1=1Ø THEN DRA
W"BM241,85":GOSUB 127ØØ
12552 IF FR=6 AND S1<1Ø AND S1+S
2=1Ø THEN DRAW"BM241,85":GOSUB12
71Ø
12553 IF FR=6 AND C1=1Ø AND A1=1
Ø THEN DRAW"BM2Ø7,57":GOSUB 1276
Ø
12554 IF FR=6 AND A1<1Ø AND A1+A
2=1Ø THEN DRAW "BM2Ø7,71":GOSUB
1273Ø
12555 IF FR=6 AND A1=1Ø AND S1<1
Ø THEN DRAW"BM2Ø7,71":GOSUB 1274
Ø
12556 IF FR=6 AND S1+S2<1Ø THEN
DRAW "BM2Ø7,85":GOSUB 1275Ø
1256Ø IF FR=7 AND S1=1Ø THEN DRA
W"BM241,99":GOSUB 127ØØ
12562 IF FR=7 AND S1<1Ø AND S1+S
2=1Ø THEN DRAW"BM241,99":GOSUB 1
271Ø
12563 IF FR=7 AND C1=1Ø AND A1=1
Ø THEN DRAW"BM2Ø7,71":GOSUB1276Ø
12564 IF FR=7 AND A1<1Ø AND A1+A
2=1Ø THEN DRAW "BM2Ø7,85":GOSUB
1273Ø
12565 IF FR=7 AND A1=1Ø AND S1<1
Ø THEN DRAW "BM 2Ø7,85":GOSUB 12
74Ø
12566 IF FR=7 AND S1+S2<1Ø THEN
DRAW "BM2Ø7,99":GOSUB 1275Ø
1257Ø IF FR=8 AND S1=1Ø THEN DRA
W"BM241,113":GOSUB127ØØ
12572 IF FR=8 AND S1<1Ø AND S1+S
2=1Ø THEN DRAW"BM241,113":GOSUB1
271Ø
12573 IF FR=8 AND C1=1Ø AND A1=1
Ø THEN DRAW"BM2Ø7,85":GOSUB1276Ø
12574 IF FR=8 AND A1<1Ø AND A1+A
2=1Ø THEN DRAW "BM2Ø7,99":GOSUB
1273Ø
12575 IF FR=8 AND A1=1Ø AND S1<1
Ø THEN DRAW "BM2Ø7,99":GOSUB 127
4Ø
12576 IF FR=8 AND S1+S2<1Ø THEN
DRAW"BM2Ø7,113":GOSUB1275Ø
1258Ø IF FR=9 AND S1=1Ø THEN DRA
W"BM241,127":GOSUB 127ØØ
12582 IF FR=9 AND S1<1Ø AND S1+S
2=1Ø THEN DRAW"BM241,127":GOSUB
1271Ø
12583 IF FR=9 AND C1=1Ø AND A1=1
Ø THEN DRAW"BM2Ø7,99":GOSUB1276Ø
12584 IF FR=9 AND A1<1Ø AND A1+A
2=1Ø THEN DRAW" BM2Ø7,113":GOSUB
 1273Ø
12585 IF FR=9 AND A1=1Ø AND S1<1
Ø THEN DRAW "BM2Ø7,113":GOSUB 12
74Ø
12586 IF FR=9 AND S1+S2<1Ø THEN
DRAW"BM2Ø7,127":GOSUB 1275Ø
1259Ø IF FR=1Ø AND S1=1Ø THEN DR
AW"BM241,141":GOSUB 127ØØ
12592 IF FR=1Ø AND S1<1Ø AND S1+
S2=1Ø THEN DRAW"BM241,141":GOSUB
1271Ø
12593 IF FR=1Ø AND C1=1Ø AND A1=
1Ø THEN DRAW"BM2Ø7,113":GOSUB127
6Ø
12594 IF FR=1Ø AND A1<1Ø AND A1+
A2=1Ø THEN DRAW "BM2Ø7,127":GOSU
B 1273Ø
12595 IF FR=1Ø AND A1=1Ø AND S1<
1Ø THEN DRAW "BM2Ø7,127":GOSUB 1
274Ø
12596 IF FR=1Ø AND S1+S2<1Ø THEN
 DRAW"BM2Ø7,141":GOSUB 1275Ø:GOT
O 128ØØ
```

```
12600 IF FR=11 AND S1=10 THEN DR
AW"BM241,155":GOSUB 12700
12602 IF FR=11 AND S1<10 AND S1+
S2=10 THEN DRAW"BM241,155":GOSUB
12710
12603 IF FR=11 AND C1=10 AND A1=
10 THEN DRAW"BM207,127":GOSUB127
60
12604 IF FR=11 AND A1<10 AND A1+
A2=10 THEN DRAW "BM207,141":GOSU
B12730:GOTO12800
12605 IF FR=11 AND A1=10 AND S1<
10 THEN DRAW "BM207,141":GOSUB 1
2740:GOTO 12800
12610 IF FR=12 AND S1=10 THEN DR
AW"BM241,169":GOSUB 12700
12617 IF FR=12 AND C1=10 AND A1=
10 THEN DRAW"BM207,141":GOSUB127
```
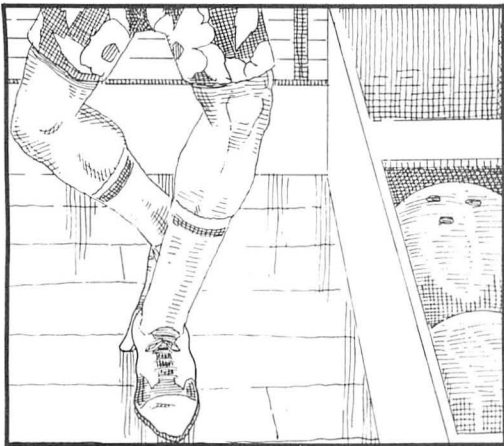


```
60:GOTO12800
12618 IF FR=12 AND S1<10 THEN DR
AW"BM207 ,141":GOSUB 12780:GOTO
12800
12630 GOTO 12031
12699 REM SCORING GRAPHICS
12700 AA$="X":GOTO 13000
12710 AA$="/":GOTO 13000
12730 AA$=STR$(A1+A2+S1+ST):ST=A
1+A2+S1+ST:GOTO 13000
12740 AA$=STR$(A1+S1+S2+ST):ST=A
1+S1+S2+ST:GOTO 13000
12750 AA$=STR$(S1+S2+ST):ST=ST+S
1+S2:GOTO 13000
12760 AA$=STR$(C1+A1+S1+ST):ST=C
1+A1+S1+ST:GOTO13000
12770 AA$=STR$(A1+S1+S2+ST):ST=S
T+A1+S1+S2:GOTO13000
12780 AA$=STR$(S1+ST):GOTO 13000
12800 DRAW "BM215,184":AA$=STR$(
ST):GOSUB 13000
12810 FOR Q=0TO2000:NEXT:CLS:PRI
NT@228,"YOUR SCORE WAS "ST:PRINT
@ 288," PRESS 'Y' TO START A NEW
 GAME.":FOR Q=0 TO 2000:NEXT
12820 A$=INKEY$:SCREEN1,1:IF A$=
"" THEN 12820
12830 IF A$<>"Y" THEN GOTO 12820
 ELSE GOTO 28
13000 'CHAR-GEN
13001 FOR XX=1 TO LEN(AA$)
13002 RESTORE:LL=0
13003 READ LL$,CC$
13004 IF LL$=MID$(AA$,XX,1) THEN
 DRAW CC$:GOTO13006
13005 LL=LL+1:IF LL<48 THEN 1300
3
13006 NEXT:RETURN
13007 DATA" ","BM+7,0"
13034 DATA "1","BM+1,0;R1;NR1;U6
;G1;BM+6,+5"
13035 DATA "2","NR4;U1;E1;R1;E2;
U1;H1;L2;G1;BM+7,+5"
13036 DATA "3","BM+0,-1;F1;R2;E1
;H2;E2;H1;L3;BM+7,6"
13037 DATA "4","BM+3,0;U2;NR1;L3
;U1;E3;D3;BM+4,3"
13038 DATA "5","BM+0,-1;F1;R2;E1
;U2;H1;L3;U2;R4;BM+3,+6"
13039 DATA "6","BM+4,-5;H1;L2;G1
;D4;F1;R2;E1;U1;H1;L3;BM+7,+3"
13040 DATA "7","U1;E4;U1;L4;BM+7
,+6"
13041 DATA "8","BM+1,-0;H1;U1;E1
;H1;U1;E1;R2;F1;D1;NL2;F1;D1;
G1;L2;BM+6,0"
13042 DATA "9","BM+0,-1;F1;R2;E1
;U4;H1;L2;G1;D1;F1;R2;BM+4,+3"
13043 DATA "/","E6;BM+3,6"
13044 DATA "X","E6;BM-6,0;F6;BM+
3,0"
13045 DATA "0","BM+1,0;H1;U4;E1;
R2;F1;D4;G1;L2;BM+6,0"
13050 DATA"'","BM+1,-5;E2;BM+4,+
7"
15000 FOR X=0 TO 10:NEXT X:RETUR
N
16000 IF S1=0 THEN B=14:PLAY"L16
;G;P64;L8;O2;GFEDCBA":B=14:Y=0:S
1=0   'GUTTER BALL
16005 RETURN
17000 GOSUB2000:GOSUB2010:GOSUB2
000:GOSUB15000:GOSUB2000:GOSUB15
000:GOSUB2000:GOSUB2020:GOSUB203
0:GOSUB2040:GOSUB2050:GOSUB2060:
GOSUB2070:GOSUB2000:GOSUB2080:GO
SUB2090:GOSUB2100:Y=0:B=6:S1=10
'TITLE PAGE
17010 GOTO12030
```
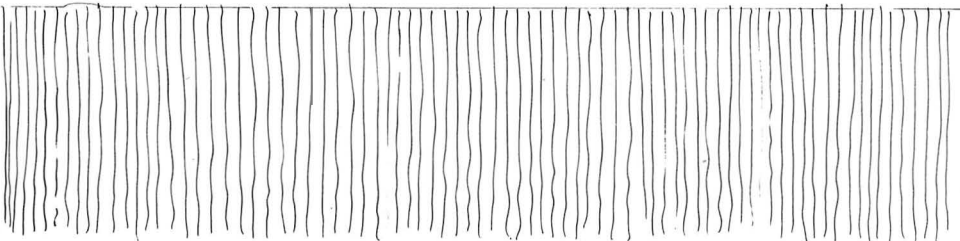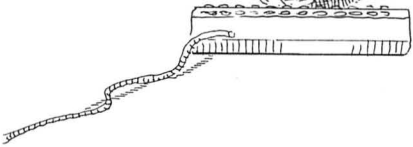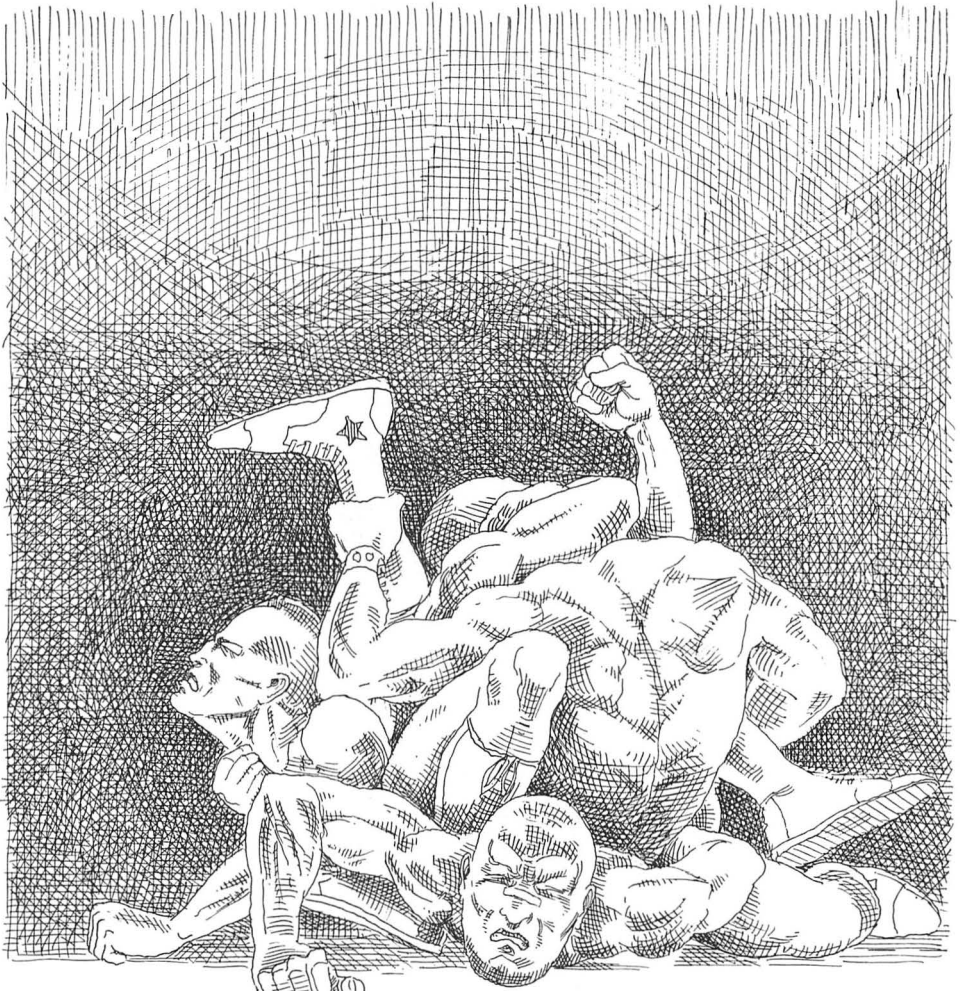
PRO WRESTLING

Program by Brian Maiorano

Westling is a sport in which two opponents try to hold each other's shoulders to the floor, although you would hardly know it by watching it on TV nowadays. Professional wrestling has become more of an entertainment spectacle than a sport governed by specific rules. In fact, the rules today are so loose that almost anything goes, which creates considerable crowd interest and excitement. Today's wrestlers must be good actors as well as good athletes. They wear unusual costumes and use funny names, which is all part of the appeal.

With this Simulation, you get to see firsthand some of the moves used in modern professional wrestling. After loading and running the program, the title screen appears, followed by some brief instructions. After the wrestlers are introduced, you are asked if you want a random match. If you answer yes, the computer chooses all of the moves at random, except the last one, which you will choose. You also get to choose

how many moves are used to complete the match. If you answer no, you get to choose your own moves, which is done by entering the number of the 19 moves available at the prompts.

There are seven moves that will end a match. The Cobra Clutch, Figure Four Leglock and Flying Hammerlock are submission holds. In these holds, the referee appears and asks the man in blue trunks if he concedes. The Superfly, Pile Driver, Rip the Turnbuckle and Hit with a Chair are moves to pin a man. Since these moves end the match, don't use them until the end, but make sure you use one of them. You can select up to 100 moves per match or as few as one. Just remember that you must end a match with one of the seven moves mentioned or you will get an FC Error.

After entering your moves, enter XX to start the match. The screen shows the ring and the wrestlers in block graphics. Each move is printed at the top of the screen as the wrestlers attack each other. Some sound effects are used too, so be sure to turn up the volume.

You will find the high-speed POKE in Line 2, so remove the 65495,0 if your machine can't handle it.

Oh yes, the guy charging into the ring with the chair is the red corner's manager. Boy, this is getting downright dangerous!

Brian Maiorano is a student majoring in mechanical engineering at the University of Delaware.

WRESTLE   32K ECB

```
2 GOTO574
4 CLEAR 1000:DRAW"S6":DIM AA(100
):UT=1:DIM M1$(19),N1$(29)
6 PMODE3,1:PCLS
8 A$="L4D2F1G1R1R3D2R1U2R2NU3L6B
D3R5L5M+1,+8M-2,+10R3M+2,-8;M+2,
+8R3M-2,-8L6U1R6D2L6U1R6M-1,-11L
4
10 B$="R4D2F1G1L1L2D2L1U2L2NU3R6
BD3L5R5M-1,+8M+2,+10L3M-2,-8;M-2
,+8L3M+2,-8R6U1L6D2R6U1L6M+1,-11
R4"
12 C$="R20U4L1D2L8H3D5R1U5L3D5U5
L7D2L2U2L4D5R6
```

```
14 D$="L20U4R1D2R8E3D5L1U5R3D5U5
R7D2R2U2R4D5L6"
16 PD$="L4U2E1H1R1R3U2R1D2R2ND3L
6BU3R6L6M+1,-8M-2,-10R3M+2,+8;M+
2,-8R3M-2,+8L6D1R6U2L6D1R6M-1,+1
1L4"
18 HS$="U4L4D2L2D1R2D2NR3U4BL3D4
U6M-12,-1M-10,-1D2M+10,+1M-10,+2
D2M+10,-1U5R1D5R1U5R1D5M+10,+1"
20 BS$="U4R4D2R2D1L2D2NL3U4BR3D4
U6M+12,-1M+10,-1D2M-10,+1M+10,+2
D2M-10,-1U5L1D5L1U5L1D5M-10,+1"
22 LP$="R8U4L1D2L8":LH$="L2U2L4D
4R6"
```

```
24 CH$="U4R6D4U12L6D12U12D1R6D1L
6D1R6D1L6D1R6"
26 EH$="L4D2F1G1R1R3D2R1U2R2U3"
28 BD$="D4R3E1F1U1U3R2U1L2U1NL3D
1R3U1R1ØD5L1ØM-2,+6M+2,-6U5R11D4
R1U4R1D3R1U3D3L2M-3,+1Ø;R3M+3,-1
ØU3L1D3"
3Ø COLOR2,1:LINE(52,6Ø)-(25,15Ø)
,PSET:LINE(25,15Ø)-(2Ø8,15Ø),PSE
T:LINE(25,16Ø)-(2Ø8,16Ø),PSET:LI
NE(25,17Ø)-(2Ø8,17Ø),PSET:LINE(2
Ø6,15Ø)-(224,6Ø),PSET:LINE(2ØØ,1
45)-(2Ø8,174),PSET,B:LINE(25,145
)-(32,174),PSET,B
32 LINE(52,6Ø)-(224,6Ø),PSET:LIN
E(52,66)-(224,66),PSET:LINE(52,7
2)-(224,72),PSET:LINE(5Ø,56)-(56
,76),PSET,B:LINE(22Ø,56)-(226,76
),PSET,B
34 CLS:INPUT"DO YOU WANT A RANDO
M MATCH (Y/N)";I$:IFI$<>"Y"THEN4
ØELSEPRINT:INPUT"HOW MANY MOVES
(UP TO 1ØØ)";I:FORT=1TOI
36 X=RND(19):IF(X=4ORX=5ORX=6ORX
=7ORX=15ORX=18ORX=19)THEN36
38 AA(T)=X:NEXT:UT=T:PRINT"NOW P
ICK THE FINAL MOVE";:PLAY"L1T1P2
"
4Ø CLS
42 RESTORE:IF UT>98 THENPRINT"YO
U CAN'T USE ANY MORE MOVES":AA(9
9)=18:GOTO52
44 CLS:FORX=1TO9:READ TY$:PRINTS
TR$(X);"-";TY$:NEXT:FORX=1ØTO12:
READ TY$:PRINTCHR$(8);X;CHR$(8);
"-";TY$:NEXT:PRINTSTRING$(32,"/"
);:LINEINPUT"PRESS THE NUMBER, <
ENTER> FOR   MORE OR <XX> TO END
-> ";QE$
46 QE=VAL(QE$):IF(QE>ØANDQE<2Ø)T
HENAA(UT)=QE:UT=UT+1:RESTORE:GOT
O42:ELSEIFQE$=""THEN48ELSEIFQE$=
"XX"THENGOTO52:ELSERESTORE:GOTO4
4
48 CLS:FORX=13TO19:READTY$:PRINT
X;CHR$(8);"-";TY$:NEXT:PRINTSTRI
NG$(32,"/");:LINEINPUT"PRESS THE
 NUMBER, <ENTER> FOR   MORE OR <
XX> TO END-> ";QE$
5Ø QE=VAL(QE$):IF(QE>ØANDQE<2Ø)T
HENAA(UT)=QE:UT=UT+1:GOTO42:ELSE
IFQE$=""THENRESTORE:GOTO44:ELSEI
F QE$="XX"THENGOTO52:ELSERESTORE
:GOTO44
52 PMODE3,1:SCREEN1,Ø:COLOR4,1
54 RESTORE:FORX=1TO19:READ TY$:M
1$(X)=TY$:NEXT:FORX=1TO29:READ T
Y$:N1$(X)=TY$:NEXT
56 DATA KARATE CHOP,DROP KICK,LE
G DROP,COBRA CLUTCH,SUPERFLY,FIG
URE FOUR LEGLOCK,PILE DRIVER,RUS
SIAN ARM BAR,HEAD BUTT,BACK BODY
 DROP,FLYING HEAD SCISSORS,BODY
SLAM,CLOTHESLINE,BLATANT CHOKE,R
IP THE TURNBUCKLE,FLYING HEAD BU
TT,SUPLEX
58 DATA HIT WITH A CHAIR,FLYING
HAMMERLOCK
6Ø FOROP=1TOUT
62 WM=AA(OP):L=LEN(M1$(WM)):L1=1
28-((L/2)*12):L1$=STR$(L1)
64 DRAW"C2S8BM"+L1$+",2Ø":FORZ=1
TOL:M=ASC(MID$(M1$(WM),Z,1))-64:
IFM=-32THENDRAW"BR4"ELSEDRAW N1$
(M)
66 DRAW"B":NEXT:DRAW"S6"
68 IF(WM=3ORWM=5ORWM=6ORWM=15) T
HENKC=1:GOTO1ØØ ELSE KC=Ø
7Ø ON WM GOTO 1ØØ,15Ø,2ØØ,25Ø,3Ø
Ø,32Ø,328,344,352,364,382,4Ø2,41
4,426,434,456,476,486,5Ø4
72 DRAW"S8C1BM"+L1$+",2Ø":FORZ=1
TOL:M=ASC(MID$(M1$(WM),Z,1))-64:
IFM=-32THENDRAW"BR4"ELSEDRAW N1$
(M)
74 DRAW"B":NEXT:DRAW"S6":NEXT
1ØØ 'KARATE CHOP
1Ø2 DRAW"C3"
1Ø4 DRAW"S6BM1ØØ,1ØØ"+B$:IFKC=ØT
HENFORX=1TO3
1Ø6 S=9:FORT=-2TO14STEP-3:T$=ST
R$(T):S=S-1:S$=STR$(S)
1Ø8 DRAW"BM132,98"+A$:R$="M"+T$+
",-"+S$+"M"+STR$(ABS(T))+",+"+S
$:DRAW"C1XQ$;C4,":DRAWR$:Q$=R$:N
EXT:DRAW"C1XQ$;C4,":PLAY"V31L215
A":IFKC=1 THEN112
11Ø NEXT
112 DRAW"S6BM1ØØ,1ØØC1"+B$:DRAW"
C3BM8Ø,135"+C$:IF KC=1 THEN7Ø
114 PLAY"P1ØL2ØABEDL8EGFE":DRAW"
C1BM8Ø,135"+C$:DRAW"C3BM1ØØ,1ØØ;
XB$;"
116 GOTO72
15Ø 'DROP KICK
152 DRAW"BM1ØØ,1ØØC3XB$;":DRAW"C
4BM132,98XA$;M-4,+5"
154 E$=STR$(1ØØ)
156 FORT=1ØØTO4ØSTEP-6:T$=STR$(T
):DRAW"C1BM"+E$+",1ØØ;XB$;":DRAW
"C3BM"+T$+",1ØØ;XB$;":E$=T$:NEXT
:E$="4Ø":FORT=4ØTO9ØSTEP6:T$=STR
$(T):DRAW"C1BM"+E$+",1ØØ;XB$;":D
RAW"C3BM"+T$+",1ØØ;XB$;":E$=T$:N
EXT
158 DRAW"C1BM132,98XA$;M-4,+5C4B
```

```
M122,114XD$;":PLAY"L9ØO1A":DRAW"
BM88,1ØØC1XB$;C3BM8Ø,135XC$;":PL
AY"L7ØO1A":DRAW"C1BM122,114XD$;C
4BM142,135XD$;":PLAY"L4ØBAFEP1Ø"
:DRAW"C1BM142,135XD$;C4BM122,98X
A$;M-2,+4":PLAY"L25O3EDAADCL4ØED
EP2":DRAW"C1BM8Ø,135XC$;"
16Ø DRAW"C1BM122,98XA$;M-2,+4BM1
32,98C4XA$;C1M-4,-5C3BM1ØØ,1ØØXB
$;"
162 GOTO72
2ØØ 'LEG DROP
2Ø2 E$="98":DRAW"C1BM132,98XA$;M
-4,-5"
2Ø4 FORT=98TO86STEP-4:DRAW"C1BM1
32,"+E$+A$:DRAW"C4BM132,"+STR$(T
)+A$:E$=STR$(T):NEXT
2Ø6 FORT=132TO7ØSTEP-4:DRAW"C1BM
"+E$+",86XA$;":DRAW"C4BM"+STR$(T
)+",86XA$;":E$=STR$(T):NEXT:DRAW
"C1BM72,86XA$;":DRAW"C4BM7Ø,1ØØX
A$;"
2Ø8 PLAY"L9ØAB":DRAW"C1BM7Ø,1ØØX
A$;C3BM8Ø,135XC$;C4BM7Ø,86XA$;":
PLAY"P2":DRAW"C1BM7Ø,86XA$;C4BM7
Ø,1ØØXA$;"
21Ø E$="1ØØ"
212 PLAY"L2ØGFFFGT5L1ØDDCCDE":FO
RT=7ØTO132STEP4:DRAW"C1BM"+E$+",
1ØØXA$;":DRAW"C4BM"+STR$(T)+",1Ø
ØXA$;":E$=STR$(T):DRAW"C3BM8Ø,13
5XC$;":NEXT:DRAW"C1BM8Ø,135XC$;C
3BM1ØØ,1ØØXB$;BM13Ø,1ØØC1XA$;BM1
32,98C4XA$;"
214 GOTO72
25Ø 'COBRA CLUTCH
252 DRAW"BM1ØØ,1ØØC3XB$;BM132,98
C4XA$;M-8,+4":PLAY"L1T1P6":DRAW"
C1BM1ØØ,1ØØC1XB$;BM12Ø,1ØØC3XA$;
M-6,+6;C4BM132,98XA$;C1M-8,+4M+8
,-4C4M-8,+ØM-2,-2;BM132,98XA$;M-
4,-4"
254 PLAY"T2L8O3EFGP94GP94GP94GP9
4L6GL7O4CO3GEFGGFDC":GOTO556
3ØØ 'SUPERFLY
3Ø2 E$="132"
3Ø4 DRAW"C1BM132,98XA$;M-4,-5":F
ORT=132TO48STEP-4:DRAW"C1BM"+E$+
",98XA$;":DRAW"C4BM"+STR$(T)+",9
8XA$;":E$=STR$(T):DRAW"C3BM8Ø,13
5XC$;":NEXT:DRAW"C1BM48,98XA$;"
3Ø6 E$="98"
3Ø8 FORT=98TO126STEP4:DRAW"C1BM4
8,"+E$+A$:DRAW"C4BM48,"+STR$(T)+
A$:E$=STR$(T):NEXT:DRAW"C1BM48,1
26XA$;C4BM26,114XB$;C2BM25,15ØR2
5;BM25,16ØR25;BM25,17ØR25":PAINT
(28,126),1,4

31Ø E$="114":TY=114:EE$="26"
312 DRAW"C4BM26,114XB$;":PAINT(3
Ø,128)),1,4:OO$="M+6,-8":DRAW OO$
:PLAY"T2L5O3DP12EP12L4CP12L5CP18
DP1ØL8DP2ØEP2ØCP2ØCP2ØO2BP2ØA":F
ORT=26TO74STEP12:TY=TY-1:T$=STR$
(T):TY$=STR$(TY):DRAW"C1BM"+EE$+
","+E$+B$+OO$:DRAW"C4BM"+T$+","+
TY$+B$+OO$
314 E$=TY$:EE$=T$:NEXT
316 DRAW"C1M-6,+8C4M+4,+8":COLOR
2,1:LINE(52,6Ø)-(25,15Ø),PSET:CO
LOR1,1:LINE(68,136)-(84,148),PSE
T,BF:COLOR4,1:DRAW"C4BM7Ø,134M-2
,+4R2U6M+2,+4R2M-2,-4":COLOR2,1:
LINE(25,145)-(32,174),PSET,B:COL
OR4,1:PLAY"T1L1P7"
318 GOTO55Ø
32Ø 'FIGURE FOUR LEG LOCK
322 PLAY"L1T1P3":DRAW"BM8Ø,135C1
XC$;BM8Ø,134C3XBS$;BM132,98C1XA$
;BM158,132C4XHS$;"
324 PLAY"L5T2ØO1EFFEADBCDEFET12Ø
FFFFFFFFFFFFFFT5O3EFABGBEADBCDET1
ØL1ØDBDBDBDBDBDBDBDBDBDBDBDB"
326 GOTO556
328 'PILE DRIVER
33Ø DRAW"C4BM132,98XA$;C3BM1ØØ,1
ØØXB$;M+8,+2C1BM132,98XA$;C4BM11
8,98XA$;M-8,+6":PLAY"T2ØØABAT1ØL
1ØP6":DRAW"BM1ØØ,1ØØC1XB$;M+8,+2
;C3BM1Ø8,122XPD$;":PLAY"L1T1P4"
332 DRAW"C1BM1Ø8,122XPD$;C1BM118
,98XA$;M-8,+6C3BM1Ø8,134XPD$;":P
L$="BM118,1Ø8L4D2F1G1R1R3D2R1U2R
2NU3L6BD3R6L5M+1,+8R6U1L6D2L14D1
D1R2ØU1L6U1R6U1L6R6M-1,-8L14":DR
AW"C4XPL$;"
334 PLAY"L1T1P7":DRAW"C1BM1Ø8,13
4XPD$;C1XPL$;C3BM8Ø,135XC$;C4BM1
32,98XA$;"
336 LP$="R8U4L1D2L8":FORX=1TO1Ø:
DRAW"BM98,135C1XLP$;BM98,132C3XL
P$;":PLAY"L1T1P9Ø":DRAW"BM98,132
C1XLP$;BM98,135C3XLP$;":PLAY"P9Ø
":NEXT
338 LH$="L1U3L4D5R6":FORX=1TO1Ø:
DRAW"BM78,132C1XLH$;BM78,13ØC3XL
H$;":PLAY"P9Ø":DRAW"BM78,13ØC1XL
H$;BM78,132C3XLH$;":PLAY"P9Ø":NE
XT
34Ø PLAY"L4ØAEDAFEDGDEDL8ØADFAGA
EL5ØEFADCDAD":DRAW"BM132,98C1XA$
;BM74,11ØC4XB$;M+4,+8":COLOR1,1:
LINE(68,136)-(84,148),PSET,BF:CO
LOR4,1:DRAW"C4BM7Ø,134M-2,+4R2U6
M+2,+4R2M-2,-4"
342 GOTO55Ø
```

```
344 'RUSSIAN ARM BAR
346 DRAW"BM1ØØ,1ØØC3XB$;BM132,98
C4XA$;":PLAY"L1T1P4":DRAW"BM1ØØ,
1ØØC1XB$;BM112,92C3XA$;M+8,+8BM1
32,98C4XA$;M-6,+4"
348 PLAY"L2ØT3AEDEGBCO4EFACEGFO2
EDEAEDAFDEAAGBL1T1P1":DRAW"BM112
,92C1XA$;M+8,+8BM132,98XA$;M-6,+
4;BM1ØØ,1ØØC3XB$;BM132,98C4XA$;"
35Ø GOTO72
352 'HEAD BUTT
354 DRAW"C3BM1ØØ,1ØØXB$;M+8,+ØC1
BM132,98XA$;C4BM118,98XA$;M-8,+2
":PLAY"L1T1P3"
356 OO$="L4D2F1G1R1R3D2R1U2R2NU3
L6":DRAW"C1BM118,98XOO$;C4BM112,
98XOO$;":PLAY"T1ØL1ØØAP6":DRAW"C
1BM112,98XOO$;C4BM118,98XOO$;"
358 DRAW"C1BM1ØØ,1ØØXB$;M+8,+ØC3
BM8Ø,135XC$;C1BM118,98XA$;M-8,+2
;C4BM132,98XA$;"
36Ø PLAY"T1ØL6ØO2AFDFEDL5CFAFAFA
O1P8":DRAW"C1BM8Ø,135XC$;C3BM1ØØ
,1ØØXB$;"
362 GOTO72
364 'BACK BODY DROP
366 DRAW"BM132,98C4XA$;BM1ØØ,1ØØ
C3XB$;C1BM1ØØ,1ØØC1XB$;"
368 W1$="1ØØ"
37Ø FORQ1=1ØØTO4ØSTEP-6:Q1$=STR$
(Q1):DRAW"C1BM"+W1$+",1ØØ;XB$;C3
BM"+Q1$+",1ØØ;XB$;":W1$=Q1$:NEXT
372 DRAW"BM132,98C1XA$;C4BM12Ø,1
18XBD$;"
374 FORQ1=4ØTO11ØSTEP1Ø:Q1$=STR$
(Q1):DRAW"C1BM"+W1$+",1ØØ;XB$;C3
BM"+Q1$+",1ØØ;XB$;":W1$=Q1$:NEXT
376 DRAW"BM11Ø,1ØØC1XB$;C3BM15Ø,
114XHS$;":PLAY"L1T1P7Ø":DRAW"BM1
5Ø,114C1XHS$;BM12Ø,118XBD$;C4BM1
32,98XA$;C3BM152,135XC$;":PLAY"L
1ØT4EDFEFL4EACDAEL1T1P4"
378 DRAW"BM152,135C1XC$;BM1ØØ,1Ø
ØC3XB$;"
38Ø GOTO72
382 'FLYING HEAD SCISSORS
384 DRAW"C4BM132,98XA$;C3BM1ØØ,1
ØØXB$;C1BM132,98XA$;"
386 Q1$="132"
388 FORX=132TO198STEP6:W1$=STR$(
X):DRAW"BM"+Q1$+",98C1XB$;":DRAW
"BM"+W1$+",98C4XB$;":Q1$=W1$:NEX
T:DRAW"BM198,98C1XB$;"
39Ø Q1$="196"
392 FORX=198TO126STEP-8:W1$=STR$
(X):DRAW"BM"+Q1$+",98C1XA$;":DRA
W"BM"+W1$+",98C4XA$;":Q1$=W1$:NE
XT:DRAW"BM126,98C1XA$;"
```

```
394 DRAW"BM14Ø,1Ø8C4XHS$;U4M+4,-
6":PLAY"L1T1P24":DRAW"BM1ØØ,1ØØC
1XB$;BM14Ø,1Ø8XHS$;U4M+4,-6;BM81
,134C3XD$;BM128,134C4XHS$;U4M-4,
-6"
396 PLAY"L2ØAEDADAEGBL8ØABDL1ØEF
D":LS$="L8U4R1D2R8":FORX=1TO2Ø:D
RAW"BM63,134C1XLS$;BM63,132C3XLS
$;":PLAY"L1T1P9Ø":DRAW"BM63,132C
1XLS$;BM63,134C3XLS$;":PLAY"P9Ø"
:NEXT
398 DRAW"BM128,134C1XHS$;U4M-4,-
6;C3BM81,134C3XD$;BM132,98C4XA$;
":PLAY"T1L1P4":DRAW"C1BM81,134XD
$;BM1ØØ,1ØØC3XB$;"
4ØØ GOTO72
4Ø2 'BODY SLAM
4Ø4 DRAW"BM1ØØ,1ØØC3XB$;BM132,98
XA$;C1BM132,98XA$;C4BM118,1Ø4XA$
;M-6,+2M+6,-2M-4,+4":PLAY"L3ØEBD
EBP15":DRAW"C1M+4,-4;M-6,+2"
4Ø6 DRAW"BM1ØØ,1ØØC1XB$;BM88,1Ø6
C3XBS$;BM118,1Ø4C4XA$;M-4,-4;M+4
,+4;M+6,-6":PLAY"L2ØEDEFABCO3ADE
"
4Ø8 DRAW"C1M-6,+6M-4,-4;C1BM88,1
Ø6XBS$;C3BM82,122XBS$;C1BM82,122
XBS$;C3BM76,134XC$;C1BM118,1Ø4XA
$;BM132,98C4XA$;"
```


HIT WITH A CHAIR
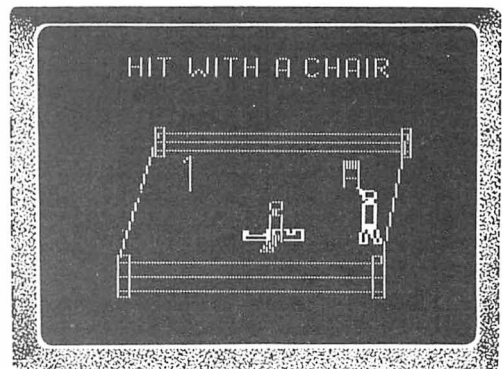
```
41Ø PLAY"P1":DRAW"BM76,134C1XC$;
BM1ØØ,1ØØC3XB$;"
412 GOTO72
414 'CLOTHESLINE
416 DRAW"BM132,98C4XA$;BM1ØØ,1ØØ
C3XB$;C1BM1ØØ,1ØØC1XB$;BM132,98X
A$;BM13Ø,1Ø4C4XA$;"
418 W4$="1ØØ"
42Ø FORQ4=1ØØTO4ØSTEP-6:Q4$=STR$
(Q4):DRAW"C1BM"+W4$+",1ØØ;XB$;C3
BM"+Q4$+",1ØØ;XB$;":W4$=Q4$:NEXT
:DRAW"BM13Ø,1Ø4C4XA$;M-6,-4":FOR
```

51

```
       Q4=40TO110STEP10:Q4$=STR$(Q4):DR
       AW"C1BM"+W4$+",100;XB$;C3BM"+Q4$
       +",100;XB$;":W4$=Q4$:NEXT
422 PLAY"T2L2150O1A":DRAW"C1BM110
       ,100XB$;C3BM84,136XC$;BM130,104C
       1XA$;M-6,-4C4BM132,98XA$;":PLAY"
       O1L3AEBDFO3FDBEAO5AEBDFL1T1P2":
       DRAW"BM84,136C1XC$;BM100,100C3XB
       $;"
424 GOTO72
426 'BLATANT CHOKE
428 DRAW"BM100,100C3XB$;BM132,98
       C4XA$;":PLAY"L1T1P3":DRAW"BM132,
       98C1XA$;BM120,98C4XA$;M-8,+0"
430 PLAY"L21O2FEDBEDBADBEGDEABL1
       T1P2":DRAW"BM120,98C1XA$;M-8,+0B
       M132,98C4XA$;"
432 GOTO72
434 'RIP THE TURNBUCKLE
436 E$="98":TY=98:EE$="132":FORT
       =132TO60STEP-8:TY=TY-4:T$=STR$(T
       ):TY$=STR$(TY):DRAW"C1BM"+EE$+",
       "+E$+A$+"C4BM"+T$+","+TY$+A$:E$=
       TY$:EE$=T$:NEXT
438 FORX=1TO8:DRAW"BM60,58C1XEH$
       ;BM58,58C4XEH$;":PLAY"P20":DRAW"
       BM58,58C1XEH$;BM60,58C4XEH$;":PL
       AY"P20":NEXT
440 DRAW"BM52,60C2L4E2F2U2L2D3U4
       F2G4;BM60,58C1XA$;BM72,58C4XA$;"
       :FORX=1TO30:T=RND(20)+44:TY=RND(
       20)+66:PSET(T,TY,4):NEXT:DRAW"BM
       54,62C3U4R1D4":PLAY"L30ABACADAEL
       1P4":DRAW"BM72,58C4XA$;M-8,-6
442 AR$="M-8,-6":FO$="U4R1D4":DR
       AW"BM54,62C1XFO$;":E$="58":TY=58
       :EE$="72":FORT=72TO144STEP8:TY=T
       Y+4:T$=STR$(T):TY$=STR$(TY):DRAW
       "C1BM"+EE$+",+E$+A$+AR$+FO$+"C4
       BM"+T$+","+TY$+A$+AR$+"C3"+FO$:E
       $=TY$:EE$=T$:NEXT
444 COLOR2,1:LINE(52,60)-(100,60
       ),PSET:LINE(52,66)-(100,66),PSET
       :LINE(52,72)-(100,72),PSET:LINE(
       50,56)-(56,76),PSET,B:COLOR4,1
446 DRAW"C1BM80,135XC$;BM100,100
       C3XB$;BM144,98C1XA$;XAR$;XFO$;BM
       126,98C4;XA$;XAR$;C3;XFO$;"
448 PLAY"P2":DRAW"BM126,98C4XA$;
       C1;XAR$;XFO$;":DRAW"BM126,98C4XA
       $;M100,102;C3XFO$;":PLAY"P15":DR
       AW"BM100,100C1XB$;BM80,135C3XC$;
       BM126,98C4XA$;C1M100,102;XFO$;"
450 DRAW"BM126,98C4XA$;M-6,+6":P
       LAY"L10O3CDEABCEFGL1":DRAW"BM126
       ,98C1XA$;M-6,+6"
452 DRAW"BM74,110C4XB$;M+4,+8":C
       OLOR1,1:LINE(68,136)-(84,148),PS
```

```
       ET,BF:COLOR4,1:DRAW"C4BM70,134M-
       2,+4R2U6M+2,+4R2M-2,-4"
454 GOTO550
456 'FLYING HEAD BUTT
458 DRAW"BM100,100C3XB$;BM132,98
       C4XA$;BM132,98C1XA$;BM100,100C1X
       B$;"
460 W7$="132"
462 FORQ7=132TO196STEP8:Q7$=STR$
       (Q7):DRAW"BM"+W7$+",98C1XB$;BM-3
       0,-6XB$;BM"+Q7$+",98C4XB$;BM-30,
       -6C3XB$;":W7$=Q7$:NEXT:DRAW"BM19
       6,98C1XB$;BM196,98C4XA$;BM196,98
       C1XA$;"
464 DRAW"BM166,104C4XBS$;":PLAY"
       T1L22O01AO3A":DRAW"BM166,104C1XB
       S$;BM156,98C1XB$;BM140,134C3XC$;
       BM186,98C4XA$;"
466 PLAY"O5L255T255EFABFECEFGBED
       A":FORX=1TO4:PLAY"O-;T<;L<;EFABF
       ECEFGBEDA":NEXT:PLAY"T1L1P4"
468 W7$="188"
470 DRAW"BM140,134C1XC$;BM186,98
       XA$;":FORQ7=188TO132STEP-8:Q7$=S
       TR$(Q7):DRAW"BM"+W7$+",98C1XA$;B
       M-20,-4XB$;BM"+Q7$+",98C4XA$;BM-
       20,-4C3XB$;":W7$=Q7$:NEXT
472 DRAW"BM98,101C1XB$;BM100,100
       C3XB$;"
474 GOTO72
476 'SUPLEX
478 DRAW"BM100,100C3XB$;BM132,98
       C4XA$;":PLAY"L1T1P3":DRAW"BM100,
       100C1XB$;BM128,112C3XPD$;":PLAY"
       P4"
480 DRAW"BM128,112C1XPD$;BM132,9
       8XA$;BM143,134C4XD$;BM164,134C3X
       C$;":PLAY"P6":DRAW"BM143,134C1XD
       $;BM132,98C4XA$;":PLAY"O1L40EDAC
       EAFGBGBDEFBFEACDEO2EFGBDEADCL1P3
       "
482 DRAW"BM164,134C1XC$;BM100,10
       0C3XB$;"
484 GOTO72
486 'HIT WITH A CHAIR
488 DRAW"BM100,100C3XB$;BM132,98
       C4XA$;":PLAY"T1L1P20":DRAW"BM100
       ,100C1XB$;BM96,112C3XC$;":PLAY"P
       42":DRAW"BM132,98C1XA$;BM143,134
       C4XD$;BM96,112C1XC$;BM80,134C3XC
       $;":PLAY"P4":DRAW"BM80,134C1XC$;
       BM100,100C3XB$;"
490 DRAW"BM200,100C4XA$;M-4,-8;C
       1M-6,+0;C2XCH$;C1BM100,100XB$;BM
       132,108C3XB$;":COLOR1,1:LINE(126
       ,136)-(142,146),PSET,BF:COLOR4,1
       :DRAW"C3BM128,136M-2,+4R2M+2,-4R
       1M-2,+4R2M+2,-4"
```

```
492 DRAW"BM7Ø,1ØØC2S16"+N1$(27):
PLAY"P3":DRAW"BM7Ø,1ØØC1"+N1$(27
)+"BM7Ø,1ØØC2"+N1$(28):DRAW"S6C1
BM2ØØ,1ØØXA$;M-4,-8;M-6,-Ø;XCH$;
```
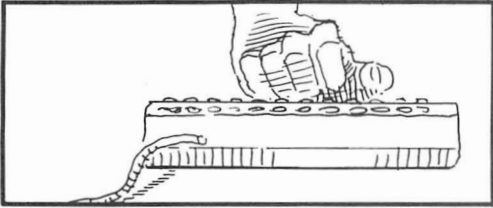


```
BM16Ø,1ØØC4XA$;M-4,-8;M-6,-Ø;C2X
CH$;":PLAY"P8":DRAW"BM16Ø,1ØØC1X
A$;M-4,-8;M-6,-Ø;XCH$;"
494 DRAW"BM16Ø,1ØØC4XA$;M-6,+ØC2
L12U1R12;C1BM7Ø,1ØØS16"+N1$(28)+
"S6"
496 DRAW"BM132,1Ø8C1XB$;BM128,13
6M-2,+4R2M+2,-4R1M-2,+4R2M+2,-4;
BM84,134C3XC$;":PLAY"P4":DRAW"BM
16Ø,1ØØC1XA$;M-6,+ØL12U1R12;BM14
3,134C4XD$;BM2ØØ,1ØØC4XA$;":PLAY
"P2"
498 DRAW"BM143,134C1XD$;BM132,98
C4XA$;BM84,134C3XC$;":PLAY"L2ØO1
AFADGDBEBLl":DRAW"BM132,98C1XA$;
BM74,11ØC4XB$;M+4,+8":COLOR1,1
5ØØ LINE(68,136)-(84,148),PSET,B
F:COLOR4,1:DRAW"C4BM7Ø,134M-2,+4
R2U6M+2,+4R2M-2,-4"
5Ø2 GOTO55Ø
5Ø4 'FLYING HAMMERLOCK
5Ø6 DRAW"BM1ØØ,1ØØC3XB$;BM132,98
C4XA$;":PLAY"P3":DRAW"BM1ØØ,1ØØC
1XB$;BM118,88C3XA$;M+2,+6M-4,-2B
M132,98C4XA$;M-6,-2M+6,+2M-8,+Ø"
5Ø8 PLAY"O2L1ØT2EAGACGDBCAL2ØEFA
DCFEDEABFBDBF"
51Ø GOTO556
55Ø 'PIN
552 FORX=27TO29:DRAW"BM158,11ØC2
S16"+N1$(X):PLAY"T1L1P3":DRAW"BM
158,11ØC1"+N1$(X):NEXT:DRAW"S6"
554 GOTO57Ø
556 'SUBMISSION
558 NO$=N1$(14)+N1$(15)
56Ø DRAW"BM8Ø,1ØØC2XB$;"
562 KL=RND(4):FORX=1TO KL
564 SU$=N1$(19)+N1$(21)+N1$(2)+N
1$(13)+N1$(9)+N1$(19)+N1$(19)+N1
$(9)+N1$(15)+N1$(14)+"BU4BRUERFD
GBDDBR2":DRAW"C2S8BM4Ø,19ØXSU$;"
566 PLAY"L1T1P2":DRAW"C1S8BM4Ø,1
9ØXSU$;":DRAW"C3BM122,19ØXNO$;":
PLAY"P2":DRAW"C1BM122,19ØXNO$;":
NEXT
568 DRAW"C2BM4Ø,19ØXSU$;":PLAY"P
2":DRAW"C1BM4Ø,19ØXSU$;":DRAW"BM
122,19ØC3"+N1$(25)+N1$(5)+N1$(19
):DRAW"S6"
57Ø PLAY"L15O5GP9GP9GL1T1P1":CLS
8:PRINT@1Ø1,"AND THE WINNER IS..
..";:PRINT@229,"THE LIZARD KING!
!!!!!!";:PRINT@384,"PRESS <ENTER
> FOR ANOTHER MATCH";
572 I$=INKEY$:IFI$=""THEN572ELSE
RUN4
574 CLS2:PRINT@16Ø,"BRIAN MAIORA
NO PRESENTS......";:PLAY"L1T1P3"
:PRINT@293,"PROFESSIONAL WRESTLI
NG";:PLAY"L1T1P1P3"
576 CLS:PRINT@1Ø,"INSTRUCTIONS";
:PRINT@32,"PICK THE MOVES BY ENT
ERING THEIRCORRESPONDING NUMBERS
. BE SURE  TO MAKE THE LAST MOVE
 ONE OF THEFOLLOWING:COBRA CLUTC
H,SUPERFLY,FIGURE FOUR LEGLOCK,P
ILE DRIVER,RIP THE TURNBUCKLE,";
578 PRINT"HIT WITH A   CHAIR,OR
FLYING HAMMERLOCK.";:PRINT@416,"
PRESS <ENTER> TO START THE MATCH
";
58Ø I$=INKEY$:IFI$=""THEN58Ø
582 CLS:PRINT"IN THE BLUE SHORTS
,FROM BUFFALO,NEW YORK,WEIGHING
225 POUNDS,    JIM SMITH.":PLAY"L
1T1P1":PRINT@224,"AND IN THE RED
 SHORTS, FROM      WILMINGTON,DEL
AWARE,WEIGHING 284POUNDS, THE LI
ZARD KING!!!!!";:PRINT@42Ø,"PRES
S <ENTER> TO CONTINUE";
584 I$=INKEY$:IFI$=""THEN584
586 GOTO4
588 ' A THROUGH M
59Ø DATAU5ER2FD3NL4D2BR3,U6R3FDG
NL3FDGNL3BR5,NRHU4ER2FBD4GNL2BR4
,U6R3FD4GNL3BR4,NR4U3NR3U3R4BD6B
R3,U3NR3U3R4BD6BR3,BRHU4ER2FBD3N
LDGNL2BR4,U3NU3R4NU3D3BR3,NU6BR3
,BUNUFR2ENU5BDBR3,U3NU3R2E2UBD3B
L2F2DBR3,NU6R4BR3,U6F3E3D6BR3
592 ' N THROUGH Y
594 DATAU5NUF4NU5DBR3,BRNR2HU4ER
2FD4GBR4,U6R3FDGNL3BF3BR,BRHU4ER
2FD4GLNUNDNLBR5,U6R3FDGL2NLF3BR3
,BUFR2EUHL2HUER2FBD5BR3,BR2U6NL2
R2BD6BR3,BRHU5BR4D5GNL2BR5,BR2H2
U4BR4D4G2BR5,BUNU5FE2F2ENU5BR3BD
,UE2H2UBR4DG2F2DBR3,BR2U3H2UBR4D
G2BF3BR2
596 ' Z THROUGH 3
598 DATANR4UE4UNL4BF3BD3,BRU6NGB
D5BR3,BU6R3FD2GL3D2R4BR3,BU6R3FD
GNL2FDGNL3BR4
```
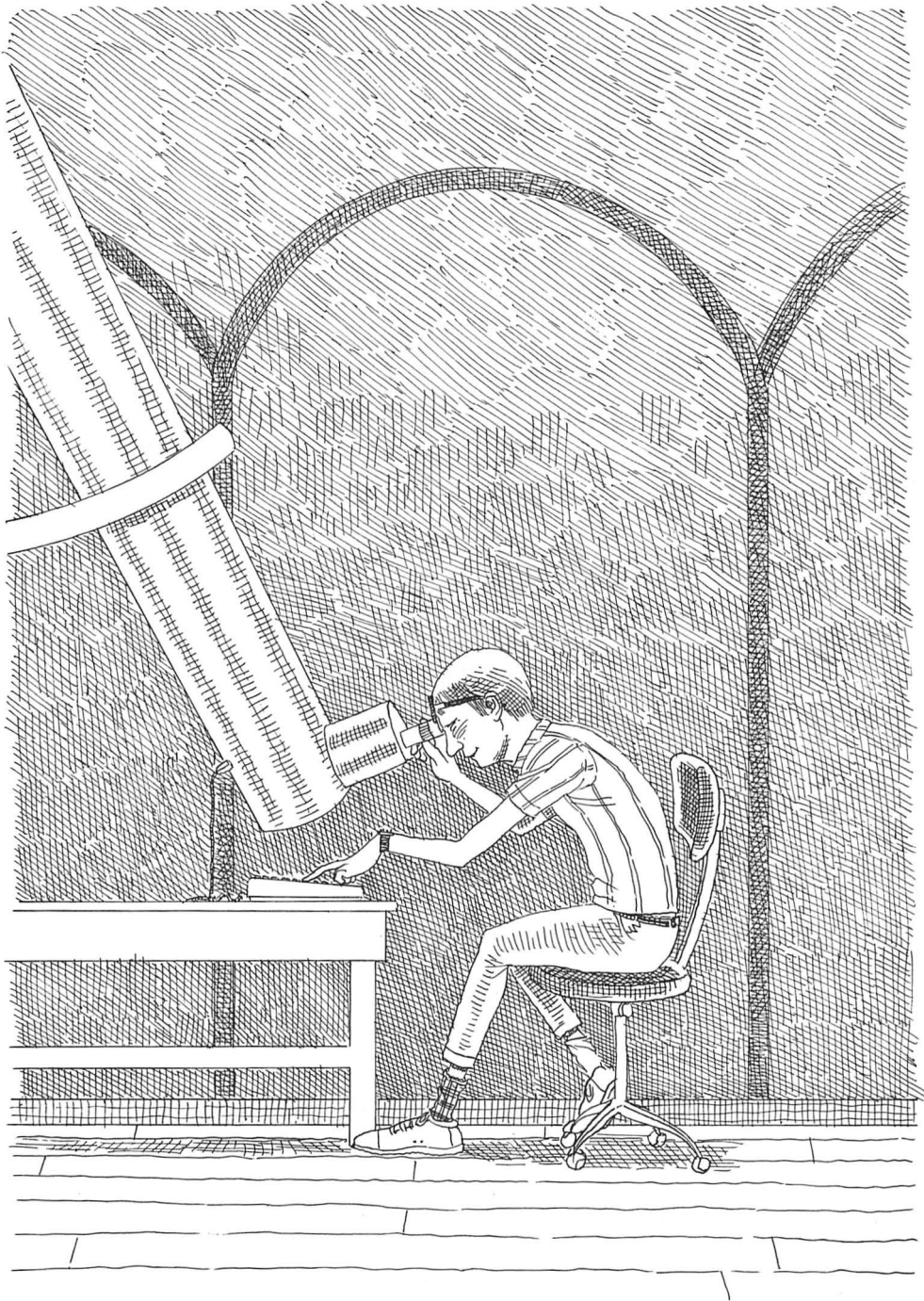
NEREID COUNTDOWN

Program by Joel Robbins

A s chief engineer on the highly acclaimed Nereid Project, you are in charge of launching the massive Ezekial Rocket, which contains a highly confidential communications satellite. The goal of this project is to place the spacecraft in an orbit around the mysterious planet Nereid. Your government is relying on you to launch it while the window is right and Nereid is closest to Earth.

Nereid Countdown is a challenging and sometimes frustrating math-orientated Simulation. Although it requires a knowledge of quadrants, formula logic and BASIC programming, it also emphasizes accuracy, concentration, memory, spelling, motor skills, perseverance and close attention to instructions.

After running the program you can press the BREAK key and remove the REM apostrophe in Line 10 to activate the high-speed POKE (if your machine can handle it, otherwise just run the program and prepare for the action). You are greeted with a colorful and noisy title screen.

The Simulation consists of several sections. In order to gain access to the launch site, you must remember four code words in sequence, which are shown on the screen in rapid succession. A control panel with flashing lights and frequent "beeps" distracts you as you try to enter the code words when prompted by the computer.

If the words are entered incorrectly, you are denied entry to the site and the Simulation ends. If the words are entered correctly, you must then solve several problems before the launch can take place. The first concerns aiming the rocket at the target. You view the planet through the rocket's powerful remote-controlled telescope and align the cross hairs with Nereid. You must enter the closest whole number corresponding to the 'X' and 'Y' coordinates. For example, if the cross hairs are two spaces too high and four spaces to the right of center, you would enter -4-2L. The first number is the 'X' coordinate and the second, the 'Y'. The 'L' must be entered to lock the coordinates into the on-board guidance computer. The screen then superimposes another set of cross hairs to show the result. You don't have to be exactly on target but the closer the better, and fewer corrections will be necessary later.

The next problem is the result of a faulty printed circuit board in the rocket's launch sequencer. You view the copper etchings through a powerful magnifying soldering probe. You have only a few seconds to position the probe over the broken etching with your right joystick and press the firebutton to solder the incomplete path. Remember that too much solder or an improper probe location can cause a short-circuit with adjacent circuits.

The fourth sequence consists of a series of equations you must solve to activate the launch sequence. You are then required to edit a single BASIC program line that contains a "bug." There is only one simple mistake that even novice programmers should be able to spot. The last task is to trace a back-up retro-rocket firing routine on the screen using the joystick.

If you are successful in all of the tasks, the rocket is launched and radar tracking begins. Finally, Ezekial is shown orbiting Nereid. If you make any mistakes, the launch is aborted and a message is printed stating the reason(s). Hopefully you can complete the launch sequence problems successfully — after all, you don't want to have to tell the President you failed on your mission.

Joel Robbins is an English teacher and a school computer coordinator. He writes for several magazines and is publishing some of his educational software. He and his wife, Sara, have two children and live in Syracuse, Indiana.

```
1 'NEREID COUNTDOWN      1984
2 'JOEL ROBBINS
3 'R # 5, BOX 45Ø
4 'SYRACUSE, IN   46567
5 CLS:PRINT@128,"   THERE ARE SOM
E BUGS IN THE      LAUNCH PROGRAM
 AT THE SPACE      CENTER, SO TYP
E RUN AND <ENTER> AGAIN IF YOU G
ET A UL ERROR      MESSAGE.":FORT
=1TO 285Ø:NEXT
1Ø 'POKE 65495,Ø'DELETE FIRST AP
OSTROPHE TO SPEED UP ACTION
2Ø PCLEAR8:PCLS
25 IFNH=ØTHEN328Ø
3Ø FORT=1TO4:CLST:FORM=1TO9Ø:NEX
TM:NEXTT:D=3:C=1Ø:PMODE3,1:CIRCL
E(125,1ØØ),45,3:PAINT(125,1ØØ),3
,3
4Ø FORB=2TO7:C=C+9
5Ø IFB>5 THEND=Ø
6Ø PMODED,B:CIRCLE(125,1ØØ),C,3:
NEXTB
7Ø PMODEU,8:DRAW"BM1Ø5,75D5ØU5ØR
25F5D15G5L25R9F25":A=1
8Ø PMODEØ,A:SCREEN1,1:PLAY"A-T25
5":A=A+1:IFA>8THENA=1
9Ø S=S+1:IFS>8ØTHEN1ØØELSE8Ø
1ØØ SCREENØ,1:FORK=1TO85:CLS2:CL
S4:NEXTK
1Ø5 SCREEN1,Ø:FORBU=1TO8:CLS4:PR
INT@2Ø2," EMERGENCY ";:SOUND185,
5:FORT=1TO45:NEXT:CLS4:PRINT@2Ø2
," emergency ";:SOUND125,5:FORT=
1TO45:NEXT:NEXTBU
11Ø CLEAR:CLS3:PRINT@8,"TROUBLE
SHOOTER";:PRINT@64,"   STEP INTO
 THE CENTRAL CON-  TROL BUNKER
 AND GET READY TO  TAKE CARE O
F ALL THE LAST MIN- UTE PROBLEM
S ASSOCIATED WITH  THE SPACE S
HOT DESTINED FOR   THE PLANET
NEREID.
12Ø PRINT"   AS A TROUBLE-SHOOTI
NG ENGI-    NEER, YOU WILL GET TO
  SEE THE  EZEKIAL ROCKET POISED
 ON THE    LAUNCH PAD.  NEXT YOU
 WILL      BE GIVEN THE ACCESS C
ODES.      PREPARE YOURSELF AND
TOUCH      <ENTER> WHEN YOU ARE
READY.
13Ø UJ$=INKEY$:LB=RND(1ØØ):IFUJ$
<>""THEN14ØELSE13Ø
14Ø ZU(1)=67:ZU(2)=79:ZU(3)=85:Z
U(4)=78:ZU(5)=84:ZU(6)=68:ZU(7)=
79:ZU(8)=87:ZU(9)=78
15Ø JZ=2ØØ
```

```
17Ø CLS3:PRINT@32,"############
#################";:UZ=1163:PR
INT@26Ø," nereid ";
```
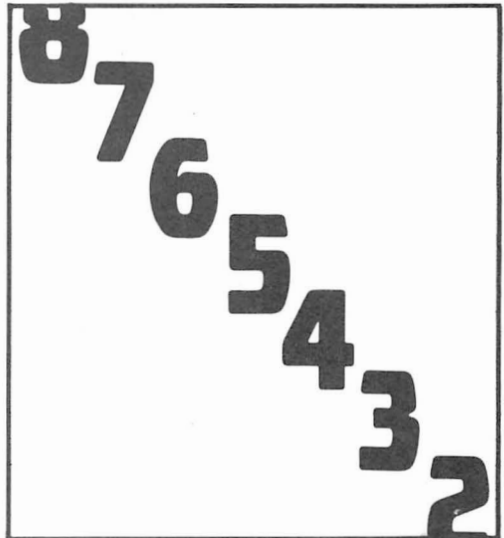


```
18Ø FORZZ=1TO9:POKE UZ,ZU(ZZ)
19Ø UZ=UZ+33
2ØØ SOUND JZ,1:JZ=JZ-2Ø
21Ø NEXTZZ
22Ø PRINT@455,"BY joel robbins "
;
23Ø PMODE3,1:PCLS:
24Ø CIRCLE(126,96),149,4
25Ø CIRCLE(2ØØ,3Ø),17,4:PAINT(2Ø
Ø,4Ø),4,4
26Ø LINE(9,18Ø)-(248,18Ø),PSET
27Ø PAINT(1Ø,182),2,4
28Ø DRAW"BM1ØØ,181U7ØR2U2ØE5U25E
5U1ØBR12D1ØF5D25F5D2ØR2D7Ø
29Ø CIRCLE(118,55),8,4,3,.5,Ø
3ØØ DRAW"BM112,1ØØD12R1ØU12BD15L
1ØD7R1ØD7L1ØR1ØBD3BL5G5E5F5D9U5L
1ØD5U9
31Ø LINE(1Ø7,86)-(127,86),PSET:L
INE(11Ø,55)-(125,55),PSET:PAINT(
115,53),3,Ø:PAINT(115,8Ø),4,Ø
32Ø LINE(118,178)-(118,158),PSET
:LINE(1Ø7,178)-(1Ø7,158),PSET:LI
NE(13Ø,178)-(13Ø,158),PSET:LINE(
112,178)-(112,158),PSET:LINE(125
,178)-(125,158),PSET
33Ø DRAW"BM8Ø,18ØU15ØL3ØD15ØE3ØH
3ØE3ØH3ØE3ØL3ØF3ØG3ØF3ØG3ØF3ØU14
ØR3ØD1ØL3ØE1ØF1ØE1Ø
34Ø SCREEN 1,1
```

```
350 FORZL=1TO2800:NEXT:GOTO740
360 DATA EZEKIAL, PLUTO, MARTIAN
, MERCURY, CELESTIAL, STELLAR, M
ETEOR, APPOLLO, SOLAR, LUNAR, QU
ASAR, NEBULA, NOVA, PULSAR, SATU
RN
370 DIM J(15),JJ$(15),B$(30),BB$
(30)
380 CC=4
390 IFW=1THEN440
400 A=RND(200)+30:B=RND(150)+30
410 PMODE 3,1
420 PCLS
440 IF W=1 THEN 450ELSE485
450 A=AA:B=BB
460 IFW=1THEN470ELSE485
470 A=AA+N6:B=BB-N7
480 IFW=1THEN53Ø
485 CLS2:PRINT@32,"       LOCK
ON TARGET":PRINT@96,"  AFTER YOU
 TOUCH <ENTER> A GRID AND CROSS
HAIRS WILL APPEAR ON  THE SCREEN
. ";
490 PRINT" THEN LOCK ROCKET   ON
  TARGET BY ENTERING THE      PR
OPER WHOLE, COORDINATE COR-   RE
CTION NUMBERS FOR X & Y. IF   TH
E CROSS HAIRS WERE TWO       SQ
UARES HIGH AND THREE LEFT OF  CE
NTER, YOU WOULD TOUCH +3-2L   (F
OR LOCK).";
500 PRINT"          <ENTER>"
```



```
502 GOTO 530
505 TY$=INKEY$:IFTY$=""THEN505EL
SE610
510 '*****lock on target*****

530 DRAW "BM8,ØD188BR17U188BR17D
188BR17U188BR17D188BR17U188BR17D
188BR17U188BR17D188BR17U188BR17D
188BR17U188BR17D188BR17U188BR17D
188BL118U50BU38U12BU38U50BL4D50B
D38D12BD38D50
540 DRAW"BMØ,9R255BD17L255BD17R2
55BD17L255BD17R255BD17L255BD17R2
55BD17L255BD17R255BD17L255BD17R2
55BU86L84BL88L82D3R82BR88R84U1L8
4BL88L82
550 DRAW"BM126,95R8L16U2R16U1L16
560 DRAW"BM125,94D8U16R3D16
570 IFA>225THENA=A-30
580 IFB<30THENB=30
590 CIRCLE(A,B),14,CC:CIRCLE(A,B
),11,CC:CIRCLE(A,B),10,CC:LINE(A
,B-15)-(A,B-3Ø),PSET:LINE(A,B+15
)-(A,B+3Ø),PSET:LINE(A-15,B)-(A-
3Ø,B),PSET:LINE(A+15,B)-(A+3Ø,B)
,PSET
600 AA=A:BB=B:A=A-126:B=B-95
605 GOTO 505
610 SCREEN1,1
620 IFCC=2THEN650
630 N$=INKEY$:IFN$<>""THEN640ELS
E630
640 NN$=NN$+N$
650 FORCE=1TO1ØØØ:NEXT:IF CC=2TH
EN890
660 IFN$="L"THEN670ELSE630
670 LE=LEN(NN$):NN$=LEFT$(NN$,LE
-1):N2$=LEFT$(NN$,2):N3$=RIGHT$(
NN$,2):N4=VAL(N2$):N5=VAL(N3$)
680 N4=N4*17:N5=N5*17
690 N6=N4:N7=N5
700 A=ABS(A):B=ABS(B):N4=ABS(N4)
:N5=ABS(N5)
710 IF A-N4<12 AND A-N4>-12THEN7
2ØELSE73Ø
720 IFB-N5<12 AND B-N5>-12THENWI
=1
730 GOTO 174Ø
740 '*****entry codes*****


750 CQ=Ø:CLSØ:H=15:LP=4:PRINT@35
,"REMEMBER THESE CODE WORDS";
760 PRINT@74,"IN SEQUENCE";
770 PRINT@17Ø,"            ";:FOR
J=1TORND(H):READJ$:NEXT:RESTORE:
PL=PL+1:JJ$(PL)=J$:PRINT@171,JJ$
```

```
(PL);:SOUND245,19:FORT=1TO95Ø:NE     118Ø DRAW"BMØ,1ØR25F5R5ØE5R169BD
XT:IFPL<>LP THEN77Ø                  1ØL168G6L52H6L24BD9R255BD9L35G1Ø
78Ø GOSUB 246Ø                       L2ØH1ØL5ØG1ØL4ØH1ØL7Ø
79Ø PL=Ø:D=11Ø                       119Ø DRAW"BMØ,48F25R1ØØE2ØR13Ø
8ØØ CLSØ:PRINT@34,"ENTER ENTRY L      12ØØ DRAW"BMØ,62F25R1ØØE2ØR13Ø
EVEL CODE WORDS";                     121Ø DRAW"BMØ,76F25R1ØØE2ØR13Ø
81Ø Z=Z+1:CQ=CQ+1                     122Ø DRAW"BMØ,129E2ØR12F2ØR11Ø
82Ø PRINT@D,CQ" ";:INPUTA$(Z)         123Ø DRAW"BMØ,152E2ØR122F2ØR11Ø
83Ø PL=PL+1                           124Ø DRAW"BMØ,17ØE18R124F18R12Ø
84Ø IFA$(Z)=JJ$(PL)THENSC=SC+1        125Ø DRAW"BMØ,178R2ØØF8Ø
85Ø D=D+31                            126Ø Y=RND(5)
86Ø IFPL=4THEN87ØELSE8ØØ              127Ø DRAW"BM18Ø,91R1ØØBD22L8ØH11
87Ø IFSC<>4THEN88ØELSE38Ø             E11
88Ø CLS4:PRINT@128," ILLEGA           128Ø ON Y GOTO 129Ø,131Ø,133Ø,13
L CODE ENTRY":PRINT@256,"       B     5Ø,137Ø
REAK IN SECURITY":SOUND25Ø,1:CLS      129Ø LINE(2ØØ,17Ø)-(22Ø,17Ø),PRE
2:IW=IW+1:IFIW=5ØTHENEND              SET
885 GOTO88Ø                          13ØØ GOTO 138Ø
89Ø '*****formula checks*****         131Ø LINE(25,73)-(45,73),PRESET
9ØØ CLS3                              132Ø GOTO 138Ø
91Ø RESTORE:FORT=1TO15+RND(1Ø):R      133Ø LINE(8Ø,1Ø1)-(1ØØ,1Ø1),PRES
EADA$:NEXT                           ET
92Ø LC=LC+64:TA=TA+1                  134Ø GOTO 138Ø
93Ø READ B$(TA)                       135Ø LINE(18Ø,2Ø)-(2ØØ,2Ø),PRESE
94Ø PRINT@Ø," FINAL FUEL FORMU        T
LA CHECKS"                           136Ø GOTO 138Ø
95Ø PRINT@LC,B$(TA)"=";               137Ø LINE(3Ø,178)-(5Ø,178),PRESE
96Ø INPUTAW                          T
97Ø BW=VAL(B$(TA))                    138Ø GOTO 1388
98Ø IFBW=ØTHENBW=31                   1388 TY$=INKEY$:IFTY$=""THEN1388
99Ø IFBW=8THENBW=13Ø                  1389 SCREEN1,1
1ØØØ IFBW=2ØTHENBW=3Ø                 139Ø J=JOYSTK(Ø):I=JOYSTK(1)
1Ø1Ø IFBW=5THENBW=-2Ø                 14ØØ IF J=Ø THEN P=P-1
1Ø2Ø IFBW=6THENBW=18                  141Ø IF J=63 THEN P=P+1
1Ø3Ø IFBW=44THENBW=378                142Ø IF I=63    THEN R=R+1
1Ø4Ø IFBW=14THENBW=23                 143Ø IF I=Ø THEN R=R-1
1Ø5Ø IFBW=9 THENBW=1428               144Ø IFP<1 THENP=1
1Ø6Ø IFBW=24THENBW=1Ø4                145Ø IFR<1THEN R =1
1Ø7Ø IFBW=84THENBW=6Ø                 146Ø IFR>196THENR =192
1Ø8Ø IFBW=3THENBW=39Ø                 147Ø IF P<5 THEN 156Ø
1Ø9Ø IFAW=BW THENWA=WA+1              148Ø IFP>255THENP=255:IFR>192THE
11ØØ IFTA=5THEN112Ø                   NR=196
111Ø GOTO 91Ø                         149Ø IF PEEK(6528Ø)=126 OR  PEEK
112Ø FORMA=1TO5ØØ:NEXT                (6528Ø)=254 THEN 15ØØELSE156Ø
113Ø '*****ic repair*****             15ØØ PLAY"T255O5A":LINE(P-5,R)-(
1135 CLS3:PRINT@32," I                P+5,R),PSET
C REPAIR"                            151Ø IFPPOINT(3Ø,73)=6THEN152ØEL
114Ø PRINT@96," USE RIGHT JOYST       SE156Ø
ICK TO POSI-    TION SOLDERING P      152Ø IFPPOINT(9Ø,1Ø1)=6THEN153ØE
ROBE AT THE     CORRECT POSITION     LSE156Ø
 TO REPAIR THE  INTEGRATED CHIP       153Ø IFPPOINT(185,2Ø)=6THEN154ØE
UNDER THE       MICROSCOPE.  YOU     LSE156Ø
 ONLY HAVE A    FEW SECONDS FOR       154Ø IFPPOINT(45,178)=6THEN155Ø
THIS PROCEDURE. PRESS RED BUTTON      155Ø IFPPOINT(2Ø5,17Ø)=6THENWW=1
 TO SOLDER.                          156Ø T=T+1:IFT>9THENT=Ø
115Ø PRINT"  DON'T BE SLOPPY!"        157Ø KQ=KQ+1:IFKQ=25ØTHEN161Ø
116Ø PRINT"           <ENTER>"        158Ø IFT=1THEN159ØELSE139Ø
117Ø PCLS3:PMODE3,1:COLOR2,3          159Ø PSET(P,R)
```

```
1600 GOTO 1390
1610 IFPPOINT(45,173)=6THEN1720
1620 IFPPOINT(205,165)=6THEN1720
1630 IFPPOINT(30,78)=6THEN1720
1640 IFPPOINT(90,96)=6THEN1720
1650 IFPPOINT(185,15)=6THEN1720
1660 IFPPOINT(45,83)=6THEN1720
1670 IFPPOINT(205,175)=6THEN1720
1680 IFPPOINT(30,68)=6THEN1720
1690 IFPPOINT(90,106)=6THEN1720
1700 IFPPOINT(185,25)=6THEN1720
1710 GOTO1750
1720 WW=0:GOTO 1750
1730 DATA (2+2)*8-3/(6-3),8/4*(3
2+43)-20,20+(2*(20+5))/5,5+3-7*(
3+4+1)/2,6+6*(4*2)/(2+2),44/2*(5
+12)-3+7,14+(2*4)-(55/5)+2*6,9*(
2+12)/3*34,24/3*2+44*(2*3)/3,84/
(4-2)+3*14-24,3*5*7+(55-14)*7-2
1740 CC=2:W=1:GOTO390
1750 FORK=1TO250:NEXT
1760 '*****debugging*****
1770 CLS3:PRINT@32,"   CORRECT TH
E FOLLOWING LINE OF   THE PRIMARY
  PROPULSION SUB-      ROUTINE. ON
LY ONE LETTER, NUM-   BER OR SYMB
OL WILL BE INCORRECT AND THE FIN
AL SPACING SHOULD BE SIMILAR TO
THE ORIGINAL LINE.   USE APOSTRO
PHES FOR ANY QUOTA-";
1780 FORK=1TO100:NEXT
1790 PRINT"  TION MARKS."
1800 YZ=RND(14)
1810 ON YZ GOTO 1820,1850,1880,1
910,1940,1970,2000,2030,2060,209
0,2120,2150,2170,2180
1820 PRINT@32,"1050 PIRNT 'SYST
EM READY'"
1830 INPUT HT$:IFHT$="1050 PRINT
 'SYSTEM READY'"THENHT=1
1840 GOTO2190
1850 PRINT@32,"2551 FOR TT = 1
TO 20 STEP 2"
1860 INPUTHT$:IFHT$="2551 FOR TT
 = 1 TO 20 STEP 2"THEN HT = 1
1870 GOTO2190
1880 PRINT@32,"7223 IF W = 2 OR
 = 4 THEN GOSUB 12541"
1890 INPUTHT$:IFHT$="7223 IF W =
 2 OR W = 4 THEN GOSUB 12541"THE
N HT = 1
1900 GOTO 2190
1910 PRINT@32,"6543 ON X GO TO
538, 539, 540"
1920 LINEINPUT HT$:IFHT$="6543 O
N X GOTO 538, 539, 540" THEN HT=
1
1930 GOTO 2190
1940 PRINT@32,"84421 AA = RND(X
*(Y*B+5)
1950 LINEINPUTHT$:IFHT$="84421 A
A = RND(X*(Y*B+5))"THENHT=1
1960 GOTO 2190
1970 PRINT@32,"95321 IF A$ = 5
THEN GOTO 722383"
1980 LINEINPUTHT$:IFHT$="95321 I
F A = 5 THEN GOTO 722383" THEN H
T=1
1990 GOTO 2190
2000 PRINT@32,"105312 IF X = 'C
OUNTDOWN' THEN GOSUB 84231"
2010 LINEINPUTHT$:IFHT$="105312
IF X$ = 'COUNTDOWN' THEN GOSUB 8
4231" THEN HT = 1
2020 GOTO 2190
2030 PRINT@32,"204215 IMPUT B$:
PRINT B$
2040 LINEINPUTHT$:IFHT$="204215
INPUT B$:PRINT B$"THEN HT = 1
2050 GOTO2190
2060 PRINT@32,"26178 PRINT 'REA
DY';:PRINT 'TEN';RETURN
2070 LINEINPUTHT$:IFHT$="26178 P
RINT 'READY';:PRINT 'TEN';:RETUR
```
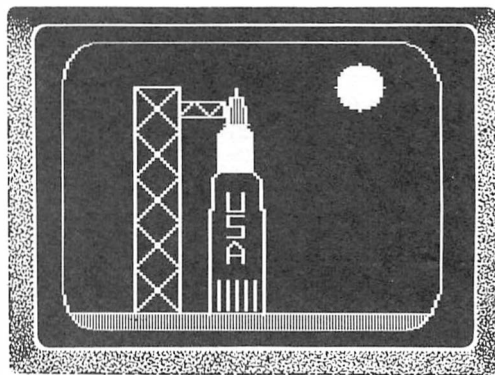


```
N"THEN HT=1
2080 GOTO 2190
2090 PRINT@32,"251647 IF TT <>
20 THAN GOTO 5001"
2100 LINEINPUTHT$:IFHT$="251647
IF TT <> 20 THEN GOTO 5001"THENH
T=1
2110 GOTO 2190
2120 PRINT@32,"435261 FOR XY =
1 - 50 STEP 5"
2130 LINEINPUTHT$:IFHT$="435261
FOR XY = 1 TO 50 STEP 5"THENHT=1
2140 GOTO2190
2150 PRINT@32,"70981 LINE(10,10
)-(20 20), PSET
2160 LINEINPUTHT$:IFHT$="70981 L
```

```
INE(1Ø,1Ø)-(2Ø,2Ø), PSET"THENHT=
1
217Ø GOTO 219Ø
218Ø PRINT@32Ø,"91283 FORE TT =
1 TO 25"
2185 LINEINPUTHT$:IFHT$="91283 F
OR TT = 1 TO 25" THEN HT =1
219Ø GOTO 22ØØ
22ØØ '******trajectory sub******
```
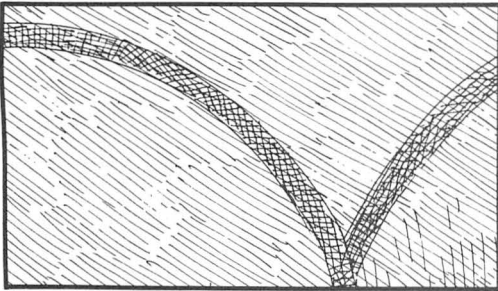


```
221Ø CLS3:PRINT@32,"    BACKUP GU
IDANCE ROCKET              FIRIN
G PROGRAM"
2215 PRINT@128," USE RIGHT JOYST
ICK TO RECORD     RETRO ROCKET FI
RING SEQUENCES    AS BACK UP FOR
PRIMARY FIR-      ING ROUTINE."
222Ø PRINT:PRINT" KEEP PATH OF R
OCKET IN LIGHT     AREA OR THE CO
MPUTER WILL        CAUSE LAUNCH P
ROGRAM TO SHUT     DOWN.   PUSH JO
YSTICK FORWARD     FOR STARTING P
OSITION. <ENTER>
223Ø PMODE3,1:PCLS:COLOR2,4
225Ø P=85:R=18Ø:LINE(Ø,188)-(255
,188),PSET
226Ø PAINT(19Ø,19Ø),3,2
227Ø CIRCLE(255,192),18Ø,3,1.2,.
51,.7Ø
228Ø CIRCLE(255,192),16Ø,3,1.25,
.5Ø,.73
229Ø PAINT(2ØØ,15Ø),4,3:PAINT(15
,115),4,3
23ØØ TY$=INKEY$:IFTY$=""THEN23ØØ
231Ø SCREEN 1,Ø
232Ø J=JOYSTK(Ø):I=JOYSTK(1)
233Ø IFJ=ØTHENP=P-1
234Ø IFJ=63THENP=P+1
235Ø IFI=63THENR=R+1
236Ø IFI=ØTHENR=R-1
237Ø IFP<1THENP=1
238Ø IFR<1THENR=1
239Ø IFR>196THENR=192
24ØØ IFP>255THENP=255
241Ø PLAY"T25ØO1G-":PSET(P,R)
242Ø IFR=1THEN26ØØ
2430 IFPPOINT(P+1,R)=4ORPPOINT(P
-1,R)=4ORPPOINT(P,R+1)=4ORPPOINT
(P,R-1)=4THEN244ØELSE245Ø
244Ø PZ=1:GOTO232Ø
245Ø GOTO232Ø
246Ø CLS3
247Ø PRINT@64,"  SCAN THE MASTER
 CONTRØL BOARD   AS IT POWERS UP
AND CHECKS        ALL SYSTEMS. BUT
 DON'T TOUCH--    YOU HAVEN'T BEEN
 CLEARED          YET.":FORGE=1TO4
8ØØ:NEXT:CLS4
248Ø FORI=1TO26:READB$:NEXT
249Ø '*****master control board*
****
25ØØ PRINT@3,"MASTER CONTROL SWI
TCHBOARD";:PRINT@68,"T";:PRINT@1
32,"B";:PRINT@196,"C";:PRINT@26Ø
,"V";:PRINT@324,"W";:PRINT@388,"
P";
251Ø PRINT@83,"Y";:PRINT@147,"F"
;:PRINT@211,"Q";:PRINT@275,"L";:
PRINT@339,"Z";:PRINT@4Ø3,"R";
252Ø CO=RND(255)+155
253Ø IFCO>255THEN252Ø
254Ø DN=RND(25Ø):SOUNDDN,1
255Ø READC:POKE C,CO
256Ø PQ=PQ+1:IFPQ=125THENRETURN
257Ø LL=LL+1:IFLL=35THEN258ØELSE
252Ø
258Ø LL=Ø:RESTORE:GOTO 248Ø
259Ø '******test for launch*****
26ØØ CLSØ:IFWW<>1THENPRINT@224,"
IC FAILURE--NO LAUNCH TODAY"
261Ø IFWI<>1THENPRINT@256,"TARGE
T QUADRANT ERROR--NO LAUNCH"
262Ø IFWA<>5THENPRINT@288,"FUEL
FORMULA ERROR--NO LAUNCH"
263Ø IFPZ<>ØTHENPRINT@32,"TRAJE
CTORY PLOT ERROR--NO LAUNCH";
2635 IFHT=ØTHENPRINT@352,"BUG IN
 LAUNCH PROGRAM--NO LAUNCH";
264Ø DATA1414,1431,13Ø3,1352,117
5,1111,1224,116Ø,1367,1416,1239,
1237,1365,1158,1Ø98,11Ø9,1173,12
22,135Ø,13Ø1,1429,1Ø96,1433,1356
,13Ø5,1177,1226,1371,1162,1Ø98,1
115,1241,1418,11ØØ,1179
265Ø IFHT<>1ORWW<>1ORWI<>1ORWA<>
5ORPZ<>ØTHEN325ØELSE266Ø
266Ø PMODE3,1:PCLS
267Ø CLS3:PRINT@64,"  WATCH MON
ITORS TO SEE THE EZ- EKIAL POSI
TIONED ON LAUNCH     PAD.   AFTE
R LAUNCH, WATCH       PROGRESS O
N RADAR SCREEN.":FORLN=1TO2ØØØ:N
EXT
268Ø 'rocket launch
```

```
2690 AA=159
2700 BB=140
2710 CIRCLE(126,96),149,4
2720 DRAW"BM180,161U17R1D17R1U17
2730 LINE(180,AA)-(180,BB),PSET
2740 LINE(0,160)-(255,160),PSET
2750 PAINT(20,181),2,0
2760 SCREEN1,0
2770 FORGE=90TO20STEP-9:SOUNDGE,
1:FORT=1TO800:NEXTT:NEXTGE:SOUND
GE-9,10
2780 FOR A=1TO20
2790 CIRCLE(180,159),A,4,9,.5,0
2800 PLAY"O1T255G-
2810 CIRCLE(180,159),A,2,9,.5,0
2820 PLAY"O1T255A
2830 NEXT
2840 PCLS:X=90:Y=150:Z=45:CIRCLE
(126,96),145,2
2850 CIRCLE(X,Y),Z,4
2860 IFXX=1THENXX=0ELSEXX=1
2870 IFXX=1THEN2880ELSE2890
2880 Z=Z-3
2890 X=X+5:Y=Y-5
2900 IFZ<1THEN2950
2910 GOTO 2850
2950 B=.03:A=.01
2960 CLS3:PRINT@32,"  THE EZEKIA
L IS NOW APPROACHING A PRE-ORBIT
AL TRAJECTORY AROUND NEREID, A P
LANET COVERED MOSTLY BY WATER AN
D HAVING ONLY ONE    LAND MASS."
2965 PRINT@320,"         ** WAIT
 **":FORM=1TO 1500:NEXT
2970 '*****orbit*****
2980 PMODE 3,1
2990 PCLS1
3000 CIRCLE(126,96),95,4
3010 CIRCLE(120,130),40,4
3020 CIRCLE(115,155),25,4:PAINT(
115,155),4,4:PAINT(115,175),4,4
3030 DRAW"BM100,97U5E3R2E4U2E5R3
E2U2R2E4R3F3R2E2R3D2R4D1F3R2D2R3
D2F3D2R3F3R3D4F2D2R3D4F3D2F4D4F2
D3L5G3L9
3040 PAINT(104,93),4,4
3050 P=0:B=.03:A=.01
3060 PAINT(120,130),4,4
3070 A=A+.01:B=B+.01
3080 PAINT(100,50),3,4
3090 CC=3:DD=2:SCREEN 1,0
3100 IFA>.38ANDA<.63 THEN3110ELS
E3120
3110 CC=1:DD=4
3120 IFA>.89ORA<.155THEN3130ELSE
3140
3130 CC=1:DD=4
3140 IFA>.24 ANDA <.32 THEN3150E
LSE3160
3150 CC=4
3160 IFA>.63 AND A<.88THEN3170EL
SE3190
3170 FORT=1TO35:NEXT:GOTO3220
3180 SOUND240,1
3190 CIRCLE(126,100),120,1,.5,A,
B
3200 SOUND 240,1
3210 CIRCLE(126,100),120,3,.5,A-
.01,B-.01
3220 P=P+1:IFP=100THEN3050
3230 IN$=INKEY$:IFIN$<>""THEN20
3240 GOTO 3070
3250 SOUND10,50:PRINT@448,"TRY A
GAIN? THEN TOUCH <ENTER>."
3260 INPUTUJ
3270 GOTO 20
3280 FORYY=1TO8:PMODE0,YY:PCLS:N
EXT:NH=1:GOTO3
```
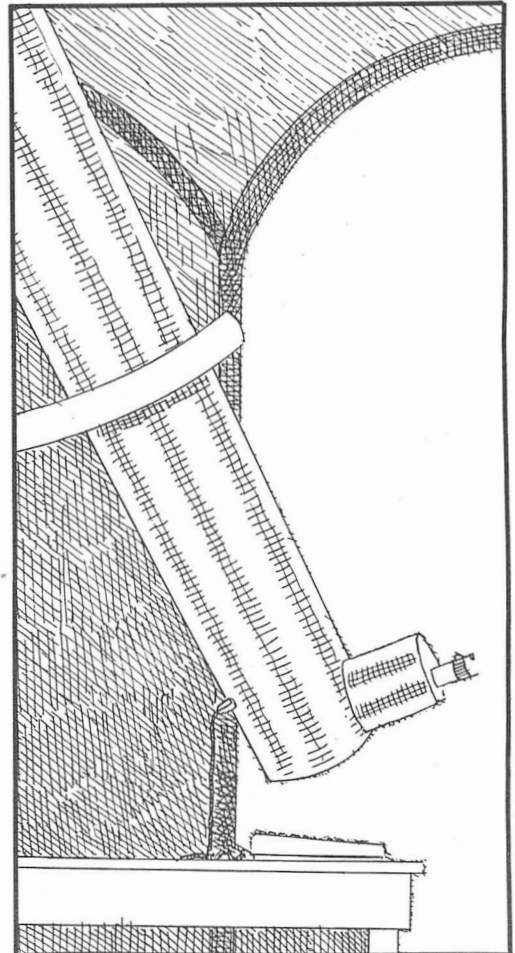
REFUNDER'S DELIGHT

Program by Audrey De Lisle

T his Simulation could lead to bigger and better things. Taking advantage of refund offers is a hobby in itself, and it can earn you hundreds of dollars in extra spending money or merchandise. Each year more and more people cash in on the value of coupons, refunds and rebates. In fact, "refunding" has grown so much in popularity that there are magazines and newspapers devoted to the subject.

Refunder's Delight is run in two parts. Listing 1 (*Refund*) gives you a brief overview of refunding and how to develop a comprehensive plan that enables you to collect extra money and merchandise. The second listing (*Simul*) is the actual Simulation. If you are using a cassette-based system, type POKE 25,6:NEW before loading and running. If you are using a disk system, type PCLEAR1 first. You will need the extra memory afforded by these commands, so be sure to follow these instructions.

The program is set up to cover a one-year

period and takes about one hour to complete. During the course of the Simulation, you are given the opportunity to read a mini-version of a bulletin board, make request lists and answer ads. You see the results of your progress throughout the Simulation. Don't get discouraged too early. Successful refunding takes a lot of patience and perseverance.

When the title page appears you are asked to establish a personal cash goal for the Simulation. It is suggested you start with $250, but any amount may be entered. Then your first week's options appear. These options include:

1) Read bulletins
2) Make request list
3) Choose ads to answer
4) Read glossary
5) Go to next week

It is suggested you choose #4 first to acquaint yourself with the terms used in the refunding business. Here you learn that POP stands for "proof of purchase" and NED means "no expiration date stated." After learning the terminology, you can select your next choice.

If you choose #1 (Read bulletins), you are instructed to write down the number of 20 offers and five ads on which you wish to follow up.

You can either:

1) Read offers
2) Read ads
3) Return to options

If you choose #2 (Make request list), the following menu appears:

1) Make form list
2) Make qualifier list
3) Read your list
4) Return to options

If you choose #3 (Choose ads to answer), you are asked to choose at least two "regular" traders who are usually better to deal with than "one time" traders.

As you can see, refunding can be a complicated process. The beauty of this Simulation is that it makes it a lot easier to deal with. It also uses random numbers, so the process is different each time the program is run.

Roll up your sleeves and sharpen those scissors — let's see how long it takes you to catch on to the fine art of refunding.

Audrey De Lisle lives in San Francisco, California, and is a self-taught BASIC programmer whose hobby is refunding. For information on refunding, send an SASE to BOE, P.O. Box 1677, Kingston, PA 18704.

```
10 '<REFUND> JUL 1984 CASSETTE A
.REFUNDER
20 PCLEAR4:PCLS:CLS3
30 DIMB(5,32),W$(26)
40 GOSUB430
50 FOR X=1TO5:FOR Y=1 TO 32:READ
 B(X,Y):NEXTY:NEXTX
100 CLS:PRINT@6,"REFUNDING IS A
HOBBY THAT CAN BE AS MUCH OR AS
LITTLE AS  YOU MAKE IT."
110 PRINT@134,"IT CONSISTS OF SA
VING THE LABELS OF THE PRODUCTS
YOU USE  AND SENDING THEM, WITH
THE PROP-ER FORM AND (SOMETIMES)
 THE      RECEIPT, TO A REDEMPTIO
N CENTER.",,"        IN RETURN, YO
U GET CASH,  FREE PRODUCTS OR A
PREMIUM GIFT."
120 PRINT@448:INPUT"NEXT PAGE <E
NTER>";C$
130 CLS:PRINT@6,"THE FORMS CAN B
E FOUND IN STORES,  NEWSPAPERS,
 MAGAZINES AND ON PACKAGES.",,,"
         THEY EXPLAIN WHAT PART OF
THE PACKAGE IS WANTED, HOW MANY,
THE EXPIRATION DATE, ADDRESS AND
ANY OTHER CONDITIONS THE COMPANY
HAS SET.";
140 PRINT" MOST FORMS ARE REQUIR
EDIN ORDER TO CLAIM THE REFUND."
150 PRINT:PRINT"       IN ORDER T
O SEARCH MORE   EFFICIENTLY, MOS
T REFUNDERS SUB-SCRIBE TO ONE OR
 MORE BULLETINS."
160 PRINT@448:INPUT"NEXT PAGE <E
NTER>";C$
170 CLS:PRINT@5,"BULLETINS ARE I
SSUED MONTH-LY.  THEY LIST THE N
EW OFFERS,  READER'S LETTERS, CO
NTESTS,NOTESABOUT OFFERS AND/OR
PRODUCTS ANDADS.  THE FIRST FOUR
 BULLETINS  IN THE SIMULATION AR
E DIFFERENT."
180 PRINT:PRINT"    ADS ARE VER
Y IMPORTANT.   SOME FORMS ARE H
ARD TO FIND, SO MOST REFUNDERS T
RADE WITH OTHERSTO INCREASE THEI
R CHANCES OF GETTING A CERTAIN F
ORM."
190 PRINT@448:INPUT"NEXT PAGE <E
NTER>";C$
200 CLS:PRINT@5,"REQUEST LISTS A
RE USED TO   SPECIFY OFFERS THAT
THE TRADER  ESPECIALLY WANTS.  T
HERE IS NO  GUARANTEE THAT MANY
OF THESE     FORMS WILL BE SENT,
```

```
BUT SOME AREUSUALLY INCLUDED IN
EACH TRADE."
210 PRINT:PRINT"    'REGULAR'TRA
DES OF THE QUAL-IFIERS (PACKAGE
PARTS)ARE ALWAYSFROM THE LIST.
OTHER TYPES OF  TRADES DO NOT HA
VE ANY GUARANTEETHAT THE PART WI
LL BE USEFUL,   MUCH LESS FROM T
HE LIST."
220 PRINT@448:INPUT"NEXT PAGE <E
NTER>";C$
230 CLS:PRINT@5,"DURING THE COUR
SE OF THIS  SIMULATION, YOU WILL
 BE GIVEN    THE OPPORTUNITY OF R
EADING A     MINI-VERSION OF A BU
LLETIN, MAK-ING REQUEST LISTS AN
D ANSWERING ADS."
240 PRINT"      THE SIMULATION LA
STS ONE    YEAR,WHICH YOU CAN DO
IN AN HOUROR SO."
250 PRINT"      YOU WILL SET A GO
AL.  THE   SUGGESTED GOAL IS BETW
EEN $200   AND $300. IN REAL LIFE
, SOME RE-FUNDERS RECEIVE MORE T
HAN $1500,BUT MOST RECEIVE ABOUT
 $500."
260 PRINT@448:INPUT"NEXT PAGE <E
NTER>";C$
270 CLS:PRINT@5,"THERE IS A GLOS
SARY INCLUD-ED FOR YOUR BENEFIT.
 HOWEVER,  SOME THINGS ARE HARD
TO EXPLAIN IN WORDS."
280 PRINT:PRINT"THE FIRST IS THE
 UPC (UNIVERSAL PRODUCT CODE).":
FORX=1TO3500:NEXTX:GOSUB 370
290 CLS:PRINT:PRINT"THE SECOND I
S THE LOGO (COMPANY TRADE MARK).
":FORX=1TO2500:NEXTX:GOSUB640
300 CLS:PRINT:PRINT"THE THIRD IS
 THE POP (SPECIAL    PROOF OF PUR
CHASE).":FORX=1TO2500:NEXTX:GOSU
B840
310 CLS:PRINT:PRINT@5,"ONE OF TH
E MAJOR CONDITIONSIS THE LIMIT O
F ONE REFUND PER  NAME, FAMILY O
R ADDRESS.  A FEW DO ALLOW TWO O
R MORE.",,,"      ANOTHER CONDITI
ON IS THE   LIMIT OF THE OFFER T
O A GEOGRA- PHIC AREA."
320 PRINT@293,"IT DOES PAY TO RE
AD THE    FINE PRINT."
330 PRINT@448:INPUT"NEXT PAGE <E
NTER>";C$
340 CLS:PRINT@5,"NOW YOU ARE REA
DY TO LOAD  THE SIMULATION AND G
ET YOUR        REFUNDING YEAR START
```

```
ED.",,,"      ENTER <NEW>, PRESS
<PLAY>, CLOAD'SIMUL' AND TRY YOU
R LUCK."
35Ø PRINT:PRINT"     LUCK IS THE
 RIGHT WORD.     THIS PROGRAM WOR
KS WITH RANDOM   NUMBERS.  EACH T
IME YOU USE IT, IT WILL BE DIFFE
RENT."
36Ø END
37Ø 'SUBROUTINE UPC
38Ø CLS3:Z=64:FORX=1 TO 5:FOR Y=
1 TO 32:PRINT@Z,CHR$(B(1,Y));:Z=
Z+1:NEXTY:NEXTX
39Ø FOR Y=1 TO 32:PRINT@Z,CHR$(B
(2,Y));:Z=Z+1:NEXT Y
4ØØ Z=32Ø:FORX=3 TO5:FORY=1 TO32
:PRINT@Z,CHR$(B(X,Y));:Z=Z+1:NEX
TY:NEXTX
41Ø PRINT@45Ø,"<ENTER>";:INPUTC$
42Ø RETURN
43Ø PMODE3,1:PCLS3:SCREEN1,Ø
44Ø LINE(15,15)-(24,16Ø),PSET,B
:PAINT(16,16),2,4
45Ø W$(1)="BM+6,Ø;U6E2R2F2D3NL6D
3":W$(4)="BM+6,Ø;U8R4FD6GNL4BR":
W$(5)="BM+6,Ø;NR5U5NR3U3R5BD8":W
$(6)="BM+6,Ø;U5NR3U3R5BD8"
46Ø W$(7)="BM+6,Ø;D6R5D6NLD2NL5
":W$(9)="BM+6,Ø;NU8R":W$(14)="BM
+6,Ø;U8DF6DNU8":W$(15)="BM+6,Ø;B
UU6ER4FD6GL4HFBR4":W$(16)="BM+6,
Ø;U8R5FD3GNL5BRBD3"
47Ø W$(18)="BM+6,Ø;U8R5FD2GNL5FD
3":W$(2Ø)="BM+6,Ø;BR3U8NL3R3BD8"
:W$(21)="BM+6,Ø;BU8D7FR5UNU7D":W
$(26)="BM+6,Ø;BR2UR2DNL2BR3":W$(
25)="BM+6,Ø;BU4R1ØNH3NG3BD4"
48Ø W$(3)="BM+6,Ø;U8R5BD8NL5BR4"
:W$(19)="BM+6,Ø;BU4U4R5BD4NL4D4N
L6":W$(8)="BM+6,Ø;U4NU4L6NU4D4BR
6"
49Ø DRAW"BM1ØØ,96;":N$="REFUNDIN
G":GOSUB1Ø2Ø
5ØØ DRAW"BM11Ø,111;":N$="FOR FUN
":GOSUB 1Ø2Ø
51Ø DRAW"BM115,126;":N$="AND PRO
FIT":GOSUB1Ø2Ø
52Ø DRAW"BM3Ø,3Ø;":N$="AZREFUNDE
R":GOSUB1Ø2Ø
53Ø LINE(19Ø,2Ø)-(23Ø,6Ø),PSET,B
54Ø DRAW"BM2Ø3,47;F2R1ØE2U5H2L8H
2U4E2R6F2":LINE(21Ø,25)-(21Ø,55)
,PSET
55Ø DRAW"BM25,15Ø;":N$="YENTER N
":GOSUB1Ø2Ø
56Ø AN$=INKEY$:IF AN$=""THEN56Ø
57Ø IF AN$="N"THEN RETURN ELSE 5
6Ø
58Ø GOTO 58Ø
59Ø DATA 175,175,175,175,175,175
,175,197,197,128,2Ø7,128,2Ø7,197
,197,128,2Ø7,197,197,128,2Ø7,128
,197,128,175,175,175,175,175,175
,175,175
6ØØ DATA 175,175,175,175,175,175
,175,143,143,49,5Ø,51,52,53,143,
45,143,54,55,56,57,48,143,143,17
5,175,175,175,175,175,175,175
61Ø DATA 175,175,175,175,175,175
,175,175,175,2Ø7,175,175,2Ø7,175
,2Ø7,2Ø4,2Ø4,2Ø7,175,2Ø7,2Ø4,2Ø4
,2Ø4,175,175,175,175,175,175,175
,175,175
62Ø DATA 175,175,175,175,175,175
,175,175,175,2Ø7,175,175,2Ø7,175
,2Ø7,195,195,2Ø7,175,2Ø7,175,175
,175,175,175,175,175,175,175,175
,175,175
63Ø DATA 175,175,175,175,175,175
,175,175,175,2Ø7,195,195,2Ø7,175
,2Ø7,175,175,175,175,2Ø7,195,195
,195,175,175,175,175,175,175,175
,175,175
64Ø ' LOGO
65Ø PCLS2:PMODE3,1:SCREEN1,Ø
66Ø CIRCLE(128,96),8Ø,4,1,.5,1:C
IRCLE(128,96),6Ø,4,1,.5,.54
67Ø CIRCLE(128,96),6Ø,4,1,.562,.
7Ø5:CIRCLE(128,96),6Ø,4,1,.8Ø5,.
954
68Ø CIRCLE(128,96),6Ø,4,1,.97,1
69Ø LINE(48,96)-(2Ø8,96),PSET:LI
NE(126,16)-(13Ø,96),PSET,B
7ØØ LINE(7Ø,86)-(11Ø,86),PSET:LI
NE(73,76)-(11Ø,76),PSET
71Ø LINE(146,86)-(186,86),PSET:L
INE(146,76)-(183,76),PSET
72Ø LINE(11Ø,39)-(11Ø,76),PSET:L
INE(146,39)-(146,76),PSET
73Ø LINE(11Ø,86)-(11Ø,96),PSET:L
INE(146,86)-(146,96),PSET
74Ø PAINT(125,18),4,4:PAINT(132,
18),4,4
75Ø DRAW"BM52,168;U36R8D3ØR22D6L
3Ø"
76Ø LINE(92,132)-(122,168),PSET,
B:LINE(1ØØ,138)-(114,162),PSET,B
77Ø DRAW"BM134,168;U36R3ØD6L22D2
4R14U6L2U2R1ØD14L3Ø"
78Ø LINE(174,132)-(2Ø4,168),PSET
,B:LINE(182,138)-(196,162),PSET,
B
79Ø PAINT(54,133),3,4:PAINT(1ØØ,
133),3,4:PAINT(137,133),3,4:PAIN
T(179,133),3,4
8ØØ DRAW"BM32,19Ø;":N$="YENTER N
```

```
":GOSUB 1Ø2Ø
81Ø AN$=INKEY$:IF AN$=""THEN 81Ø
82Ø IF AN$="N"THEN RETURN ELSE81
Ø
83Ø GOTO 83Ø
84Ø 'PROOF OF PURCHASE
85Ø PCLS3:PMODE3,1:SCREEN1,Ø
86Ø LINE(7Ø,36)-(186,96),PSET,B
87Ø PAINT(128,38),2,4
88Ø DRAW"BM85,5Ø;":N$="PROOF OF"
:GOSUB 1Ø2Ø
89Ø DRAW"BM8Ø,94;":N$="PURCHASE"
:GOSUB 1Ø2Ø
9ØØ CIRCLE(128,66),5Ø,4,.2
91Ø LINE(75,66)-(18Ø,66),PSET
92Ø CIRCLE(128,66),1Ø,4
93Ø DRAW"BM72,168;U36R32D24L24D1
2L8":LINE(8Ø,138)-(96,15Ø),PSET,
B
94Ø LINE(112,132)-(144,168),PSET
,B:LINE(12Ø,138)-(136,162),PSET,
B
```

```
95Ø DRAW"BM152,168;U36R32D24L24D
12L8"
96Ø LINE(16Ø,138)-(176,15Ø),PSET
,B
97Ø PAINT(74,134),4,4:PAINT(12Ø,
134),4,4:PAINT(155,134),4,4
98Ø DRAW"C2;BM32,19Ø;":N$="YENTE
R N":GOSUB1Ø2Ø
99Ø AN$=INKEY$:IF AN$=""THEN99Ø
1ØØØ IF AN$="N"THEN RETURNELSE99
Ø
1Ø1Ø GOTO1Ø1Ø
1Ø2Ø FORH=1 TO LEN(N$):N1$=MID$(
N$,H,1):N1=ASC(N1$):IF N1=32 THE
N DRAW"BM+8,Ø;":GOTO 1Ø6Ø
1Ø3Ø IF N1>=65 AND N1<=9Ø THEN G
OTO 1Ø4Ø ELSE NEXT H
1Ø4Ø N1=N1-64
1Ø5Ø DRAW W$(N1)
1Ø6Ø NEXT H
1Ø7Ø RETURN
```

SIMUL

```
1Ø '<REFUND>FOR FUN AND PROFIT C
ASSETTE JUL 84 A.REFUNDER
2Ø GOTO199Ø
3Ø CLS:PRINT@1Ø2,"WELCOME TO REF
UNDING":PRINT@169,"SET YOUR GOAL
",,,"    ABOUT $25Ø IS FAVORABL
E"
4Ø CLEAR1ØØØ,&H7EFF:DIM B$(62),L
1$(2Ø),L2$(2Ø),T$(1Ø),G$(47),QU$
(1ØØ)
5Ø L1$(Ø)="      *** FORM LIST *
**      ":ST$=STRING$(31,32)
6Ø A=Ø: N=Ø: I=Ø: J=Ø: B=Ø
7Ø DATA 19Ø,127,254,52,16,238,22
8,174,94,48,31,79,52,18,166,196,
39,42,166,196,23Ø,69,16Ø,69,36,2
,23Ø,196,52,1,174,66,16,174,71
8Ø DATA 1Ø9,69,38,4,5Ø,97,32,41,
166,128,16Ø,16Ø,39,4,5Ø,97,32,5,
9Ø,38,243,53,1,35,24,174,66,16,1
74,71,175,71,16,175,66,166
9Ø DATA 196,23Ø,69,231,196,167,6
9,234,69,234,228,231,228,51,69,1
74,97,48,31,175,97,38,176,166,22
8,5Ø,99,38,161,5Ø,98,57
1ØØ FOR I=&H7FØØ TO &H7F66: READ
 A: POKE I,A: B=B+A: NEXT I
11Ø IF B<>11172 THEN PRINT"INVAL
ID DATA STATEMENTS": STOP
```

```
12Ø I=Ø:B=Ø:MO=1
13Ø FOR X=Ø TO 42: READ G$(X):NEX
T X
14Ø FORQ=1 TO1ØØ:READQU$(Q):NEXT
Q
15Ø DATA ********** GLOSSARY **
*********,B1-1F--BUY ONE GET ONE
 FREE,BB--BOUNCE BACK--NEW OFFER
        RECEIVED WITH REFUND,(
###)--P.O.BOX NUMBER USED FOR
  REFERENCE(ADDRESS IS ON FORM),
CBB--INFORMATIONAL BACKING SEEN
      WHEN STORE FORMS ARE GON
16Ø DATA C/D--COMPLETE DEAL READ
Y TO MAIL,C/O--CASH OFF COUPON,C
I OR FSI--INSERT IN NEWSPAPER,CO
UFUND--ATTACH POP AND REDEEM
      AT STORE,CRT--CASH REGIST
ER RECEIPT      DCRT--DATED SDC
RT--W/STORE NAME,EPOP--EACH PAY
OWN POSTAGE
17Ø DATA EXP--EXPIRATION DATE,FO
RM--CERTIFICATE NEEDED TO GET
   REFUND,HT--HANG TAG ON PRODU
CT,H/F--HANDLING FEE,IDENTIFY--I
D--MARK PRODUCT NAME           A
ND SIZE ON POP,JUNK--ANYTHING YO
U DON'T WANT
18Ø DATA LTD--LIMITED TO STATED
```

AREA,LSASE--LONG SELF-ADDRESSED
           STAMPED ENVELOPE,MLR
--COUPONS MAILED TO HOME,MF--MAG
AZINE FORM,MONEY PLUS--ITEMS FOR
 SALE   (NOT REFU
NDS!),NAZ--NAME/ADDRESS/ZIP
19Ø DATA NED--NO EXPIRATION DATE
 STATED,NF--NEWSPAPER FORM,NFN--
NO FORM NEEDED,NTWT--NET WEIGHT
OR FLUID OZ,OFFER--ADVERTISED RE
WARD FOR   PURCHASE,P&G-
-PROCTOR & GAMBLE,PKGF--FORM ON
PACKAGE
2ØØ DATA POP--PROOF OF PURCHASE,
PP--PRICE PAID FOR ITEM,QUALIFIE
R--PART OF PACKAGE USED
    TO GET REFUND,REBATE--OFFER O
N SELDOM USED   OR EXPE
NSIVE ITEM,SF--STORE FORM,SHORT
DATE--EXPIRES IN LESS THAN
        3Ø DAYS
21Ø DATA SMP--SPECIAL MARKED PAC
KAGE,UPC--UNIVERSAL PRODUCT CODE
           BLACK LINES W/NUMBERS,
WFF--WRITE FOR FORM TO (ADDRESS)
,W/--WITH,WSL--WHILE SUPPLIES LA
ST,WRITE UP--NO FORM/AD GIVES TE
RMS,1-4-1--EVEN EXCHANGE
22Ø DATA ACE BANDAGE--BOX,ADOLPH
 TEND--LABEL/MIX--ENV,ALL CONC--
BOXTOP/LIQ--NTWT,ANACIN/-3/ARTH.
/MAX--BOX,ARMOUR--FROZEN DINNER-
UPC,ARMOUR CANNED PROD.--LABEL,B
AGGIES--UPC,BAN ROLL-ON--BOX BAC
K,BAND-AID--WRAPPER,BANQUET PROD
UCTS--UPC
23Ø DATA BAYER PRODUCTS--BOX,BIC
 PRODUCTS--WRAP/CARD,BORDEN CHEE
SE--FRONT PANEL,BOUNTY TOWELS--U
PC,BRACH CANDY--BAGS/UPC,CAMPBEL
L SOUPS/BEANS--LABEL,CARNATION P
RODUCTS--UPC,CHEX CEREAL--POP,CL
AIROL PROD.--POP/FRONT,CURITY PR
OD.--BOXTOP/WRAP
24Ø DATA DATRIL--BOX,DEL MONTE--
UPC/NECKBAND,DIXIE(PAPER)--POP/B
OXTOP,DOLE--LABEL,DRISTAN--BOX,D
UNCAN HINES--NTWT,EKCO PRODUCTS-
-UPC/CARD,EQUAL--UPC,FANTASTIK--
NTWT,FIESTA SOAP--WRAPPER
25Ø DATA FORMULA 4Ø9--UPC,FRENCH
 PRODUCTS--UPC/NTWT,GENERAL MILL
S--UPC,GILLETTE--UPC,GLAD--UPC+T
EAR OPEN STRIP,GOLDEN GRAIN--UPC
,GREEN GIANT--POP,HALL'S COUGH D
ROPS--BAG/UPC,HEINZ--LABEL W/UPC
,HUNT FOODS--LABELS
26Ø DATA IRISH SPRING--UPC,IVORY

SOAP--UPC/LIQ--NTWT,JENO'S PIZZ
A--POP,JERGENS PRODUCTS--POP,JOH
NSON BABY PRODUCTS--UPC,KEEBLER
PRODUCTS--POP/UPC,KELLOGG CEREAL
S--POP,KODAK FILM--POP/BOX,KOOL-
AID--POP
27Ø DATA KOTEX/KLEENEX--UPC+LOGO
,KRAFT--UPC LABEL,LAWRY--ENVELOP
E/UPC,LIBBY--LABELS,LIPTON--UPC/
FRONT/SIDE,LISTERINE--NTWT/UPC,M
ARS CANDY--POP/NTWT/WRAP,MAX FAC
TOR--POP,MAZOLA OIL/MARG--NTWT,M
INUTE MAID--OPENING STRIPS
28Ø DATA MJB RICE/MIXES--UPC,MOT
T'S--NTWT/UPC/LOGO,MURINE/PLUS--
BOX FRONT/BACK,NABISCO PRODUCTS-
-UPC/POP,NESTLE PRODUCTS--WRAP/P
OP,NEW FREEDOM--UPC,NORTHERN--BO
Y/GIRL FACE/UPC,OLD SPICE--POP/U
PC,ORAL-B--BOX,OROWEAT--WRAP/UPC
,OSCAR MAYER--LABELS
29Ø DATA OXYDOL--NTWT,PALMOLIVE
SOAP-UPC/LIQ-NTWT,PARKAY--UPC,PE
PSODENT--NTWT/UPC,PETER PAUL CAN
DY--WRAP/BAG,PILLSBURY--UPC/BISC
.--LABEL,POLAROID--BOX BOTTOM,PO
ST CEREAL--POP/UPC,P&G PRODUCTS-
-UPC/NTWT,PUREX--QUALITY SEAL
3ØØ DATA Q-TIPS--WORDS'17Ø SAF.S
WAB',QUAKER PRODUCTS--UPC/POP,RA
GU--LABEL,RAVE--BOX FRONT,RAY-Ø-
VAC ALK/HD--UPC,REVLON--FRONT PA
NEL,RONZONI--UPC,ROYAL OAK CHARC
OAL--UPC,SANKA INSTANT--INNERSEA
L,SMUCKER--POP/NTWT
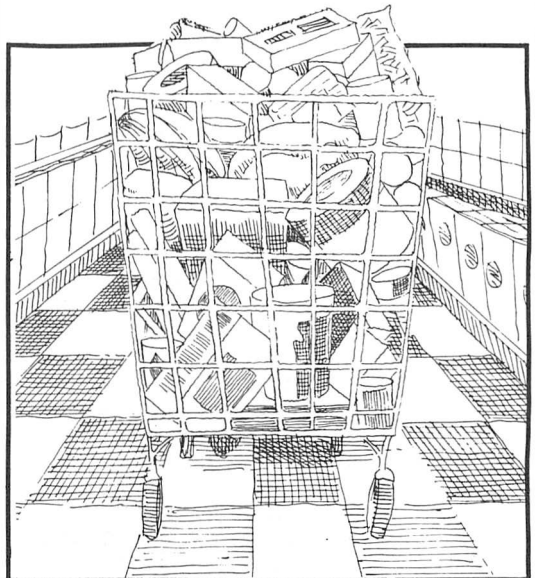
```
310 DATA STP--UPC,SWIFT PRODUCTS
--UPC,THOMAS MUFFINS--UPC,TRIDEN
T--UPC,TYLENOL/COTYLENOL--BOX,UN
CLE BEN RICE--POP,VICKS--BOX FRO
NT/UPC,WEAVER--UPC,WISHBONE--NEC
K LABEL,ZIPLOC PRODUCTS--UPC
320 PRINT:INPUT"GOAL (NUMBERS ON
LY)";GG
330 IF MO=1 THEN 340ELSE360
340 X=RND(-TIMER):F=RND(20):M=RN
D(10):IF F<10 THEN F=10
350 CLS:PRINT@4,"THIS IS YOUR FI
RST WEEK.","YOU HAVE RECEIVED YO
UR BULLETIN AND FOUND";F;"FORMS
IN A STORE.","YOU USE SOME OF TH
ESE PRODUCTS, SO YOU CAN MAIL";M
;"RIGHT AWAY.":GOTO390
360 IF MO>1 AND MO<12 THEN 370EL
SE380
370 CLS:PRINT@6,"FIRST WEEK OF M
ONTH"MO,,,,"EACH MONTH IS DIFFERE
NT","--SOME BETTER, SOME NOT--",
"START EACH MONTH WITH HIGH HOPE
S":GOTO390
380 CLS:PRINT@37,"THIS IS THE LA
ST MONTH."
390 IF B=0 THEN 400 ELSE 410
400 FOR X=1 TO 60:READB$(X):NEXT
X:B=1
410 PRINT:PRINT"OPTIONS:",,"(1)R
EAD BULLETIN","(2)MAKE REQUEST L
IST","(3)CHOOSE ADS TO ANSWER","
(4)READ GLOSSARY","(5)GO TO NEXT
 WEEK"
420 PRINT:PRINT:INPUT"ENTER A NU
MBER (1-5)";C:ON C GOSUB 450,510
,740,1000,810
430 CLS:GOTO 410
450 CLS:PRINT@34,"REFUND BULLETI
N MONTH NO.";MO,,," WRITE DOW
N THE NUMBERS":IF MO=1 THEN PRIN
T"    OF 20 OFFERS AND 5 ADS"ELS
E PRINT"   OF SEVERAL NEW FORMS A
ND ADS":PRINT:PRINT
460 PRINT:PRINT:INPUT"(1)READ OF
FERS (2)READ ADS       (3)RETURN
TO OPTIONS";C:ONC GOTO 470,480,5
00
470 FOR X=1 TO 49 STEP5:CLS:FORY
=0TO4:PRINTX+Y;B$(X+Y):PRINT:NEX
TY:INPUT"<Q>UIT OR NEXT<ENTER>";
C$:IF C$="Q"THEN450ELSE NEXTX:GO
TO 450
480 FORX=51 TO 60STEP5:CLS:FORZ=
0TO4:Y=X+Z-50:PRINTY;B$(X+Z):PRI
NT:NEXTZ:INPUT"NEXT <ENTER>";C$:
NEXTX
490 CLS:GOTO450
500 CLS:RETURN
510 CLS:PRINT@42,"REQUEST LISTS"
,,,"CHOOSE (1)MAKE FORM LIST","
     (2)MAKE QUALIFIER LIST","
     (3)READ YOUR LISTS","
   (4)RETURN TO OPTIONS","ENTER A
 NUMBER (1-4)":INPUTC:ON C GOTO5
20,610,700,730:GOTO510
520 CLS:PRINT"MAKE FORM REQUEST
LIST","ENTER NUMBER OF OFFER (1-
50)",,,
530 IF MO>1THEN540 ELSE580
540 CLS:PRINT"REPLACE ITEMS NO L
ONGER WANTED.",,,"ENTER NO. OF L
IST ITEM (1-20)    OR <0> TO STOP
 THEN NEW NUMBER  FROM BULLETIN
(1-50).":INPUT"CHANGE NO.";CN:IF
 CN=0 THEN GOSUB950:GOTO510ELSE
IF CN>20THEN 540
550 PRINTL1$(CN):INPUT"TO NO.";N
N:IF NN>50THEN 550
560 L1$(CN)=RIGHT$(B$(NN),5)+"
"+LEFT$(B$(NN),20):PRINTL1$(CN):
FOR DL=1TO750:NEXTDL:GOTO 540
580 FORX=1 TO 20:PRINT@160:PRINT
"ITEM"X:INPUTI:IF I>50THEN590ELS
E600
590 PRINT@416,"USE 1 TO 50 ONLY-
-START OVER!":FORDL=1 TO 750:NEX
TDL:PRINT@416,ST$:GOTO580
600 L1$(X)=RIGHT$(B$(I),5)+"   "+
LEFT$(B$(I),20):PRINT@416,L1$(X)
:FORDL=1TO750:NEXTDL:PRINT@416,S
T$:NEXTX:GOSUB950:GOTO510
610 CLS:PRINT"MAKE QUALIFIER LIS
T",,,"CHOOSE: (1)READ ITEM LIST"
,"       (2)MAKE YOUR LIST","
      (3)RETURN":INPUT"(1-3)<ENT
ER>";C:ON C GOTO620,630,510:GOTO
610
620 CLS:FORX=1TO100STEP10:FORY=0
TO9:PRINTX+Y;QU$(X+Y):NEXTY:PRIN
T@448:INPUT"<Q>UIT OR NEXT <ENTE
R>";C$:CLS:IF C$="Q"THEN610ELSEN
EXTX:GOTO610
630 IF MO=1THEN640ELSE670
640 FOR Y=1 TO 20:PRINT@128:PRIN
T"ITEM NO."Y": (ENTER 1-100)":IN
PUTZ:IF Z>100THEN650ELSE660
650 PRINT@416,"WRONG NUMBER! STA
RT OVER!":FORDL=1TO750:NEXTDL:PR
INT@416,ST$:GOTO640
660 L2$(Y)=QU$(Z):PRINT@416,L2$(
Y):FOR DL=1TO750:NEXTDL:PRINT@41
6,ST$:NEXTY:GOTO510
670 CLS:PRINT@64,"ENTER NUMBER O
F LIST ITEM (1-20)OR <0> TO STOP
 THEN ENTER NUMBEROF NEW ITEM FR
```

```
OM QUALIFIER LIST (1-100).":INPU
T"CHANGE NO.";CN:IF CN=0THEN 510
 ELSE IF CN>20 THEN 670
680 PRINTL2$(CN) :INPUT"TO NO.";
NN:IF NN>100 THEN 680
690 L2$(CN)=QU$(NN):PRINTL2$(CN)
:FOR DL=1TO75:NEXTDL:GOTO 670
700 PRINT:PRINT"WHICH LIST (1)FO
RM (2)QUALIFIER (3)RETURN":INPUT
C:ON C GOTO710,720,510
710 CLS:FORX=1TO20 STEP10:FORY=0
TO9:PRINTX+Y;L1$(X+Y):NEXT Y:PRI
NT@448:INPUT"NEXT <ENTER>";C$:CL
S:NEXTX:GOTO700
720 CLS:FORX=1TO20 STEP10:FORY=0
TO9:PRINTX+Y;L2$(X+Y):NEXTY:PRIN
T@448:INPUT"NEXT <ENTER>";C$:CLS
:NEXTX:GOTO700
730 CLS:GOTO 410
740 CLS:PRINT@43,"ANSWER ADS":IF
 MO=1 THEN PRINT"CHOOSE AT LEAST
 TWO 'REGULAR'   TRADERS.  THEY
 CAN BE REPLACED  LATER, BUT USUA
LLY ARE BETTER   THAN 'ONE-SHOT'
S."
750 IF MO=1THEN760ELSE770
760 PRINT:PRINT"ENTER THE NUMBER
 OF THE AD YOU  WISH TO ANSWER (
1-10)":FORX=1 TO 5:PRINT@320:PRI
NT"AD NO."X:INPUTT$(X)=B$(50+T
):NEXTX:CLS:GOTO410
770 PRINT:PRINT"REPLACE TRADERS"
,,"ENTER NO. OF TRADER TO BE","R
EPLACED (1-5) OR <0>TO QUIT","TH
EN NEW AD NO. (1-10)",,,:INPUT"T
RADER NO.";T:IF T>5THEN CLS:GOTO
770 ELSE IF T=0THENCLS:GOTO 410
780 PRINT:PRINT"  "+T$(T),:INPU
T"NEW AD NO.";NT:IF NT>10THEN780
790 T$(T)=B$(50+NT):PRINT:PRINT"
  "+T$(T):FOR X=1 TO 2000:NEXTX
:CLS:GOTO770
800 GOSUB 1000:CLS:GOTO 410
810 X=RND(10):F=F+X:CLS:PRINT@42
,"SECOND WEEK",,,"NONE OF YOUR T
RADES HAVE COME","BACK. YOU FOUN
D"X"NEW FORMS","LAST WEEK. KEEP
LOOKING.":PRINT@448:INPUT"NEXT W
EEK <ENTER>";C$
820 FF=RND(20):IF FF<10THEN FF=1
0:F=F+FF-MM+10
830 W$(1)="ALL":W$(2)="MOST":W=R
ND(2)
840 CLS:PRINT@42,"THIRD WEEK",,,
W$(W);" OF YOUR TRADES ARE BACK.
","YOU HAVE RECEIVED 100 FORMS O
F","WHICH";FF;"WERE ON YOUR LIST
;","HOWEVER, SOME ARE DUPLICATE
.","OTHER FORMS ARE 'NEW' (NOT",
"LISTED YET) AND MAY BE USABLE."
850 PRINT"YOU NOW HAVE"F"OFFERS
TO USE."
860 PRINT@448:INPUT"<ENTER>";C$:
CLS:PRINT@39,"RESULTS OF TRADES"
:GOSUB1020
870 PRINT@104,"KEEP LOOKING!",,,
"GET YOUR REFUNDS READY TO MAIL.
":PRINT@448:INPUT"NEXT WEEK <ENT
ER>";C$
880 CLS:PRINT@36,"FOURTH WEEK OF
 MONTH";MO,,,"NOW IS THE TIME TO
 MAIL EXPIRINGOFFERS, THROW AWAY
 OLD FORMS ANDTALLY UP RESULTS T
O DATE."
890 IF MO>1THEN900 ELSE910
900 RR=M-R-5:IFRR<1THENRR=1
905 R=R+RR:IFR>M THENR=M
910 MM=INT(F/5):M=M+MM:IF MO=12T
HEN R=M
920 PRINT:GOSUB1060
930 MO=MO+1:IF MO<5 THEN B=0:GOT
O360
940 GOTO360
950 CLS
960 DEFUSR0=&H7F00
970 N=VARPTR(L1$(0))
980 POKE&H7FFE,INT(N/256): POKE&
H7FFF,N-INT(N/256)*256
990 A=USR0(0):RETURN
1000 CLS
1010 FOR X=0TO41STEP8:FORY=0TO7:
PRINTG$(X+Y):NEXTY:PRINT@448:INP
UT"NEXT<ENTER>";Q$:CLS:NEXTX:RET
URN
1020 M$(1)="NOT TOO GOOD.":M$(2)
="NOT TOO BAD.":M$(3)="VERY GOOD
!":M$(4)="5 FROM LIST,2 NEW, BUT
 5 JUNK.":M$(5)="NO REQUESTS,BUT
 SOME NEW."
1030 PRINT:FOR X=1TO5:PRINT@64,"
NO."X,,"   ";T$(X):PRINT:Z=RND(5
):PRINT@256,"RESULTS:",,:PRINT@3
20,M$(Z):PRINT@448:INPUT"NEXT <E
NTER>";C$:CLS:NEXTX:RETURN
1040 CLS4:PLAY"D;O4;F;P6;D;O4;F;
":FOR X=0TO8:CLSX:PLAY"P12;":NEX
TX:CLS:PRINT@136,"CONGRATULATION
S!":PRINT@196,"YOU HAVE MADE YOU
R GOAL!":IF MO<12 THEN RETURN EL
SE END
1050 CLS:PLAY"O2;D;D;D;O1;L1;B;"
:PRINT@128,"TOO BAD YOU DID NOT
MAKE YOUR  GOAL.  BETTER LUCK N
EXT YEAR.":END
1060 V=R*1.40:PC=V/GG*100:PC=FIX
(PC)
```
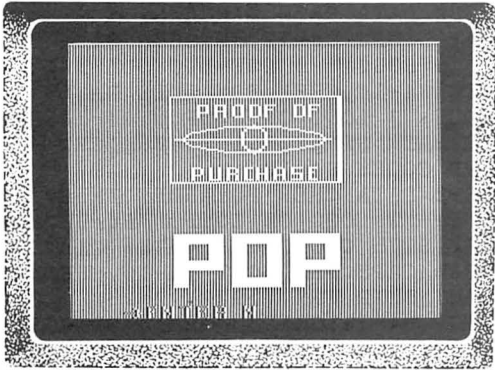
```
1070 PRINT"STATUS:":PRINTUSING"F
ORMS ON HAND =     ####";F:PRI
NTUSING"OFFERS MAILED =    ##
##";M:PRINTUSING"REFUNDS RECEIVE
D =    ####";R:PRINTUSING"VALUE
OF REFUNDS= $####.##";V:PRINTUSI
NG"PERCENT OF GOAL =    ####";P
C:PRINT"GOAL="GG
1080 PRINT@448:INPUT"NEXT <ENTER
>";C$
1090 IF MO=12 AND PC=>100 THEN G
OSUB1040
1100 IF MO=12 AND PC<100 THEN GO
TO 1050
1110 RETURN
1120 DATA GOOD NEWS 1/2 PP     (4
852)       POP=12 RAZORS+CRT 84-0
9,POUR-A-QUICHE TO $2 (1182)
   3 UPC/$1 4 UPC/$2 84-09,SUCARY
L $1 REFUND   (NB566)    1-12 O
Z/2-6 OZ UPC 84-09,VEG-ALL FREE
CAN    (1563)       2-29 OZ LABEL
S 84-09
1130 DATA DR.SCHOLL'S AIR-P.50(N
B011)      LARGE LOGO + CRT 84-10
,DR.WEST T.BRUSH $1    (637)
  3 UPC  84-10,OSCAR MAYER $1
  (3416)      6 COLD CUT LABELS
84-10,JET X TO $4.50        (ADDR)
      UPC 1/2/5 QT + DCRT 84-10
1140 DATA JELLO GEL./PUD.C/O'S(3
951)       4 LGE/8 SM FRONTS 84-1
1,SUNLIGHT 2-.50 C/O'S(3361)
  48 OZ NTWT 84-12,STAR COFFEE F
ILT.C/O(ADDR)      2 GUARANTEE S
EALS 84-12,ALLEREST .50 + C/O'S(
PM419)      UPC 84-12
1150 DATA DAP SPACKLING CMP $1(N
B691)      2-6 OZ CUT TIPS +CRT 8
4-12,GAS X .50 + C/O'S   (3397)
      CRT 84-12,DERUSTO $1
     (NB008)      SPRAY=2 LABEL/QT
=CRT  84-12,SATIN CIGARETTE C/O
(2057)       2 CARTON END FLAPS
84-12
1160 DATA TREETOP SPARKL.FREE (N
B916)      3 LABELS OR CRT  84-12
,LOVE MY CARPET C/O'S (PM526)
 UPC + CRT 84-12,BD MICRO FINE I
I $2 (NB027)      NAME & PRODUCT
# FLAP 84-12,QUICKIE MOPS $1
  (175)       WRAPPER + CRT 84-12
1170 DATA SOLO CUP DISPENSER  (W
)       3 POP  84-12,VAN DE KA
MP MEX. $1 (610)      3 POP + C
RT/LETTUCE 84-12,SCHICK BLADES $
1    (9373)      2 UPC SUPER II/
ULTREX 84-12,TRONOLANE $1.75
 (NB006)      UPC + NAME + CRT 84
-12
1180 DATA GLAD/FREE FLASHLIGHT(1
085)      3 UPC TRASH BAGS  84-1
2,DAISY RAZORS $1    (4835)
 8 PACK POP  84-12,RAID INDOOR
FOG. $1 (9428)      UPC + CRT 84
-12,GIOIA $1         (1340)
  3 UPC  84-12
1190 DATA COMSTOCK C/O'S        (7
1),      4 'LITE' LABELS 84-12,
TABATCHNIK SOUP C/O (ADDR)
4 UPC  84-12,OLD SPICE A.S. $1
  (5012)      SMP NECKCOLLAR + CR
T 84-12,MOREY'S SMOK.FISH $1(900
62)      2 FRONTS  84-12
1200 DATA SELSEN BLUE $1      (N
B621)      UPC 1-7 OZ/2-4 OZ 84-1
2,PRO COMFORT $2     (NB885)
 FRONT NAME  85-03,SALLY HANSEN
$1.50 (ADDR)       PICTURE PANE
L 85-06,KJELDSEN COOKIES $1 (NB
365)      CENTER DIVIDER 85-03
1210 DATA DREAM WHIP C/O'S    (6
253)       SPECIAL POP  86-12,GOO
D NEWS 1/2 PP    (4853)      POP
=12 RAZORS + CRT 85-03,MAXIM .5
0        (7122)      2 INNERS
EALS 86-08,MEGUIAR NO BUFF $1
(783)      POP+CRT  85-12
1220 DATA SANO'S SPAG. C/O'S  (A
DDR)      3 SAUCE LABELS  85-01,
MOISTURE WHIP $2     (6638)
3 CARD + CRT  85-03,GOYA BEANS $
1    (ADDR)       10 UPC NED-
-,FARM BEST MILK $1.75(5314)
  4 UPC (QT) NED--
1230 DATA GREAT EXPLORER $2    (G
E)      3 SPICE JAR FLAPS NED-
-,GAINESBURGERS C/O'S (8048)
  2 STAR PRICE MARKS  NED--,HOLL
YWOOD CANDY FREE(NB823)      SPEC
```

IAL PKG NED--,DEL MONTE PINEAP
.55(COUF)   ATTACH 2 UPC 15 O
Z NED--
1240 DATA SUCCESS RICE $1   (5
5264)   3-14 OZ POP NED--,WEAV
ER COLD CUTS C/O(7245)   3 UP
C NED--
1250 DATA FORMS EXCHANGED 1-4-1.
LSASE.   REQUESTS WELCOME. ANN
IE
1260 DATA QUICK TRADE. SAME DAY
SERVICE   SEND 10 FORMS GET 15.S
ASE.VI
1270 DATA TRY ME! REGULAR TRADE
FORMS   & QUAL.1-4-1. LIST+LSASE.
GRACE
1280 DATA EPOP!40 FORMS FOR 2 FR
EE FOODCOUPONS. 60 DAY EXP. MARY
1290 DATA FREE 30 FORMS FOR DIET
AC/SUDAFED/VICKS CARTON. LSASE.
BILL
1300 DATA REGULAR TRADE 1-4-1. L
ISTS.   FAST LIMIT 15. LSASE. BEA
1310 DATA SEND 15 ALIKE-GET 18 D
IFFER- ENT! REQUESTS. LSASE. JO
ANN
1320 DATA 20 FORMS FOR ANY 3 CUR
RENT   QUALIFIERS. LIST OK. LSAS
E.BESS
1330 DATA LET'S TRADE! SASE FIRS
T TIME.   LIMIT 20. 60 DAYS. KAR
EN
1340 DATA SEND YOUR BEST FORMS A
ND GET MY BEST. NO LISTS.LSASE.
 RUTH
1350 DATA FANCY FRUIT/TRIVET   (7
26)   3 LABELS 84-09,CURITY/CUR
AD $1   (4409)   BOXTOP/WRAPPE
R 84-09,GRANDMA MOLASSES $1 (GB-
200) 2 FRONT PANELS 84-09,LLOYD
J.HARRISS/MILK (7726)   CHERRY PI
E 2 NTWT 84-09,FANTASTIK 40 OZ F
REE (200)   44 OZ SMP+CRT 84-0
1360 DATA OREO/QUIK FREE MILK (N
B388) 2 OREO POP + 2 LB QUIK POP
 84-09,WIDGET/PAINT $2/GAL. (417
4)   POP + PAINT LABEL + CRT 84-0
9,PARKAY $3 C/O BOOK (815) UPC
5-1 LB STICK MARG. 84-09,CANADA
DRY $1 C/O   (NB384) 4 NECK LAB
EL/CAP LINERS 84-09
1370 DATA HUNT FREE SPAGHETTI (8
2672) CRT TOM.SCE + UPC SPAG. 84
-09,FOAMY GEL $1   (4750)
SMP LABEL + CRT 84-09,C&H SUGAR/
EGGS .55 (COUF) 2 CAMEO ON COU
PON 84-10,BEST FOOD SAL.DR..75 (
1652) 3 LABELS-LMT AREA 84-10

1380 DATA RAIN DANCE $3   (3
84)   UPC 84-10,JERGENS $4
 (8880)   3 POP-LIQ.SOAP/LOT./
ETC 84-10,CHEF BOYARDEE RAV.50 (
COUF) 3 LOGO ON COUPON 84-10,STY
LE HAIR SPRAY $1 (4406) CRT + C
OPY CODES 84-10
1390 DATA CHEF BOYARDEE FREE (C
OUF) 3 LOGO ON COUPON 84-10,DAT
RIL $.75 C/O   (14033) CARTON/
DRAW CAPS.PKG +CRT 84-10,GREEN G
IANT STIR FRY (1922) 2-.50 C/O 2
 POP 84-11,GOLDEN GRAIN BINGO$2
(81006) .20/UPC (MINIMUM 3) 84-1
2
1400 DATA HYPONEX $1   (P
M023) HANG CARD +CRT 84-12,ANACI
N/KITCHEN TOOL   (745)   MAX.STR.F
RONT PNL+CRT 84-12,CLASSY CURL $
4   (NB721) UPC 84-12,GEISLER
 FLEA COLL.$1 (5533) BOX TOP 84
-12,TEMPO 30'S $1.59   (16022)
FRONT PANEL + CRT 84-12
1410 DATA HALL'S C.DROPS $1.25(8
2695) 2 BAGS OR 4 STICK UPC 84-1
2,UNISOM/FREE SAMPLE (257)   1
OTHER SLEEP TABLET 84-12,COME &
GET IT/GIFTS (650B) E.G.=T-SHIR
T 80 LB POPS 84-12,SEA DOG $2/C/
O'S   (14392) 1 NTWT CIRCLE 84-
12
1420 DATA HI-C/PUZZLES&CRAYONS (
9924) 10 SEALS 46/64 OZ 84-12,BU
ITONI RAVIOLI C/O (COUF)   2 UPC
ON COUPON 84-12,LA CHOY NOODLES
$1 (NB734) POP NOOD./SOY SCE +
SMP 84-12,KORDITE $2   (8
516)   3 BAG POP + CRT 84-12
1430 DATA ZIP WAX INSTANT $2   (P
M001) UPC 74660-01090 + CRT 84-1
2,BRYAN V.SAUSAGE $1 (738)   8
LABELS-LMT AREA 84-12,BLUE POLY
$3   (2268) UPC+CRT(STORE
ID) 84-12,JFG COFFEE/PERCOL. (2
151) 30 CUP SIZE-100 UPC 84-12
1440 DATA TRONOLANE $1.75   (N
B006) UPC+UPC PAIN KILLER+CRT 84
-12,CLASSIC FROZ.SAND. (170)
B3-1F COOK.INSTR.PANEL 84-12,PAN
CHO VILLA $1   (2653) 3 BXTP/
LABEL/ENVEL. 84-12,TONI SILKWAVE
 $2   (4064) UPC KIT/CURLERS+D
CRT 85-01
1450 DATA POST TOASTIES B3-1F (8
105) 3 BXTP (5= +C/O) 85-01,LIG
HT & ELEGANT C/O (94753) 2 UPC
85-01,VICKS THROAT DROP $1 (968)
 UPC 85-01,SIMONIZ SUPERPOLY $2

(444) GUARANTEE+DCRT(STORE ID) 85-Ø1
146Ø DATA MELITTA TO $2 +C/O (4 211) DCRT 85-Ø1,ENCARE $1   (7196) CARTON + CRT 85-Ø3, PREP.H C/O BOOKLET (549) 2 CARTONS 85-Ø3,ORIGIN $1 (1Ø67) CONTAINER+DCRT(STORE ID) 85-Ø3
147Ø DATA 7 FORMS/UPC PEPSODENT6 .5 OZ./PANADOL/PAMPERS. LSASE. JUNE
148Ø DATA FORMS EXCHANGED 1-4-1. SEND 15 SAME/GET 2Ø DIFF.LSASE. JODY
149Ø DATA HONEST TRADER. REQUESTS READ.SEND STAMP + 15 FORMS. JULIE
15ØØ DATA EPOP! 4Ø DIFFERENT FORMS FOR 2 FREE PRODUCT C/O'S. JOYCE
151Ø DATA 35 FORMS + COMPLETE DEAL FOR $1 H/F AND LSASE. JAMES
152Ø DATA SWIFT RETURN! 1-4-1 REGULAR. LSASE FIRST TIME. JONATHAN
153Ø DATA SEND SKIPPY LABEL 18 OZ. GET 1Ø FORMS+2Ø C/O'S. LSASE. ZOLA
154Ø DATA FAST SERVICE! ONCE A MONTH. 15 FORMS + LSASE. HOWARD
155Ø DATA QUALIFIERS 1-4-1. SEND LSASE FOR LIST. NO H/F. WILDE
156Ø DATA EPOP-8 FORMS/POP-OREO/ OXYDOL/VICKS/HUNT CATSUP/JENO. EMILE
157Ø DATA SPECTRACIDE $2   (1

99ØØ) BOOKLET'NAME'+CRT 84-Ø9,DEEP WOODS OFF! $1 (4343) UPC MAX.STR.+CRT 84-Ø9,TRIDENT MINTS FREE (545) UPC-3 PK OR 3-1 PK 84-Ø9,KELLOGG CEREAL B2-1F (4 125) SMP PROOF 84-Ø9
158Ø DATA RAGU/MUELLER PASTA (9215) 3 RAGU LBL+1 PASTA 84-Ø9 ,CHEF SALUTO $.75 (225) LOGO + PEPSI CRT 84-Ø9,ORTHO PEST/ FLEA $1 (351Ø) STICKER + CRT 84-Ø9,TOBIN'S MEAT B4-1F (7819) 4 LABELS 84-Ø9
159Ø DATA ANUSOL $1   (3177) UPC + CRT 84-Ø9,SALAD CRISPINS $.5Ø (NBØ76) COPY CODE# + CRT 84-Ø9,LORD CALVERT CAN. $2 (1968Ø) NECK LABEL+CRT LTD 84-Ø9,STRIKE ROACH TRAP PP (3115) UPC + DCRT 84-Ø9
16ØØ DATA EVEREADY SHD TO $2 (1 ØØØ) TO 4 CARDS 84-Ø9,ORTEGA TACO SALSA (4426) B1-1F LABEL SMP HT 84-Ø9,HERSHEY BIG BLOCK (1112) C/O 2 WRAPPERS 84-Ø 9,FLINTSTONE/ERASERS (2851) END FLAP W/NAME 84-Ø9
161Ø DATA STP CARB. SPRAY $1 (799) STOCK#/PART# 84-Ø9,BAN 2 .5 OZ $1   (14829) BACK PANEL+CRT 84-Ø9,MASSENGILL $1.5Ø   (1Ø77) 2 UPC+CRT LMT AREA 84-Ø9,GLAD 'BOSLEY BUCKS' $2(22 15) 3 UPC+TEAR STRIP 2Ø CT 84-Ø9
162Ø DATA X14 $.5Ø + C/O   (1345) UPC SMP 84-Ø9,REPEL X

V FREE QUART(1AB004)   CRT (2 AL
LOWED)   84-09,KERR/CERTO/HEINZ
   (8244) $1 C/O SUGAR 9 UPC 8
4-09,KRAFT MAYO/VEG. $1   (2665)
   3 BACK LBL+CRT FOR VEG   84-09
1630 DATA WYLER LEMONADE $1
(7031) 20/32 QT UPC 84-09,LIPT
ON TEA SAMPLE   (7325) W/NUTR
ASWEET FORM ONLY 84-09,SUNBEAM B
READ$2/BEEF (705) 6 SPECIAL PO
P SMP 84-09,SALADA TEA C/O'S
   (5114) 2 POP 84-09
1640 DATA DOLE PINEAPPLE C/O'S (
22190) 6-46 OZ OR 6 PK UPC 84-0
9,HAWAIIAN PUNCH C/O   (7040) U
PC 4/2 QT OR 10/UNSWEET 84-09,FI
NAL NET C/O +GAME (14839) PUMP=
POP AER=COPY UPC 84-09,B.CROCKE
R ANGELFD $1 (5205) 2 UPC LTD A
REA 84-09
1650 DATA SMUCKER T-SHIRT   (
716) 4 LBL + .75 P/H 84-09,DE
NTURITE $.75   (ADDR)   BOTTO
M PANEL+CRT 84-09,STROH PARTY K
IT   (3591) SEND NAME & AD
DRESS 84-09,STROH $1 + PARTY KI
T (1129) 2 LIGHTBEER UPC+CRT
84-09
1660 DATA GILLETTE/FREE JACKET (
1158) 10 ATRA UPC + $1 P/H 84
-09,SEAGRAM 7 CROWN $2   (305)
   1.5L NECK LABEL 86-05,BACO/FR
EE LETTUCE   (748) 2 FRESHNES
S SEALS 84-09,BON-BONS ICE CREA
M C/O(86) 2 UPC 20/36 CT SIZ
E 84-09
1670 DATA IRISH SPRING $1
(672) 4 UPC + CRT 84-09,CHILD
'S ANACIN-3 C/O (4243)   CARTON
+CRT 84-09,VAN DE KAMP SEAFOOD
$1 (67) 2 POP PANEL + CRT 84
-09,POUR A QUICHE $2   (5676B)
   3 UPC 84-09
1680 DATA VIDAL SASSOON TO $2
(4463) 3 DIFF.UPC FOR $2 84-09
,COMBO'S/IRON ONS   (7526) N
TWT PIZZA 84-09,WILTON BAKE PAN
$2   (4419) UPC OR STOCK# +CR
T 84-09,STRIKE INSECT STRIP PP(3
116) UPC + CRT 84-09
1690 DATA BANQUET CHICKEN C/O (4
030)   UPC + CORN + FRIES 84-09
,CURITY/NEOSP. 1/2 PP (4306) TO
$4.50+$1 BONUS POPS 84-09
1700 DATA TRADE FORMS 1-4-1. 20
 LIMIT.LSASE. REQUESTS.   M
EG
1710 DATA EVEN EXCHANGE. SEND 20

ALIKE/STAMP/LSASE.   BETH
1720 DATA 25 QUALIFIERS .50 AND
LSASE. LISTS READ. NO PROMISES.
 JO
1730 DATA QUALITY EXCHANGE. SEND
20 ALL ALIKE OR DIFF. LSASE.
AMY
1740 DATA REGULAR TRADERS WANTED
. 1-4-1REQUEST LISTS. LSASE 1ST.
 ANNE
1750 DATA SAY YES TO UTAH! TRADE
1-4-1.LSASE. LISTS. LIMIT 20.
HEIDI
1760 DATA COUPON EXCHANGE. SEND
LSASE FOR LIST. NO FEE.   REBEC
CA
1770 DATA GOOD SELECTION! 30 QUA
LIFIERSFOR $1 H/F + LSASE. LAUR
A
1780 DATA RELIABLE FORM EXCHANGE
. 1-4-1LSASE. MAXIMUM 35.   LILI
TH
1790 DATA EAST COAST BEST! TRADE
 EVEN VALUE FOR VALUE.LSASE. CL
AUDIA
1800 DATA ANACIN $1 C/O   (5
56)   CARTON+CRT 84-09,PASSPOR
T SCOTCH $5 (26940) 3 NECK/BOD
Y LBL+CRT 84-09,CURLY PERM $2 +
 C/O (PM717) FRONT PANEL+CRT 8
4-09,BAYER PRODUCTS TO $5 (1009)
 6 DIFF.UPC 84-09
1810 DATA CAREFREE GUM $1 C/O (2
9784) 2 BIG PK UPC 84-09,BREAT
HSAVERS $1 C/O (29732) 1-5 PK U
PC 84-09,GRANDMA MOLASSES $1 (8
00)   LABEL+FLOUR LBL+CRT 84-0
9,J-WAX KIT $1   (7016)   S
YMBOL OR COPY CODE 84-09
1820 DATA CUP-O-BROTH B3-2F (1
89)   (SWANSON) 3 LABELS 84-09
,DOLE PINEAPPLE $2 (4431) 5-2
0 OZ LBL+CHICK.LBL 84-09,AIRWIC
K HAM OFFER $5(SR7855) 9 POP(3 P
RODUCTS) 84-09,BARBASOL GLIDE S
TICK (PM439)
1830 DATA BUNKER HILL CHILI $1 (
1048) (NO BEANS) 3 LABELS 84-10
,UNCLE BEN'S/TONGS   (55196) 4 C
ONV.RICE POP 84-10,SHOOT OUT RE
BATE $1+(PM178) SUPER K GRO UPC+
CRT 84-10,SUPERMOIST FRUIT   (
5250) C/O'S 3 UPC 84-10
1840 DATA ARMOUR ALL $1   (1
068) DCRT(STORE ID)+UPC 84-10,
COUNTY LINE C/O'S   (PM192) 4 'M
AILING ADDR' 84-10,AIR PILLO $.
50   (NB011) LARGE LOGO+CRT

84-1Ø,MEOW MONEY TO $7   (14384
) SMP 48 PTS=$7   84-1Ø
185Ø DATA MAXWELL HSE/AT&T $5 (3
665) 9 INNERSEALS C/O TEL.BILL
84-1Ø,JOCKEY FOR HER B3-1F (4239
) WRAPPER+CRT   84-1Ø,KRAFT/FREE
CABBAGE   (2666) 3 SAL.DR. UPC
84-12,FORMULA 4Ø9 C/O'S   (77Ø4)
  COPY UPC   85-Ø1
186Ø DATA WELCH JELLY B1-1F   (7
8Ø6) SMP POP 2Ø OZ   85-Ø3,WESSO
N OIL BONUS $1 (9ØØ41) 64 OZ CRT
+COPY UPC   85-Ø4,SILHOUETTES PP
$1.75 (4Ø21) SMP   85-1Ø,COMET R
ICE MIX B1-1F (1681) BOXTOP SMP
 85-Ø1
187Ø DATA CLEAR EYES $1 C/O   (3
133)   SMP   NED--,THRIVE B5-1F
       (14374)   SMP 5 SAME SIZE   N
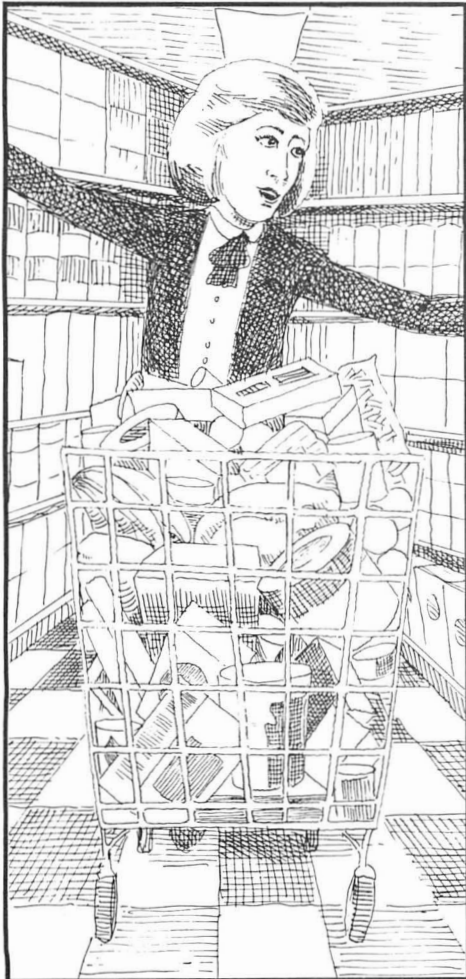
ED--,WONDER WINE MIX FREE (ADDR)
 PKG FRONT+.75 P/H   NED--,SOAPUR
E CASH $1 +C/O (2345)   FRONT PAN
EL NED--
188Ø DATA ALLEREST $.5Ø +C/O'S(N
B785)   LOT# +EXP DATE NED--,SEA
LTEST ICE CREAM (COUF) $1 C/O
3 POP NED--,SENOR NACHO DIP C/O
 (ADDR) DIP LABEL NED--,NATURA
L SUN B1-1F   (2256) OPENING ST
RIP NED--
189Ø DATA SOFT SENSE B1-1F   (1
Ø7ØA) POP SEAL SMP NED--,ECOTRI
N $1   (1ØØØ) CODED END
PANEL NED--,BLISTEX PRODUCT $1
 (DHR)   UPC +NAME&ADDRESS   NED-
-,QUEEN HELENE $1   (ADDR) EL
ASTIN CRT ONLY NED--
19ØØ DATA TREESWEET FREE + C/O (
518) 4-6 OZ OPEN STRIPS NED--,
DINTY MOORE $2.5Ø   (8ØØ)   1Ø F
RONT LBL STEW NED--,COLOMBO PIZ
ZA C/O'S (NB73Ø) 3 FLAVOR NAMES
 NED--,ROSARITA SAVE $1 C/O (317
1) POP NED--
191Ø DATA HOLLY FARMS RECIPES (3
Ø327) 3 POP SEALS NED--,JOLLY T
IME 15 OZ .5Ø (178) 2 PENNANTS
 NED--,HOT & RICH FREE/PP (4175
) SMP +DCRT NED--,LISTERMINT $
1   (917Ø) UPC 6 OZ UP NED
--
192Ø DATA WISHBONE/LETTUCE   (9
443) $1.5Ø C/O 4 NECKBANDS NED
--,KIMLAN SAUCE B1-1F (1355) N
ECKBAND 1Ø OZ NED--
193Ø DATA HI! LET'S TRADE OUR BE
ST! 1STTRADE LSASE. 1-4-1.   DALE
E,EXPERIENCED TRADER. 1-4-1/45 D
AY EXP.LSASE 1ST TIME. ROGERS
194Ø DATA BACK IN A FLASH! 2Ø FO
RMS FORCURRENT QUAL. LSASE. GOR
DON,5Ø DIFFERENT FORMS. $1 H/F +
 LSASE. NO LISTS.   A&B EXCHANGE
195Ø DATA SEND .2Ø STAMP-RECEIVE
 1Ø + FORMS.   RUTH,I'LL SEND 5
FORMS FOR EACH   CIG.C/O. LSASE.
   BABE
196Ø DATA I'LL FILL YOUR LSASE W
ITH C/OFOR 2 QUAL.+FORMS. JACKI
E,QUITTING! STUFF YOUR LSASE W/F
ORMS-QUAL-COUPONS.$1 H/F. EMMA
197Ø DATA REQUESTS HONORED! 2Ø F
ORMS +5C/O PER QUAL. LSASE.   PA
MELA,PIC-A-DEAL!(1)1-4-1(2)$1 H/
F GET 2Ø FORMS. LSASE. EVELYN
198Ø END
199Ø PMODEØ,1:PCLEAR1:GOTO3Ø
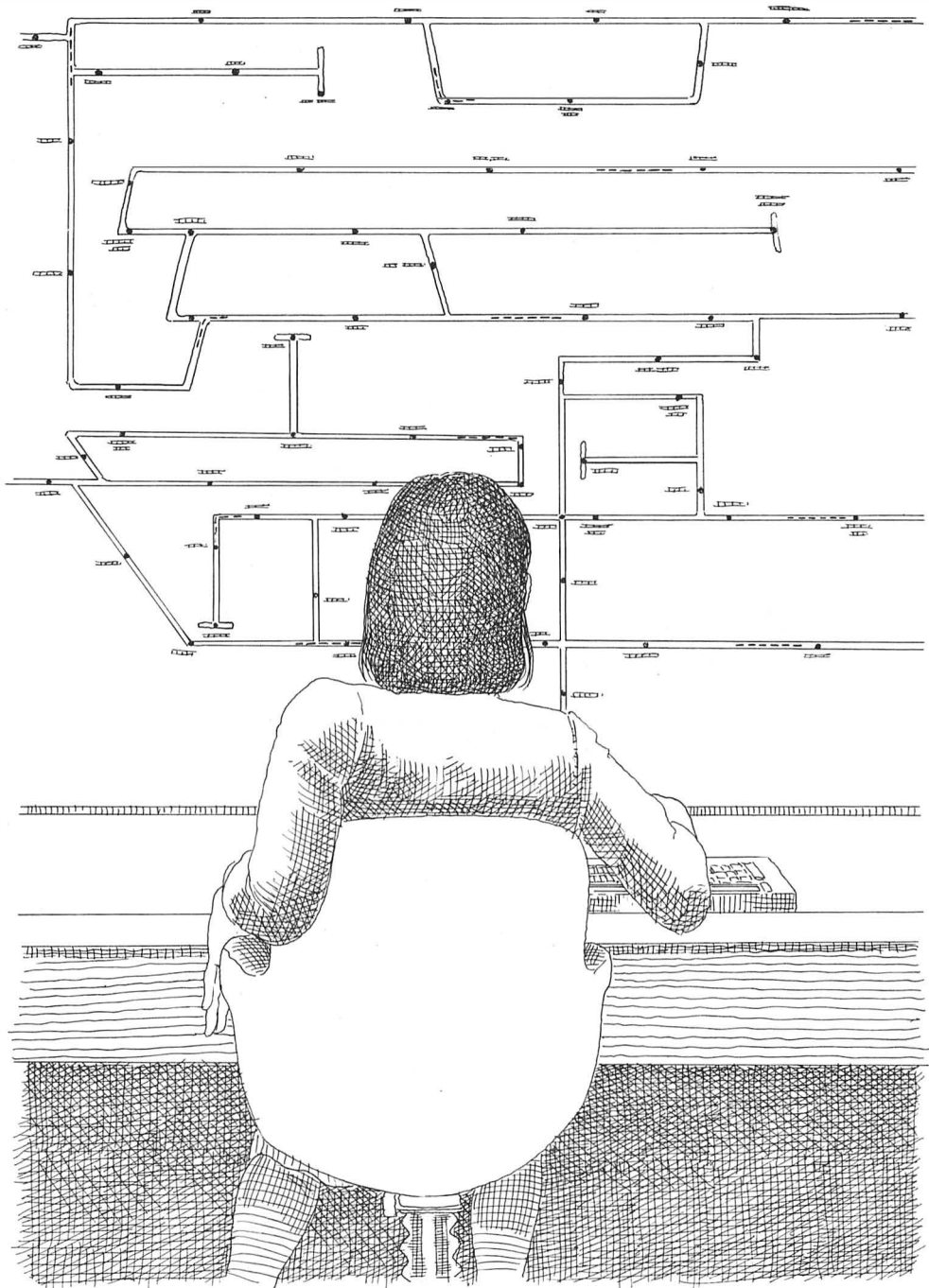
MASTER TRAIN DISPATCHER

Program by E.L. Vasser

Y ou are responsible for the lives of thousands of people and millions of dollars worth of equipment as you are in command of the train dispatcher's position. It's your job to move 18 trains over your territory with as little delay as possible. This Simulation requires concentration and will probably take a lot of practice before you qualify as a Master Train Dispatcher.

After the program is loaded and run, a title screen appears, followed by a high resolution (PMODE 4) graphics Territory screen. This screen is the main part of the program and shows what is going on in your control territory. It is a schematic diagram of a real-life railroad system between Winchester and Louisville, Kentucky.

As with airports, the railroad industry also uses abbreviations to identify its various locations. In this case, North Cabin in Winchester is abbreviated NC, HK Tower is in Louisville, LX is Lexington, Ky., and so forth.

This screen is the same kind of display found

on a train dispatcher's console in a typical centralized traffic control system, but it is separated into four sections here to provide more detail. All sidings and branch lines are indicated as found on the actual railroad line.

Railroad direction from Winchester (North Cabin) to Louisville (HK Tower) is northward. On the Territory screen, south is to your left and north is to your right. Winchester is at the upper left and Louisville at the lower right. NC and HK are points where the line junctions with other divisions of the railroad. LX is a railyard in which all trains stop and remain for some length of time before proceeding.

The main track is divided into 10 "blocks" and, except for NC, LX and HK, each block terminates between the switches of a siding, where trains may pass or opposing trains may meet and pass each other. Block limits are vertical lines extending from the main track with the two-letter block limit designation centered over it.

At the bottom of the screen is a prompt; press 'T' to go to the Train Sheet mode of the program. All action and the update features of the program occur in the Territory screen mode only. Whenever you are in the Train Sheet mode, no changes occur in the Territory. The Train Sheet screen simulates your written log of train movements so you can identify what trains are in the blocks, in sidings or approaching the block system. At the bottom of this screen is a menu: press 'I' to issue block orders, 'C' to clear a block and 'T' to return to the Territory screen.

All train numbers are three-digit numbers with even numbers representing northbound and odd numbers for southbound trains. To issue a block to a train, press 'I' and you will enter the Issue Manual Blocks mode. Enter the train number, the train's block limit location and the next block limit ahead. If you want the train to "take siding" at the block limit in advance, enter Y when prompted and enter the block limit as follows:

        TO C&E TRAIN NO.(160) AT (NC)
        MANUAL BLOCK IS CLEAR TO (AV)
        TAKE SIDING? Y/N (Y) AT (AV)

If all the information entered is correct and contains no system errors, you are returned to the Train Sheet, which displays that train number between the designated block limits and beside the block limit of the siding's location. Trains approaching the block system or ready to depart LX yard appear within less-than (<) or greater-than (>) characters to indicate their direction.

Approach sections are also indicated by an inverse 'A', sidings by an inverse 'S' and the yard at LX by an inverse 'Y'. This screen may be confusing at first,

but as you play you will get the idea. Its primary function is to help you keep track of the trains and their numbers.

To clear a train from a block, press 'C' and you will be in the Clear Manual Blocks mode. Enter the number of the train that is reporting "clear" and its block limit. Once again, if the information is correct, you are returned to the Train Sheet screen. In both the Issue and Clear Blocks modes, the program only permits you to enter the correct train number and block limit designations.

Invalid entries result in being prompted to re-enter the data until it is valid. This prevents incorrect train numbers and misspelled or invalid combinations from being entered for block limits.

Trains cannot enter the Manual Block System from any point until authority is received from the train dispatcher (you). By withholding authority, you provide spacing of trains moving in the same direction, and by instructing trains to "take siding" when necessary, allow opposing trains to pass each other.

At the beginning of the Simulation, there are two trains in the yard at LX and there are eight northbound trains that want to enter the block system. When a train approaches the block system at NC or HK, or a train is ready to depart LX, the program interrupts the Territory screen and advises you by sounding a tone and displaying a message that indicates the train number and its block limit location. Since this is a random selection, there may be a few minutes delay before anything happens.

You cannot issue a block to a train until it has been entered by the program. Once a train is in one of the approach sections (NC or HK) or ready to depart from LX, a train symbol appears on the Territory screen at the proper location. If the block in advance of the train is clear of opposing or preceding trains, you may issue a block to that train. Trains may be advanced only one block at a time. If there are opposing trains in the blocks beyond a particular block, you need to instruct the train to "take siding" at the block limit where the opposing train will meet (except LX). Always enter N when issuing blocks to NC, HK or LX.

Attempting to issue a block to trains through a block that is occupied sounds a warning and a "serious error" is counted against you. (The number of such errors is displayed when the program ends). This also happens if you order two trains to "take siding" at the same point. You must be extra cautious since you cannot reissue a block to a train. Although the program could be altered to do so, the author has chosen not to in order to make it more challenging.

Once you have issued a block to a train and returned to the Territory screen, the train symbol moves along the main track line until it reaches the block limit

in advance or the switch at the entrance to the siding. If the train is to take siding at that point it reports clear of the block and reappears in the siding. If not instructed to take siding, when the train reaches the block limit it requests another block. When you issue another block to the train, the train's symbol begins to move again. When the train passes the block limit, it reports clear at that block limit. When you have cleared that block you may then allow another train to enter it.

Trains that report clear of the block in a siding will not request a block after reporting clear. It is up to you to see that the train is advanced from the siding as soon as the block in advance is clear. To prevent undesired effects in the program, always wait until a train requests a block or reports clear of a block before actually issuing another block. In actual practice it is forbidden for a train dispatcher to show a block clear until it has been reported clear — after all, it's possible something could go wrong in the system's electronic circuits and incorrectly indicate a clear condition.

The program will also not allow you to clear a block unless that train has been issued another block or is to take siding. If you should clear a train in a siding before it has actually moved into the siding, its symbol will not appear in the siding location although its train number is shown on the Train Sheet.

There is one bug that can occur when trains request or clear blocks. It happens if you go to the Train Sheet mode at the same instant a train is going to request or clear a block. The result is that you will not get the "clear" report or request for a block. The train simply stops at the block limit or appears in the siding as it normally would. This simulates a train failing to report clear, which does happen sometimes. You, as dispatcher, must be alert for these situations.

When a train clears the block at LX, it will not re-enter the block system for some time, which simulates trains being switched in the yard. You will generally have at least three trains in the LX yard before one is ready to depart, and the trains may or may not depart in the same order in which they arrive.

Master Train Dispatcher starts out easy, with only one or two trains in the block system. As more trains enter the system, it becomes increasingly difficult, and the trains' movement seems almost too fast to keep up with. Remember that you are dealing with large distances between yards and sidings, so the movement initially looks very slow.

This Simulation should keep you occupied for hours. You will soon see why once railroading gets into your blood, it's with you for life.

Ed Vasser has over 15 years experience with railroad operations. He is employed by the Kentucky State Police in Frankfort, Kentucky, and works with MS-DOS computer systems.

```
0 PRINT"MBTDS" : CLS0
1 CLEAR200 : PCLEAR4
2 TIMER=0
3 DIMNT(10,3),ST(10,3)
4 PRINT@167,"manual";:PRINT@174,
"block";:PRINT@180,"train";
5 PRINT@229,"dispatching";:PRINT
@241,"simulation";
6 PRINT@297,"COPYRIGHT 1984";
7 PRINT@329,"by";:PRINT@333,"e";
:PRINT@335,"l";:PRINT@337,"vasse
r";
8 FORT=1TO6000 : NEXT
9 FORX=0TO9 : READBN$(X) : NEXT
10 DATANCAV,AVLX,LXMK,MKWF,WFBN,
BNGH,GHLS,LSSV,SVEW,EWHK
11 FORX=0TO9 : READBS$(X) : NEXT
12 DATAAVNC,LXAV,MKLX,WFMK,BNWF,
GHBN,LSGH,SVLS,EWSV,HKEW
13 FORX=1TO8 : READSD$(X) : NEXT
14 DATAAV,MK,WF,BN,GH,LS,SV,EW
15 FORX=0TO9 : READVN(X) : NEXT
16 DATA9,105,0,90,223,48,118,206
,68,146
17 FORX=0TO9 : READVS(X) : NEXT
18 DATA128,245,115,244,71,140,22
8,88,168,236
19 FORX=0TO10 : READBL$(X) : NEX
T
20 DATANC,AV,LX,MK,WF,BN,GH,LS,S
V,EW,HK
21 E=0 : LN$="146" : LS$="139" :
 WN(4)=0 : WS(4)=0 : AN=0 : YN=0
 : LN(7)=0 : LS(7)=0 : AS=0 : YS
=0
22 FORX=1TO8 : CN(X)=0 : NEXT
23 FORX=1TO8 : CS(X)=0 : NEXT
24 FORX=1TO8 : READAN$(X) : NEXT
25 DATA160,128,144,162,148,164,1
66,138
26 FORX=1TO9 : READNT$(X) : NEXT
27 DATA160,128,144,162,148,164,1
66,146,138
28 FORX=1TO8 : READAS$(X) : NEXT
29 DATA161,129,145,163,149,165,1
67,147
30 FORX=1TO9 : READST$(X) : NEXT
31 DATA161,129,145,163,149,165,1
67,147,139
50 PMODE4,1
51 PCLS5
52 SCREEN1,1
53 DRAW"C0BM10,5BR1R7F1D1G1L7U3"
 : PAINT(12,6),0,0
54 GET(10,5)-(20,8),NT,G
55 DRAW"C0BM30,5BR2R7BR1BD3BL1U3
```

```
BD3L7H1U1E1" : PAINT(33,6),0,0
56 GET(30,5)-(40,8),ST,G
100 PMODE4,1
101 PCLS5
102 SCREEN1,1
103 DRAW"C0BM2,12R4U2L4U2R4":DRA
W"C0BM10,12R4U4L4D4":DRAW"C0BM18
,12R4U4BL4D4":DRAW"C0BM23,12BR4U
4L2R4":DRAW"C0BM32,12U4D2R4U2D4"
104 DRAW"C0BM218,12U4F4U4":DRAW"
C0BM226,12U4R4D4L4":DRAW"C0BM234
,12U4R4D2L4BR2F2":DRAW"C0BM242,1
2BR2U4L2R4":DRAW"C0BM250,12U4BD2
R4BU2D4"
105 DRAW"C0BM84,12U4R3F1G1L3BR3F
1G1L3":DRAW"C0BM92,12U4BD4R3":DR
AW"C0BM98,12U4R4D4L4":DRAW"C0BM1
06,12U4R3BD4L3":DRAW"C0BM112,12U
4BD2R2F2BH2E2"
106 DRAW"C0BM130,12U4BD4R3":DRAW
"C0BM137,12U4":DRAW"C0BM141,12U4
F2E2D4":DRAW"C0BM149,12U4":DRAW"
C0BM151,12BR3U4L2R4":DRAW"C0BM15
9,12R4U2L4U2R4"
125 DRAW"C0BM0,48F8":DRAW"C0BM4,
52R255":DRAW"C0BM20,52U12L6R12":
DRAW"C0BM48,52F6R4E6":DRAW"C0BM8
0,52H6":DRAW"C0BM180,52F6R4E6":D
RAW"C0BM96,52E6R20F6":DRAW"C0BM1
18,52U12L6R12":DRAW"C0BM224,52U1
2L6R12":DRAW"C0BM236,52H6":DRAW"
C0BM238,52E6R12"
126 DRAW"C0BM14,38U4F4U4":DRAW"C
0BM22,38R4BU4L4D4":DRAW"C0BM112,
38U3E1R2F1D3BU1L4":DRAW"C0BM122,
38H2U2BR4D2G2":DRAW"C0BM218,38U4
BD4R3":DRAW"C0BM225,38E2F2H4F2E2
"
127 DRAW"C0BM0,92R255":DRAW"C0BM
0,86R12F6":DRAW"C0BM20,92U12L6R1
2":DRAW"C0BM48,92F6R4":DRAW"C0BM
80,92E6R20F6":DRAW"C0BM102,92U12
L6R12":DRAW"C0BM120,92F6R4E6":DR
AW"C0BM148,92F6R12E6":DRAW"C0BM1
52,92E6R4F6":DRAW"C0BM192,92H6":
DRAW"C0BM204,92G6"
128 DRAW"C0BM212,92E6R20F6":DRAW
"C0BM234,92U12L6R12":DRAW"C0BM14
,78U4BD4R3":DRAW"C0BM22,78E2F2H4
BF2E2":DRAW"C0BM96,78U4F2E2D4":D
RAW"C0BM104,78U4BD2R2F2BH2E2":DR
AW"C0BM228,78BU1U3BD3F1E2F2E1U3"
:DRAW"C0BM237,78U2R2BL2U2R3"
129 DRAW"C0BM0,132R255":DRAW"C0B
M40,132E6R20F6":DRAW"C0BM108,132
E6R20F6":DRAW"C0BM160,132F6R4E6"
```

```
:DRAW"CØBM188,132E6R28F6":DRAW"C
ØBM62,132U12L6R12":DRAW"CØBM13Ø,
132U12L6R12":DRAW"CØBM218,132U12
L6R12"
13Ø DRAW"CØBM56,118U4R3F1G1L3BR3
F1G1L3":DRAW"CØBM64,118U4F4U4":D
RAW"CØBM124,118U4R4BD2L1R1D2L4":
DRAW"CØBM132,118U4BD2R4U2D4":DRA
W"CØBM212,118U4BD4R3":DRAW"CØBM2
2Ø,118R4U2L4U2R4"
131 DRAW"CØBMØ,172R251E4G1Ø":DRA
W"CØBM12,172F6R4E6":DRAW"CØBM22,
172H6":DRAW"CØBM37,172H6":DRAW"C
ØBM6Ø,172E6R16F6":DRAW"CØBM138,1
72E6R16F6":DRAW"CØBM188,172F6R4E
6":DRAW"CØBM218,172F6R4E6"
132 DRAW"CØBM8Ø,172U12L6R12":DRA
W"CØBM158,172U12L6R12":DRAW"CØBM
232,172U12L6R12":DRAW"CØBM74,158
R4U2L4U2R4":DRAW"CØBM84,158H2U2B
R4D2G2":DRAW"CØBM152,158U4R4BD2L
4D2R4":DRAW"CØBM16Ø,158BU1U3BD3F
1E2F2E1U3"
133 DRAW"CØBM226,158U4BD2R4U2D4"
:DRAW"CØBM234,158U4BD2R2F2BH2E2"
134 DRAW"CØBM114,188BR2H2E2BR4R4
BL2D4BR6E2H2"
135 M1$=INKEY$
136 IFM1$="T"THEN5ØØELSEIFM1$=CH
R$(91)THEN1ØØØ
15Ø IFN$(Ø)=""ORN$(1)=N$(Ø)THEN1
6Ø
151 IFN$(Ø)=AN$(AN)THENAN$(AN)="
"
152 IFN(Ø)=>86ANDC$(1)=N$(Ø)THEN
CN(1)=1 : GOTO155
153 IFN(Ø)>1Ø5THENN(Ø)=1Ø5
154 PUT(N(Ø),51)-(N(Ø)+1Ø,54),NT
,PSET
155 N(Ø)=N(Ø)+1
16Ø IFN$(1)=C$(1)THENC$(1)="" :
CN(1)=Ø : N(1)=128
161 IFN$(1)=""THEN165
162 IFN(1)>245THENN(1)=245
163 PUT(N(1),51)-(N(1)+1Ø,54),NT
,PSET
164 N(1)=N(1)+1
165 IFN$(2)=""ORN$(3)=N$(2)THEN1
75
166 IFN$(2)=YN$THENYN$=""
167 IFN(2)=>7ØANDC$(2)=N$(2)THEN
CN(2)=2 : GOTO17Ø
168 IFN(2)>9ØTHENN(2)=9Ø
169 PUT(N(2),91)-(N(2)+1Ø,94),NT
,PSET
17Ø N(2)=N(2)+1
175 IFN$(3)=C$(2)THENC$(2)="" :
CN(2)=Ø : N(3)=115
176 IFN$(3)=""ORN$(4)=N$(3)THEN1
85
177 IFN(3)=>2Ø2ANDC$(3)=N$(3)THE
NCN(3)=3 : GOTO18Ø
178 IFN(3)>223THENN(3)=223
179 PUT(N(3),91)-(N(3)+1Ø,94),NT
,PSET
18Ø N(3)=N(3)+1
185 IFN$(4)=C$(3)THENC$(3)="" :
CN(3)=Ø : N(4)=244
186 IFN$(4)=""ORN$(5)=N$(4)THEN1
95
187 IFWN(4)=1THEN191
188 IFN(4)>245THENN(4)=Ø : WN(4)
=1 : GOTO191
189 PUT(N(4),91)-(N(4)+1Ø,94),NT
,PSET
19Ø GOTO194
191 IFN(4)=>3ØANDC$(4)=N$(4)THEN
CN(4)=4 : GOTO194
192 IFN(4)>48THENN(4)=48
193 PUT(N(4),131)-(N(4)+1Ø,134),
NT,PSET
194 N(4)=N(4)+1
195 IFN$(5)=C$(4)THENC$(4)="" :
CN(4)=Ø : N(5)=71
196 IFN$(5)=""ORN$(6)=N$(5)THEN2
Ø5
197 IFN(5)=>98ANDC$(5)=N$(5)THEN
CN(5)=5 : GOTO2ØØ
198 IFN(5)>118THENN(5)=118
199 PUT(N(5),131)-(N(5)+1Ø,134),
NT,PSET
2ØØ N(5)=N(5)+1
2Ø5 IFN$(6)=C$(5)THENC$(5)="" :
CN(5)=Ø : N(6)=14Ø
2Ø6 IFN$(6)=""ORN$(7)=N$(6)THEN2
15
2Ø7 IFN(6)=>178ANDC$(6)=N$(6)THE
NCN(6)=6 : GOTO21Ø
2Ø8 IFN(6)>2Ø6THENN(6)=2Ø6
2Ø9 PUT(N(6),131)-(N(6)+1Ø,134),
NT,PSET
21Ø N(6)=N(6)+1
215 IFN$(7)=C$(6)THENC$(6)="" :
CN(6)=Ø : N(7)=227
216 IFN$(7)=""ORN$(8)=N$(7)THEN2
25
217 IFLN(7)=1THEN221
218 IFN(7)>245THENN(7)=Ø : LN(7)
=1 : GOTO221
219 PUT(N(7),131)-(N(7)+1Ø,134),
NT,PSET
22Ø GOTO224
221 IFN(7)=>5ØANDC$(7)=N$(7)THEN
CN(7)=7 : GOTO224
222 IFN(7)>68THENN(7)=68
223 PUT(N(7),171)-(N(7)+1Ø,174),
```
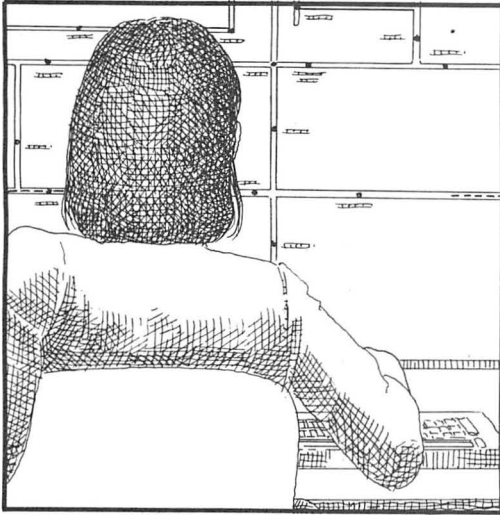
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NT,PSET
224 N(7)=N(7)+1
225 IFN$(8)=C$(7)THENC$(7)="" :
CN(7)=Ø : N(8)=86
226 IFN$(8)=""ORN$(9)=N$(8)THEN2
35
227 IFN(8)=>128ANDC$(8)=N$(8)THE
NCN(8)=8 : GOTO23Ø
228 IFN(8)>145THENN(8)=145
229 PUT(N(8),171)-(N(8)+1Ø,174),
NT,PSET
23Ø N(8)=N(8)+1
235 IFN$(9)=C$(8)THENC$(8)="" :
CN(8)=Ø : N(9)=168
236 IFN$(9)=""THEN24Ø
237 IFN(9)>236THENN(9)=236
238 PUT(N(9),171)-(N(9)+1Ø,174),
NT,PSET
239 N(9)=N(9)+1
24Ø IFS$(Ø)=C$(1)THENC$(1)="" :
CS(1)=Ø : S(Ø)=86
241 IFS$(Ø)=""THEN245
242 IFS(Ø)<9THENS(Ø)=9
243 PUT(S(Ø),51)-(S(Ø)+1Ø,54),ST
,PSET
244 S(Ø)=S(Ø)-1
245 IFS$(1)=""ORS$(Ø)=S$(1)THEN2
55
246 IFS$(1)=YS$THENYS$=""
247 IFS(1)=<129ANDC$(1)=S$(1)THE
NCS(1)=1 : GOTO25Ø
248 IFS(1)<128THENS(1)=128
249 PUT(S(1),51)-(S(1)+1Ø,54),ST
,PSET
25Ø S(1)=S(1)-1
255 IFS$(2)=C$(2)THENC$(2)="" :
CS(2)=Ø : S(2)=7Ø
256 IFS$(2)=""THEN26Ø
257 IFS(2)<ØTHENS(2)=Ø
258 PUT(S(2),91)-(S(2)+1Ø,94),ST
,PSET
259 S(2)=S(2)-1
26Ø IFS$(3)=C$(3)THENC$(3)="" :
CS(3)=Ø : S(3)=2Ø2
261 IFS$(3)=""ORS$(2)=S$(3)THEN2
7Ø
262 IFS(3)=<116ANDC$(2)=S$(3)THE
NCS(2)=2 : GOTO265
263 IFS(3)<115THENS(3)=115
264 PUT(S(3),91)-(S(3)+1Ø,94),ST
,PSET
265 S(3)=S(3)-1
27Ø IFS$(4)=C$(4)THENC$(4)="" :
CS(4)=Ø : S(4)=3Ø
271 IFS$(4)=""ORS$(3)=S$(4)THEN2
8Ø
272 IFWS(4)=1THEN276
273 IFS(4)<ØTHENWS(4)=1 : GOTO27
6
274 PUT(S(4),131)-(S(4)+1Ø,134),
ST,PSET
275 GOTO278
276 IFS(4)=<ØANDC$(3)=S$(4)THENC
S(3)=3
277 PUT(245,91)-(255,94),ST,PSET
278 S(4)=S(4)-1
28Ø IFS$(5)=C$(5)THENC$(5)="" :
CS(5)=Ø : S(5)=98
281 IFS$(5)=""ORS$(4)=S$(5)THEN2
9Ø
282 IFS(5)=<72ANDC$(4)=S$(5)THEN
CS(4)=4 : GOTO285
283 IFS(5)<71THENS(5)=71
284 PUT(S(5),131)-(S(5)+1Ø,134),
ST,PSET
285 S(5)=S(5)-1
29Ø IFS$(6)=C$(6)THENC$(6)="" :
CS(6)=Ø : S(6)=178
291 IFS$(6)=""ORS$(5)=S$(6)THEN3
ØØ
292 IFS(6)=<141ANDC$(5)=S$(6)THE
NCS(5)=5 : GOTO295
293 IFS(6)<14ØTHENS(6)=14Ø
294 PUT(S(6),131)-(S(6)+1Ø,134),
ST,PSET
295 S(6)=S(6)-1
3ØØ IFS$(7)=C$(7)THENC$(7)="" :
CS(7)=Ø : S(7)=5Ø
3Ø1 IFS$(7)=""ORS$(6)=S$(7)THEN3
1Ø
3Ø2 IFLS(7)=1THEN3Ø6
3Ø3 IFS(7)<ØTHENS(7)=245 : LS(7)
=1 : GOTO3Ø6
3Ø4 PUT(S(7),171)-(S(7)+1Ø,174),
ST,PSET
3Ø5 GOTO3Ø9
```

```
306 IFS(7)<228THENS(7)=228
307 IFS(7)=<229ANDC$(6)=S$(7)THE
NCS(6)=6 : GOTO309
308 PUT(S(7),131)-(S(7)+10,134),
ST,PSET
309 S(7)=S(7)-1
310 IFS$(8)=C$(8)THENC$(8)="" :
CS(8)=0 : S(8)=128
311 IFS$(8)=""ORS$(7)=S$(8)THEN3
20
312 IFS(8)=<89ANDC$(7)=S$(8)THEN
CS(7)=7 : GOTO315
313 IFS(8)<88THENS(8)=88
314 PUT(S(8),171)-(S(8)+10,174),
ST,PSET
315 S(8)=S(8)-1
320 IFS$(9)=AS$(AS)THENAS$(AS)="
"
321 IFS$(9)=""ORS$(8)=S$(9)THEN3
50
322 IFS(9)=<169ANDC$(8)=S$(9)THE
NCS(8)=8 : GOTO325
323 IFS(9)<168THENS(9)=168
324 PUT(S(9),171)-(S(9)+10,174),
ST,PSET
325 S(9)=S(9)-1
350 IFCN(1)=1THENPUT(106,45)-(11
6,48),NT,PSET
351 IFYN$<>""THENPUT(0,85)-(10,8
8),NT,PSET
352 IFCN(2)=2THENPUT(90,85)-(100
,88),NT,PSET
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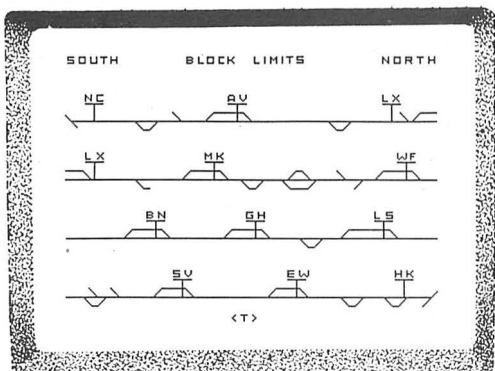


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353 IFCN(3)=3THENPUT(220,85)-(23
0,88),NT,PSET
354 IFCN(4)=4THENPUT(50,125)-(60
,128),NT,PSET
355 IFCN(5)=5THENPUT(115,125)-(1
25,128),NT,PSET
356 IFCN(6)=6THENPUT(200,125)-(2
10,128),NT,PSET
357 IFCN(7)=7THENPUT(68,165)-(78
,168),NT,PSET
358 IFCN(8)=8THENPUT(146,165)-(1
56,168),NT,PSET
359 IFCS(1)=1THENPUT(106,45)-(11
6,48),ST,PSET
360 IFYS$<>""THENPUT(245,45)-(25
5,48),ST,PSET
361 IFCS(2)=2THENPUT(90,85)-(100
,88),ST,PSET
362 IFCS(3)=3THENPUT(220,85)-(23
0,88),ST,PSET
363 IFCS(4)=4THENPUT(50,125)-(60
,128),ST,PSET
364 IFCS(5)=5THENPUT(115,125)-(1
25,128),ST,PSET
365 IFCS(6)=6THENPUT(200,125)-(2
10,128),ST,PSET
366 IFCS(7)=7THENPUT(68,165)-(78
,168),ST,PSET
367 IFCS(8)=8THENPUT(146,165)-(1
56,168),ST,PSET
368 IFAN$(AN)=""THEN369ELSEPUT(7
,45)-(17,48),NT,PSET
369 IFAS$(AS)=""THEN370ELSEPUT(2
36,165)-(246,168),ST,PSET
370 M1$=INKEY$
371 IFM1$="T"THEN500ELSEIFM1$=CH
R$(91)THEN1000
372 SR=0
373 GOSUB400
374 IFSR>0THEN100ELSE125
400 U=RND(40)
401 IFU=10ANDN$(0)=""ANDAN$(AN)=
""GOSUB900
402 IFU=20ANDS$(9)=""ANDS$(8)=""
ANDAS$(AS)=""GOSUB925
403 IFU=30ANDYN>1ANDYN$=""GOSUB9
60
404 IFU=40ANDYS>1ANDYS$=""GOSUB9
75
405 IFTIMER>10000ANDLN$<>""GOSUB
950
406 IFTIMER>25000ANDLS$<>""GOSUB
970
410 IFN(0)=104ANDC$(1)<>N$(0)GOS
UB800
411 IFN(2)=89ANDC$(2)<>N$(2)GOSU
B801
412 IFN(3)=222ANDC$(3)<>N$(3)GOS
UB802
413 IFN(4)=47ANDC$(4)<>N$(4)GOSU
B803
414 IFN(5)=117ANDC$(5)<>N$(5)GOS
UB804
415 IFN(6)=205ANDC$(6)<>N$(6)GOS
UB805
416 IFN(7)=67ANDC$(7)<>N$(7)GOSU
B806
417 IFN(8)=144ANDC$(8)<>N$(8)GOS
UB807
```

```
418 IFS(1)=129ANDC$(1)<>S$(1)GOS
UB8Ø8
419 IFS(3)=116ANDC$(2)<>S$(3)GOS
UB8Ø9
42Ø IFS(4)=ØANDC$(3)<>S$(4)GOSUB
81Ø
421 IFS(5)=72ANDC$(4)<>S$(5)GOSU
B811
422 IFS(6)=141ANDC$(5)<>S$(6)GOS
UB812
423 IFS(7)=229ANDC$(6)<>S$(7)GOS
UB813
424 IFS(8)=89ANDC$(7)<>S$(8)GOSU
B814
425 IFS(9)=169ANDC$(8)<>S$(9)GOS
UB815
43Ø IFN(1)=12ØANDN$(Ø)=N$(1)GOSU
B825
431 IFN(1)=226GOSUB826
432 IFN(3)=1Ø4ANDN$(2)=N$(3)GOSU
B827
433 IFN(4)=236ANDN$(3)=N$(4)GOSU
B828
434 IFN(5)=64ANDN$(4)=N$(5)GOSUB
829
435 IFN(6)=132ANDN$(5)=N$(6)GOSU
B83Ø
436 IFN(7)=22ØANDN$(6)=N$(7)GOSU
B831
437 IFN(8)=82ANDN$(7)=N$(8)GOSUB
832
438 IFN(9)=16ØANDN$(8)=N$(9)GOSU
B833
439 IFN(9)=235GOSUB834
44Ø IFS(Ø)=1ØGOSUB835
441 IFS(Ø)=1Ø6ANDS$(1)=S$(Ø)GOSU
B836
442 IFS(2)=8GOSUB837
443 IFS(2)=86ANDS$(3)=S$(2)GOSUB
838
444 IFS(3)=222ANDS$(4)=S$(3)GOSU
B839
445 IFS(4)=5ØANDS$(5)=S$(4)GOSUB
84Ø
446 IFS(5)=118ANDS$(6)=S$(5)GOSU
B841
447 IFS(6)=2Ø6ANDS$(7)=S$(6)GOSU
B842
448 IFS(7)=68ANDS$(8)=S$(7)GOSUB
843
449 IFS(8)=146ANDS$(9)=S$(8)GOSU
B844
45Ø IFN(Ø)=86ANDN$(Ø)=C$(1)GOSUB
825
451 IFN(2)=7ØANDN$(2)=C$(2)GOSUB
827
452 IFN(3)=2Ø2ANDN$(3)=C$(3)GOSU
B828
453 IFN(4)=3ØANDN$(4)=C$(4)GOSUB
829
454 IFN(5)=98ANDN$(5)=C$(5)GOSUB
83Ø
455 IFN(6)=178ANDN$(6)=C$(6)GOSU
B831
456 IFN(7)=5ØANDN$(7)=C$(7)GOSUB
832
457 IFN(8)=128ANDN$(8)=C$(8)GOSU
B833
458 IFS(9)=169ANDS$(9)=C$(8)GOSU
B844
459 IFS(8)=89ANDS$(8)=C$(7)GOSUB
843
46Ø IFS(7)=229ANDS$(7)=C$(6)GOSUB
842
461 IFS(6)=141ANDS$(6)=C$(5)GOSUB
841
462 IFS(5)=72ANDS$(5)=C$(4)GOSUB
84Ø
463 IFS(4)=ØANDS$(4)=C$(3)GOSUB8
39
464 IFS(3)=116ANDS$(3)=C$(2)GOSU
B838
465 IFS(1)=129ANDS$(1)=C$(1)GOSU
B836
466 RETURN
5ØØ CLS:PRINT@Ø,STRING$(1Ø,"#");
"train  sheet";STRING$(1Ø,"#");
5Ø1 PRINT@32,"<SOUTH";:PRINT@45,
"BLOCKS";:PRINT@58,"NORTH>";
5Ø2 PRINT@96,"a>    > (NC)-------
---(AV) [   ]s";
5Ø3 PRINT@128,"s[   ] (AV)------
----(LX) <    <y";
5Ø4 PRINT@16Ø,"y>    > (LX)------
----(MK) [   ]s";
5Ø5 PRINT@192,"s[   ] (MK)------
----(WF) [   ]s";
5Ø6 PRINT@224,"s[   ] (WF)------
----(BN) [   ]s";
5Ø7 PRINT@256,"s[   ] (BN)------
----(GH) [   ]s";
5Ø8 PRINT@288,"s[   ] (GH)------
----(LS) [   ]s";
5Ø9 PRINT@32Ø,"s[   ] (LS)------
----(SV) [   ]s";
51Ø PRINT@352,"s[   ] (SV)------
----(EW) [   ]s";
511 PRINT@384,"s[   ] (EW)------
----(HK) <    <a";
512 PRINT@98,AN$(AN);:PRINT@11Ø,
N$(Ø);S$(Ø);:PRINT@123,C$(1);
513 PRINT@13Ø,C$(1);:PRINT@142,N
$(1);S$(1);:PRINT@155,YS$;
514 PRINT@162,YN$;:PRINT@174,N$(
2);S$(2);:PRINT@187,C$(2);
515 PRINT@194,C$(2);:PRINT@2Ø6,N
```

```
$(3);S$(3);:PRINT@219,C$(3);
516 PRINT@226,C$(3);:PRINT@238,N
$(4);S$(4);:PRINT@251,C$(4);
517 PRINT@258,C$(4);:PRINT@27Ø,N
$(5);S$(5);:PRINT@283,C$(5);
518 PRINT@29Ø,C$(5);:PRINT@3Ø2,N
$(6);S$(6);:PRINT@315,C$(6);
519 PRINT@322,C$(6);:PRINT@334,N
$(7);S$(7);:PRINT@347,C$(7);
52Ø PRINT@354,C$(7);:PRINT@366,N
$(8);S$(8);:PRINT@379,C$(8);
521 PRINT@386,C$(8);:PRINT@398,N
$(9);S$(9);:PRINT@411,AS$(AS);
522 PRINT@449,"<I>SSUE BLOCK  <C
>LEAR BLOCKS":PRINT@487,"<T>ERRI
TORY SCREEN";
523 M2$=INKEY$
524 IFM2$="T"THEN1ØØELSEIFM2$="I
"THEN55ØELSEIFM2$="C"THEN7ØØ
525 GOTO523
55Ø CLS:PRINT@71,"ISSUE BLOCK LI
MITS"
551 PRINT@162,"TO C&E TRAIN NO.
     AT"
552 PRINT@226,"MANUAL BLOCK IS C
LEAR TO"
553 PRINT@29Ø,"TAKE SIDING [Y/N]
?"
554 PRINT@42Ø,"PRESS <ENTER>  TO
 CANCEL"
555 PRINT@179,"";:LINEINPUTTN$:I
FTN$=""THEN5ØØ
556 PRINT@184,"AT ";:LINEINPUTAB
$:IFAB$=""THEN5ØØ
557 PRINT@251,"";:LINEINPUTTB$:I
FTB$=""THEN5ØØ
558 B$=AB$+TB$
559 PRINT@3Ø9,"";:LINEINPUTY$:IF
Y$=""THEN5ØØ
56Ø IFY$="Y"THEN561ELSEIFY$="N"T
HEN6ØØELSE5ØØ
561 PRINT@312,"AT ";:LINEINPUTTS
$:IFTS$=""THEN5ØØ
562 IFTS$<>MID$(B$,3,2)THEN561
6ØØ FORX=1TO9
6Ø1 IFTN$=NT$(X)THEN6Ø7
6Ø2 NEXTX
6Ø3 FORX=1TO9
6Ø4 IFTN$=ST$(X)THEN65Ø
6Ø5 NEXTX
6Ø6 GOTO555
6Ø7 FORN=ØTO9
6Ø8 IFINSTR(BN$(N),B$)THEN611
6Ø9 NEXTN
61Ø GOTO555
611 V=N+1
612 ON V GOTO613,614,615,616,617
,618,619,62Ø,621,622
613 IFTN$=AN$(AN)THEN623ELSE555
614 IFTN$=N$(Ø)ORTN$=C$(1)THEN62
3ELSE555
615 IFTN$=YN$THEN623ELSE555
616 IFTN$=N$(2)ORTN$=C$(2)THEN62
3ELSE555
617 IFTN$=N$(3)ORTN$=C$(3)THEN62
3ELSE555
618 IFTN$=N$(4)ORTN$=C$(4)THEN62
3ELSE555
619 IFTN$=N$(5)ORTN$=C$(5)THEN62
3ELSE555
62Ø IFTN$=N$(6)ORTN$=C$(6)THEN62
3ELSE555
621 IFTN$=N$(7)ORTN$=C$(7)THEN62
3ELSE555
622 IFTN$=N$(8)ORTN$=C$(8)THEN62
3ELSE555
623 IFN$(N)=""ANDS$(N)=""THEN624
ELSE676
624 N$(N)=TN$
625 N(N)=VN(N) : WN(N)=Ø : LN(N)
=Ø
626 GOTO669
65Ø FORN=ØTO9
651 IFINSTR(BS$(N),B$)THEN654
652 NEXTN
653 GOTO555
654 V=N+1
655 ON V GOTO656,657,658,659,66Ø
,661,662,663,664,665
656 IFTN$=S$(1)ORTN$=C$(1)THEN66
6ELSE555
657 IFTN$=YS$THEN666ELSE555
658 IFTN$=S$(3)ORTN$=C$(2)THEN66
6ELSE555
659 IFTN$=S$(4)ORTN$=C$(3)THEN66
6ELSE555
66Ø IFTN$=S$(5)ORTN$=C$(4)THEN66
6ELSE555
661 IFTN$=S$(6)ORTN$=C$(5)THEN66
6ELSE555
662 IFTN$=S$(7)ORTN$=C$(6)THEN66
6ELSE555
663 IFTN$=S$(8)ORTN$=C$(7)THEN66
6ELSE555
664 IFTN$=S$(9)ORTN$=C$(8)THEN66
6ELSE555
665 IFTN$=AS$(AS)THEN666ELSE555
666 IFS$(N)=""ANDN$(N)=""THEN667
ELSE676
667 S$(N)=TN$
668 S(N)=VS(N) : WS(N)=Ø : LS(N)
=Ø
669 IFY$="N"THEN675
67Ø FORN=1TO8
671 IFTS$=SD$(N)THEN674
672 NEXTN
```

```
673 GOTO555
674 IFC$(N)=""THENC$(N)=TN$ELSE6
76
675 GOTO500
676 CLS4:FORX=1TO20
677 PRINT@231,"BLOCK OCCUPIED!!!
!";
678 SOUND195,5:NEXTX
679 E=E+1
680 GOTO500
700 CLS:PRINT@71,"CLEAR MANUAL B
LOCK"
701 PRINT@194,"TRAIN NO.      REP
ORTS CLEAR"
702 PRINT@258,"OF BLOCK LIMITS A
T......."
703 PRINT@388,"PRESS <ENTER>  TO
 CANCEL"
704 PRINT@204,"";:LINEINPUTTN$:I
FTN$=""THEN500
705 PRINT@208,"REPORTS CLEAR":PR
INT@282,".";:LINEINPUTRC$:IFRC$=
""THEN500
710 FORX=1TO9
711 IFTN$=NT$(X)THEN725
712 NEXTX
713 FORX=1TO9
714 IFTN$=ST$(X)THEN750
715 NEXTX
716 GOTO704
725 FORN=1TO10
726 IFRC$=BL$(N)THEN729
727 NEXTN
728 GOTO704
729 IFN=1THEN730ELSE731
730 IFN$(N-1)=TN$ANDN$(N)=TN$ORC
$(N)=TN$THEN738ELSE704
731 IFN=2THEN732ELSE735
732 IFN$(N-1)=TN$THEN733ELSE704
733 YN=YN+1 : YN$(YN)=N$(N-1)
734 GOTO738
735 IFN=10THEN736ELSE737
736 IFN$(N-1)=TN$THEN738ELSE704
737 IFN$(N-1)=TN$ANDN$(N)=TN$ORC
$(N-1)=TN$THEN738ELSE704
738 N$(N-1)=""
739 GOTO500
750 FORN=0TO9
751 IFRC$=BL$(N)THEN754
752 NEXTN
753 GOTO704
754 IFN=0THEN755ELSE757
755 IFS$(N)=TN$THENS$(N)=""ELSE7
04
756 GOTO500
757 IFN=1THEN758ELSE759
758 IFS$(N-1)=TN$ANDS$(N)=TN$ORC
$(N)=TN$THEN764ELSE704

759 IFN=2THEN760ELSE763
760 IFS$(N)=TN$THEN761ELSE704
761 YS=YS+1 : YS$(YS)=S$(N)
762 GOTO764
763 IFS$(N-1)=TN$ANDS$(N)=TN$ORC
$(N-1)=TN$THEN764ELSE704
764 S$(N)=""
765 GOTO500
800 RB$=N$(0) : BL$=BL$(1) : N(0
)=105 : GOTO816
801 RB$=N$(2) : BL$=BL$(3) : N(2
)=90 : GOTO816
802 RB$=N$(3) : BL$=BL$(4) : N(3
)=223 : GOTO816
803 RB$=N$(4) : BL$=BL$(5) : N(4
)=48 : GOTO816
804 RB$=N$(5) : BL$=BL$(6) : N(5
)=118 : GOTO816
805 RB$=N$(6) : BL$=BL$(7) : N(6
)=206 : GOTO816
806 RB$=N$(7) : BL$=BL$(8) : N(7
)=68 : GOTO816
```
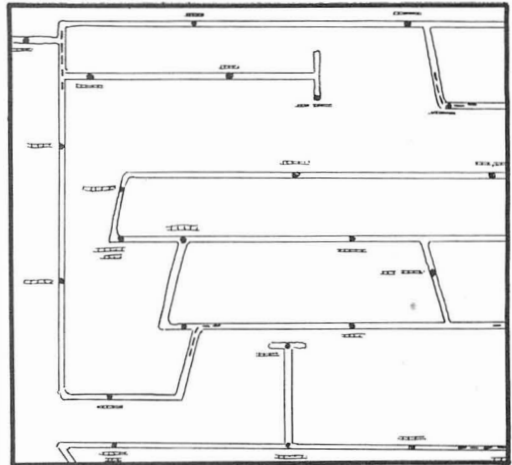


```
807 RB$=N$(8) : BL$=BL$(9) : N(8
)=145 : GOTO816
808 RB$=S$(1) : BL$=BL$(1) : S(1
)=128 : GOTO816
809 RB$=S$(3) : BL$=BL$(3) : S(3
)=115 : GOTO816
810 RB$=S$(4) : BL$=BL$(4) : S(4
)=0 : GOTO816
811 RB$=S$(5) : BL$=BL$(5) : S(5
)=71 : GOTO816
812 RB$=S$(6) : BL$=BL$(6) : S(6
)=140 : GOTO816
813 RB$=S$(7) : BL$=BL$(7) : S(7
)=228 : GOTO816
814 RB$=S$(8) : BL$=BL$(8) : S(8
)=88 : GOTO816
```

```
815 RB$=S$(9) : BL$=BL$(9) : S(9      903 SOUND200,10:FORT=1TO50:NEXT:
)=168                                  SOUND200,10
816 CLS3:SOUND195,10                  904 PRINT@225," ";AN$(AN);" APPR
817 PRINT@226," ";RB$;" REQUESTS      OACHING BLOCK AT NC";" ";
 BLOCK AT ";BL$;" ";                  905 FORT=1TO5000:NEXT
818 FORT=1TO5000:NEXT                 906 SR=SR+1
819 SR=SR+1                           907 RETURN
820 RETURN                            925 CLS8
825 RC$=N$(0) : BL$=BL$(1) : GOT      926 AS=AS+1 : IFAS>8THENAS=1
O845                                  927 IF AS$(AS)=""THEN RETURN
826 RC$=N$(1) : BL$=BL$(2) : N(1      928 SOUND200,10:FORT=1TO50:NEXT:
)=227 : GOTO845                        SOUND200,10
827 RC$=N$(2) : BL$=BL$(3) : GOT      929 PRINT@225," ";AS$(AS);" APPR
O845                                  OACHING BLOCK AT HK";" ";
828 RC$=N$(3) : BL$=BL$(4) : GOT      930 FORT=1TO5000:NEXT
O845                                  931 SR=SR+1
829 RC$=N$(4) : BL$=BL$(5) : GOT      932 RETURN
O845                                  950 CLS2
830 RC$=N$(5) : BL$=BL$(6) : GOT      951 YN$=LN$
O845                                  952 LN$=""
831 RC$=N$(6) : BL$=BL$(7) : GOT      953 GOTO965
O845                                  960 CLS2
832 RC$=N$(7) : BL$=BL$(8) : GOT      961 N=RND(YN)
O845                                  962 YN$=YN$(N)
833 RC$=N$(8) : BL$=BL$(9) : GOT      963 IFYN$=""THENRETURN
O845                                  964 YN$(N)=""
834 RC$=N$(9) : BL$=BL$(10) : N(      965 SOUND190,15
9)=236 : GOTO845                      966 PRINT@226," ";YN$;" READY TO
835 RC$=S$(0) : BL$=BL$(0) : S(0       DEPART FROM LX";" ";
)=9 : GOTO845                         967 FORT=1TO5000:NEXT
836 RC$=S$(1) : BL$=BL$(1) : GOT      968 SR=SR+1
O845                                  969 RETURN
837 RC$=S$(2) : BL$=BL$(2) : GOT      970 CLS2
O845                                  971 YS$=LS$
838 RC$=S$(3) : BL$=BL$(3) : GOT      972 LS$=""
O845                                  973 GOTO980
839 RC$=S$(4) : BL$=BL$(4) : GOT      975 CLS2
O845                                  976 S=RND(YS)
840 RC$=S$(5) : BL$=BL$(5) : GOT      977 YS$=YS$(S)
O845                                  978 IFYS$=""THENRETURN
841 RC$=S$(6) : BL$=BL$(6) : GOT      979 YS$(S)=""
O845                                  980 SOUND190,15
842 RC$=S$(7) : BL$=BL$(7) : GOT      981 PRINT@226," ";YS$;" READY TO
O845                                   DEPART FROM LX";" ";
843 RC$=S$(8) : BL$=BL$(8) : GOT      982 FORT=1TO5000:NEXT
O845                                  983 SR=SR+1
844 RC$=S$(9) : BL$=BL$(9) : GOT      984 RETURN
O845                                  1000 CLS4:SOUND195,10
845 CLS:SOUND195,10:FORT=1TO100:      1001 PRINT@199,"PROGRAM TERMINAT
NEXT:SOUND195,10                      ED";
846 PRINT@224,RC$;" REPORTS CLEA      1002 PRINT@260,"SERIOUS ERRORS M
R OF BLOCK AT ";BL$;                  ADE =";E;
847 FORT=1TO6000:NEXT                 1003 FORT=1TO6000:NEXT
848 SR=SR+1                           1004 CLS3:PRINT@224,"DO YOU WANT
849 RETURN                             TO TRY AGAIN? [Y/N]";
900 CLS8                              1005 M3$=INKEY$ : IFM3$="Y"THEN0
901 AN=AN+1 : IFAN>8 THEN AN=1        ELSEIFM3$="N"THEN1100ELSE1005
902 IFAN$(AN)=""THEN RETURN           1100 CLEAR : CLS : END
```
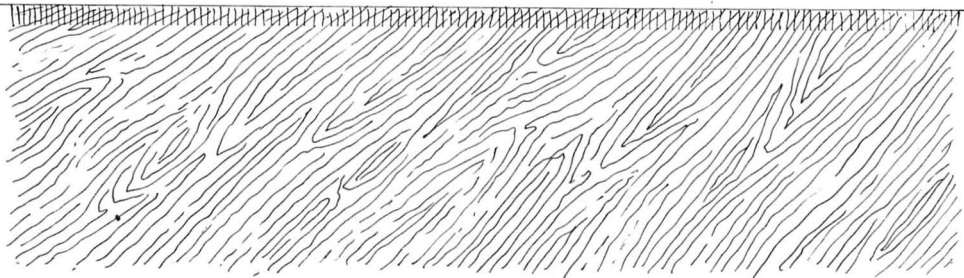
STOCK MARKET

Program by Ray Ligocki

I f you like to play the stock market, or even if you don't know anything about the stock market, once you play this one you will be hooked. Make a buck and then you will try for two; before you know it, it will be 2 a.m.!

This is a situation game in which you buy and sell stock based upon what you read in the program's newspapers. The objective of *Stock Market* is to increase your basic investment of $10,000 in 12 sessions.

After loading and running the program, you are greeted with a short title screen and color check. Next you see a nice graphics title screen befitting the market's ups and downs. This Simulation uses the RND function, so your success depends on how lucky you are. (That's the way you make money in the stock market anyway!) Whenever you buy or sell stock, a two percent brokerage fee is deducted. Also, the IRS takes its share at the end of the 12 sessions.

After the opening screen and instructions are presented, you are given a corporation sum-

mary that explains the interests of each of the six companies you will be dealing with. The next screen prints news headlines for three of the six companies upon which you must make a decision to buy, sell or pass. Be sure to select one of the companies in the current headlines, otherwise the stock prices remain unchanged.

The portfolio screen lists all six companies, the current stock price, how many shares you own, and the value of your shares. Also listed is your cash on hand and net worth. It is from this screen that you issue commands to buy and sell stocks. Remember that it's OK to pass on occasion, but you have to either buy or sell for anything to happen. A built-in checking routine keeps you from spending money you don't have. After most transactions, a newsflash occurs with either good or bad news relating to your transaction.

The graphics in this Simulation are outstanding, but the best part is that as real as it seems, it's only a game!

Ray Ligocki is a computer maintenance supervisor for Wisconsin Bell in Milwaukee. Computing is his favorite hobby.

STOCKS   32K ECB

```
Ø CLS:CLEAR4ØØ:PRINT@6,"RAY LIGO
CKI PRESENTS":PRINT@42,"stock ma
rket":PRINT"  IF THE SCREEN IS N
OT ORANGE":PRINT"  AFTER PRESSIN
G THE 'R' KEY"
2 PRINT:PRINT" PRESS RESET BUTTO
N ON BACK OF":PRINT"  COMPUTER AN
D RUN PROGRAM AGAIN":PRINT:PRINT
"IF ORANGE SCREEN PRESS SPACE BA
R"
4 A$=INKEY$:IFA$="R"THEN6ELSE4
6 PMODE4,1:PCLS:SCREEN1,1:PMODE3
,1:PCLS3
8 A$=INKEY$:IFA$=CHR$(32)THEN1ØE
LSE8
1Ø CLS:PRINT@17Ø,"HERE WE GO!":S
CREENØ,1:FORX=1TO255STEP1Ø:SOUND
X,1:NEXT:DIMCH$(58),A(32),CO(6),
SP(6),SH(6),SI(6),B$(6),C$(6),D$
(6)
12 B$(1)="BM92,28":C$(1)="BM138,
28":D$(1)="BM196,28":B$(2)="BM92
,38":C$(2)="BM138,38":D$(2)="BM1
96,38":B$(3)="BM92,48":C$(3)="BM
138,48":D$(3)="BM196,48"
14 B$(4)="BM92,58":C$(4)="BM138,
58":D$(4)="BM196,58":B$(5)="BM92
,68":C$(5)="BM138,68":D$(5)="BM1
96,68":B$(6)="BM92,78":C$(6)="BM
138,78":D$(6)="BM196,78":E$="CØR
36UL36UR36UL36UR36UL36UR36C1":F$
="CØR52UL52UR52UL52UR52UL52UR52C
1"
16 O$="BM2,7Ø":P$="BM2,8Ø":Q$="B
M2,1Ø5":R$="BM2,115":S$="BM2,14Ø
":T$="BM2,15Ø":U$="BM2,4Ø":V$="B
M3Ø,4Ø":W$="BM1Ø,4Ø":X$="BM2Ø,4Ø
":Y$="BM4Ø,6Ø":Z$="BM4Ø,8Ø"
18 FORZ=ØTO58:READCH$(Z):NEXT
2Ø PMODE3,1:PCLS:COLOR3:LINE(Ø,Ø
)-(6Ø,2Ø),PSET,B:DRAW"BM4,2D4BR4
U4R4D4L2BR6R4U4L4D4":DRAW"BM4Ø,1
```

```
8U4BR4R4D4L4U4BR8R4D4L4U4":DRAW"
BM4,16C4D2R2BR5ØBU14U2L2BL4F6BD1
ØBL46H6":DRAW"BM4Ø,2C3R6BR2BD2L8
BD2R1Ø":DRAW"BM14,18R6BU2L8BL2BU
2R1Ø"
22 CIRCLE(1Ø,1Ø),5,2,.6:CIRCLE(4
8,1Ø),5,2,.6:CIRCLE(3Ø,1Ø),9,3:C
IRCLE(3Ø,1Ø),6,2:CIRCLE(3Ø,1Ø),4
,4:GET(Ø,Ø)-(6Ø,2Ø),A,G
24 PMODE3,1:PCLS:SCREEN1,Ø:COLOR
4:LINE(Ø,Ø)-(255,27),PSET,B:COLO
R2:LINE(2,1)-(253,26),PSET,BF:DR
AW"BM2Ø,19C4S8":M$="$STOCK MARKE
T$":GOSUB91ØØ:COLOR3:FORX=5TO245
STEP1Ø:LINE(X,35)-(X,165),PSET:N
EXT:FORX=35TO165STEP1Ø:LINE(5,X)
-(245,X),PSET:NEXT
26 COLOR2:GOSUB911Ø:LINE(5,X)-(1
5,X+2Ø),PSET:FORS=25TO245STEP1Ø:
GOSUB911Ø:LINE-(S,X),PSET:NEXT:C
OLOR3:LINE(2,173)-(253,19Ø),PSET
,BF:DRAW"BM4,184C2S4":M$="BY RAY
 LIGOCKI":GOSUB91ØØ
28 DRAW"BM14Ø,184C1S4":M$="PRESS
 ANY KEY":GOSUB91ØØ
3Ø A$=INKEY$:IFA$=""THEN32ELSE34
32 DRAW"BM14Ø,184C3S4":GOSUB91ØØ
:GOTO28
34 CLS:PRINT@193,"DO YOU WANT IN
STRUCTIONS (Y/N)"
36 A$=INKEY$:IFA$="Y"THEN38ELSEI
FA$="N"THEN56ELSE36
38 CLS:PRINT" THIS IS A SIMULATI
ON OF SOME OFTHE EVENTS WHICH TA
KE PLACE IN  THE BUYING AND SELL
ING OF STOCK."
4Ø PRINT" YOU GET TO BUY AND SEL
L FROM A LIMITED PORTFOLIO OF ST
OCK BASEDUPON NEWS HEADLINES REL
EVANT TO THOSE COMPANIES."
42 PRINT:PRINT" YOU START WITH 1
Ø,ØØØ DOLLARS  AND YOUR SOLE MIS
SION IS TO      INCREASE THAT VAL
UE AS MUCH AS   POSSIBLE IN 12 BU
YING/SELLING    SESSIONS."
44 PRINT@483,"PRESS ANY KEY TO C
ONTINUE";
46 A$=INKEY$:IFA$=""THEN46
48 CLS:PRINT" BE SURE TO WATCH T
HE HEADLINES BECAUSE THEY ARE TH
E ONLY HINTS FOR YOUR SUCCESS.":
PRINT:PRINT"BE CAREFUL, THOUGH B
ECAUSE NOT   ALL HEADLINES TURN O
UT TO BE      ACCURATE."
5Ø PRINT:PRINT" AFTER THIS MESSA
GE YOU WILL BE GIVEN A LIST OF T
HE COMPANIES."
52 PRINT@483,"PRESS ANY KEY TO C
ONTINUE";
54 A$=INKEY$:IFA$=""THEN54
56 PMODE4,1:PCLS5:SCREEN1,1:COLO
RØ:LINE(Ø,Ø)-(256,28),PSET,B:LIN
E(4Ø,4)-(21Ø,24),PSET,B:POKE178,
23:PAINT(2,2),,Ø:DRAW"BM6Ø,12CØ"
:M$="CORPORATION RECAP":GOSUB91Ø
Ø:DRAW"BM5Ø,22":M$="CEILING AVEN
UE NEWS":GOSUB91ØØ
58 DRAW"BM2,38":B$="TELTECH-BLUE
 CHIP UTILITY-GAS":GOSUB912Ø:DRA
W"BM66,46":B$="OIL-POWER AND DAT
A":GOSUB912Ø:DRAW"BM66,54":B$="H
ANDLING-VERY STABLE":GOSUB912Ø:L
INE(Ø,56)-(256,56),PSET
6Ø DRAW"BM2,66":B$="RACORP--SOLA
R ENERGY-HIGH TECH":GOSUB912Ø:DR
AW"BM66,74":B$="ROBOTICS-COMPUTE
RS":GOSUB912Ø:DRAW"BM66,82":B$="
RELATIVELY NEW":GOSUB912Ø:LINE(Ø
,84)-(256,84),PSET
62 DRAW"BM2,94":B$="GEMOIL--SPEC
ULATOR IN OIL-GAS":GOSUB912Ø:DRA
W"BM66,1Ø2":B$="COAL MINING-VERY
 RISKY":GOSUB912Ø:DRAW"BM66,11Ø"
:B$="AT TIMES":GOSUB912Ø:LINE(Ø,
112)-(256,112),PSET
64 DRAW"BM2,122":B$="MEDICO--HOS
PITAL-HEALTH CARE":GOSUB912Ø:DRA
W"BM66,13Ø":B$="NATIONWIDE-VERY
STABLE":GOSUB912Ø:LINE(Ø,132)-(2
56,132),PSET
66 DRAW"BM2,142":B$="NAPCORP-HOT
EL-MOTEL-RESTAURANTS":GOSUB912Ø:
DRAW"BM66,15Ø":B$="TOURIST DEPEN
DENT-STABLE":GOSUB912Ø:LINE(Ø,15
2)-(256,152),PSET
68 DRAW"BM2,162":B$="AMERICO-IND
USTIAL-CONSTRUCTION":GOSUB912Ø:D
RAW"BM66,17Ø":B$="CIVILIAN-MILIT
ARY":GOSUB912Ø:DRAW"BM66,178":B$
="EQUIPMENT-STABLE":GOSUB912Ø:LI
NE(Ø,18Ø)-(256,18Ø),PSET
7Ø DRAW"BM4Ø,19Ø":M$="PRESS ANY
KEY TO CONTINUE":GOSUB91ØØ
72 A$=INKEY$:IFA$=""THEN72
1ØØ CH=1ØØØØ:TW=CH:FORX=1TO6:SH(
X)=Ø:SI(X)=Ø:NEXT:SP(1)=1Ø5:SP(2
)=68:SP(3)=57:SP(4)=132:SP(5)=83
:SP(6)=73:GF=1:RF=Ø
125 PMODE4,1:PCLS5:SCREEN1,1
126 COLORØ:LINE(9Ø,Ø)-(16Ø,1Ø),P
SET,B:DRAW"BM94,8S4":M$="ROUND-"
:GOSUB91ØØ:DRAW"BM134,8":M$=STR$
(GF):GOSUB91ØØ:LINE(Ø,12)-(256,3
6),PSET,B:LINE(4Ø,18)-(22Ø,3Ø),P
SET,B:POKE178,23:PAINT(2,14),,Ø
128 DRAW"BM54,27CØ":M$="CEILING
```

AVENUE NEWS":GOSUB9100
130 DRAW"BM9,46":M$="<<< THE STO
CK BUYERS CHOICE >>>":GOSUB9100
132 LINE(Ø,5Ø)-(256,56),PSET,B:L
INE(Ø,17Ø)-(256,176),PSET,B:POKE
178,25:PAINT(2,52),,Ø:PAINT(2,17
2),,Ø:COLORØ
134 ON GF GOTO5ØØ,51Ø,52Ø,53Ø,54
Ø,55Ø,56Ø,57Ø,58Ø,59Ø,6ØØ,61Ø
136 DRAW"BM3Ø,19ØCØ":M$="PRESS A
NY KEY TO CONTINUE":GOSUB9100
138 A$=INKEY$:IFA$=""THEN138
2ØØ PMODE4,1:PCLS:SCREEN1,Ø
2Ø2 DRAW"BM9,8":M$="PORTFOLIO":
GOSUB9100
2Ø4 GOSUB368:GOSUB37Ø
2Ø6 FORX=1ØTO9ØSTEP1Ø:LINE(Ø,X)-
(256,X),PSET:NEXT:LINE(78,1Ø)-(7
8,9Ø),PSET:LINE(132,1Ø)-(132,9Ø)
,PSET:LINE(18Ø,1Ø)-(18Ø,9Ø),PSET
:LINE(133,9Ø)-(179,9Ø),PRESET
2Ø8 DRAW"BM12,18":M$="COMPANY":G
OSUB9100:DRAW"BM84,18":M$="SHARE
S":GOSUB9100:DRAW"BM138,18":M$="
PRICE":GOSUB9100:DRAW"BM188,18":
M$="INVESTED":GOSUB9100
21Ø DRAW"BM4,28":M$="1-TELTECH":
GOSUB9100:DRAWB$(1):M$=STR$(SH(1
)):GOSUB9100:DRAWC$(1):M$=STR$(S
P(1)):GOSUB9100:DRAWD$(1):M$=STR
$(SI(1)):GOSUB9100
212 DRAW"BM4,38":M$="2-RACORP":G
OSUB9100:DRAWB$(2):M$=STR$(SH(2)
):GOSUB9100:DRAWC$(2):M$=STR$(SP
(2)):GOSUB9100:DRAWD$(2):M$=STR$
(SI(2)):GOSUB9100
214 DRAW"BM4,48":M$="3-GEMOIL":G
OSUB9100:DRAWB$(3):M$=STR$(SH(3)
):GOSUB9100:DRAWC$(3):M$=STR$(SP
(3)):GOSUB9100:DRAWD$(3):M$=STR$
(SI(3)):GOSUB9100
216 DRAW"BM4,58":M$="4-MEDICO":G
OSUB9100:DRAWB$(4):M$=STR$(SH(4)
):GOSUB9100:DRAWC$(4):M$=STR$(SP
(4)):GOSUB9100:DRAWD$(4):M$=STR$
(SI(4)):GOSUB9100
218 DRAW"BM4,68":M$="5-NAPCORP":
GOSUB9100:DRAWB$(5):M$=STR$(SH(5
)):GOSUB9100:DRAWC$(5):M$=STR$(S
P(5)):GOSUB9100:DRAWD$(5):M$=STR
$(SI(5)):GOSUB9100
22Ø DRAW"BM4,78":M$="6-AMERICO":
GOSUB9100:DRAWB$(6):M$=STR$(SH(6
)):GOSUB9100:DRAWC$(6):M$=STR$(S
P(6)):GOSUB9100:DRAWD$(6):M$=STR
$(SI(6)):GOSUB9100
222 DRAW"BM14,88":M$="TOTALS":GO
SUB9100:DRAW"BM92,88":M$=STR$(TS

):GOSUB9100:DRAW"BM196,88":M$=ST
R$(TI):GOSUB9100
224 DRAW"BM4,1ØØ":M$="ROUND-":GO
SUB9100:DRAW"BM46,1ØØ":M$=STR$(G
F):GOSUB9100
226 DRAW"BM4,11Ø":M$="CASH ON HA
ND-$":GOSUB9100:DRAW"BM1Ø8,11Ø":
M$=STR$(CH):GOSUB9100
228 DRAW"BM4,12Ø":M$="TOTAL WORT
H-$":GOSUB9100:DRAW"BM1ØØ,12Ø":M
$=STR$(TW):GOSUB9100
23Ø IFRF=ØTHENGL=TW
232 IFRF=1THENGOTO24Ø
234 GOTO25Ø
24Ø DRAW"BM16Ø,1ØØ":M$="*LAST DE
AL*":GOSUB9100
242 IFGL>TW THEN DRAW"BM17Ø,11Ø"
:M$="LOSS-$":GOSUB9100:L=GL-TW:D
RAW"BM21Ø,11Ø":M$=STR$(L):GOSUB9
1ØØ
244 IFGL<TW THEN DRAW"BM17Ø,11Ø"
:M$="GAIN-$":GOSUB9100:L=TW-GL:D
RAW"BM21Ø,11Ø":M$=STR$(L):GOSUB9
1ØØ
246 IFGL=TW THENDRAW"BM178,11Ø":
M$="NO-CHANGE":GOSUB9100
248 FORX=1TO25:GOSUB398:NEXT
249 IFGF=12 THENGOSUB388:GOTO4Ø
Ø
25Ø DRAW"BM4,13Ø":M$="DO YOU WIS
H TO 1-3":GOSUB9100:DRAW"BM2Ø,14
Ø":M$="1-BUY 2-SELL 3-NEITHER"
:GOSUB9100
252 DRAW"BM2Ø1,13Ø":M$="CHOICE":
GOSUB9100:DRAW"BM197,122R52D1ØL5
2U1Ø":DRAW"BM217,132D3ØR1ØU3ØBD1
ØL1ØBD1ØR1Ø"
254 A$=INKEY$:IFA$="1"THENBU=1:G
OSUB376ELSEIFA$="2"THENSE=1:GOSU
B376ELSEIFA$="3"THENGOSUB376:GOT
O288ELSE254
256 DRAW"BM4,15Ø":M$="WHICH COMP
ANY 1-6":GOSUB9100
258 A$=INKEY$:IFA$="1"THENCO=1:G
OSUB374ELSEIFA$="2"THENCO=2:GOSU
B374ELSEIFA$="3"THENCO=3:GOSUB37
4ELSEIFA$="4"THENCO=4:GOSUB374EL
SEIFA$="5"THENCO=5:GOSUB374ELSEI
FA$="6"THENCO=6:GOSUB374ELSE258
26Ø IFSE=1THEN32Ø
262 DRAW"BM4,16Ø":M$="HOW MANY S
HARES 1-5":GOSUB9100:DRAW"BM2,17
Ø":M$="1-5   2-1Ø   3-25   4-5Ø
   5-1ØØ":GOSUB9100
264 A$=INKEY$:IFA$="1"THENSS=5:G
OSUB372ELSEIFA$="2"THENSS=1Ø:GOS
UB372ELSEIFA$="3"THENSS=25:GOSUB
372:ELSEIFA$="4"THENSS=5Ø:GOSUB3

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72ELSEIFA$="5"THENSS=1ØØ:GOSUB37
2ELSE264
266 IFBU=1THENGOSUB33Ø
268 IFSE=1THEN28Ø
27Ø DRAWB$(CO)+E$:DRAWD$(CO)+F$:
DRAW"BM92,88"+E$:DRAW"BM196,88"+
F$:DRAW"BM114,11Ø"+F$:DRAW"BM1Ø6
,12Ø"+F$
272 SH(CO)=SH(CO)+SS:DRAWB$(CO):
M$=STR$(SH(CO)):GOSUB91ØØ:GOSUB3
98:SI(CO)=(SH(CO)*SP(CO)):DRAWD$
(CO):M$=STR$(SI(CO)):GOSUB91ØØ:G
OSUB398:GOSUB368:GOSUB37Ø:DRAW"B
M92,88":M$=STR$(TS):GOSUB91ØØ:GO
SUB398:DRAW"BM196,88":M$=STR$(TI
):GOSUB91ØØ:GOSUB398
274 I=SS*SP(CO):GOSUB391:GOSUB39
3:CH=CH-I:DRAW"BM1Ø8,11Ø":M$=STR
$(CH):GOSUB91ØØ:GOSUB398:DRAW"BM
1Ø2,12Ø":M$=STR$(TW):GOSUB91ØØ:G
OSUB398:GOSUB388
276 IFRF=ØTHENBU=Ø:SE=Ø:GOTO396
278 RF=Ø:BU=Ø:SE=Ø:GF=GF+1:GOTO1
25
28Ø IFSS>SH(CO)THENGOSUB378:GOSU
B384:GOSUB388:GOSUB386:SE=Ø:GOTO
25ØELSE282
282 DRAWB$(CO)+E$:DRAWD$(CO)+F$:
DRAW"BM92,88"+E$:DRAW"BM196,88"+
F$:DRAW"BM114,11Ø"+F$:DRAW"BM1Ø6
,12Ø"+F$:SH(CO)=SH(CO)-SS:DRAWB$
(CO):M$=STR$(SH(CO)):GOSUB91ØØ:G
OSUB398
284 I=SS*SP(CO):SI(CO)=SI(CO)-I:
DRAWD$(CO):M$=STR$(SI(CO)):GOSUB
91ØØ:GOSUB398:GOSUB368:GOSUB37Ø:
DRAW"BM92,88":M$=STR$(TS):GOSUB9
1ØØ:GOSUB398:DRAW"BM196,88":M$=S
TR$(TI):GOSUB91ØØ:GOSUB398
286 GOSUB392:GOSUB393:CH=CH+I:DR
AW"BM1Ø8,11Ø":M$=STR$(CH):GOSUB9
1ØØ:GOSUB398:DRAW"BM1Ø2,12Ø":M$=
STR$(TW):GOSUB91ØØ:GOSUB398
288 IFGF=12THENGOSUB388:RF=Ø:BU=
Ø:SE=Ø:GOTO4ØØØ
29Ø GOSUB388:RF=Ø:BU=Ø:SE=Ø:GF=G
F+1:GOTO125
32Ø IFSH(CO)=ØTHENGOSUB382:GOSUB
384:GOSUB388:GOSUB386:SE=Ø:GOTO2
5ØELSE262
33Ø TB=(SP(CO)*SS):TF=TB*.Ø2:TT=
TB+TF
332 IFTT>CH THENGOSUB38Ø:GOSUB38
4:GOSUB388:GOSUB386:BU=Ø:GOTO25Ø
ELSERETURN
368 TS=SH(1)+SH(2)+SH(3)+SH(4)+S
H(5)+SH(6):RETURN
37Ø TI=SI(1)+SI(2)+SI(3)+SI(4)+S
I(5)+SI(6):RETURN
372 DRAW"BM22Ø,16Ø":M$=A$:GOSUB9
1ØØ:GOSUB398:RETURN
374 DRAW"BM22Ø,15Ø":M$=A$:GOSUB9
1ØØ:GOSUB398:RETURN
376 DRAW"BM22Ø,14Ø":M$=A$:GOSUB9
1ØØ:GOSUB398:RETURN
378 DRAW"BM7Ø,18Ø":M$="YOU CAN'T
 DO THAT!!!":GOSUB91ØØ:RETURN
38Ø DRAW"BM3Ø,18Ø":M$="NOT ENOUG
H CASH ON HAND!!":GOSUB91ØØ:RETU
RN
382 DRAW"BM4,18Ø":M$="NO SHARES
HELD IN THAT COMPANY!!":GOSUB91Ø
Ø:RETURN
384 SOUND1,1Ø:RETURN
386 LINE(Ø,122)-(256,192),PRESET
,BF:RETURN
388 DRAW"BM8Ø,19Ø":M$="PRESS ANY
 KEY":GOSUB91ØØ
39Ø A$=INKEY$:IFA$=""THEN39ØELSE
RETURN
391 BF=INT(I*.Ø2):I=I+BF:TW=TW-B
F:GL=TW:RETURN
392 BF=INT(I*.Ø2):I=I-BF:TW=TW-B
F:RETURN
393 DRAW"BM4,18Ø":M$="BROKER FEE
S-$":GOSUB91ØØ:DRAW"BM99,18Ø":M$
=STR$(BF):GOSUB91ØØ:FORX=1TO8:SO
UND1,1:NEXT:RETURN
396 ON GF GOTO1ØØØ,11ØØ,12ØØ,13Ø
Ø,14ØØ,15ØØ,16ØØ,17ØØ,18ØØ,19ØØ,
2ØØØ,21ØØ
398 SOUND18Ø,1:RETURN
5ØØ  DRAWO$:B$="TELTECH ACCUSED
OF PRICE RIP OFF":GOSUB912Ø:DRAW
P$:B$="BY CONSUMER ADVOCATES":GO
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SUB912Ø:DRAWQ$:B$="GEMOIL REQUES
TS APPROVAL FOR OIL":GOSUB912Ø:D
RAWR$:B$="FIELD IN MEXICO":GOSUB
912Ø
5Ø5 DRAWS$:B$="NAPCORP WILL DEVE
LOP MINI PRICE":GOSUB912Ø:DRAWT$
:B$="MOTELS ACROSS THE COUNTRY":
GOSUB912Ø:GOTO136
51Ø DRAWO$:B$="RACORP UNVEILS NE
W ECONOMICAL":GOSUB912Ø:DRAWP$:B
$="SOLAR COLLECTOR":GOSUB912Ø:DR
AWQ$:B$="MEDICO SEEKS RATE INCRE
ASE IN":GOSUB912Ø:DRAWR$:B$="HEA
LTH CARE CHARGES":GOSUB912Ø
515 DRAWS$:B$="AMERICO ACCUSED O
F STEALING WAR":GOSUB912Ø:DRAWT$
:B$="PLANS FROM THE PENTAGON":GO
SUB912Ø:GOTO136
52Ø DRAWO$:B$="GEMOIL ACCUSED OF
 LAKE POLLUTION":GOSUB912Ø:DRAWP
$:B$="BY NATIONAL BIRD SOCIETY":
GOSUB912Ø:DRAWQ$:B$="NAPCORP SEE
KS APPROVAL FOR SUPER":GOSUB912Ø
:DRAWR$:B$="HOTEL IN FLORIDA":GO
SUB912Ø
525 DRAWS$:B$="MEDICO UNVEILS PL
ANS FOR HEALTH":GOSUB912Ø:DRAWT$
:B$="CARE CENTER IN CANADA":GOSU
B912Ø:GOTO136
53Ø DRAWO$:B$="RACORP WILL DEVEL
OP ECONOMICAL":GOSUB912Ø:DRAWP$:
B$="BUBBLE MEMORY FOR COMPUTERS"
:GOSUB912Ø:DRAWQ$:B$="TELTECH RE
QUESTS DEREGULATION OF":GOSUB912
Ø:DRAWR$:B$="GAS PRICES":GOSUB91
2Ø
535 DRAWS$:B$="GEMOIL ACCUSED OF
 ATTEMPTED":GOSUB912Ø:DRAWT$:B$=
"PAYOFF OF THREE SENATORS":GOSUB
912Ø:GOTO136
54Ø DRAWO$:B$="TELTECH ACCUSED O
F PIRATING BY":GOSUB912Ø:DRAWP$:
B$="NATIONAL COMPUTER CORP":GOSU
B912Ø:DRAWQ$:B$="AMERICO REQUEST
S APPROVAL FOR":GOSUB912Ø:DRAWR$
:B$="TAKEOVER OF ATOM ARMS CORP"
:GOSUB912Ø
545 DRAWS$:B$="MEDICO DEVELOPING
 TWO NEW WONDER":GOSUB912Ø:DRAWT
$:B$="DRUGS":GOSUB912Ø:GOTO136
55Ø DRAWO$:B$="GEMOIL DEVELOPING
 NEW OIL":GOSUB912Ø:DRAWP$:B$="R
ECYCLING PLANT IN BRAZIL":GOSUB9
12Ø:DRAWQ$:B$="AMERICO SEEKS APP
ROVAL FOR":GOSUB912Ø:DRAWR$:B$="
NEW PLANT IN GEORGIA":GOSUB912Ø
555 DRAWS$:B$="NAPCORP NAMED IN
MULTI MILLION":GOSUB912Ø:DRAWT$:
B$="FOOD POISONING SUIT":GOSUB91
2Ø:GOTO136
56Ø DRAWO$:B$="RACORP ACCUSED OF
 PATENT THEFT":GOSUB912Ø:DRAWP$:
B$="BY SOLARMASTER CORP":GOSUB91
2Ø:DRAWQ$:B$="MEDICO REQUESTS TA
KEOVER OF":GOSUB912Ø:DRAWR$:B$="
MEDICARE PROGRAM":GOSUB912Ø
565 DRAWS$:B$="TELTECH TO DEVELO
PE HIGH SPEED":GOSUB912Ø:DRAWT$:
B$="NATIONAL DATA LINK":GOSUB912
Ø:GOTO136
57Ø DRAWO$:B$="NAPCORP DECIDES T
O ENTER FAST":GOSUB912Ø:DRAWP$:B
$="FOOD MARKET":GOSUB912Ø:DRAWQ$
:B$="GEMOIL SEEKS APPROVAL FOR":
GOSUB912Ø:DRAWR$:B$="DRILLING OF
F TEXAS COAST":GOSUB912Ø
575 DRAWS$:B$="RACORP ACCUSED OF
 PRICE FIXING":GOSUB912Ø:DRAWT$:
B$="BY ROBOTOMATICS CORP":GOSUB9
12Ø:GOTO136
58Ø DRAWO$:B$="MEDICO NAMED IN B
ILLION DOLLAR":GOSUB912Ø:DRAWP$:
B$="MALPRACTICE SUIT":GOSUB912Ø:
DRAWQ$:B$="NAPCORP REQUESTS APPR
OVAL FOR":GOSUB912Ø:DRAWR$:B$="T
AKEOVER OF TEN AMERICANA INNS":G
OSUB912Ø
585 DRAWS$:B$="TELTECH DEVELOPIN
G NEW MASS DATA":GOSUB912Ø:DRAWT
$:B$="STORAGE SYSTEM":GOSUB912Ø:
GOTO136
59Ø DRAWO$:B$="GEMOIL STARTS NEW
 DRILLING IN":GOSUB912Ø:DRAWP$:B
$="PERUVIAN FIELD":GOSUB912Ø:DRA
WQ$:B$="RACORP REQUESTS NASA TO
ORBIT":GOSUB912Ø:DRAWR$:B$="NEW
SOLAR SPACELAB":GOSUB912Ø
595 DRAWS$:B$="AMERICO ACCUSE OF
 SELLING ARMS":GOSUB912Ø:DRAWT$:
B$="TO ANTI AMERICAN FORCES":GOS
UB912Ø:GOTO136
6ØØ DRAWO$:B$="NAPCORP ACCUSED O
F PAYOFF TO":GOSUB912Ø:DRAWP$:B$
="FLORIDA MAYOR":GOSUB912Ø:DRAWQ
$:B$="TELTECH SEEKS APPROVAL OF
HOME":GOSUB912Ø:DRAWR$:B$="SECUR
ITY SYSTEM":GOSUB912Ø
6Ø5 DRAWS$:B$="AMERICO DEVELOPIN
G NEW BOOSTER":GOSUB912Ø:DRAWT$:
B$="ROCKET FOR FRANCE":GOSUB912Ø
:GOTO136
61Ø DRAWO$:B$="AMERICO UNVEILS P
LANS FOR NEW":GOSUB912Ø:DRAWP$:B
$="TRANSPORT PLANE":GOSUB912Ø:DR
AWQ$:B$="RACORP SEEKS FEDERAL FU
NDING FOR":GOSUB912Ø:DRAWR$:B$="
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DEVELOPING ROBOT WARRIORS":GOSUB
912Ø
615 DRAWS$:B$="MEDICO ACCUSED OF
 FAULTY BILLING":GOSUB912Ø:DRAWT
$:B$="BY NATIONAL INSURANCE CO":
GOSUB912Ø:GOTO136
62Ø PMODE3,1:PCLS2:SCREEN1,Ø:DRA
W"BM1Ø,16C3S8":B$="* NEWS FLASH
*":GOSUB912Ø:DRAW"BMØ,2ØR255BD2L
255":COLOR4:RETURN
625 DRAWU$:B$="TELTECH SUCCEEDS"
:GOSUB912Ø:RETURN
63Ø DRAWV$:B$="TELTECH FAILS":GO
SUB912Ø:RETURN
635 DRAWW$:B$="TELTECH CHARGES":
GOSUB912Ø:RETURN
64Ø DRAWW$:B$="TELTECH REQUEST":
GOSUB912Ø:RETURN
645 DRAWW$:B$="RACORP SUCCEEDS":
GOSUB912Ø:RETURN
65Ø DRAWV$:B$="RACORP FAILS":GOS
UB912Ø:RETURN
655 DRAWX$:B$="RACORP CHARGES":G
OSUB912Ø:RETURN
66Ø DRAWW$:B$="RACORP REQUEST":G
OSUB912Ø:RETURN
665 DRAWW$:B$="GEMOIL SUCCEEDS":
GOSUB912Ø:RETURN
67Ø DRAWV$:B$="GEMOIL FAILS":GOS
UB912Ø:RETURN
675 DRAWX$:B$="GEMOIL CHARGES":G
OSUB912Ø:RETURN
68Ø DRAWX$:B$="GEMOIL REQUEST":G
OSUB912Ø:RETURN
685 DRAWW$:B$="MEDICO SUCCEEDS":
GOSUB912Ø:RETURN
69Ø DRAWV$:B$="MEDICO FAILS":GOS
UB912Ø:RETURN
695 DRAWX$:B$="MEDICO CHARGES":G
OSUB912Ø:RETURN
7ØØ DRAWX$:B$="MEDICO REQUEST":G
OSUB912Ø:RETURN
7Ø5 DRAWU$:B$="NAPCORP SUCCEEDS"
:GOSUB912Ø:RETURN
71Ø DRAWX$:B$="NAPCORP FAILS":GO
SUB912Ø:RETURN
715 DRAWX$:B$="NAPCORP CHARGES":
GOSUB912Ø:RETURN
72Ø DRAWW$:B$="NAPCORP REQUEST":
GOSUB912Ø:RETURN
725 DRAWU$:B$="AMERICO SUCCEEDS"
:GOSUB912Ø:RETURN
73Ø DRAWV$:B$="AMERICO FAILS":GO
SUB912Ø:RETURN
735 DRAWW$:B$="AMERICO CHARGES":
GOSUB912Ø:RETURN
74Ø DRAWW$:B$="AMERICO REQUEST":
GOSUB912Ø:RETURN

745 DRAW"BM2Ø,6Ø":B$="IN NEW VEN
TURE":GOSUB912Ø:RETURN
75Ø DRAWY$:B$="IS APPROVED":GOSU
B912Ø:RETURN
755 DRAWY$:B$="IS REJECTED":GOSU
B912Ø:RETURN
76Ø DRAWY$:B$="PROVEN TRUE":GOSU
B912Ø:RETURN
765 DRAWY$:B$="PROVEN FALSE":GOS
UB912Ø:RETURN
77Ø DRAWZ$:B$="STOCK CLIMBS":GOS
UB912Ø:GOSUB9ØØ:RETURN
775 DRAWZ$:B$="STOCK SOARS":GOSU
B912Ø:GOSUB91Ø:RETURN
78Ø DRAWZ$:B$="STOCK SLIPS":GOSU
B912Ø:GOSUB92Ø:RETURN
785 DRAWZ$:B$="STOCK DIVES":GOSU
B912Ø:GOSUB93Ø:RETURN
79Ø FORX=16ØTO88STEP-8:PUT(1ØØ,X
)-(16Ø,X+2Ø),A,PSET:PLAY"L255O1G
":NEXT:RETURN
795 FORX=16ØTO88STEP-8:PUT(15,X)
-(75,X+2Ø),A,PSET:PLAY"L255O1G":
NEXT:FORX=16ØTO88STEP-8:PUT(1ØØ,
X)-(16Ø,X+2Ø),A,PSET:PLAY"O1G":N
EXT:FORX=16ØTO88STEP-8:PUT(185,X
)-(245,X+2Ø),A,PSET:PLAY"O1G":NE
XT:RETURN
8ØØ PUT(15,1ØØ)-(75,12Ø),A,PSET:
PLAY"L255O1G":PUT(1ØØ,1ØØ)-(16Ø,
12Ø),A,PSET:PLAY"O1G":PUT(185,1Ø
Ø)-(245,12Ø),A,PSET:PLAY"O1G":CO
LOR2:FORM=1TO5ØØ:NEXTM:LINE(15,1
ØØ)-(245,12Ø),PSET,BF:RETURN
8Ø5 PUT(15,1ØØ)-(75,12Ø),A,PSET:
PLAY"L255O1G":PUT(1ØØ,1ØØ)-(16Ø,
12Ø),A,PSET:PLAY"O1G":PUT(185,1Ø
Ø)-(245,12Ø),A,PSET:PLAY"O1G":PU
T(15,14Ø)-(75,16Ø),A,PSET:PLAY"O
1G":PUT(1ØØ,14Ø)-(16Ø,16Ø),A,PSE
T:PLAY"O1G":PUT(185,14Ø)-(245,16
Ø),A,PSET:PLAY"O1G"
81Ø FORM=1TO5ØØ:NEXTM:COLOR2:LIN
E(15,1ØØ)-(245,16Ø),PSET,BF:RETU
RN
82Ø PMODE3,1:PCLS2:SCREEN1,Ø:DRA
W"BM2Ø,6ØC4S8":B$="STOCK SELECTE
D":GOSUB912Ø:DRAW"BM4Ø,1ØØ":B$="
IS UNCHANGED":GOSUB912Ø:RETURN
825 DRAW"BM8Ø,19ØC1S4":M$="PRESS
 ANY KEY":GOSUB91ØØ:RETURN
9ØØ J=INT(SP(CO)*.1):SP(CO)=SP(C
O)+J:SI(CO)=SH(CO)*SP(CO):GOSUB3
7Ø:TW=CH+TI:RF=1:RETURN
91Ø K=INT(SP(CO)*.2):SP(CO)=SP(C
O)+K:SI(CO)=SH(CO)*SP(CO):GOSUB3
7Ø:TW=CH+TI:RF=1:RETURN
92Ø L=INT(SP(CO)*.1):SP(CO)=SP(C
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O)-L:SI(CO)=SH(CO)*SP(CO):GOSUB3
7Ø:TW=CH+TI:RF=1:RETURN
93Ø M=INT(SP(CO)*.2):SP(CO)=SP(C
O)-M:SI(CO)=SH(CO)*SP(CO):GOSUB3
7Ø:TW=CH+TI:RF=1:RETURN
1ØØØ ON CO GOTO1Ø1Ø,1Ø6Ø,1Ø2Ø,1Ø
6Ø,1Ø3Ø,1Ø6Ø
1Ø1Ø GOSUB62Ø:GOSUB635:GOSUB25ØØ
:GOTO22ØØ
1Ø2Ø GOSUB62Ø:GOSUB68Ø:GOSUB26ØØ
:GOTO22ØØ
1Ø3Ø GOSUB62Ø:X=RND(2):IFX=1THEN
1Ø4ØELSE1Ø5Ø
1Ø4Ø GOSUB71Ø:GOSUB745:GOSUB222Ø
:GOTO22ØØ
1Ø5Ø GOSUB7Ø5:GOSUB745:GOSUB224Ø
:GOTO22ØØ
1Ø6Ø GOTO221Ø
11ØØ ON CO GOTO116Ø,113Ø,116Ø,11
2Ø,116Ø,111Ø
111Ø GOSUB62Ø:GOSUB735:GOSUB25ØØ
:GOTO22ØØ
112Ø GOSUB62Ø:GOSUB7ØØ:GOSUB26ØØ
:GOTO22ØØ
113Ø GOSUB62Ø:X=RND(2):IFX=1THEN
114ØELSE115Ø
114Ø GOSUB65Ø:GOSUB745:GOSUB222Ø
:GOTO22ØØ
115Ø GOSUB645:GOSUB745:GOSUB224Ø
:GOTO22ØØ
116Ø GOTO221Ø
12ØØ ON CO GOTO126Ø,126Ø,121Ø,12
3Ø,122Ø,126Ø
121Ø GOSUB62Ø:GOSUB675:GOSUB25ØØ
:GOTO22ØØ
122Ø GOSUB62Ø:GOSUB72Ø:GOSUB26ØØ
:GOTO22ØØ
123Ø GOSUB62Ø:X=RND(2):IFX=1THEN
124ØELSE125Ø
124Ø GOSUB69Ø:GOSUB745:GOSUB222Ø
:GOTO22ØØ
125Ø GOSUB685:GOSUB745:GOSUB224Ø
:GOTO22ØØ
126Ø GOTO221Ø
13ØØ ON CO GOTO132Ø,133Ø,131Ø,13
6Ø,136Ø,136Ø
131Ø GOSUB62Ø:GOSUB675:GOSUB25ØØ
:GOTO22ØØ
132Ø GOSUB62Ø:GOSUB64Ø:GOSUB26ØØ
:GOTO22ØØ
133Ø GOSUB62Ø:X=RND(2):IFX=1THEN
134ØELSE135Ø
134Ø GOSUB65Ø:GOSUB745:GOSUB222Ø
:GOTO22ØØ
135Ø GOSUB645:GOSUB745:GOSUB224Ø
:GOTO22ØØ
136Ø GOTO221Ø
14ØØ ON CO GOTO141Ø,146Ø,146Ø,14
```

```
3Ø,146Ø,142Ø
141Ø GOSUB62Ø:GOSUB635:GOSUB25ØØ
:GOTO22ØØ
142Ø GOSUB62Ø:GOSUB74Ø:GOSUB26ØØ
:GOTO22ØØ
143Ø GOSUB62Ø:X=RND(2):IFX=1THEN
144ØELSE145Ø
144Ø GOSUB69Ø:GOSUB745:GOSUB222Ø
:GOTO22ØØ
145Ø GOSUB685:GOSUB745:GOSUB224Ø
:GOTO22ØØ
146Ø GOTO221Ø
15ØØ ON CO GOTO156Ø,156Ø,153Ø,15
```



```
6Ø,151Ø,152Ø
151Ø GOSUB62Ø:GOSUB715:GOSUB25ØØ
:GOTO22ØØ
152Ø GOSUB62Ø:GOSUB74Ø:GOSUB26ØØ
:GOTO22ØØ
153Ø GOSUB62Ø:X=RND(2):IFX=1THEN
154ØELSE155Ø
154Ø GOSUB67Ø:GOSUB745:GOSUB222Ø
:GOTO22ØØ
155Ø GOSUB665:GOSUB745:GOSUB224Ø
:GOTO22ØØ
156Ø GOTO221Ø
16ØØ ON CO GOTO163Ø,161Ø,166Ø,16
2Ø,166Ø,166Ø
161Ø GOSUB62Ø:GOSUB655:GOSUB25ØØ
:GOTO22ØØ
162Ø GOSUB62Ø:GOSUB7ØØ:GOSUB26ØØ
:GOTO22ØØ
163Ø GOSUB62Ø:X=RND(2):IFX=1THEN
164ØELSE165Ø
164Ø GOSUB63Ø:GOSUB745:GOSUB222Ø
:GOTO22ØØ
165Ø GOSUB625:GOSUB745:GOSUB224Ø
:GOTO22ØØ
166Ø GOTO221Ø
17ØØ ON CO GOTO176Ø,171Ø,172Ø,17
6Ø,173Ø,176Ø
171Ø GOSUB62Ø:GOSUB655:GOSUB25ØØ
:GOTO22ØØ
```

```
1720 GOSUB620:GOSUB680:GOSUB2600      2150 GOSUB725:GOSUB745:GOSUB2240
:GOTO2200                            :GOTO2200
1730 GOSUB620:X=RND(2):IFX=1THEN      2160 GOTO2210
1740ELSE1750                         2200 A$=INKEY$:IFA$=""THEN2200EL
1740 GOSUB710:GOSUB745:GOSUB2220      SE2200
:GOTO2200                            2210 GOSUB820:GOSUB825:RF=1:GOTO
1750 GOSUB705:GOSUB745:GOSUB2240      2200
:GOTO2200                            2220 X=RND(2):IFX=1THENGOSUB3000
1760 GOTO2210                        ELSEGOSUB3010
1800 ON CO GOTO1830,1860,1860,18     2230 RETURN
10,1820,1860                         2240 X=RND(2):IFX=1THENGOSUB3020
1810 GOSUB620:GOSUB695:GOSUB2500     ELSEGOSUB3030
:GOTO2200                            2250 RETURN
1820 GOSUB620:GOSUB720:GOSUB2600     2500 X=RND(2):IFX=1THEN2510ELSE2
:GOTO2200                            530
1830 GOSUB620:X=RND(2):IFX=1THEN     2510 GOSUB760:X=RND(2):IFX=1THEN
1840ELSE1850                         GOSUB3000ELSEGOSUB3010
1840 GOSUB630:GOSUB745:GOSUB2220     2520 RETURN
:GOTO2200                            2530 GOSUB765:X=RND(2):IFX=1THEN
1850 GOSUB625:GOSUB745:GOSUB2240     GOSUB3020ELSEGOSUB3030
:GOTO2200                            2540 RETURN
1860 GOTO2210                        2600 X=RND(2):IFX=1THEN2610ELSE2
1900 ON CO GOTO1960,1920,1930,19     630
60,1960,1910                         2610 GOSUB750:X=RND(2):IFX=1THEN
1910 GOSUB620:GOSUB735:GOSUB2500     GOSUB3020ELSEGOSUB3030
:GOTO2200                            2620 RETURN
1920 GOSUB620:GOSUB660:GOSUB2600     2630 GOSUB755:X=RND(2):IFX=1THEN
:GOTO2200                            GOSUB3000ELSE3010
1930 GOSUB620:X=RND(2):IFX=1THEN     2640 RETURN
1940ELSE1950                         3000 GOSUB780:GOSUB9130:GOSUB800
1940 GOSUB670:GOSUB745:GOSUB2220     :GOSUB825:RETURN
:GOTO2200                            3010 GOSUB785:GOSUB9130:GOSUB805
1950 GOSUB665:GOSUB745:GOSUB2240     :GOSUB825:RETURN
:GOTO2200                            3020 GOSUB770:GOSUB9135:GOSUB790
1960 GOTO2210                        :GOSUB825:RETURN
2000 ON CO GOTO2020,2060,2060,20     3030 GOSUB775:GOSUB9135:GOSUB795
60,2010,2030                         :GOSUB825:RETURN
2010 GOSUB620:GOSUB715:GOSUB2500     4000 A=10000
:GOTO2200                            4002 IFA=TW THEN4500
2020 GOSUB620:GOSUB640:GOSUB2600     4004 PMODE4,1:PCLS5:SCREEN1,1:DR
:GOTO2200                            AW"BM6,20C0S8":M$="*":GOSUB9100:
2030 GOSUB620:X=RND(2):IFX=1THEN     DRAW"BM242,20":GOSUB9100:DRAW"BM
2040ELSE2050                         30,10C0S4":M$="DEPARTMENT OF THE
2040 GOSUB730:GOSUB745:GOSUB2220      TREASURY":GOSUB9100:DRAW"BM40,2
:GOTO2200                            0":M$="INTERNAL REVENUE SERVICE"
2050 GOSUB725:GOSUB745:GOSUB2240     :GOSUB9100:DRAW"BM0,3R255BD2L25
:GOTO2200                            5BD2R255":GOSUB4100
2060 GOTO2210                        4006 IFA>TW THEN4010ELSE4030
2100 ON CO GOTO2160,2120,2160,21     4010 DRAW"BM36,70S8":M$="CAPITAL
10,2160,2130                          LOSS":GOSUB9100:S=A-TW:TX=INT(S
2110 GOSUB620:GOSUB695:GOSUB2500     *.2):DRAW"BM36,110":M$="REFUND-$
:GOTO2200                            ":GOSUB9100:DRAW"BM160,110":M$=S
2120 GOSUB620:GOSUB660:GOSUB2600     TR$(TX):GOSUB9100:DRAW"S4":GOSUB
:GOTO2200                            388:XB=1:GOTO4500
2130 GOSUB620:X=RND(2):IFX=1THEN     4030 DRAW"BM36,70S8":M$="CAPITAL
2140ELSE2150                          GAIN":GOSUB9100:DRAW"BM36,110":
2140 GOSUB730:GOSUB745:GOSUB2220     M$="TAX DUE-$":GOSUB9100:S=TW-A:
:GOTO2200                            TX=INT(S*.2):DRAW"BM166,110":M$=
```

```
STR$(TX):GOSUB91ØØ:DRAW"S4":GOSU
B388:XB=2:GOTO45ØØ
41ØØ PLAY"V31L4O1DL2ØEL1ØFL6D":R
ETURN
45ØØ PMODE4,1:PCLS:SCREEN1,1:DRA
W"BM62,5ØS8":M$="GAME OVER":GOSU
B91ØØ
45Ø2 IFXB=1THEN 453ØELSEIFXB=2 T
HEN451Ø ELSE45Ø4
45Ø4 DRAW"BM2Ø,8Ø":M$="YOU BROKE
 EVEN":GOSUB91ØØ:GOTO455Ø
451Ø S=S-TX:DRAW"BM54,8Ø":M$="YO
U GAINED":GOSUB91ØØ:GOTO4512
4512 DRAW"BM9Ø,11Ø":M$=STR$(S):G
OSUB91ØØ:DRAW"BM8Ø,14Ø":M$="DOLL
ARS":GOSUB91ØØ:GOTO455Ø
453Ø S=S-TX:DRAW"BM7Ø,8Ø":M$="YO
U LOST":GOSUB91ØØ:GOTO4512
455Ø PLAY"L1ØT2O1CDEL6DL1ØEL4CO2
L3C"
4552 POKE178,141:FORX=ØTO191:LIN
E(Ø,X)-(256,X),PSET:NEXT
4554 FORX=191TO1Ø6STEP-1:LINE(Ø,
X)-(256,X),PRESET:NEXT
4556 DRAW"BM4Ø,12ØC1":M$="Y/YES
N/NO":GOSUB91ØØ
4558 FORX=1Ø5TO76STEP-1:LINE(Ø,X
)-(256,X),PRESET:NEXT
456Ø DRAW"BM3Ø,9Ø":M$="ANOTHER G
AME":GOSUB91ØØ
4562 FORX=75TOØSTEP-1:LINE(Ø,X)-
(256,X),PRESET:NEXT
4563 XB=Ø
4564 A$=INKEY$:IFA$="Y"THEN1ØØEL
SEIFA$="N"THEN4566ELSE4564
4566 CLSO:END
9ØØØ DATABR4
9ØØ1 DATABU6D3BD2D
9ØØ2 DATABU4U2BR3D2BD4
9ØØ3 DATABR2U6BR3D6U2R2L7BU2R7BD
4
9ØØ4 DATABUFR2EUHL2HUER2FBD5BL2D
U8D8UBR2
9ØØ5 DATABU5UBR4BFG4BDBR4NU
9ØØ6 DATABUUBU2UEFDG2DFRE2BU2BL4
F4
9ØØ7 DATABRBU6DGBD4BR
9ØØ8 DATABR2H2U2E2BD6
9ØØ9 DATABU6F2D2G2BR2
9Ø1Ø DATABR3U3NU3NL3NR3NE3NF3NG3
NH3BD3BR4
9Ø11 DATABR2BUU4D2L2R4BD3
9Ø12 DATABRUDNGBR
9Ø13 DATABU3R4BD3
9Ø14 DATANU
9Ø15 DATAE5BD5
9Ø16 DATABRHU4ERFD4GNLBR2
9Ø17 DATAR2U6NGD6R2
9Ø18 DATABU5ER2FDGL2GD2R4
9Ø19 DATABU5ER2FDGNLFDGL2NHBR3
9Ø2Ø DATABR3U6G3R4BD3
9Ø21 DATABUFR2EU2HL3U2R4BD6
9Ø22 DATABU3R3FDGL2HU4ER2BD6BR
9Ø23 DATABU6R4DG3D2BR3
9Ø24 DATABRHUER2EUHL2GDFR2FDGNL2
BR
9Ø25 DATABRR2EU4HL2GDFR3BD3
9Ø26 DATABU6BD2DBD2D
9Ø27 DATABU6BD2DBD2DNG
9Ø28 DATABR3H3E3BD6
9Ø29 DATAU2R4BU2L4BD4BR4
9Ø3Ø DATAE3H3BD6BR3
9Ø31 DATABU5UER2FDG2DBD2DBR2
9Ø32 DATABR4
9Ø33 DATAU5ER2FD2NL4D3
9Ø34 DATARU6NLR2FDGNL2FDGNL3BR
9Ø35 DATABR4BU5HL2GD4FR2EBD
9Ø36 DATARU6NLR2FD4GNL2BR
9Ø37 DATAU6NR4D3NR3D3R4
9Ø38 DATAU3NR3U3R4BD6
9Ø39 DATABUU4ER3BD4NLD2L3NHR3
9Ø4Ø DATAU3NU3R4NU3D3
9Ø41 DATAR2U6NL2NR2D6R2
9Ø42 DATABUNUFR2ENU5BD
9Ø43 DATAU3NU3RNE3F3
9Ø44 DATANU6R4
9Ø45 DATAU6F2DUE2D6
9Ø46 DATAU6BDF4DU6BD6
9Ø47 DATABRHU4ER2FD4GNL2BR
9Ø48 DATAU6R3FDGL3D3BR4
9Ø49 DATABRHU4ER2FD4GNL2BUHF2
9Ø5Ø DATAU6R3FDGL3RF3
9Ø51 DATABUFR2EUHL2HUER2FBD5
9Ø52 DATABU6R4L2D6BR2
9Ø53 DATABUNU5FR2ENU5BD
9Ø54 DATABU6D4F2E2U4BD6
9Ø55 DATANU6E2UDF2NU6
9Ø56 DATAUE4NUG2H2NUF4D
9Ø57 DATABU6DF2E2NUG2D3BR2
9Ø58 DATABU6R4DG4DR4
91ØØ L=LEN(M$)::FORZ=1TOL:M=ASC(
MID$(M$,Z,1))-32:DRAWCH$(M):DRAW
"BR4":NEXT:RETURN
911Ø X=RND(1ØØ)+4Ø:B=RND(5Ø)+15Ø
:SOUNDB,1:RETURN
912Ø L=LEN(B$):FORZ=1TOL:M=ASC(M
ID$(B$,Z,1))-32:DRAWCH$(M):PLAY"
T255V31O1CO5CO1C":DRAW"BR4":NEXT
:RETURN
913Ø PLAY"V31T2L1ØO1BBBL2GP8L1ØA
AAL2F#":RETURN
9135 PLAY"V31T2L8O3DL4FL1ØDD#L6F
P8DL6FL1ØDD#L8F":RETURN
```
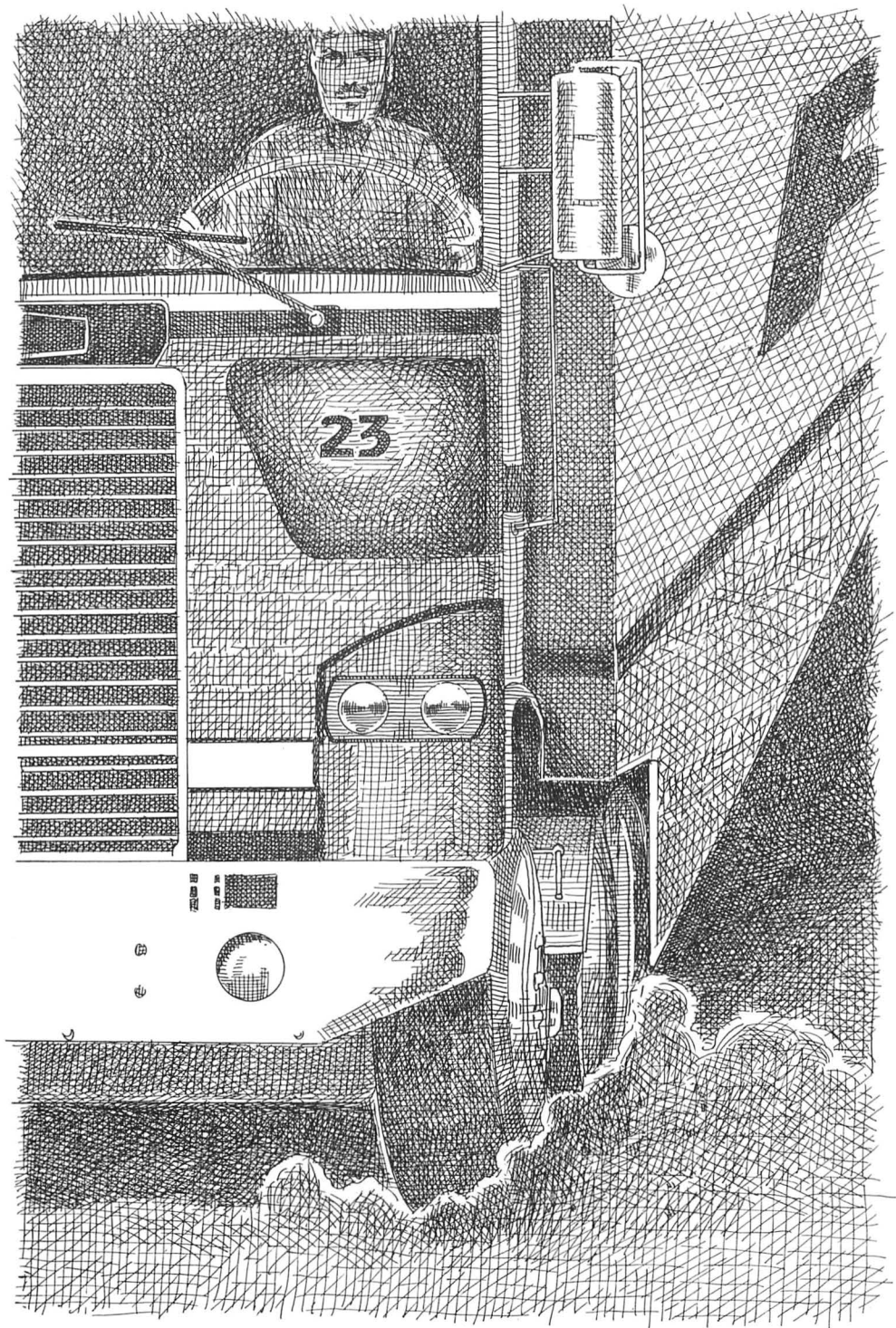
18-WHEELER

Program by Peter Brandt

"Ten-four CoCo Nut, put the hammer down . . . You're lean and green all the way to the border." Do you trust what you hear on your C.B. radio? Should you go ahead and put the pedal to the metal or be more cautious and conserve gas? You need to get this 10 tons of fresh Florida produce to Seattle before it spoils.

This Simulation gives you the feeling of driving a big "rig" across the U.S.A. You are sitting high above the road watching the highway's white lines pass you by throughout the long journey. Just load and run the program and get ready for a new experience. After a title page appears, you may select from this menu:

B	=	Begin
M	=	Check map
F	=	Refuel
1	=	First gear (25 mph)
2	=	Second gear (35 mph)
3	=	Third gear (45 mph)
4	=	Fourth gear (55 mph)
5	=	Fifth gear (65 mph)
6	=	Sixth gear (75 mph)
S	=	Stop

After pressing 'B', the first thing you need to do is check the map. This familiarizes you with the route, which, starting in Orlando, Florida, takes you through St. Louis, Missouri, Salt Lake City, Utah, and Butte, Montana to Seattle, Washington. You must shift gears in sequence and can only stop your rig for refueling or map reading while in first gear. Be sure to check the map frequently because the only places you can gas up are in St. Louis, Salt Lake City and Butte. Just press 'F' to gas up when you're within the circles that surround these cities.

Keep in mind that if you choose to exceed the speed limit in order to make up for lost time, you risk being caught by "Smokey." If this happens, your speed is reduced to zero mph and time is added to the total trip time. The same thing happens if you run out of fuel, so remember to check your map location often; at higher speeds your fuel-to-miles ratio is reduced significantly.

"How 'bout that, Southbounder? You got the CoCo Nut here . . . How's it lookin' over your shoulder? I'm gonna get this rolling fruit salad to Seattle in record time!"

Pete Brandt is a designer of automotive electrical systems and an electronics student. He lives in Matthews, North Carolina.

WHEELER   32K ECB

```
5 PMODE 4,1
10 PCLS
15 SCREEN 1,1
20 LINE (0,92)-(192,92),PSET
25 LINE (28,96)-(28,144),PSET
30 LINE (44,104)-(68,104),PSET
35 LINE (44,104)-(44,144),PSET
40 LINE (44,116)-(68,116),PSET
45 LINE (68,104)-(68,116),PSET
50 LINE (62,120)-(68,144),PSET
55 LINE (84,104)-(84,144),PSET
60 LINE -(104,144),PSET
65 LINE -(104,104),PSET
70 LINE (136,104)-(116,104),PSET
75 LINE-(116,144),PSET
80 LINE-(136,144),PSET
85 LINE (148,104)-(148,144),PSET
90 LINE (152,116)-(164,104),PSET
95 LINE (152,124)-(168,144),PSET
100 LINE (176,104)-(180,104),PSE
T
110 LINE (176,106)-(180,106),PSE
T
115 LINE (192,104)-(192,144),PSE
T
120 LINE (204,144)-(204,104),PSE
T
125 LINE-(232,144),PSET
130 LINE-(232,104),PSET
131 SOUND1,15
135 FORDLAY=1TO300:NEXTDLAY
136 SOUND1,28
2000 CLS
2005 PRINT @ 40, "CONTROL COMMAN
DS"
2010 PRINT @ 102, "B = BEGIN"
```

```
2015 PRINT @ 134, "M = CHECK MAP
"
2020 PRINT @ 166, "F = REFUEL"
2025 PRINT @ 198, "1 = FIRST GEA
R (25 MPH)"
2030 PRINT @ 230, "2 = SECOND GE
AR (35 MPH)"
2035 PRINT @ 262, "3 = THIRD GEA
R (45 MPH)"
2040 PRINT @ 294, "4 = FORTH GEA
R (55 MPH)"
2045 PRINT @ 326, "5 = FIFTH GEA
R (65 MPH)"
2050 PRINT @ 358, "6 = SIXTH GEA
R (75 MPH)"
2055 PRINT @ 390, "S = STOP"
2060 INPUT A$
2065 IF A$ = CHR$(66)THEN 2070 E
LSE 2060
2070 PCLEAR 4
2075 C=0:F=0:M=1
2080 PMODE 4,1
2085 PCLS
2090 SCREEN 1,1
2095 LINE(100,0)-(0,100),PSET
2100 LINE-(256,100),PSET
2105 LINE-(156,0),PSET
2110 CIRCLE (52,144),36
2115 CIRCLE (204,144),36
2120 CIRCLE (128,128),24
2125 PAINT (24,12),5,5
2130 PAINT (192,12),5,5
2135 LINE(112,156)-(112,164),PSE
T
2140 LINE(112,156)-(118,156),PSE
T
2145 LINE(112,160)-(116,160),PSE
T
2150 LINE(120,156)-(120,164),PSE
T
2155 LINE-(126,164),PSET
2160 LINE-(126,156),PSET
2165 LINE(130,156)-(130,164),PSE
T
2170 LINE-(136,164),PSET
2175 LINE(130,156)-(136,156),PSE
T
2180 LINE(130,160)-(134,160),PSE
T
2185 LINE(140,156)-(140,164),PSE
T
2190 LINE-(146,164),PSET
2195 LINE(108,125)-(108,131),PSE
T
2200 LINE-(112,131),PSET
2205 LINE(108,128)-(112,128),PSE
T
2210 LINE(108,125)-(112,125),PSE
2215 LINE(128,106)-(128,112),PSE
T
2220 LINE(145,125)-(145,131),PSE
T
2225 LINE(145,125)-(149,125),PSE
T
2230 LINE(145,128)-(148,128),PSE
T
2235 LINE(40,190)-(40,182),PSET
2240 LINE-(43,190),PSET
2245 LINE-(46,182),PSET
2250 LINE-(46,190),PSET
2255 LINE(50,190)-(50,182),PSET
2260 LINE-(53,182),PSET
2265 LINE-(53,186),PSET
2270 LINE-(50,186),PSET
2275 LINE(57,182)-(57,190),PSET
2280 LINE-(60,186),PSET
2285 LINE(60,182)-(60,190),PSET
2290 DRAW"BM193,190;U8R3D3L3"
2295 LINE(193,185)-(197,190),PSE
T
2300 DRAW"BM200,190;U8R3D3L3"
2305 LINE(206,190)-(206,182),PSE
T
2310 LINE-(209,190),PSET
2315 LINE-(212,182),PSET
2320 LINE-(212,190),PSET
2325 LINE(20,141)-(20,147),PSET
2330 LINE-(23,147),PSET
2335 LINE-(23,141),PSET
2340 LINE-(20,141),PSET
2345 LINE(75,141)-(78,141),PSET
2350 LINE-(78,147),PSET
2355 LINE(84,141)-(81,141),PSET
2360 LINE-(81,144),PSET
2365 LINE-(84,144),PSET
2370 LINE-(84,147),PSET
2375 LINE-(81,147),PSET
2380 LINE(50,118)-(50,112),PSET
2385 LINE-(47,115),PSET
2390 LINE-(50,115),PSET
2395 LINE(56,112)-(53,112),PSET
2400 LINE-(53,115),PSET
2405 LINE-(56,115),PSET
2410 LINE-(56,118),PSET
2415 LINE-(53,118),PSET
2420 DRAW"BM65,119;L3D3R3D3L3
2425 DRAW"BM71,119;L3D3R3D3L3"
2430 DRAW"BM72,130;D6R3U3L3"
2435 DRAW"BM80,130;L3D3R3D3L3"
2440 DRAW"BM31,119;R3D6L3"
2445 DRAW"BM34,122;L3
2450 DRAW"BM40,119;L3D3R3D3L3"
2455 DRAW"BM23,130;R3D3L3D3R3"
2460 DRAW"BM32,130;L3D3R3D3L3"
2465 LINE(192,156)-(196,160),PSE
```

107

```
T
2470 LINE(192,160)-(196,156),PSE
T
2475 LINE(200,156)-(200,160),PSE
T
2480 DRAW"BM203,156;D4R3U4L3"
2485 DRAW"BM208,156;D4R3U4L3"
2490 DRAW"BM174,141;D6
2495 DRAW"BM178,126;R3D3L3D3R3"
2500 DRAW"BM194,115;R3D3L3R3D3L3
"
2505 DRAW"BM214,115;D6U3L3"
2510 LINE(214,115)-(211,118),PSE
T
2515 DRAW"BM230,126;L3D3R3D3L3"
2520 DRAW"BM233,141;D6R3U3L3"
2525 LINE(216,20)-(236,44),PRESE
T,BF
2530 DRAW"BM224,24;L4D4R4D4L4"
2535 DRAW"BM232,24;L4D4R4D4L4"
2536 IFF<100GOTO2541
2537 IFF>99ANDF<200GOTO2543
2538 IFF>199ANDF<300GOTO2545
2539 IFF>299GOTO2547
2541 LINE(128,128)-(144,128),PSE
T:GOTO2550
2543 LINE(128,128)-(138,118),PSE
T:GOTO2550
2545 LINE(128,128)-(128,114),PSE
T:GOTO2550
2547 LINE(128,128)-(118,118),PSE
T
2550 LINE(204,144)-(224,132),PRE
SET
2551 LINE(52,144)-(42,128),PRESE
T
2552 LINE(52,144)-(52,126),PRESE
T
2553 LINE(52,144)-(62,128),PRESE
T
2554 LINE(52,144)-(69,136),PRESE
T
2555 LINE(52,144)-(34,136),PRESE
T
2556 LINE(52,144)-(72,144),PRESE
T
2560 LINE(52,144)-(32,144),PSET
2565 LINE(204,144)-(180,144),PSE
T
2570 A$=INKEY$ : C = C + 1
2575 IF A$ = "1" THEN 2595 ELSE
2580
2580 IF A$ = "F" THEN 7000 ELSE
2585
2585 IF A$ = "M" THEN 8000 ELSE
2590
2590 IF A$ = "" THEN 2570 ELSE 2
570
```
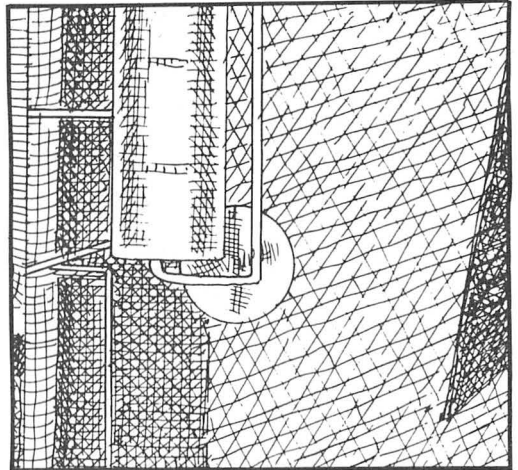


```
2595 LINE(52,144)-(32,144),PRESE
T
2596 LINE(204,144)-(224,132),PRE
SET
2600 LINE(52,144)-(42,128),PRESE
T
2605 LINE(52,144)-(34,136),PSET
2610 LINE(204,144)-(180,144),PSE
T
2615 LINE(204,144)-(228,144),PRE
SET
2620 FOR DLAY = 1 TO 100 : NEXT
DLAY
2625 LINE(204,144)-(180,144),PRE
SET
2630 LINE(204,144)-(184,132),PSE
T
2635 FOR DLAY =1 TO 100: NEXT DL
AY
2640 LINE(204,144)-(184,132),PRE
SET
2645 LINE(204,144)-(196,124),PSE
T
2650 FOR DLAY = 1 TO 100 : NEXT
DLAY
2655 LINE(204,144)-(196,124),PRE
SET
2660 LINE(204,144)-(212,124),PSE
T
2665 FOR DLAY = 1 TO 100 : NEXT
DLAY
2670 LINE(204,144)-(212,124),PRE
SET
2675 LINE(204,144)-(224,132),PSE
T
2680 IF F < 100 GOTO 2760
2685 IF F > 99 AND F < 200 GOTO2
705
2690 IF F>199 AND F < 300 GOTO 2
```

```
715
2695 IF F>299 AND F < 400 GOTO 2
725
2700 IF F > 399 GOTO 2735
2705 LINE(128,128)-(144,128),PRE
SET
2710 LINE(128,128)-(138,118),PSE
T:GOTO 2760
2715 LINE(128,128)-(138,118),PRE
SET
2720 LINE(128,128)-(128,114),PSE
T:GOTO 2760
2725 LINE(128,128)-(128,114),PRE
SET
2730 LINE(128,128)-(118,118),PSE
T:GOTO 2760
2735 LINE(128,128)-(118,118),PRE
SET
2740 LINE(128,128)-(114,128),PSE
T
2745 FOR DLAY = 1 TO 5000 : NEXT
 DLAY
2750 LINE(128,128)-(114,128),PRE
SET
2755 F=0:C=C+100:GOTO2536
2760 LINE(126,4)-(128,24),PSET,B
F
2765 FOR DLAY = 1 TO 250 : NEXT
DLAY
2770 LINE (126,4)-(128,24),PRESE
T,BF
2775 FOR DLAY = 1 TO 250 : NEXT
DLAY
2780 LINE(112,34)-(115,56),PSET,
BF
2785 FOR DLAY = 1 TO 250 : NEXT
DLAY
2790 LINE(112,34)-(115,56),PRESE
T,BF
2795 FOR DLAY = 1 TO 250 : NEXT
DLAY
2800 LINE(100,62)-(104,86),PSET,
BF
2805 FOR DLAY = 1 TO 250 : NEXT
DLAY
2810 LINE (100,62)-(104,86),PRES
ET,BF
2815 FOR DLAY = 1 TO 250 : NEXT
DLAY
2820 F = F + 10:C=C+6:M=M+5
2825 IFM>10000GOTO9500
2830 B$ = INKEY$
2835 IF B$ = CHR$(83) THEN 2550
ELSE 2840
2840 IF B$ = "2" THEN 3000 ELSE
2845
2845 IF B$ = "" THEN 2680 ELSE 2
680
3000 LINE(52,144)-(34,136),PRESE
T
3001 LINE(204,144)-(224,132),PRE
SET
3005 LINE(52,144)-(52,126),PRESE
T
3010 LINE(52,144)-(42,128),PSET
3015 LINE(204,144)-(180,144),PSE
T
3020 LINE(204,144)-(228,144),PRE
SET
3025 FOR DLAY = 1 TO 100 : NEXT
DLAY
3030 LINE(204,144)-(180,144),PRE
SET
3035 LINE(204,144)-(184,132),PSE
T
3040 FOR DLAY = 1 TO 100 : NEXT
DLAY
3045 LINE(204,144)-(184,132),PRE
SET
3050 LINE(204,144)-(196,124),PSE
T
3055 FOR DLAY = 1 TO 100 : NEXT
DLAY
3060 LINE(204,144)-(196,124),PRE
SET
3065 LINE(204,144)-(212,124),PSE
T
3070 FOR DLAY = 1 TO 100 : NEXT
DLAY
3075 LINE(204,144)-(212,124),PRE
SET
3080 LINE(204,144)-(224,132),PSE
T
3085 IF F < 100 GOTO 3165
3090 IF F > 99 AND F < 200 GOTO
3110
3095 IF F>199 AND F < 300 GOTO 3
120
3100 IF F >299 AND F < 400 GOTO
3130
3105 IF F > 399 GOTO 3140
3110 LINE(128,128)-(144,128),PRE
SET
3115 LINE(128,128)-(138,118),PSE
T:GOTO 3165
3120 LINE(128,128)-(138,118),PRE
SET
3125 LINE(128,128)-(128,114),PSE
T:GOTO 3165
3130 LINE(128,128)-(128,114),PRE
SET
3135 LINE(128,128)-(118,118),PSE
T:GOTO 3165
3140 LINE(128,128)-(118,118),PRE
SET
3145 LINE(128,128)-(114,128),PSE
```

```
T
3150 FOR DLAY = 1 TO 5000 : NEXT
   DLAY
3155 LINE(128,128)-(114,128),PRE
SET
3160 F = 0 : C= C + 100 : GOTO 2
536
3165 LINE(126,4)-(128,24),PSET,B
F
3170 FOR DLAY = 1 TO 200 : NEXT
DLAY
3175 LINE(126,4)-(128,24),PRESET
,BF
3180 FOR DLAY = 1 TO 200 : NEXT
DLAY
3185 LINE(112,34)-(115,56),PSET,
BF
3190 FOR DLAY = 1 TO 200 : NEXT
DLAY
3191 LINE (112,34)-(115,56),PRES
ET,BF
3195 FOR DLAY = 1 TO 200 : NEXT
DLAY
3200 LINE(100,62)-(104,86),PSET,
BF
3205 FOR DLAY = 1 TO 200 : NEXT
DLAY
3210 LINE (100,62)-(104,86),PRES
ET,BF
3215 FOR DLAY = 1 TO 200 : NEXT
DLAY
3220 F = F + 8 : C= C + 5:M=M+5
3221 IFM>1000GOTO9500
3225 C$ = INKEY$
3230 IF C$ = "3" THEN 4000 ELSE
3235
3235 IF C$ = "1" THEN 2595 ELSE
3240
3240 IF C$ = "" THEN 3085 ELSE 3
085
4000 LINE(52,144)-(42,128),PRESE
T
4005 LINE(52,144)-(62,128),PRESE
T
4010 LINE(52,144)-(52,126),PSET
4015 LINE(204,144)-(224,132),PRE
SET
4020 LINE(204,144)-(180,144),PSE
T
4025 LINE(204,144)-(228,144),PRE
SET
4030 FOR DLAY = 1 TO 100 : NEXT
DLAY
4035 LINE(204,144)-(180,144),PRE
SET
4040 LINE(204,144)-(184,132),PSE
T
4045 FOR DLAY = 1 TO 100 : NEXT
DLAY
4050 LINE(204,144)-(184,132),PRE
SET
4055 LINE(204,144)-(196,124),PSE
T
4060 FOR DLAY = 1 TO 100 : NEXT
DLAY
4065 LINE(204,144)-(196,124),PRE
SET
4070 LINE(204,144)-(212,124),PSE
T
4075 FOR DLAY = 1 TO 100 : NEXT
DLAY
4080 LINE(204,144)-(212,124),PRE
SET
4085 LINE(204,144)-(224,132),PSE
T
4090 IF F < 100 GOTO 4170
4095 IF F > 99 AND F < 200 GOTO
4115
4100 IF F>199 AND F < 300 GOTO 4
125
4105 IF F >299 AND F < 400 GOTO
4135
4110 IF F > 399 GOTO 4145
4115 LINE(128,128)-(144,128),PRE
SET'
4120 LINE(128,128)-(138,118),PSE
T:GOTO 4170
4125 LINE(128,128)-(138,118),PRE
SET
4130 LINE(128,128)-(128,114),PSE
T:GOTO 4170
4135 LINE(128,128)-(128,114),PRE
SET
4140 LINE(128,128)-(118,118),PSE
T:GOTO 4170
4145 LINE(128,128)-(118,118),PRE
SET
4150 LINE(128,128)-(114,128),PSE
T
4155 FOR DLAY = 1 TO 5000 : NEXT
   DLAY
```
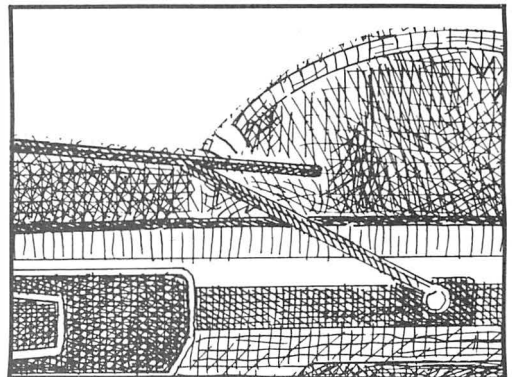
```
4160 LINE(128,128)-(114,128),PRE
SET
4165 F = Ø : C= C + 1ØØ : GOTO 2
536
4170 LINE(126,4)-(128,24),PSET,B
F
4175 FOR DLAY = 1 TO 15Ø : NEXT
DLAY
4180 LINE(126,4)-(128,24),PRESET
,BF
4185 FOR DLAY = 1 TO 15Ø : NEXT
DLAY
4190 LINE(112,34)-(115,56),PSET,
BF
4195 FOR DLAY = 1 TO 15Ø : NEXT
DLAY
42ØØ LINE(112,34)-(115,56),PRESE
T,BF
42Ø5 FOR DLAY = 1 TO 15Ø : NEXT
DLAY
4210 LINE(1ØØ,62)-(1Ø4,86),PSET,
BF
4215 FOR DLAY = 1 TO 15Ø : NEXT
DLAY
4220 LINE (1ØØ,62)-(1Ø4,86),PRES
ET,BF
4225 FOR DLAY = 1 TO 15Ø : NEXT
DLAY
4230 F = F + 6 : C= C + 4:M=M+5
4231 IFM>1ØØØGOTO9ØØØ
4235 C$ = INKEY$
4240 IF C$ = "4" THEN 45ØØ ELSE
4245
4245 IF C$ = "2" THEN 3ØØØ ELSE
425Ø
425Ø IF C$ = "" THEN 4Ø9Ø ELSE 4
Ø9Ø
45ØØ LINE(52,144)-(52,126),PRESE
T
45Ø5 LINE(52,144)-(69,136),PRESE
T
4510 LINE(52,144)-(62,128),PSET
4515 LINE(2Ø4,144)-(224,132),PRE
SET
4520 LINE(2Ø4,144)-(18Ø,144),PSE
T
4525 LINE(2Ø4,144)-(228,144),PRE
SET
4530 FOR DLAY = 1 TO 1ØØ : NEXT
DLAY
4535 LINE(2Ø4,144)-(18Ø,144),PRE
SET
4540 LINE(2Ø4,144)-(184,132),PSE
T
4545 FOR DLAY = 1 TO 1ØØ : NEXT
DLAY
4550 LINE(2Ø4,144)-(184,132),PRE
SET
4555 LINE(2Ø4,144)-(196,124),PSE
T
4560 FOR DLAY = 1 TO 1ØØ : NEXT
DLAY
4565 LINE(2Ø4,144)-(196,124),PRE
SET
4570 LINE(2Ø4,144)-(212,124),PSE
T
4575 FOR DLAY = 1 TO 1ØØ : NEXT
DLAY
4580 LINE(2Ø4,144)-(212,124),PRE
SET
4585 LINE(2Ø4,144)-(224,132),PSE
T
4590 IF F < 1ØØ GOTO 467Ø
4595 IF F > 99 AND F < 2ØØ GOTO
4615
46ØØ IF F>199 AND F < 3ØØ GOTO 4
625
46Ø5 IF F >299 AND F < 4ØØ GOTO
4635
4610 IF F > 399 GOTO 4645
4615 LINE(128,128)-(144,128),PRE
SET
4620 LINE(128,128)-(138,118),PSE
T:GOTO 467Ø
4625 LINE(128,128)-(138,118),PRE
SET
4630 LINE(128,128)-(128,114),PSE
T:GOTO 467Ø
4635 LINE(128,128)-(128,114),PRE
SET
4640 LINE(128,128)-(118,118),PSE
T:GOTO 467Ø
4645 LINE(128,128)-(118,118),PRE
SET
4650 LINE(128,128)-(114,128),PSE
T
4655 FOR DLAY = 1 TO 5ØØØ : NEXT
 DLAY
4660 LINE(128,128)-(114,128),PRE
SET
4665 F = Ø : C= C + 1ØØ : GOTO 2
536
4670 LINE(126,4)-(128,24),PSET,B
F
4675 FOR DLAY = 1 TO 1ØØ : NEXT
DLAY
4680 LINE(126,4)-(128,24),PRESET
,BF
4685 FOR DLAY = 1 TO 1ØØ : NEXT
DLAY
4690 LINE(112,34)-(115,56),PSET,
BF
4695 FOR DLAY = 1 TO 1ØØ : NEXT
DLAY
47ØØ LINE(112,34)-(115,56),PRESE
T,BF
```

```
4705 FOR DLAY = 1 TO 100 : NEXT
DLAY
4710 LINE(100,62)-(104,86),PSET,
BF
4715 FOR DLAY = 1 TO 100 : NEXT
DLAY
4720 LINE (100,62)-(104,86),PRES
ET,BF
4725 FOR DLAY = 1 TO 100 : NEXT
DLAY
4730 F = F + 4 : C= C + 3:M=M+5
4731 IFM>1000GOTO9500
4735 C$ = INKEY$
4740 IF C$ = "5" THEN 5000 ELSE
4745
4745 IF C$ = "3" THEN 4000 ELSE
4750
4750 IF C$ = "" THEN 4590 ELSE 4
590
5000 LINE(52,144)-(72,144),PRESE
T
5005 LINE(52,144)-(62,128),PRESE
T
5010 LINE(52,144)-(69,136),PSET
5015 LINE(204,144)-(224,132),PRE
SET
5020 LINE(204,144)-(180,144),PSE
T
5025 LINE(204,144)-(228,144),PRE
SET
5030 FOR DLAY = 1 TO 100 : NEXT
DLAY
5035 LINE(204,144)-(180,144),PRE
SET
5040 LINE(204,144)-(184,132),PSE
T
5045 FOR DLAY = 1 TO 100 : NEXT
DLAY
5050 LINE(204,144)-(184,132),PRE
SET
5055 LINE(204,144)-(196,124),PSE
T
5060 FOR DLAY = 1 TO 100 : NEXT
DLAY
5065 LINE(204,144)-(196,124),PRE
SET
5070 LINE(204,144)-(212,124),PSE
T
5075 FOR DLAY = 1 TO 100 : NEXT
DLAY
5080 LINE(204,144)-(212,124),PRE
SET
5085 LINE(204,144)-(224,132),PSE
T
5090 IF F < 100 GOTO 5170
5095 IF F > 99 AND F < 200 GOTO
5115
5100 IF F>199 AND F < 300 GOTO 5
125
5105 IF F >299 AND F < 400 GOTO
5135
5110 IF F > 399 GOTO 5145
5115 LINE(128,128)-(144,128),PRE
SET
5120 LINE(128,128)-(138,118),PSE
T:GOTO 5170
5125 LINE(128,128)-(138,118),PRE
SET
5130 LINE(128,128)-(128,114),PSE
T:GOTO 5170
5132 IFRND(20)=10THEN8000
5135 LINE(128,128)-(128,114),PRE
SET
5140 LINE(128,128)-(118,118),PSE
T:GOTO 5170
5145 LINE(128,128)-(118,118),PRE
SET
5150 LINE(128,128)-(114,128),PSE
T
5155 FOR DLAY = 1 TO 5000 : NEXT
 DLAY
5160 LINE(128,128)-(114,128),PRE
SET
5165 F = 0 : C= C + 100 : GOTO 2
536
5170 LINE(126,4)-(128,24),PSET,B
F
5175 FOR DLAY = 1 TO 50 : NEXT D
LAY
5180 LINE(126,4)-(128,24),PRESET
,BF
5185 FOR DLAY = 1 TO 50  : NEXT
DLAY
5190 LINE(112,34)-(115,56),PSET,
BF
5195 FOR DLAY = 1 TO 50  : NEXT
DLAY
5200 LINE(112,34)-(115,56),PRESE
T,BF
5205 FOR DLAY = 1 TO 50  : NEXT
DLAY
5210 LINE(100,62)-(104,86),PSET,
BF
5215 FOR DLAY = 1 TO 50  : NEXT
DLAY
5220 LINE (100,62)-(104,86),PRES
ET,BF
5225 FOR DLAY = 1 TO 50  : NEXT
DLAY
5230 F = F + 2 : C= C + 2:M=M+5
5231 IFM>1000GOTO9500
5232 IFRND(90)=10THEN6000
5235 C$ = INKEY$
5240 IF C$ = "6" THEN 5500 ELSE
5245
5245 IF C$ = "4" THEN 4500 ELSE
```
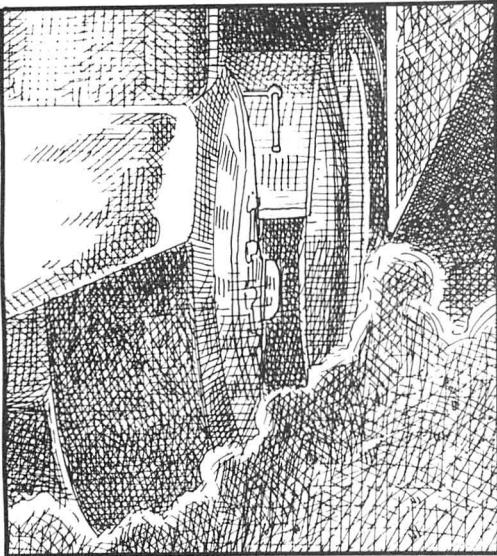
```
5250
5250 IF C$ = "" THEN 5090 ELSE 5
090
5500 LINE(52,144)-(69,136),PRESE
T
5505 LINE(52,144)-(72,144),PSET
5510 LINE(204,144)-(224,132),PRE
SET
5515 LINE(204,144)-(180,144),PSE
T
5520 LINE(204,144)-(228,144),PRE
SET
5525 FOR DLAY = 1 TO 100 : NEXT
DLAY
5530 LINE(204,144)-(180,144),PRE
SET
5535 LINE(204,144)-(184,132),PSE
T
5540 FOR DLAY = 1 TO 100 : NEXT
DLAY
5545 LINE(204,144)-(184,132),PRE
```



```
SET
5550 LINE(204,144)-(196,124),PSE
T
5555 FOR DLAY = 1 TO 100 : NEXT
DLAY
5560 LINE(204,144)-(196,124),PRE
SET
5565 LINE(204,144)-(212,124),PSE
T
5570 FOR DLAY = 1 TO 100 : NEXT
DLAY
5575 LINE(204,144)-(212,124),PRE
SET
5580 LINE(204,144)-(224,132),PSE
```

```
T
5585 IF F < 100 GOTO 5665
5590 IF F > 99 AND F < 200 GOTO
5610
5595 IF F>199 AND F < 300 GOTO 5
620
5600 IF F >299 AND F < 400 GOTO
5630
5605 IF F > 399 GOTO 5640
5610 LINE(128,128)-(144,128),PRE
SET
5615 LINE(128,128)-(138,118),PSE
T:GOTO 5665
5620 LINE(128,128)-(138,118),PRE
SET
5625 LINE(128,128)-(128,114),PSE
T:GOTO 5665
5630 LINE(128,128)-(128,114),PRE
SET
5635 LINE(128,128)-(118,118),PSE
T:GOTO 5665
5640 LINE(128,128)-(118,118),PRE
SET
5645 LINE(128,128)-(114,128),PSE
T
5650 FOR DLAY = 1 TO 5000 : NEXT
 DLAY
5655 LINE(128,128)-(114,128),PRE
SET
5660 F = 0 : C= C + 100 : GOTO 2
536
5665 LINE(126,4)-(128,24),PSET,B
F
5670 LINE(126,4)-(128,24),PRESET
,BF
5675 LINE(112,34)-(115,56),PSET,
BF
5680 LINE(112,34)-(115,56),PRESE
T,BF
5685 LINE(100,62)-(104,86),PSET,
BF
5690 LINE (100,62)-(104,86),PRES
ET,BF
5695 F = F + 1 : C= C + 1 :M=M+5
5696 IFM>1000GOTO9500
5697 IFRND(90)=10THEN6000
5700 C$ = INKEY$
5705 IF C$ = "5" THEN 5000 ELSE
5710
5710 IF C$ = "" THEN 5585 ELSE 5
585
6000 SOUND100,1:SOUND110,1:SOUND
120,1
6005 SOUND130,1:SOUND140,1:SOUND
150,1
6010 SOUND150,1:SOUND140,1:SOUND
130,1
6015 SOUND120,1:SOUND110,1:SOUND
```

```
100,1
6020 C=C+100:GOTO2536
7000 IFM>174ANDM<325GOTO7015ELSE
7005
7005 IFM>649ANDM<825GOTO7015ELSE
7010
7010 IFM>849ANDM<925GOTO7015ELSE
2536
7015 LINE(128,128)-(138,118),PRE
SET
7020 LINE(128,128)-(128,114),PRE
SET
7025 LINE(128,128)-(118,118),PRE
SET
7030 F=0:GOTO2536
8000 PMODE4,1
8005 PCLS
8010 SCREEN1,1
8015 Z=0
8020 LINE(36,48)-(122,48),PSET
8025 LINE-(140,54),PSET
8030 LINE-(134,58),PSET
8035 LINE-(138,57),PSET
8040 LINE-(138,59),PSET
8045 LINE-(147,54),PSET
8050 LINE-(147,57),PSET
8055 LINE-(152,56),PSET
8060 LINE-(158,61),PSET
8065 LINE-(156,62),PSET
8070 LINE-(160,68),PSET
8075 LINE-(164,72),PSET
8080 LINE-(150,80),PSET
8085 LINE-(164,80),PSET
8090 LINE-(170,72),PSET
8095 LINE-(188,64),PSET
8100 LINE-(196,64),PSET
8105 LINE-(204,58),PSET
8110 LINE-(206,52),PSET
8115 LINE-(208,52),PSET
8120 LINE-(212,60),PSET
8125 LINE-(216,64),PSET
8130 LINE-(204,68),PSET
8135 LINE-(206,76),PSET
8140 LINE-(210,76),PSET
8145 LINE-(200,84),PSET
8150 LINE-(202,86),PSET
8155 LINE-(192,88),PSET
8160 LINE-(188,102),PSET
8165 LINE-(186,110),PSET
8170 LINE-(168,130),PSET
8175 LINE-(172,144),PSET
8180 LINE-(172,152),PSET
8185 LINE-(168,154),PSET
8190 LINE-(162,146),PSET
8195 LINE-(162,142),PSET
8200 LINE-(158,136),PSET
8205 LINE-(144,136),PSET
8210 LINE-(146,136),PSET
8215 LINE-(146,140),PSET
8220 LINE-(128,140),PSET
8225 LINE-(124,142),PSET
8230 LINE-(124,152),PSET
8235 LINE-(116,150),PSET
8240 LINE-(104,138),PSET
8245 LINE-(100,142),PSET
8250 LINE-(92,132),PSET
8255 LINE-(76,132),PSET
8260 LINE-(56,128),PSET
8265 LINE-(46,116),PSET
8270 LINE-(42,114),PSET
8275 LINE-(38,100),PSET
8280 LINE-(36,100),PSET
8285 LINE-(32,92),PSET
8290 LINE-(32,76),PSET
8295 LINE-(36,68),PSET
8300 LINE-(34,50),PSET
8305 LINE-(38,52),PSET
8310 LINE-(36,48),PSET
8315 PAINT(104,90),1,1
8320 LINE(38,52)-(68,56),PRESET
8325 LINE-(77,86),PRESET
8330 CIRCLE(68,56),8,0
8335 CIRCLE(77,86),8,0
8340 LINE-(148,100),PRESET
8345 CIRCLE(148,100),8,0
8350 LINE-(170,142),PRESET
8355 DRAW"BM178,144;R4D4L4U4"
8360 DRAW"BM186,148;U4R4D2L4"
8365 LINE(187,146)-(190,148),PSE
T
8370 DRAW"BM193,144;D4R3"
8375 DRAW"BM200,148;U4R3D4U2L3"
8380 LINE(206,148)-(206,144),PSE
T
8385 LINE-(209,148),PSET:LINE-(2
09,144),PSET
8390 DRAW"BM212,144;D4R3U4L3"
8395 DRAW"BM218,144;D4R4U4L4
8400 DRAW"C0;BM136,84;L3D2R3D2L3
"
8405 DRAW"C0;BM140,84;R4L2D4"
8410 DRAW"C0;BM150,84;D4R3"
8415 DRAW"C0;BM156,84;D4R3U4L3"
8420 DRAW"C0;BM162,84;D4R3U4"
8425 DRAW"C0;BM168,84;D4"
8430 DRAW"C0;BM171,88;R3U2L3U2R3
"
8435 DRAW"C0;BM46,100;R3U2L3U2R3
"
8440 DRAW"C0;BM52,100;U4R3D4U2L3
"
8445 DRAW"C0;BM58,96;D4R3"
8450 DRAW"C0;BM63,96;R4L2D4"
8455 DRAW"C0;BM72,96;D4R3"
8460 DRAW"C0;BM78,100;U4R3D4U2L2
"
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8465 DRAW"CØ;BM84,96;D4U2E2G2F2"
847Ø DRAW"CØ;BM92,96;L3D2R2L2D2R3"
8475 DRAW"CØ;BM8Ø,52;D4R3U2L3U2R3D2"
848Ø DRAW"CØ;BM86,52;D4R3U4"
8485 DRAW"CØ;BM92,52;R4L2D4"
849Ø DRAW"CØ;BM99,52;R4L2D4"
8495 DRAW"CØ;BM1Ø9,52;L3D2R2L2D2R3"
85ØØ DRAW"C5;BM24,4Ø;L3D2R3D2L3"
85Ø5 DRAW"C5;BM3Ø,4Ø;L3D2R2L2D2R3"
851Ø DRAW"C5;BM33,44;U4R3D4U2L3"
8515 DRAW"C5;BM39,4Ø;R4L2D4"
852Ø DRAW"C5;BM46,4Ø;R4L2D4"
8525 DRAW"C5;BM53,4Ø;D4R3"
853Ø DRAW"C5;BM62,4Ø;L3D2R2L2D2R3"
8535 IFM>ØANDM<25GOTO854ØELSE855Ø
854Ø CIRCLE(168,138),2,Ø:CIRCLE(168,138),2,5
8545 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE854Ø
855Ø IFM>24ANDM<5ØGOTO8555ELSE8565
8555 CIRCLE(166,134),2,Ø:CIRCLE(166,134),2,5
856Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE8555
8565 IFM>49ANDM<75GOTO857ØELSE858Ø
857Ø CIRCLE(164,13Ø),2,Ø:CIRCLE(164,13Ø),2,5
8575 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE857Ø
858Ø IFM>74ANDM<1ØØGOTO8585ELSE8595
8585 CIRCLE(162,126),2,Ø:CIRCLE(162,126),2,5
859Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE8545
8595 IFM>99ANDM<125GOTO86ØØELSE861Ø
86ØØ CIRCLE(16Ø,122),2,Ø:CIRCLE(16Ø,122),2,5
86Ø5 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE86ØØ
861Ø IFM>124ANDM<15ØGOTO8615ELSE8625
8615 CIRCLE(158,118),2,Ø:CIRCLE(158,118),2,5
862Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE8615
8625 IFM>149ANDM<175GOTO863ØELSE864Ø
863Ø CIRCLE(156,114),2,Ø:CIRCLE(156,114),2,5
8635 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE863Ø
864Ø IFM>174ANDM<2ØØGOTO8645ELSE8655
8645 CIRCLE(154,1Ø8),2,Ø:CIRCLE(154,1Ø8),2,5
865Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE8645
8655 IFM>199ANDM<225GOTO866ØELSE867Ø
866Ø CIRCLE(152,1Ø6),2,Ø:CIRCLE(152,1Ø6),2,5
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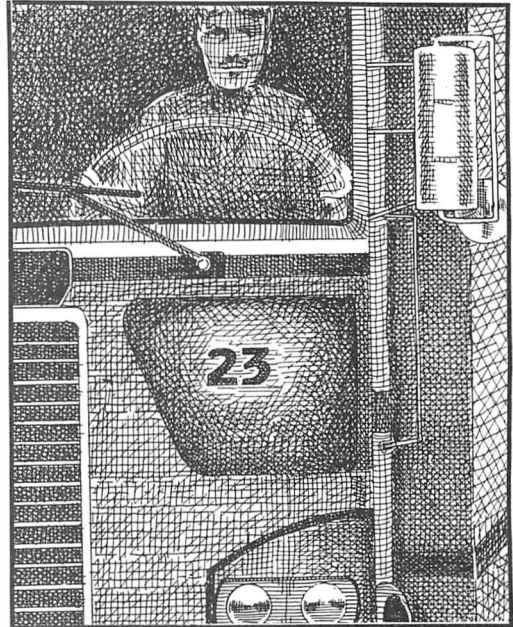


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8665 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE866Ø
867Ø IFM>224ANDM<25ØGOTO8675ELSE8685
8675 CIRCLE(15Ø,1Ø2),2,Ø:CIRCLE(15Ø,1Ø2),2,5
868Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE8675
8685 IFM>249ANDM<275GOTO869ØELSE87ØØ
869Ø CIRCLE(146,98),2,Ø:CIRCLE(146,98),2,5
8695 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE869Ø
87ØØ IFM>274ANDM<3ØØGOTO87Ø5ELSE8715
87Ø5 CIRCLE(142,98),2,Ø:CIRCLE(142,98),2,5
871Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE87Ø5
```

```
8715 IFM>299ANDM<325GOTO872ØELSE
873Ø
872Ø CIRCLE(142,98),2,Ø:CIRCLE(1
42,98),2,5
8725 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE872
Ø
873Ø IFM>324ANDM<35ØGOTO8735ELSE
8745
8735 CIRCLE(138,97),2,Ø:CIRCLE(1
38,97),2,5
874Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE873
5
8745 IFM>349ANDM<375GOTO875ØELSE
876Ø
875Ø CIRCLE(134,97),2,Ø:CIRCLE(1
34,97),2,5
8755 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE875
Ø
876Ø IFM>374ANDM<4ØØGOTO8765ELSE
8775
8765 CIRCLE(13Ø,96),2,Ø:CIRCLE(1
```
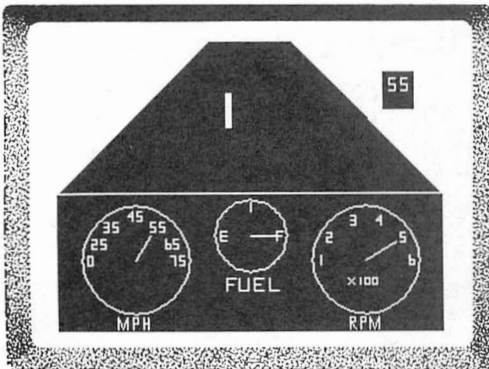


```
3Ø,96),2,5
877Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE876
5
8775 IFM>399ANDM<425GOTO878ØELSE
879Ø
878Ø CIRCLE(126,95),2,Ø:CIRCLE(1
26,95),2,5
8785 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE878
Ø
879Ø IFM>424ANDM<45ØGOTO8795ELSE
88Ø5
8795 CIRCLE(122,94),2,Ø:CIRCLE(1
22,94),2,5
88ØØ Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE879
5
88Ø5 IFM>449ANDM<475GOTO881ØELSE
882Ø
881Ø CIRCLE(118,94),2,Ø:CIRCLE(1
18,94),2,5
8815 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE881
Ø
882Ø IFM>474ANDM<5ØØGOTO8825ELSE
8835
8825 CIRCLE(114,93),2,Ø:CIRCLE(1
14,93),2,5
883Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE882
5
8835 IFM>499ANDM<525GOTO884ØELSE
885Ø
884Ø CIRCLE(1Ø8,92),2,Ø:CIRCLE(1
Ø8,92),2,5
8845 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE884
Ø
885Ø IFM>524ANDM<55ØGOTO8855ELSE
8865
8855 CIRCLE(1Ø6,91),2,Ø:CIRCLE(1
Ø6,91),2,5
886Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE885
5
8865 IFM>549ANDM<575GOTO887ØELSE
888Ø
887Ø CIRCLE(1Ø2,9Ø),2,Ø:CIRCLE(1
Ø2,9Ø),2,5
8875 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE887
Ø
888Ø IFM>574ANDM<6ØØGOTO8885ELSE
8895
8885 CIRCLE(98,89),2,Ø:CIRCLE(98
,89),2,5
889Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE888
5
8895 IFM>599ANDM<625GOTO89ØØELSE
891Ø
89ØØ CIRCLE(94,89),2,Ø:CIRCLE(94
,89),2,5
89Ø5 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE89Ø
Ø
891Ø IFM>624ANDM<65ØGOTO8915ELSE
8925
8915 CIRCLE(9Ø,88),2,Ø:CIRCLE(9Ø
,88),2,5
892Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE891
5
8925 IFM>649ANDM<675GOTO893ØELSE
894Ø
893Ø CIRCLE(86,87),2,Ø:CIRCLE(86
,87),2,5
8935 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE893
Ø
894Ø IFM>674ANDM<7ØØGOTO8945ELSE
8955
8945 CIRCLE(82,86),2,Ø:CIRCLE(82
,86),2,5
895Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE894
5
8955 IFM>699ANDM<725GOTO896ØELSE
897Ø
896Ø CIRCLE(78,83),2,Ø:CIRCLE(78
,83),2,5
```

```
8965 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE896
Ø
897Ø IFM>724ANDM<75ØGOTO8975ELSE
8985
8975 CIRCLE(76,8Ø),2,Ø:CIRCLE(76
,8Ø),2,5
898Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE897
5
8985 IFM>749ANDM<775GOTO899ØELSE
9ØØØ
899Ø CIRCLE(75,75),2,Ø:CIRCLE(75
,75),2,5
8995 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE899
Ø
9ØØØ IFM>774ANDM<8ØØGOTO9ØØ5ELSE
9Ø15
9ØØ5 CIRCLE(74,72),2,Ø:CIRCLE(74
,72),2,5
9Ø1Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE9ØØ
5
9Ø15 IFM>799ANDM<825GOTO9Ø2ØELSE
9Ø3Ø
9Ø2Ø CIRCLE(72,68),2,Ø:CIRCLE(72
,68),2,5
9Ø25 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE9Ø2
Ø
9Ø3Ø IFM>824ANDM<85ØGOTO9Ø35ELSE
9Ø45
9Ø35 CIRCLE(71,64),2,Ø:CIRCLE(71
,64),2,5
9Ø4Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE9Ø3
5
9Ø45 IFM>849ANDM<875GOTO9Ø5ØELSE
9Ø6Ø
9Ø5Ø CIRCLE(69,6Ø),2,Ø:CIRCLE(69
,6Ø),2,5
9Ø55 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE9Ø5
Ø
9Ø6Ø IFM>874ANDM<9ØØGOTO9Ø65ELSE
9Ø75
9Ø65 CIRCLE(66,55),2,Ø:CIRCLE(66
,55),2,5
9Ø7Ø Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE9Ø6
5
9Ø75 IFM>899ANDM<925GOTO9Ø8ØELSE
9Ø9Ø
9Ø8Ø CIRCLE(62,55),2,Ø:CIRCLE(62
,55),2,5
9Ø85 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE9Ø8
Ø
9Ø9Ø IFM>924ANDM<95ØGOTO9Ø95ELSE
91Ø5
9Ø95 CIRCLE(58,54),2,Ø:CIRCLE(58
,54),2,5
91ØØ Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE9Ø9
5
91Ø5 IFM>949ANDM<975GOTO911ØELSE
912Ø
911Ø CIRCLE(54,54),2,Ø:CIRCLE(54
,54),2,5
9115 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE911
Ø
912Ø CIRCLE(48,53),2,Ø:CIRCLE(48
,53),2,5
9125 Z=Z+1:IFZ>3ØGOTO2Ø8ØELSE912
Ø
95ØØ CLS
95Ø5 PRINT@1ØØ,"WELCOME TO SEATT
LE"
951Ø PRINT@16Ø,"TOTAL TRIP TIME"
9515 PRINT@175,C/35
952Ø PRINT@181," HOURS"
9525 PRINT@224,"AVERAGE SPEED"
953Ø PRINT@237,9ØØ/(C/7Ø)
9531 PRINT@256,"          "
9532 PRINT@192,"             "
9535 PRINT@246," MPH"
954Ø FORDLAY=1TO1ØØØØ:NEXTDLAY
9545 CLS:GOTO2ØØØ
```
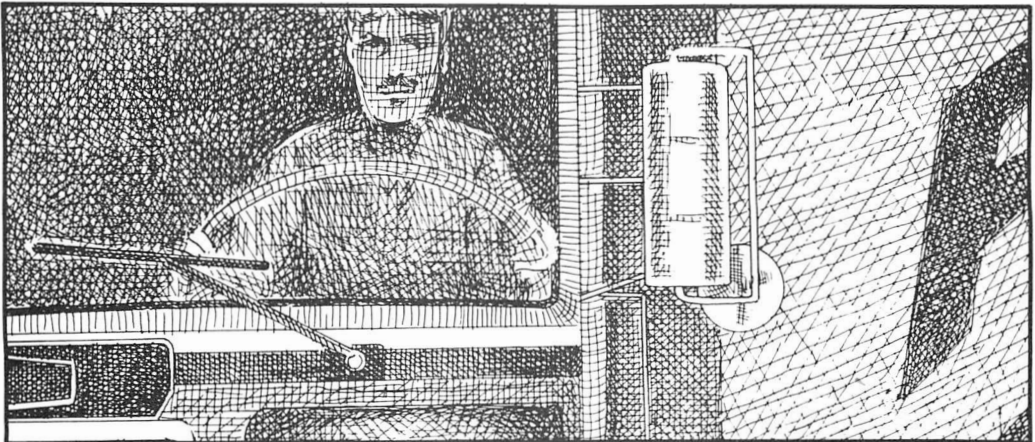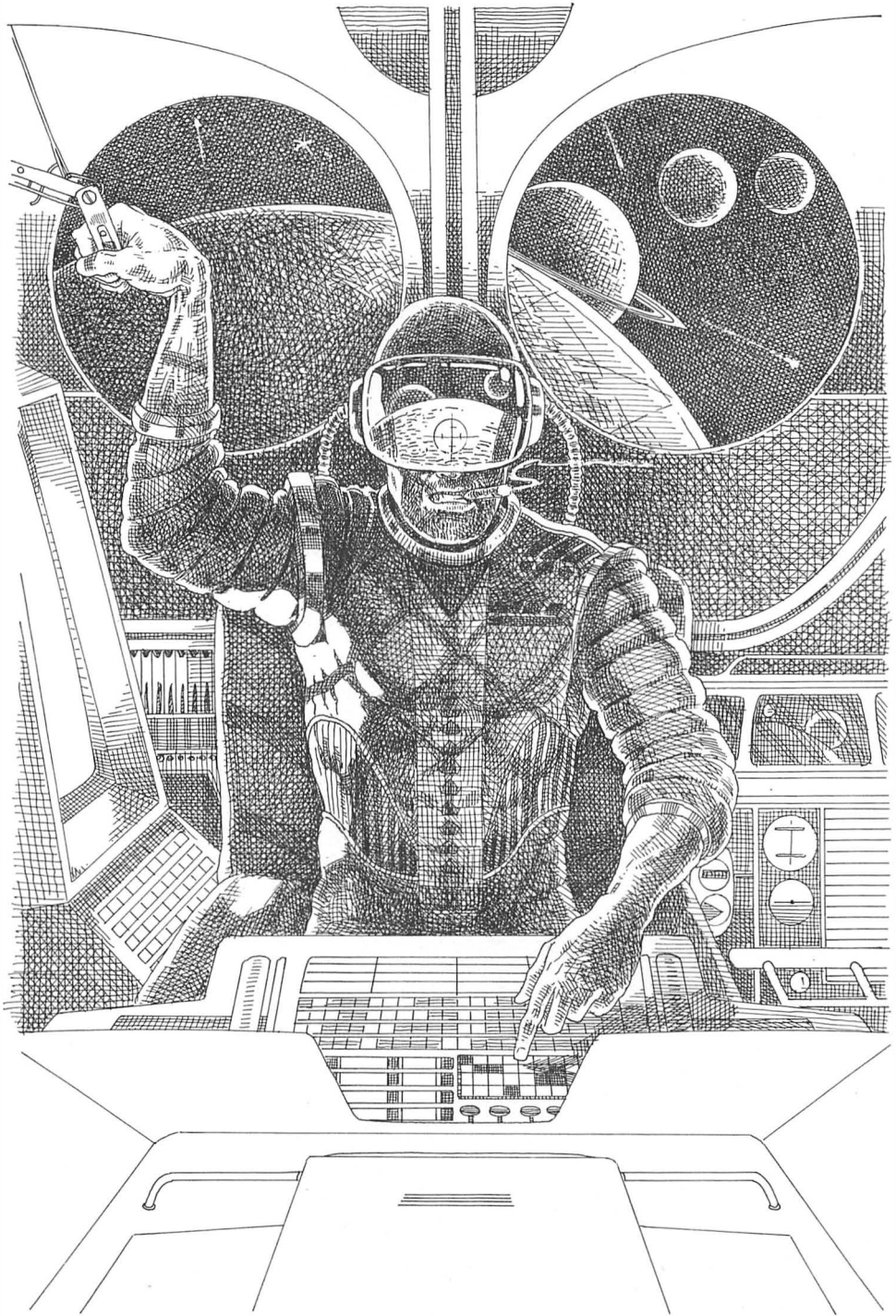
FLIGHT TO MARS

Program by Aryeh Glaberson

. . . 9 . . . 8 . . . 7 . . . 6 . . .

Fasten your seat belt and prepare for blast-off! You are about to embark upon your first trip into outer space and you can't wait to get a close-up look at the Red Planet. Your years of training are now about to be put to the real test. You need to use the on-board computer systems effectively to ensure a successful approach and landing on Mars.

This program involves the laws of celestial mechanics, which deal with the gravitational forces of Earth, Mars and the resultant thrust provided by your rocket engines. The ship is allowed a maximum time and amount of fuel to reach a safe landing on Mars. A random position on the Earth's surface is selected by the computer and will be used as the launch site.

Thrust is provided by pressing and holding the right joystick's firebutton. This continuously burns fuel pellets, the sizes of which are determined by the joystick deflection. Each fuel

pellet burned decreases the mass of the rocket and therefore increases the effectiveness of each new pellet burned.

At ignition, the ship starts out with approximately 90 percent of its mass as fuel. Toward the end of its fuel supply, each fuel pellet changes the rocket's velocity 10 times more than it would have at the beginning of the trip in the absence of any gravitational force.

There are three PMODE4 graphics pages that show the position of the rocket from liftoff to a successful landing on Mars. The first one shows a view of Earth from space, with a blinking cursor representing the launch pad. The second graphics page comes into view as you enter the first limits of outer space. The third screen only comes into view if you are successful in a correct approach to Mars. If the rocket thrust is too little, you will crash into Earth. If too much thrust is used, you may overshoot Mars and be doomed to an eternity in space.

Your landing speed must be under 1.0 and whether you crash, run out of fuel or land successfully, a screen is displayed showing your fuel and oxygen consumption as well as your landing (or crashing!) speed and flight time.

Flight to Mars uses nice graphics and incorporates uncanny realism of the spaceship's gravitational pull toward Earth and Mars. It also uses a speed-up POKE, so if your CoCo can't handle it, delete POKE 65495,0 in Line 160. Load it in and give space flight a try!

Ready? All is A-OK on the launch pad. Countdown continues . . . 5 . . . 4 . . . 3 . . . 2 . . . 1 . . .

Ignition . . . Liftoff . . . Good luck, Captain!

Aryeh Glaberson is a student at the Rabbi Jacob Joseph Yeshiva in Edison, New Jersey. He has previously published programs in THE RAINBOW.

```
10 GOTO 820
20 REM ** COPYRIGHT GLA ASSOC.
30 REM **    (C)1984
40 REM ** 32K ECB
45 REM *POKE 65495,0 LINE 160
50 CLS
60 F$="CGL10FEDL404C03GL10FEDL4O
4C03GL10FEFL4D"
70 PRINT@266,"space flight"
80 PLAY"V504T255ABABABABABABACCBCB
CBCBCP4ABCBCBDBDBDBDBDBP8GGAFAFA
FAO2BABABABABABABABABAO4GGFFGGFFGG
FFGGFFGGFFP8"
90 PRINT@327,"BY ARYEH GLABERSON
"
100 PLAY"T1P3"
110 PRINT@419,"COPYRIGHT 1984 BY
 GLA ASSOC.
120 PLAY"P2
130 PRINT@485,"JUST ONE MOMENT P
LEASE.";
140 PLAY"V15O3T2"+F$
150 CLEAR 400,&H6000
160 POKE 65495,0:QQ=RND(-TIMER)
170 PMODE4,5:PCLS:CIRCLE(128,96)
,35,1:CIRCLE(111,72),3,1:CIRCLE(
132,81),5,1:PA
INT(111,72),1,1:PAINT(132,81),1,
1:PAINT(85,63),1,1
180 CIRCLE(141,102),5,1:PAINT(14
1,102),1,1:CIRCLE(118,90),3,1:PA
INT(118,90),1,1:CIRCLE(130,111),
4,1:PAINT(130,111),1,1
190 POKE&HB2,1:PAINT(128,96),,1
200 D$="S8BM136,92E2R4F2R2F2R2D2
D2F2R2D4G6D2L2G2L2D4L2G6L2U2E4U2
E2U6L2U2H2U4E2U6"
210 E$="U2H2L2E2L4U2H2L2U4R2F2U2
R2F2U4E2RU4E2H4L2G2D4L2H4E2NR2L8
H2L4D4R2G4D2F4D2F2U4F2D2F4D2R2F2
R2F2R2F2R2"
220 POKE&HBA,&H60:POKE&HB7,&H78:
PCLS:COLOR1:CIRCLE(128,96),75,1:
POKE&HB2,3:DRAWD$+E$
230 PAINT(140,98),1,1:PAINT(124,
50),1,1
240 POKE&HB2,2:PAINT(128,96),,1
250 X1=-50:Y1=50:X2=50:Y2=-50
260 PMODE4,1:PCLS:COLOR1:CIRCLE(
128+X1,96-Y1),15,1:POKE &HB2,3:P
AINT(128+X1,96-Y1),,1
270 CIRCLE(128+X2,96-Y2),7,1:POK
E&HB2,2:PAINT(128+X2,96-Y2),7,1:
COLOR1
280 FOR I=1 TO 50:PSET(RND(255),
RND(191),1):NEXT I
290 AN=6.2832*RND(0):CS=COS(AN):
SN=SIN(AN):X=X1+15*CS:Y=Y1+15*SN
:VX=0:VY=0:F1=750:F2=75:F3=15:DT
=.1:A=X:B=Y:CN=0:T=0:TT=.5*DT*DT
:FL=0
300 R1=SQR((X-X1)*(X-X1)+(Y-Y1)*
(Y-Y1)):R2=SQR((X-X2)*(X-X2)+(Y-
Y2)*(Y-Y2)):D1=F1/(R1*R1*R1):D2=
F2/(R2*R2*R2):FX=-(X-X1)*D1-(X-X
2)*D2:FY=-(Y-Y1)*D1-(Y-Y2)*D2
310 IF T>48 THEN SCREEN1,0
320 X=X+VX*DT+FX*TT:VX=VX+FX*DT:
Y=Y+VY*DT+FY*TT:VY=VY+FY*DT
330 IF ABS(X-X1)>25 OR ABS(Y-Y1)
>19 THENGOTO460
340 POKE&HBA,&H60:SCREEN1,1:X=X-
X1:Y=Y-Y1:A=X:B=Y:DT=.1:TT=.5*DT
*DT
350 R1=SQR(X*X+Y*Y):D1=F1/(R1*R1
*R1):FX=-X*D1:FY=-Y*D1
360 IFABS(X)>25 OR ABS(Y)>19 THE
N PSET(128+A*5,96-B*5,0):PMODE4,
1:SCREEN1,1:X=X+X1:Y=Y+Y1:DT=.1:
TT=.5*DT*DT:GOTO590
370 IFT>48THENSCREEN1,1
380 IF R1>15 THEN FL=1
390 IFR1<15 AND FL=1 THEN PSET(1
28+A*5,96-B*5,0):GOTO 680 ELSE I
```
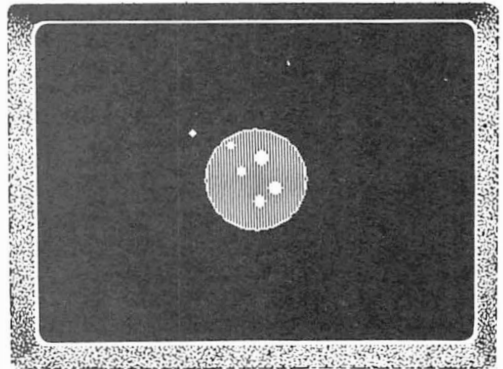


```
F R1<=15 AND FL=0 THEN X=15*CS:Y
=15*SN:VX=0:VY=0:LINE(128+5*X,96
-5*Y)-(128+5.1*X,96-5.1*Y),PSET:
LINE(128+5*X,96-5*Y)-(128+5.1*X,
96-5.1*Y),PRESET
400 IFT>48 THEN SCREEN1,0
410 IF T>54 THEN PSET(128+A*5,96
```

```
-B*5,Ø):GOTO 6ØØ
42Ø T=T+DT:IFX>-25 AND X<25 AND
Y>-19 AND Y<19 THEN PSET(128+A*5
,96-B*5,Ø):PSET(128+X*5,96-Y*5,1
):A=X:B=Y
43Ø C=PEEK(6528Ø):IFC=126 OR C=2
54 THEN GOSUB 64Ø
44Ø X=X+VX*DT+FX*TT:VX=VX+FX*DT:
Y=Y+VY*DT+FY*TT:VY=VY+FY*DT
45Ø GOTO35Ø
46Ø IF ABS(X-X2)>25 OR ABS(Y-Y2)
>19 THEN GOTO 59Ø:ELSE PSET(128+
A,96-B,Ø)
47Ø PMODE4,5:SCREEN1,1:X=X-X2:Y=
Y-Y2:A=X:B=Y:DT=.1:TT=.5*DT*DT
48Ø R2=SQR(X*X+Y*Y):D2=F2/(R2*R2
*R2):R3=SQR((X+8.6)*(X+8.6)+(Y-6
.6)*(Y-6.6)):IFR3<.Ø1 THEN R3=.Ø
1
49Ø D3=F3/(R3*R3*R3):FX=-X*D2-(X
+8.6)*D3:FY=-Y*D2-(Y-6.6)*D3
5ØØ IF ABS(X)>25 OR ABS(Y)>19 TH
EN PSET(128+A*5,96-B*5,Ø):PMODE4
,1:SCREEN1,1:X=X+X2:Y=Y+Y2:DT=.1
:TT=.5*DT*DT:GOTO 59Ø
51Ø IF T>48 THEN SCREEN1,1
52Ø X=X+VX*DT+FX*TT:VX=VX+FX*DT:
Y=Y+VY*DT+FY*TT:VY=VY+FY*DT
53Ø IF R2<7 THEN PSET(128+A*5,96
-B*5,Ø):GOTO 75Ø
54Ø IF T>48 THEN SCREEN 1,Ø
55Ø IF T>54 THEN PSET(128+A*5,96
-B*5,Ø):GOTO 6ØØ
56Ø T=T+DT:IFX>-25 AND X<25 AND
Y>-19 AND Y<19 THEN PSET(128+A*5
,96-B*5,Ø):PSET(128+X*5,96-Y*5,1
):A=X:B=Y
57Ø C=PEEK(6528Ø):IFC=126 OR C=2
54 THEN GOSUB 64Ø
58Ø GOTO 48Ø
59Ø IF T>48 THEN SCREEN1,1
6ØØ IF T>54 THEN V=SQR(VX*VX+VY*
VY):CLS:SOUND1Ø,1Ø:PRINT"you ran
 out of oxygen":GOTO 77Ø
61Ø T=T+DT:IF X>-128 AND X<128 A
ND Y>-96 AND Y<96 THEN PSET(128+
A,96-B,Ø):PSET(128+X,96-Y,1):A=X
:B=Y
62Ø C=PEEK(6528Ø):IFC=126 OR C=2
54 THEN GOSUB 64Ø
63Ø GOTO 3ØØ
64Ø JØ=JOYSTK(Ø)-32:J1=32-JOYSTK
(1):VX=VX+JØ/(27Ø-CN):VY=VY+J1/(
27Ø-CN):SOUNDCN+1Ø,1:JJ=SQR(JØ*J
Ø+J1*J1):CN=CN+JJ/5Ø
65Ø IF CN>24Ø THEN V=SQR(VX*VX+V
Y*VY):CLS:PRINT"you ran out of f
uel":GOTO 77Ø
66Ø C=PEEK(6528Ø):IF C=127 OR C=
255 THEN RETURN
67Ø GOTO 64Ø
68Ø CLS:V=SQR(VX*VX+VY*VY):IF V>
.3 THEN SOUND 1Ø,1Ø:PRINT"you cr
ashed on earth":ELSE PRINT"SUCCE
SSFUL LANDING ON EARTH":PLAY"CDE
FGAB"
69Ø PRINT"LANDING SPEED :";V
7ØØ PRINT"FUEL CONSUMPTION :";CN
71Ø PRINT"FLIGHT TIME :";T
72Ø IF V<.3 AND T<54 AND CN<24Ø
THEN PRINT"SCORE :";INT(((1ØØ-(V*
3ØØ))+(24Ø-CN)+(54-T))
73Ø A$=INKEY$:IFA$=""THEN GOTO73
Ø
74Ø GOTO 29Ø
75Ø CLS:V=SQR(VX*VX+VY*VY):IFV>1
 THENSOUND 1Ø,1Ø:PRINT "you cras
hed on mars":ELSE PRINT"SUCCESSF
UL LANDING ON MARS":PLAY"CDEFGAB
"
76Ø PRINT "LANDING SPEED :";V
77Ø PRINT "FUEL CONSUMPTION :";C
N
78Ø PRINT "FLIGHT TIME :";T
79Ø IF V<1 AND CN<24Ø AND T<54 T
HEN PRINT"SCORE :";INT((1ØØ-(V*1
ØØ))+(24Ø-CN)+(54-T))
8ØØ A$=INKEY$:IFA$=""THEN GOTO8Ø
Ø
81Ø GOTO 29Ø
82Ø PCLEAR8:GOTO2Ø
```
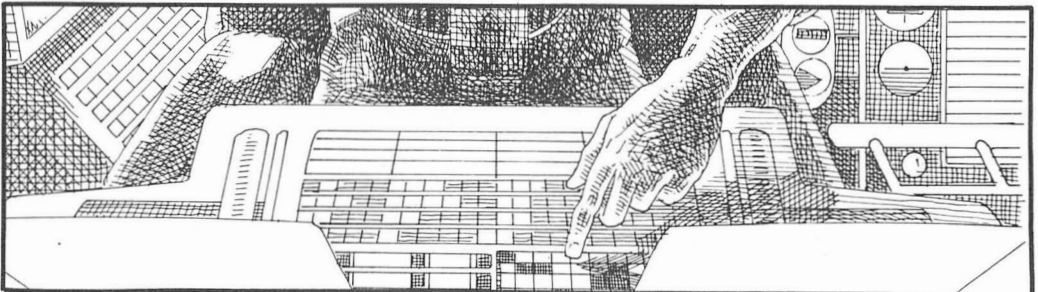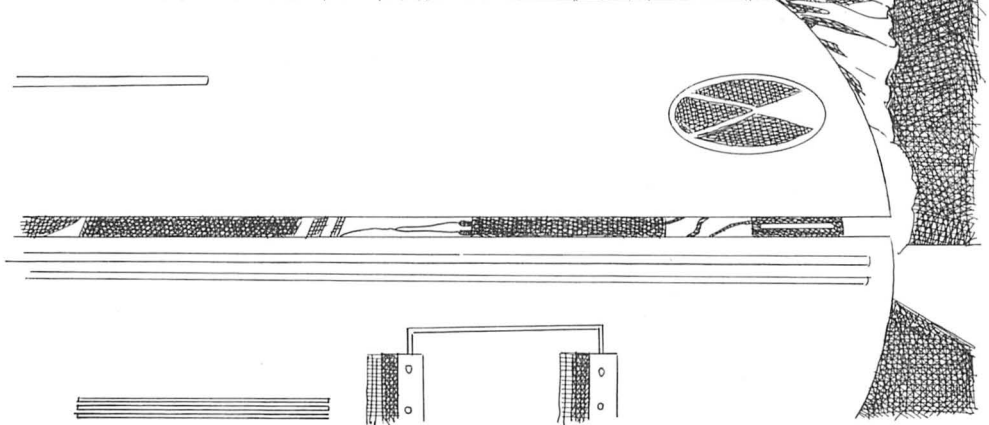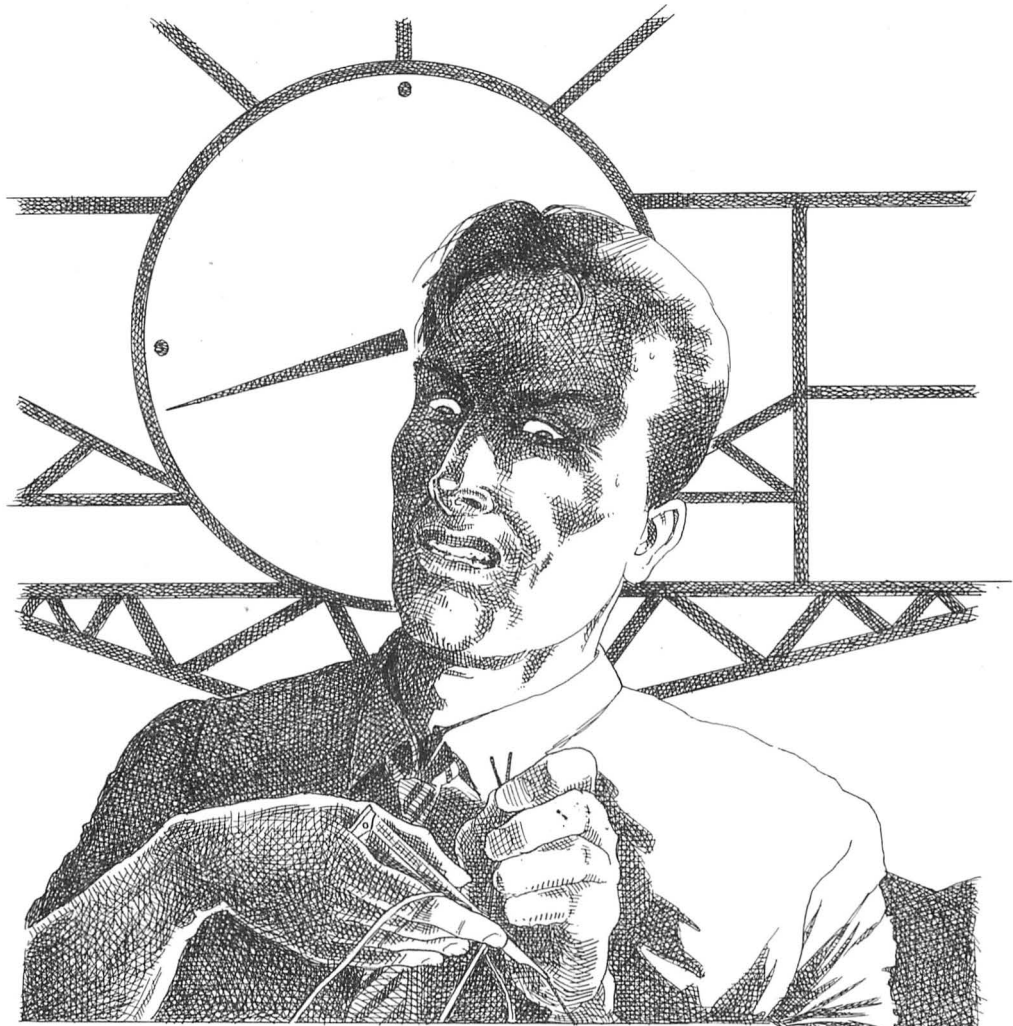
BOMB SQUAD

Program by Chris McKernan

T he telephone rings with a caller's urgent report, and the police dispatcher quickly presses the red button that signals the Rainbow City Bomb Squad into action. An international terrorist organization claims to have planted a bomb at the airport. As the leader of the bomb squad, it is your responsibility to find and defuse this menace before it explodes.

This clever Simulation will challenge your patience and memory. Note that the program contains a speed-up POKE in Line 40, so you will have to remove this line if your CoCo can't handle the higher speed. The main title screen shows an eye-catching illustration of a bomb with a burning fuse, with a generous helping of color and text.

Bomb Squad has three levels of bombs to be disarmed. The first level contains World War II bombs that were found by workers in an old abandoned warehouse while they were preparing it for demolition as part of the city's urban renewal project. The second level contains

terrorist bombs, which are very tricky to disarm, and the third level has atomic bombs, which are extremely difficult to disarm because of their complex structure.

After the title screen appears, a bar-type timer and 10 digits from zero to nine are displayed. The first level of defusing is simple. All you have to do is remember the flashing code of three numbers, reverse their order, and type in the answer before the timer runs out. If you are right, you advance to the next level and get a chance to defuse another bomb. If you're wrong, you can keep trying until the timer runs out, resulting in a deadly explosion.

Level 2 bombs are similar, but there is a longer code to break and it requires substitution of one of the code digits with a zero. Level 3 bombs are the most difficult and you must substitute one of the digits with a number that may be other than a zero.

If all three levels are completed, you become a world class bomb expert as well as a real live hero and you are rewarded! So relax, take a deep breath, concentrate and have a BLAST!

Chris McKernan lives in Montreal, Quebec, and is pursuing a career in computer technology. Laser light, electronics and computer programming are just a few of his interests. His favorite magazine is, of course, THE RAINBOW.

BOMBSQAD   32K ECB

```
5 AB=8
1Ø REM ######################
        #### BOMB SQUAD ########
        #### BY CHRIS MCKERNAN ##
        ######################
2Ø PMODE 1,1:COLOR Ø,1:PCLS
3Ø SCREEN 1,1:POKE 65314,255
4Ø POKE 65495,1
5Ø COLOR 3,1
6Ø DIM S$(26),S(26)
7Ø CIRCLE (128,13Ø),5Ø,Ø
8Ø PAINT (128,13Ø),3,Ø
9Ø LINE (1Ø,1Ø)-(246,182),PSET,B
1ØØ PAINT (1,1),2,3
11Ø LINE (12Ø,7Ø)-(136,8Ø),PSET,
BF
12Ø LINE (128,2Ø)-(128,7Ø),PSET
13Ø FOR Q=1 TO 5:PLAY "L1ØØAAAAA
BBBBCCCDDEEFFG":NEXT Q
14Ø FOR Y=2Ø TO 7Ø STEP 2
15Ø PRESET (128,Y)
16Ø X1=RND(5)-2:X2=RND(5)-2
17Ø Y1=RND(3)-2:Y2=RND(3)-2
18Ø PSET(128+X1,Y+Y1,RND(4)-1)
19Ø PSET(128+X2,Y+Y2,RND(4)-1)
2ØØ PRESET(128+X1,Y+Y1)
21Ø PRESET(128+X2,Y+Y2)
22Ø NEXT Y
23Ø FOR Q=1 TO 2:PLAY"L25ØABBCCC
DDDDEEEEEFFFFFFGGGGGGG":NEXT Q
24Ø PCLS
25Ø DRAW "BM4Ø,4ØC3S24D6R3U3L3"
26Ø DRAW "BM8Ø,4ØC2S24BD3D3R3U3L
3"
```

```
270 DRAW "BM12Ø,4ØC2S24BD3D3U3R2
D3U3R2D3"
28Ø DRAW "BM16Ø,4ØC3S24D6R3U3L3"
29Ø DRAW "BM4Ø,9ØCØR3L3D3R3D3L3"
3ØØ DRAW "BM8Ø,9ØD6R3H1F2H1U6L3"
31Ø DRAW "BM12Ø,9ØD6R3U6"
32Ø DRAW "BM16Ø,9ØD6U6R3D6U3L3"
33Ø DRAW "BM2ØØ,9ØL1R4D6L4R1U6"
34Ø LINE (2Ø,2Ø)-(236,172),PSET,
B
35Ø PAINT (1Ø,1Ø),2,Ø
36Ø FOR Q=1 TO 4:PLAY "L22ØAAAAA
AGGGGGGCCCCCCDDDDD":NEXT Q
37Ø CLS3:PRINT @224,"     BY CH
RIS MCKERNAN ":FOR T=1 TO 1ØØØ:N
EXT T
38Ø FOR X=1Ø24+224 TO 1Ø24+224+3
2:POKE X,175:NEXT X
39Ø FOR Z=1 TO 1ØØ:NEXT Z
4ØØ CLS
41Ø PRINT "     ################
######"
42Ø PRINT "     #WELCOME TO BOMB
SQUAD#"
43Ø PRINT "     ################
######"
44Ø FOR F=1 TO 1Ø
45Ø FOR T=1 TO 2ØØ:NEXT T:POKE 6
5314,1Ø:FOR T=1 TO 2ØØ:NEXT T:PO
KE 65314,Ø:NEXT F
46Ø PRINT "     ################
######      # DANGER THIS PRO
GRAM #      # IS NOT RECOMMEN
DED #      # FOR  THE EASILY
 ... #      #    - FRUSTRATED
 -   #      ################
######"
47Ø PRINT:PRINT:PRINT
48Ø PRINT "<   ENTER WILL CONTIN
UE    ><   EXECUTION OF THIS
 PROGRAM  >"
49Ø IF INKEY$=CHR$(13) THEN 5ØØ
ELSE 49Ø
5ØØ CLS
51Ø PRINT "        BOMB SQUAD"
52Ø PRINT
53Ø DATA E,N,T,E,R ,N,A,M,E:
54Ø FOR X=1 TO 9:READ DT$:PRINT
DT$;:SOUND 1ØØ,1:NEXT X
55Ø PRINT " :";:LINE INPUT N$
56Ø PRINT "THERE ARE 3 LEVELS OF
 BOMBS TO  DIS-ARM :"
57Ø PRINT "     LEVEL [1]    WW II
BOMBS        LEVEL [2]    TERROR
IST BOMBS        LEVEL [3]   'A' BO
MBS       EACH LEVEL IS PROGRE
SSIVELY      HARDER TO DISARM."
58Ø PRINT "THERE ARE ";AB;" BOMB
S ON EACH      LEVEL.":S=1
62Ø PRINT "PRESS ANY KEY TO CONT
INUE....."
63Ø IF INKEY$="" THEN 63Ø
64Ø GOTO 115Ø
645 REM WORKING PAGE PRINT
65Ø PRINT "NUMBER OF DIGITS IN C
ODE:";ND:PRINT:PRINT:FOR X=1Ø24+
1Ø5 TO 1Ø24+1Ø5+9:POKE X,(X-(1Ø2
4+1Ø5))+48:NEXT X
66Ø PRINT @128,"TIMER-----------
--------------->"
67Ø FOR X=1Ø24+16Ø TO 1Ø24+16Ø+3
1:POKE X,176+15:NEXT X
68Ø PRINT @192+32,"DEFUSSION COD
E :";
69Ø FOR T=1 TO 1ØØØ:NEXT T
695 RETURN:REM END WORKING PAGE
696 REM BOMB LEVEL 1 PRINT
7ØØ PCLS:SCREEN 1,1:POKE 65314,2
55:COLOR Ø
71Ø CIRCLE (128,96),2Ø,Ø,1,.Ø1,.
5Ø
72Ø LINE (1Ø8,56)-(148,96),PSET,
B
73Ø LINE (118,46)-(138,55),PSET,
BF
74Ø LINE (1Ø8,33)-(148,45),PSET,
BF
75Ø PAINT (128,99),3,Ø
76Ø PAINT (128,9Ø),2,Ø
77Ø FOR Z=1 TO 1ØØØ:NEXT Z
775 RETURN:REM BOMB PRINT FINISH
78Ø T=Ø:FOR X=1 TO ND:D(X)=RND(1
Ø)-1:NEXT X
79Ø FOR Z=1 TO ND:N(Z)=Ø:NEXTZ:P
RINT @32,"     CODE locked IN":
PRINT @64,"      GET READY":F
OR Z=1 TO 1ØØØ:NEXT Z:PRINT @64,
""
8ØØ FOR X=1 TO ND
81Ø POKE D(X)+1129,PEEK(D(X)+112
9)+64:SOUND RND(255),15-(T/4)
82Ø POKE D(X)+1129,PEEK(D(X)+112
9)-64:FOR Z=1 TO 1ØØ-(T*7):NEXT
Z,X
83Ø REM LOOP
84Ø PRINT @241,"";
85Ø D1=1
86Ø T=T+TV:TT=INT(T):POKE 1215-T
T,16Ø:IF INT(T)=31 THEN 9ØØ
87Ø I$=INKEY$:IF I$="" THEN 86Ø
88Ø N(D1)=VAL(I$):PRINT I$;:D1=D
1+1:IF D1=ND+1 THEN 89Ø ELSE 86Ø
89Ø FOR Z=1 TO ND:IFN((ND+1)-Z)=
D(Z) THEN NEXT Z:PRINT:PRINT "RI
GHT CODE!":GOSUB3ØØØ:TV=TV/1.2:I
F ND=AB+2 THEN1Ø4Ø ELSE ND=ND+1:
```

127

```
CLS:GOTO 2010 ELSE PRINT: PRINT
"WRONG CODE":FOR ZZ=1 TO 500:NEX
T ZZ:PRINT @256,"":PRINT@241,"":
GOTO 790
900 REM LEVEL 1 GAME END
910 REM
920 REM
930 REM TIMER OUT EXPLOSION
940 SCREEN 1,1:POKE 65314,255
950 FOR Q=1 TO 10:PLAY"L230AAAAA
ABBBBBCCCCDDDEEFFG":NEXT Q
960 FOR R=10 TO 140 STEP 3:CIRCL
E (128,96),R,2:CIRCLE (100,30),R
+1,0:CIRCLE (160,105),R,3:NEXT R
970 PCLS
980 DRAW "BM90,70S12C2D6R3U3L3R3
BR3U3R3D6L3U3BR7U3R3D6L3U6BR7D6U
6R2D3U3R2D6"
990 FOR X=10 TO 50 STEP 5:COLOR
2:LINE (80-X,60-X)-(170+X,132+X)
,PSET,B:COLOR 3:LINE (78-X,58-X)
-(172+X,134+X),PSET,B:NEXT X
1000 FOR X=50 TO 10 STEP-5:COLOR
3:LINE(80-X,60-X)-(170+X,132+X)
,PSET,B:COLOR 2:LINE (78-X,58-X)
-(172+X,134+X),PSET,B:NEXT X
1005 FOR Q=1 TO 2
1010 PLAY "L255EDFGFDEDFGFDEDFGF
DE"
1015 NEXT Q
1020 PRINT @32*12,"DIS-ARM CODE
WAS:";:FOR Z=ND TO 1 STEP -1:PRI
NTCHR$(8);D(Z);:NEXT Z
1030 PRINT @32*13,"THE BOMB DETO
NATED!            DO YOU WANT T
O PLAY AGAIN";:INPUT A$:IF A$="Y
ES" OR A$="Y" THEN RESTORE:GOTO
400        ELSE CLS:PRINT @234,"BY
E-BYE":PRINT:PRINT:POKE 65494,1:
END
1040 REM COMPLETED LEVEL
1050 CLS
1060 PRINT:PRINT "CONGRATULATION
S,";N$
1070 PRINT:PRINT
1080 PRINT " you have completed
level:";S
1090 IF S=3 THEN FOR ZZ=1 TO 100
0:NEXT ZZ:GOTO 4000
1100 IF S=3 THEN IF INKEY$="" TH
EN 1100 ELSE RUN
1110 PRINT " YOU CAN NOW PROGRES
S TO SKILL    LEVEL ";S+1
1120 IF INKEY$="" THEN 1120
1125 S=S+1:GOTO 640
1130 RESTORE:GOTO 500
1140 GOTO 1140
1150 REM BRANCH TO CORRECT GAME
```

```
            LEVEL  1 TO 3
1160 ON S GOTO 2000,2100,2200
1170 S=1:GOTO 1160
1180 STOP
1200 REM BOMB LEVEL 2 PRINT
1205 COLOR 0,1:PCLS:SCREEN 1,1:P
OKE 65314,255
1210 LINE(60,60)-(195,132),PSET,
B
1220 PAINT (64,64),3,0
1230 CIRCLE(90,96),25,0
1240 CIRCLE(165,96),25,0
1250 PAINT (90,96),2,0:PAINT(165
,96),2,0
1260 LINE (80,30)-(175,59),PSET,
B:PAINT(84,34),2,0
1270 DRAW "BM95,30S4C3U8L40D8R5
"
1280 DRAW "BM160,30S4C2U8R40D8L
5"
1289 FOR Z=1 TO 1000:NEXT Z
1299 RETURN
1300 REM GAME LEVEL 3 BOMB PRINT
1310 COLOR 1,0:PCLS:SCREEN 1,1:
POKE 65314,255
1320 CIRCLE (40,96),40,1,1,.25,.
75
1330 LINE (40,56)-(200,136),PSET
,B
1340 PAINT(45,70),3,1
1350 PAINT (30,96),2,1
1360 LINE (201,66)-(221,126),PSE
T,BF
1370 LINE (222,56)-(252,136),PSE
T,B
1380 PAINT (230,70),2,1
1390 COLOR 0,1
1398 FOR Z=1 TO 1500:NEXT Z
1399 RETURN
1999 REM GAME LEVEL 1
2000 CLS:ND=3:TV=.1
2010 GOSUB 645:GOSUB 700
2020 GOTO 780
2099 REM GAME LEVEL 2
2100 CLS:ND=3:TV=.09
2110 GOSUB 645:GOSUB 1200
2120 GOTO 3100
2200 CLS:ND=3:TV=.06
2210 GOSUB 645:GOSUB 1300
2220 GOTO 3300
3000 REM DELAY
3010 FOR Z=1 TO 1000:NEXT Z
3020 RETURN
3100 REM GAME LEVEL 2
3110 T=0:FOR X=1 TO ND:D(X)=RND(
10)-1:NEXT X:RN=RND(10)-1:PRINT
@32*11,"REPLACE ALL ";RN"'S WITH
 0'S":FOR Z=1 TO 1500:NEXT Z
```

```
3120 FOR Z=1 TO ND:N(Z)=Ø:NEXTZ:
PRINT @32,"        CODE locked IN"
:PRINT @64,"           GET READY":
FOR Z=1 TO 1ØØØ:NEXT Z:PRINT @64
,""
3130 FOR X=1 TO ND
3140 POKE D(X)+1129,PEEK(D(X)+11
29)+64:SOUND RND(255),15-(T/4)
3150 POKE D(X)+1129,PEEK(D(X)+11
29)-64:FOR Z=1 TO 1ØØ-(T*7):NEXT
 Z,X
3160 REM LOOP
3170 PRINT @241,"";
3180 D1=1
3190 T=T+TV:TT=INT(T):POKE 1215-
TT,16Ø:IF INT(T)=31 THEN 9ØØ
3200 I$=INKEY$:IF I$="" THEN 319
Ø
3210 N(D1)=VAL(I$):PRINT I$;:D1=
D1+1:IF D1=ND+1 THEN 322Ø ELSE 3
19Ø
3220 FOR Z=1 TO ND
3221 IF D(Z)=RN THEN IF N((ND+1)
-Z)=Ø THEN NEXT Z:GOTO 324Ø ELSE
 323Ø
3222 IF N((ND+1)-Z)=D(Z) THEN NE
XT Z:GOTO 324Ø ELSE 323Ø
3230 PRINT :PRINT "WRONG CODE!":
FOR ZZ=1TO 5ØØ:NEXT ZZ:PRINT@256
,"":PRINT@241,"":GOTO 312Ø
3240 PRINT:PRINT "RIGHT CODE! BO
MB DIS-ARMED":GOSUB3ØØØ:TV=TV/1.
2:IF ND=AB+2   THEN1Ø4ØELSEND=ND+
```



```
1:CLS:GOTO 211Ø
3300 REM GAME LEVEL 3
3310 T=Ø:FOR X=1 TO ND:D(X)=RND(
1Ø)-1:NEXT X:RN=RND(1Ø)-1:RR=RND
(1Ø)-1:PRINT @32*11,"REPLACE ALL
 ";RN"'S WITH ";RR"'S.":FOR Z=1
TO 15ØØ:NEXT Z
3320 FOR Z=1 TO ND:N(Z)=Ø:NEXTZ:
PRINT @32,"        CODE locked IN"
:PRINT @64,"           GET READY":
FOR Z=1 TO 15ØØ:NEXT Z:PRINT @64
,""
3330 FOR X=1 TO ND
3340 POKE D(X)+1129,PEEK(D(X)+11
29)+64:SOUND RND(255),15-(T/4)
3350 POKE D(X)+1129,PEEK(D(X)+11
29)-64:FOR Z=1 TO 1ØØ-(T*7):NEXT
 Z,X
3360 REM LOOP
3370 PRINT @241,"";
3380 D1=1
3390 T=T+TV:TT=INT(T):POKE 1215-
TT,16Ø:IF INT(T)=31 THEN 9ØØ
3400 I$=INKEY$:IF I$="" THEN 339
Ø
3410 N(D1)=VAL(I$):PRINT I$;:D1=
D1+1:IF D1=ND+1 THEN 342Ø ELSE 3
39Ø
3420 FOR Z=1 TO ND
3421 IF D(Z)=RN THEN IF N((ND+1)
-Z)=RR THEN NEXT Z:GOTO 344Ø ELS
E 343Ø
3422 IF N((ND+1)-Z)=D(Z) THEN NE
XT Z:GOTO 344Ø ELSE 343Ø
3430 PRINT :PRINT "WRONG CODE! S
ORRY !":FOR ZZ=1 TO 5ØØ:NEXT ZZ:
PRINT@256,"":PRINT@241,"":GOTO 3
32Ø
3440 PRINT:PRINT "CORRECT CODE!
BOMB DIS-ARMED!":GOSUB3ØØØ:TV=TV
/1.2:IF ND=AB+2 THEN 1Ø4ØELSEND=
ND+1:CLS:GOTO 221Ø
4000 COLOR 1,Ø:PCLS:SCREEN 1,1:P
OKE 65314,255
4010 CIRCLE (128,128),3Ø,1
4020 PAINT  (128,128),2,1
4030 LINE (128,88)-(128,98),PSET
4040 LINE (11Ø,15)-(146,87),PSET
,B
4050 FOR ZZ=111 TO 145 STEP 3
4051 COLOR 3
4052 LINE (ZZ,16)-(ZZ,86),PSET
4053 COLOR 2
4054 LINE (ZZ+1,16)-(ZZ+1,86),PS
ET
4055 NEXT ZZ
4056 DRAW "BM1Ø,1ØS8C3D6U6R2D6U6
R2D6"
4057 DRAW "BM1Ø,4ØC2D6U6R3L3D3R2
L2D3R3"
4058 DRAW "BM1Ø,8ØC3BR3D6L3U3R3"
4059 DRAW "BM1Ø,12ØC2D6U6R3D6U3L
3"
4060 DRAW "BM1Ø,16ØC3D6R3"
4070 FOR Q=1 TO 3:PLAY "L1ØØABAC
ADAEAFAGAFAEADACAB":NEXT Q
4080 FOR T=1 TO 2ØØØ:NEXT T
4090 CLS:PRINT "         -CONGRATUL
ATIONS-"
4100 PRINT "   YOU RECIEVE THIS
MEDAL FOR    ALL THE BOMBS YOU DI
S-ARMED.    DON'T LET ALL THIS T
ALK GO TO    YOUR HEAD BECAUSE TH
IS TIME IT    MIGHT HAVE BEEN LUCK
 BUT NEXT    TIME YOU MIGHT......
........"
4110 IF INKEY$="" THEN 411Ø
4120 RUN
4999 GOTO 4999
```
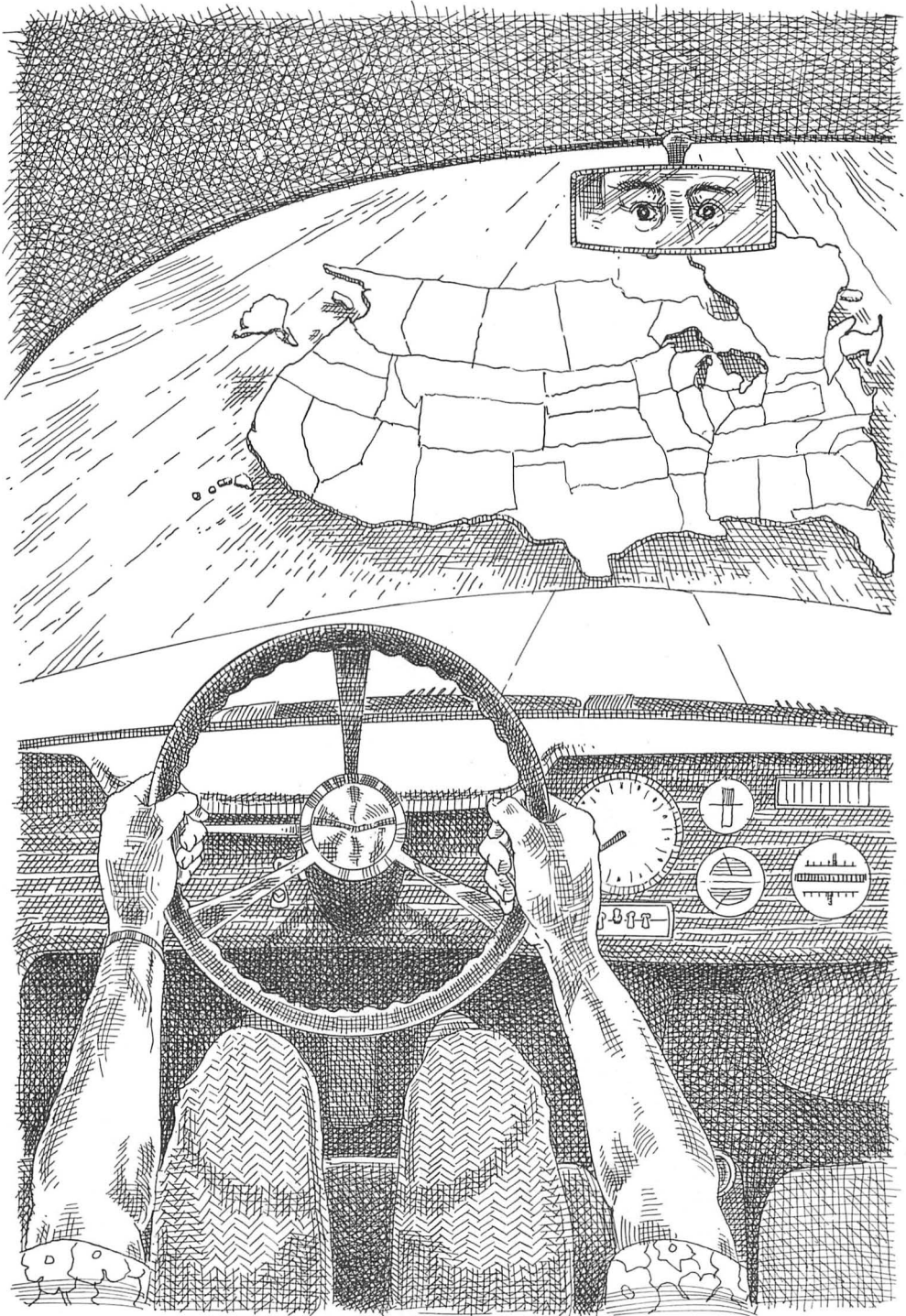
VACATION U.S.A.

Program by Bill English

Work, work, work . . . It seems to be a never-ending part of our lives. The reward for our efforts, besides a paycheck, is usually a well-earned vacation. You have worked and saved all year. Now it's time to pack your bags, load the car and gather the family for a trip to somewhere in the continental U.S.A. You are in charge of all aspects of this vacation; its success depends entirely on the decisions you make before and during the trip.

After running the program, a handsome title screen of a U.S.A. map appears. The color of the map can be changed from red to blue by pressing the Reset button and rerunning, but the selection has no effect on the operation of the program. The first decision to make concerns the type of car you plan to drive, how fast you intend to drive it and the amount of money you have saved for the trip. Select the amount of money carefully, as your success depends largely on spending as close as possible to the selected amount.

Next you have an opportunity to either preplan the entire trip from city to city, or elect to set out and go wherever the spirit moves you. The vacation ends when you reach the city from which you started. There are 100 cities from which to choose, and capitals are indicated with an asterisk (*). From the text pages of cities that are shown, you must select your starting point. This will be the city where you live or one close to it. Keep pressing ENTER to see more cities, then make your choice.

When the trip has been planned, or you have chosen the next city, the status and options page is displayed. The status at the top of the screen is self-explanatory, showing speed, miles traveled and money spent, among others. The options shown at the bottom of the screen, however, require some specific user entries. At most, there are seven options from which to choose. If "Drive" is selected, it continues automatically as if you were on an interstate highway. You will notice the options changing as you keep driving. This simulates passing up exit ramps, and is influenced by your family's appetite and other personal needs, as well as the need to fill up the gas tank.

Your family "speaks" to you with messages at the bottom of the screen. It is very important that your family is fed and entertained on a regular basis. Keep in mind you are leaving early in the morning, and kids get restless after riding for extended periods of time. The "Eat" option is not the only way to get food — some motels and other attractions have food, too. Besides that, you should plan on entertaining your family at least once a day. After all, you are on vacation.

After returning home, the Simulation ends and you are shown the total trip miles, money spent and an overall enjoyment index. Remember that the total miles includes extra time and mileage necessary to go to the fun places, restaurants and gas stations. If you spend too much cash, your credit card is automatically used and the resultant total is shown as a negative amount. An enjoyment index of 90 percent is considered to be an excellent score.

Vacation U.S.A. is fun and often funny, and typical of the average family's adventures. The mileage between cities is pretty accurate and therefore can also be used in practical applications. You've worked hard and earned it . . . have a great vacation! This one will be long remembered.

Bill English teaches high school mathematics and computers, and also teaches programming at a state college. After using many other computers, the Color Computer remains his favorite. Bill lives in Greenfield, Indiana.

```
0 GOTO300
1 CLEAR240,32327:CLEAR300
2 PF$="WE DON'T WANT TO EAT HERE
 AGAIN":RW$=STRING$(8,191)+STRIN
G$(15,207)+STRING$(9,175):TP=1:T
E=1:CLS:DIM SC(12,7),M$(26,16),
L$(58):GOSUB143:GOSUB151
3 FOR FY=0 TO 8 STEP 2:X1=FY:Y1=
50+FY/2:FX=5:MS$="VACATION":GOSU
B255:X1=80+FY:Y1=100+FY/2:FX=7:M
S$="USA":GOSUB255:NEXT FY
4 Y1=180:MS$="BY BILL ENGLISH":G
OSUB201:Y1=10:MS$="ONE MOMENT PL
EASE":GOSUB201:GOSUB152
5 FOR X=0 TO 6:FOR Y=0 TO 1: REA
D OS$(X,Y):NEXT Y,X:RESTORE
6 GOSUB258:GOSUB155:GOSUB143:GOS
UB167:GOSUB212
7 IF ZZ=1 THEN GOSUB277:GOSUB285
8 CLS:SP=0:R=RND(-TIMER):MP=MP-R
ND(5):DN=1:CL=60*7:FU=AG:GOSUB25
4:GOSUB131:GOSUB113
9 PRINT@268,"OPTIONS";:IF CL>22*
60 AND MF=0 THEN PRINT@448,"WE D
ON'T LIKE SLEEPING IN A CAR";:E1
=0:E2=1000:GOSUB 128:GOSUB 257
10 IF TE/TP<.1 THEN 298
11 IF CL>22*60 THEN GOSUB 133
12 IF CL<=10*60 THEN ZC=1 ELSE I
F CL<12*60 THEN ZC=2 ELSE IF CL<
=15*60 THEN ZC=3 ELSE IF CL<17*6
0 THEN ZC=4 ELSE IF CL<=20*60 TH
EN ZC=5 ELSE ZC=6
13 IF (XS=XF AND YS=YF AND MD=0)
 OR CC=50 THEN275
14 IF FU=0 THEN PRINT@451,"OH NO
!! WE ARE OUT OF GAS.";:CM=60:E1
=0:E2=10:PF=1:GOSUB257:GOSUB73
15 IF MF=1 OR MD=0 THEN OV(0)=0
ELSE OV(0)=1
16 IF RND(0)<.9 OR MD<30 OR MT=1
 THEN OV(1)=1 ELSE OV(1)=0
17 IF MF=1 AND MT<>1 THEN OV(6)=
1 ELSE OV(6)=0
18 IF MD=0 THEN OV(5)=1 ELSE OV(
5)=0
19 FOR K=2 TO 4
20 IF MD<30 OR RND(0)<.5 THEN OV
(K)=1 ELSE OV(K)=0
21 NEXT
22 IF ZC/2=INT(ZC/2) THEN OV(3)=
0
23 IF (ZC=1 AND E(1)=1) OR (ZC=3
 AND E(2)=1) OR (ZC=5 AND E(3)=1
) THEN OV(3)=0
24 IF MF=1 OR CL<60*13 THEN OV(4
)=0
25 K=INT((ZC+1)/2)
26 IF PF=2 THEN 27 ELSE IF E(K)=
0 AND CL>(9+(K-1)*5)*60 THEN PRI
NT@457,"WE ARE HUNGRY";:GOSUB 25
7
27 IF E(K)=0 AND CL>(10+(K-1)*5)
*60 THEN PRINT@455,"WE MISSED OU
R MEAL";:E1=0:E2=10:PF=2:GOSUB 1
28:GOSUB 257
28 IF CL>22*60 AND MF=0 THEN PRI
NT@448,"WE DON'T LIKE SLEEPING I
N A CAR";:E1=0:E2=1000:GOSUB128:
GOSUB257
29 IF SP>55 AND RND(0)<.1 THEN P
RINT@448,"YOU ARE GOING TO GET A
 SPEEDING TICKET";:CS=45:E1=5:E2
=10:GOSUB128:GOSUB257
30 IF CL>15*60 AND (E(1)=0 AND E
(2)=0) AND E(3)=0 THENPRINT@451,
"ARE WE EVER GOING TO EAT?";:E1=
0:E2=1000:GOSUB 257
31 IF ZC=6 AND E(1)=0 AND E(2)=0
 AND E(3)=0 THEN PRINT@451,"NO F
OOD FOR A WHOLE DAY!!!";:E1=0:E2
=100000:GOSUB128:GOSUB257
32 IF CD>100 AND RND(0)<.5 THEN
PRINT@450,"I NEED TO USE THE RES
TROOM";:RF=RF+1:GOSUB 257
33 IF RF>2 THEN PRINT@450,"I MUS
T USE THE RESTROOM!!!";:E1=0:E2=
10:GOSUB128:GOSUB257
34 IF DD=0 AND MF=0 THEN OV(4)=1
35 FOR K=0 TO 6
36 IF OV(K)=1 THEN PRINT@290+K*1
6,K+1;")"+OS$(K,0); ELSE PRINT@2
90+K*16,STRING$(16,32);
37 NEXT K
38 PRINT@419,"SELECT OPTION BY N
UMBER";
39 A$=INKEY$:K=K+1
40 IF A$<>"" THEN43
41 IF K<100 THEN39
42 IF OC=1 AND MD<>0 THEN46
43 IF VAL(A$)<1 OR VAL(A$)>7 THE
N39
44 IF OV(VAL(A$)-1)=0 THEN39
45 CD=0:OC=VAL(A$)
46 PRINT@290+(OC-1)*16,OC;")"+OS
$(OC-1,1);
47 PRINT@416,STRING$(32,32);
48 IF OC<>1 THEN PLAY"L50A"
49 ON OC GOSUB 52,56,73,74,96,10
7,109
50 PRINT@448,STRING$(32,32);
51 GOTO 9
```

133

```
52 SP=CS+RND(3)-RND(3):DE=Ø:DT=I
NT(MD/8)
53 IF DT<2Ø THEN DT=2Ø
54 IF DT>MD THEN DT=MD
55 CM=INT(DT*6Ø/SP):EX=Ø:CD=CD+D
T:DD=DD+DT:GOSUB113:RETURN
56 CLS:PRINT@41,"TYPE OF FUN":FO
R X=1 TO 6:FM(X)=Ø:NEXT
57 IF RND(Ø)<.5 THEN PRINT@1Ø2,"
1) GIFT SHOP":FM(1)=1:CF(1)=RND(
2Ø)+2Ø
58 IF RND(Ø)<.5 THEN PRINT@166,"
2) MUSEUM":FM(2)=1:CF(2)=RND(4Ø)
+2Ø
59 IF RND(Ø)<.5 THEN PRINT@23Ø,"
3) HISTORICAL POINT":FM(3)=1:CF(
3)=RND(2Ø)
6Ø IF RND(Ø)<.5 THEN PRINT@294,"
4) MAN MADE WONDER":FM(4)=1:CF(4
)=RND(4Ø)+2Ø
61 IF RND(Ø)<.5 THEN PRINT@358,"
5) AMUSEMENT PARK":FM(5)=1:CF(5)
=RND(4Ø)+4Ø:KK=INT((ZC+1)/2):E(K
K)=1:E(KK+1)=1
62 IF RND(Ø)<.5 THEN PRINT@422,"
6) SCENIC WONDER":FM(6)=1:CF(6)=
RND(4Ø)
63 FOR X=1 TO 6:IF FM(X)=1 THEN6
4 ELSE NEXT:GOTO57
64 PRINT@481,"SELECT ENTERTAINME
NT BY NUMBER";
65 A$=INKEY$:IF VAL(A$)<1 OR VAL
(A$)>7 THEN 65
66 X=VAL(A$)
67 IF FM(X)=Ø THEN65
68 DE=RND(5Ø):EX=CF(X):CM=6Ø+RND
(6Ø)
69 IF X=5 THEN CM=CM+18Ø
7Ø IF X=6 THEN CM=CM+6Ø
71 FF=FF+1:E1=RND(3)+3/FF+24:E2=
3Ø:SP=Ø:RF=Ø
72 GOSUB254:GOSUB131:GOSUB113:RE
TURN
73 CM=RND(1Ø)+2Ø:GA=AG-FU:EX=(1.
1Ø+RND(3Ø)/1ØØ)*GA:FU=AG:DE=RND(
5):SP=Ø:GOSUB 113:RF=Ø:RETURN
74 CLS:PRINT@39,"RESTAURANT
COST"
75 FOR K=1 TO 4:FM(K)=Ø:NEXT
76 IF RND(Ø)<.9 THEN CF(1)=RND(1
Ø)+1Ø:FM(1)=1:PRINT@99,"1) SPEED
Y FOODS      $";CF(1)
77 IF RND(Ø)<.8 THEN CF(2)=RND(1
Ø)+15:FM(2)=1:PRINT@163,"2) DOES
 DINER       $";CF(2)
78 IF RND(Ø)<.7 THEN CF(3)=RND(2
Ø)+2Ø:FM(3)=1:PRINT@227,"3) NICE
 PLACE        $";CF(3)
```

```
79 IF RND(Ø)<.6 THEN CF(4)=RND(2
Ø)+4Ø:FM(4)=1:PRINT@291,"4) CLAS
SY PLACE     $";CF(4)
8Ø FOR K=1 TO 4: IF FM(K)=1 THEN
 82 ELSE NEXT:GOTO 76
81 NEXT:GOTO 76
82 PRINT@355,"SELECT OPTION BY N
UMBER":PLAY"L5ØA"
83 A$=INKEY$:IF VAL(A$)<1 OR VAL
(A$)>4 THEN 83
84 X=VAL(A$)
85 IF FM(X)=Ø THEN83
86 IF ZC=1 THEN E(1)=1 ELSE88
87 IF X=1 THEN E1=6+RND(Ø) ELSE
IF X=2 THEN E1=9+RND(Ø) ELSE IF
X=3 THEN E1=8+RND(Ø) ELSE E1=7+R
ND(Ø)
88 IF ZC=3 THEN E(2)=1 ELSE 9Ø
89 IF X=1 THEN E1=8+RND(Ø) ELSE
IF X=2 THEN E1=8+RND(Ø) ELSE IF
X=3 THEN E1=9+RND(Ø) ELSE E1=6+R
ND(Ø)
9Ø IF ZC=5 THEN E(3)=1:E1=X+5+RN
D(Ø)
91 E2=1Ø:CM=3Ø*(X-1):EX=CF(X):SP
=Ø:IF CM=Ø THEN CM=2Ø
92 IF ZC=1 THEN IF E1>=8 THEN PR
INT@448,"THAT WAS A VERY GOOD BR
EAKFAST ";ELSE PRINT@448,PF$;:GO
TO 95
93 IF ZC=3 THEN IF E1>=8 THEN PR
INT@452,"THAT WAS A GREAT LUNCH"
;ELSE PRINT@448,PF$;:GOTO 95
94 IF ZC=5 THEN IF E1>=8 THEN PR
INT@45Ø,"WE REALLY ENJOYED OUR D
INNER";ELSE PRINT@448,PF$;
95 RF=Ø:GOSUB 257:GOSUB 254:GOSU
B 113:GOSUB 131:RETURN
96 FOR K=1 TO 4:FM(K)=Ø:NEXT:MF=
1
97 CLS:PRINT@4Ø,"MOTEL
COST":IF RND(Ø)<.8 THEN CF(1)=RN
D(1Ø)+15:FM(1)=1:PRINT@99,"1) MO
TEL CHEAPO     $"CF(1)
98 IF RND(Ø)<.8 THEN CF(2)=RND(1
Ø)+25:FM(2)=1:PRINT@163,"2) MOTE
L OK          $"CF(2)
99 IF RND(Ø)<.8 THEN CF(3)=RND(2
Ø)+45:FM(3)=1:PRINT@227,"3) MOTE
L SUPER       $"CF(3)
1ØØ IF RND(Ø)<.8 THEN CF(4)=RND(
4Ø)+65:FM(4)=1:PRINT@291,"4) MOT
EL LUX        $"CF(4)
1Ø1 FOR K=1 TO 4 :IF FM(K)=1 THE
N 1Ø2 ELSE NEXT:GOTO 97
1Ø2 PRINT@357,"SELECT MOTEL BY N
UMBER"
1Ø3 A$=INKEY$:IF VAL(A$)<Ø OR VA
```

```
L(A$)>4 THEN 1Ø3
1Ø4 MT=VAL(A$)
1Ø5 IF FM(MT)=Ø THEN 1Ø3
1Ø6 RF=Ø:EX=CF(MT):El=RND(4)+(MT
+5)*3:E2=3Ø:SP=Ø:GOSUB 254:GOSUB
 131:GOSUB 113:RETURN
1Ø7 IF ZZ=1 THEN Z2=1:GOSUB 291:
RETURN
1Ø8 GOSUB167:GOSUB212:FOR Xl=1 T
O 9ØØ:NEXT:GOSUBl31:RETURN
1Ø9 F2=F2+1:CM=RND(12Ø)+6Ø:EX=RN
```
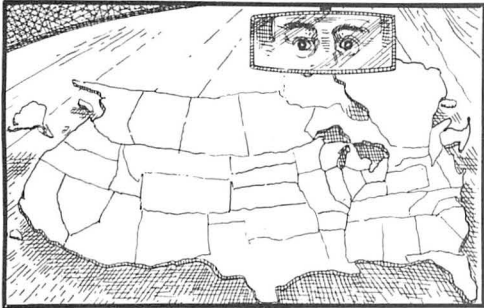


```
D(2Ø)+MT*5:El=MT+6/F2:RF=Ø
11Ø DE=Ø:E2=1Ø:SP=Ø:ZC=INT((ZC+1
)/2)
111 IF E(ZC)=Ø THEN E(ZC)=1:EX=E
X+MT*5
112 GOSUB 113:RETURN
113 FU=FU-(DT/MP)-(DE/MP)
114 IF FU<Ø THEN FU=Ø
115 MD=MD-DT
116 IF MD<Ø THEN MD=Ø
117 CL=CL+CM:TM=TM+DT+DE:TC=TC-E
X:FS=INT(FU/5)
118 IF FS>3 THEN FS=3
119 FOR K=Ø TO 3:PRINT@36+K,CHR$
(128);:NEXT
12Ø IF FU<2 THEN PRINT@36+FS,CHR
$(186); ELSE PRINT@36+FS,CHR$(22
9);
121 HR=INT(CL/6Ø):MN=CL-HR*6Ø
122 IF HR>11 THEN IN$="PM" ELSE
IN$="AM"
123 IF HR>12 THEN HR=HR-12
124 IF HR>12 THEN HR=HR-12:IN$="
AM"
125 IF MN<1Ø THEN CL$="##:Ø#%%"
ELSE CL$="##:##%%"
126 PRINT@4Ø, USING CL$;HR,MN,IN
$;:PRINT@49,USING"## MPH";SP;:PR
INT@151,USING"$#,###.##";TC;:PR
127 PRINT@141,USING"####";TM;:PR
INT@61,USING"##";DN;:PRINT@118,U
SING"### MILES";MD;
128 TE=TE+El:TP=TP+E2:X=1ØØ*TE/T
P
129 PRINT@193,USING"###.#%";X;:P
RINT@216,USING"###.#%";X;
13Ø El=Ø:E2=Ø:DT=Ø:EX=Ø:CM=Ø:RET
URN
131 PRINT@64,STRING$(54,32);
132 PRINT@68,"FROM-";M$(XM,YM);:
PRINT@96,"TO-";M$(XS,YS);:PRINT@
118,USING"###";MD;:RETURN
133 X=-2
134 FOR K=1 TO 3:IF E(K)=1 THEN
X=X+1
135 NEXT
136 IF DD<4ØØ AND DD>25Ø THEN X=
X+1
137 IF FF=Ø THEN 138 ELSE IF FF<
4 THEN X=X+1 ELSE X=3/FF+X
138 IF MF=1 THEN X=X+1
139 IF PF=Ø AND RF=Ø THEN X=X+1
14Ø FOR K=1 TO 3:E(K)=Ø:NEXT
141 GM=Ø:F2=Ø:El=X*1Ø:E2=5Ø:RF=Ø
:PF=Ø:DD=Ø:FF=Ø:MF=Ø:CL=7*6Ø:DN=
DN+1
142 SCREENØ,1:FOR X=1 TO 9ØØ:NEX
T:SCREENØ,Ø:GOSUB 113:RETURN
143 PMODE 4,1:PCLS1:SCREEN1,1:PM
ODE 3
144 READ A$:DRAW"S4C6BM 4,6Ø;"+A
$
145 FOR X=1 TO 4:READ A$:DRAW A$
:NEXT X
146 READ A$:DRAW"C2BM152,4Ø;"+A$
:PAINT(16Ø,4Ø),2,2
147 READ A$:DRAW"C2BM172,76;"+A$
148 READ A$:DRAW"C2BM17Ø,76;"+A$
149 READ A$:DRAW"C2BM166,1ØØ;"+A
$
15Ø READ A$:DRAW"C2BM198,72;"+A$
:RETURN
151 FOR X=Ø TO 58:READ L$(X):NEX
T:RETURN
152 FOR X=Ø TO 26:FOR Y=Ø TO 16:
READ M$(X,Y):NEXT Y,X
153 FOR X=Ø TO 12:FOR Y=Ø TO 7:R
EAD SC$(X,Y):NEXT Y,X
154 FOR X=Ø TO 119:READ XL,YL:PO
KE 2*X+32527,XL:POKE 2*X+32528,Y
L:NEXT:RETURN
155 CLS:PRINT@8,"SELECT HOME CIT
Y":Cl=Ø:Xl=Ø:Yl=Ø
156 IF M$(Xl,Yl)="Ø" THEN 158
157 Cl=Cl+1:PX(Cl)=Xl:PY(Cl)=Yl:
A$=CHR$(Cl+64):PRINT@37+32*Cl,A$
;")    "M$(Xl,Yl)
158 Yl=Yl+2
159 IF Yl>16 THEN Yl=Ø:Xl=Xl+2
16Ø IF Xl>26 THEN Cl=Ø:GOTO 155
161 IF Cl=1Ø THEN 163
162 GOTO 156
```

135

```
163 PRINT@422,"select city by le
tter":PRINT@449,"OR PRESS ENTER
FOR NEW LISTING";:PLAY"L5ØO3A"
164 A$=INKEY$:IF A$>="A" AND A$<
"K" THEN 166 ELSE IF A$=CHR$(13)
 THEN 165 ELSE 164
165 Cl=Ø:CLS:PRINT@8,"SELECT HOM
E CITY":GOTO 156
166 Cl=ASC(A$)-64:XS=PX(Cl):YS=P
Y(Cl):RETURN
167 XM=XS:YM=YS
168 IF ZF=Ø THEN XF=XS:YF=YS
169 COLOR 7,8:LINE(Ø,9)-(255,18)
,PSET,BF:COLOR 6,8:LINE(Ø,Ø)-(25
5,8),PSET,BF:PMODE4,1:SCREEN1,1:
PMODE3
17Ø X=XM:Y=YM:IF ZF=1 THEN 173
171 Y1=173:MS$="PRESS ENTER FOR
NEXT CITY":GOSUB 2Ø1
172 Y1=183:MS$="PRESS S TO SELEC
T THIS CITY":GOSUB2Ø1:ZF=1
173 Y1=Ø:MS$=M$(X,Y)+" TO":GOSUB
 2Ø1
174 GOSUB2Ø5:CIRCLE(XL,YL),2,5:P
LAY"L255CD":GOSUB186
175 FOR J=1 TO Cl
176 Y1=1Ø:MS$=CT$(J)+" "+MI$(J)+
" MILES":GOSUB2Ø1
177 X=PX(J):Y=PY(J):GOSUB2Ø5:PLA
Y"L255A"
178 A$=INKEY$:IF A$<>CHR$(13) AN
D A$<>"S" THEN GOSUB 2Ø5:GOTO 17
8
179 IF A$="S" THEN 183
18Ø COLOR 7,8:LINE(Ø,1Ø)-(255,18
),PSET,BF
181 NEXT J
182 GOTO175
183 MD=VAL(MI$(J)):XS=PX(J):YS=P
Y(J)
184 IF ZZ=1 THEN GOSUB 283
185 RETURN
186 Cl=Ø
187 FOR FX=-1 TO 1:FOR FY=-1 TO
1:IF FX*FY=1 THEN GOSUB195 ELSE
GOSUB189
188 NEXT FY,FX:RETURN
189 NX=X+FX:NY=Y+FY
19Ø IF NX<Ø OR NX>26 OR NY<Ø OR
NY>16 THEN RETURN
191 IF VAL(M$(NX,NY))=Ø THEN RET
URN
192 Cl=Cl+1
193 MI$(Cl)=M$(NX,NY):CT$(Cl)=M$
(NX+FX,NY+FY)
194 PX(Cl)=NX+FX:PY(Cl)=NY+FY:RE
TURN
195 NX=X+FX:NY=Y+FY
196 IF NX<Ø OR NX>26 OR NY<Ø OR
NY>16 THEN RETURN
197 IF VAL(SC$((NX-1)/2,(NY-1)/2
))=Ø THEN RETURN
198 Cl=Cl+1
199 MI$(Cl)=SC$((NX-1)/2,(NY-1)/
2):CT$(Cl)=M$(NX+FX,NY+FY)
2ØØ PX(Cl)=NX+FX:PY(Cl)=NY+FY:RE
TURN
2Ø1 X1=Ø:SP=INT((31-LEN(MS$))/2)
:X1=SP*8
2Ø2 FOR C=1 TO LEN(MS$)
2Ø3 A$=MID$(MS$,C,1):CN=ASC(A$)-
32:DRAW"C5S4BM"+STR$(X1)+","+STR
$(Y1)+";"+L$(CN)
2Ø4 X1=X1+8:NEXT:RETURN
2Ø5 C2=(X/2)*9+Y/2:C=Ø:XL=PEEK(2
*C2+32527):YL=PEEK(2*C2+32528)
2Ø6 FOR X1=XL-1 TO XL+1:FOR Y1=Y
L-1 TO YL+1
2Ø7 C=C+1:P(C)=PPOINT(X1,Y1):NEX
T Y1,X1
2Ø8 COLOR7,8:LINE(XL-1,YL-1)-(XL
+1,YL+1),PSET,BF
2Ø9 C=Ø
21Ø FOR X1=XL-1 TO XL+1:FOR Y1=Y
L-1 TO YL+1
211 C=C+1:PSET(X1,Y1,P(C)):NEXT
Y1,X1:RETURN
212 '
```
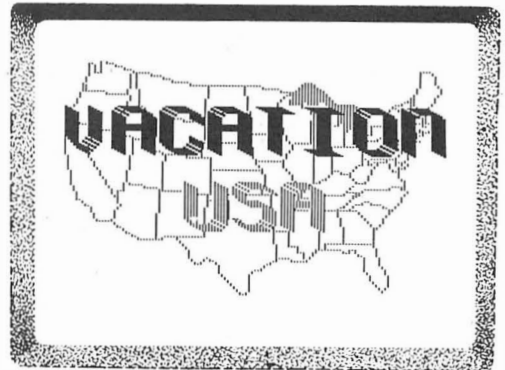


```
213 Cl=XM/2*9+YM/2:C2=XS/2*9+YS/
2:XL=PEEK(2*C2+32527):YL=PEEK(2*
C2+32528):XZ=PEEK(2*Cl+32527):YZ
=PEEK(2*Cl+32528)
214 IF Z2=1 THEN COLOR 6,8 ELSE
COLOR 7,8
215 LINE(XZ,YZ)-(XL,YL),PSET:PLA
Y"L99CDEFGAB":RETURN
216 'USA
217 DATA R4F2R4F2R4D2G2D6G2D8F4D
```

2F4D2F4D2F4D2F4D2F2G4D4G2L1ØH2U2
H2U2H2L2H4L2U4H2U2H2U8H2U8H2U12E
2U2E2U12E4U2E2U2E2U4

218 DATA E2U2E2U8R2F2D4R4U8R2F2R
4F2R4F2R4F2G2D8G2D2L14H2L12U4G2R
2D4R12F2R14F2D2G2D2G2D2G2D6G2D4L
2H2L1ØH2F2R1ØF2R2F2R6F2R8F2R4L4H
2L8D1ØG2D8G2D6G2D4L4D4U4R4U4E2F2
R8F2R8F2D14G2D16L12H2L2H2L2H4L2H
4F4R2F4R2F2R2F2R14

219 DATA R2E2R26U18E2U8L12H2L16U
18E2U4L2H2L4U8E2U12L6H2U4H2L2U1Ø
H2U1ØNL2R8F2R6F2R4F2R1ØF2R12D8G2
D14L14H2L8G4L2R2E4R8F2R14D12G2D1
ØL1ØH2L1ØR1ØF2R1ØR6D24NL6R34U4E2
U6H2U2NL32H4U2H2U6H4NL28E2U18NL3
ØH2U8H2U6NL24

22Ø DATA R1ØF2R1ØF2R8G2L2G6D4G2D
4F2D2F2R2D4NL2ØF2D2F4D2G4D2G2NL1
8D4F6D2F4D2F2G2NL22D6G2D2G2D2G2D
8NL1ØD1ØR6D4R4D4F2L1ØH2L8D2

221 DATA U1ØH2U1ØH2NU2ØL18H4L6U1
2L14D4G2D18L18D2F8D4F4R4E4F2R2F4
D4F14R4E2U1ØE4R4E4R2E2

222 DATA R2E6R4F4R2F1ØR12F4D2G2L
2G2D6G2H2ND12U2H2G2NL2U8L8G4D18L
4H2NL1ØU14E2U4E2R4E2R2U2L2H2L2G2
L6E2U2G2L2G2L8U2E4G4D2R6F2R6D4R2

223 DATA R22E8R2U6R8E2U6E6R4E2R2
E6U2E2U1ØR6F4D4F4D2G4D2G6D8R4F2D
2L2G2L2G2L4G2D2NR4D2G2D4G2D2G2F2
G2L2G2D4F2R2D6F2G4D2G12D2G6D1ØF2
D4F2D4F4D2F2D6G4H8U2H4U8H2L2H2U2
L4D2L4H2L16D2L2

224 DATA L4D24G2D2L2G4D2R6E2R2ØE
2NE4R8G2L2R2ND1ØG8L2G2D4F2D4F2D1
ØNR2ØL12D4L4NG6U26NR12L14

225 DATA R4E2R2E4NU18E2R2F2R6NE6
D2F4R6E2U2E2U2E6L4G2L2U2H2L2D4U4
NU12R2F2E2R1ØD2NL6F2D2F2R4D4F4D4
L2U2L6G2L16G6D4R4E2R2F2R6F2R2F2D
2G4D2G4L2H12C8U8D8C6L4NE4L8

226 DATA R1ØE2R1ØF4L2G2F4G4L6R6D
2D2F2D2U2E2U2L4U2E4H4E2R4D2R2E2N
R2U2L4U6NU4R8ND4BU2BR2NF2ND2BE2N
R2U2L4G2L2NU18L4H2U6H4F4D6F2R6E2
R4U4L2U2H2U2H2U6

227 DATA ,,,,,,,,,,D4R2NE2NF2L4N
G2NH2R2D3,,BD4BR3D2G2,,,,

228 DATA R5D7L5U7,BR2D7,R5D3L5D4
R5,R5D3NL3D4L5,D3R5NU3D4,NR5D3R5
D4L4,D7R5U4L5,R5D7,ND7R5D3NL5D4L
5,ND3R5D3NL3D4

229 DATA ,,,,,,,BD1D6U4NR5U2E1R3
F1D6,D7R2E2H2NL2E2U1L4,BD1D5F1R3
E1U1BU3U1H1L3G1,D7R2E2U3H2L2,NR5
D3NR4D4R4,NR5D3NR4D4,BD1D5F1R3E1
U2NL2BU2U1H1L3G1,D7U4R5NU3D4,R4L
2D7L2R4,BD5D1F1R3E1U6,D7U4R3E2NU
1G2F2D2,D7R5

23Ø DATA ND7F2BD1E3D7,D1ND6E1R3F
1D6,BD1D5F1R3E1U5H1L3G1,ND7R4F1D
2G1L4,BD1D5F1R3E1U5H1L3G1D4BR3F2
,D7U4R1F4BU4U2H1L3,BD1D1F1R3F1D2
G1L3H1BU5E1R3F1,R4L2D7,D6F1R3E1U
6,D5F2E2U5,D7E2F2U7,D1F5D1BL5U1E
5U1,D2F2ND3E2U2,R5D1G5D1R5

231 DATA "SEATTLE,WA",65,"*OLYMP
IA,WA",157,"*SALEM,OR",214,"GRAN
TS PASS,OR",18Ø,"REDDING,CA",162
,"*SACRAMENTO,CA",382,"LOS ANGEL
OS,CA",125,"SAN DIEGO,CA",Ø,Ø,27
8,33Ø,311,262,Ø,525,567,Ø,221,12
4,35Ø,265,282,331,171,Ø,Ø

232 DATA "SPOKANE,WA",2Ø2,"PENDE
LTON,OR",221,"*BOISE,ID",277,"EL
KO,NV",3Ø9,"*CARSON CITY,NV",184
,"BISHOP,CA",3ØØ,"LAS VEGAS,NV",
312,"YUMA,AZ",Ø,Ø,Ø,Ø,472,486,25
8,285,161,Ø,465,Ø,Ø,182,26Ø,368,
184,Ø,Ø

233 DATA Ø,Ø,"*HELENA,MT",316,"P
OCATELLO,ID",159,"*SALT LAKE CIT
Y,UT",182,"RICHFIELD,UT",75,"CED
AR CITY,UT",318,"FLAGSTAFF,AZ",1
37,"*PHOENIX,AZ",Ø,Ø,Ø,Ø,239,35Ø
,411,Ø,285,Ø,212,33Ø,Ø,Ø,582,461
,118,Ø,Ø

234 DATA Ø,Ø,"BILLINGS,MT",28Ø,"
CASPER,WY",118,"RAWLINS,WY",27Ø,
"GRAND JUNCTION,CO",Ø,Ø,Ø,"ALBUQ
UERQE,NM",441,"TUSCON,AZ",Ø,Ø,Ø,
Ø,418,Ø,413,Ø,151,Ø,257,Ø,Ø,Ø,62
,Ø,273,Ø,Ø

235 DATAØ,Ø, "*BISMARK,ND",211,"
*PIERRE,SD",465,"*CHEYENNE,WY",1
ØØ,"*DENVER,CO",1Ø7,"PUEBLO,CO",
279,"*SANTE FE,NM",275,"LA CRUCE
S,NM",45,"EL PASO,TX",Ø,Ø,193,33
9,222,625,446,511,532,523,427,6Ø
7,277,417,Ø,62Ø,584

236 DATA Ø,Ø,"FARGO,ND",277,"SIO
UX FALLS,SD",2Ø9,"*LINCOLN,NB",1
9Ø,"*TOPEKA,KS",134,"WICHITA,KS"
,378,"AMARILLO,TX",358,"DALLAS,T
X",193,"*AUSTIN,TX",Ø,Ø,251,Ø,23
4,Ø,189,275,Ø,336,197,Ø,25Ø,2Ø6,
185,3Ø9,164

237 DATA Ø,Ø,"DULUTH,MN",153,"*S
T PAUL,MN",26Ø,"*DES MOINES,IO",
282,"*JEFFERSON CITY,MO",139,"KA
NSAS CITY,MO",36Ø,"*OKLAHOMA CIT
Y,OK",36Ø,"SHREVEPORT,LA",234,"H
OUSTON,TX",Ø,Ø,Ø,Ø,288,443,254,Ø
,214,31Ø,257,4Ø2,338,2Ø2,219,4Ø9
,266

```
238 DATA Ø,Ø,Ø,Ø,"*MADISON,WI",1
95,"PEORIA,IL",72,"*SPRINGFIELD,
IL",1ØØ,"ST LOUIS,MO",352,"*LITT
LE ROCK,AK",252,"*JACKSON,MS",18
5,"*BATON ROUGE,LA",Ø,Ø,Ø,Ø,77,Ø
,151,189,193,235,3Ø5,Ø,346,42Ø,2
46,381,45Ø
239 DATA Ø,Ø,Ø,Ø,"MILWAUKEE,WI",
87,"CHICAGO,IL",181,"*INDIANAPOL
IS,IN",153,"*FRANKFORT,KY",198,"
*NASHVILLE,TN",29Ø,"*MONTGOMERY,
AL",2Ø4,"*TALLAHASSEE,FL",Ø,Ø,Ø,
Ø,Ø,266,218,223,171,216,24,21Ø,1
77,Ø,166,269,241
24Ø DATA Ø,Ø,Ø,Ø,"DETROIT,MI",97
,"*LANSING,MI",244,"*COLUMBUS,OH
",323,"LEXINGTON,KY",175,"KNOXVI
LLE,TN",194,"*ATLANTA,GA",455,"T
AMPA,FL",Ø,Ø,Ø,Ø,263,Ø,225,139,3
71,535,174,315,282,368,215,Ø,194
241 DATA Ø,Ø,Ø,Ø,"BUFFALO,NY",18
7,"CLEVELAND,OH",323,"*HARRISBUR
G,PA",361,"*CHARLESTON,WV",28Ø,"
GREENSBORO,NC",184,"*COLUMBIA,SC
",289,"JACKSONVILLE,FL",Ø,Ø,Ø,28
3,384,485,Ø,1Ø2,1Ø7,344,3Ø6,19Ø,
77,2Ø5,2Ø1,Ø,253
242 DATA "*MONTPELIER,VT",2Ø2,"*
ALBANY,NY",154,"NEW YORK,NY",1ØØ
,"PHILADELPHIA,PA",133,"WASHINGT
ON,DC",1Ø6,"*RICHMOND,VA",151,"*
RALIEGH,NC",122,"WILMINGTON,NC",
167,"CHARLESTON,SC",122,168,81,Ø
,1Ø6,Ø,61,Ø,34,134,Ø,93,168,236,
Ø,Ø,Ø
243 DATA"*CONCORD,NH",122,"SPRIN
GFIELD,MA",29,"*HARTFORD,CN",Ø,"
*TRENTON,NJ",Ø,"*ANNAPOLIS,MD",5
Ø,"*DOVER,DL",185,"NORFOLK,VA",Ø
,Ø,Ø,Ø,163,Ø,89,1Ø1,64,Ø,Ø,Ø,Ø,Ø
,Ø,Ø,Ø,Ø,Ø,Ø,Ø
244 DATA "*AUGUSTA,ME",169,"*BOS
TON,MA",37,"*PROVIDENCE,RI",Ø,Ø,
Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø
245 DATA 28Ø,Ø,Ø,288,4Ø5,Ø,268,Ø
,Ø,Ø,348,Ø,44Ø,285,Ø,Ø,449,387
,256,Ø,Ø,Ø,Ø,548,179,23Ø,29Ø,Ø
,213,Ø,Ø,4Ø6,421,Ø,512,421,686,Ø
,Ø,234,Ø,Ø,76,159,Ø,243,Ø,332,44
3,261,127,389,Ø,233
246 DATA Ø,Ø,14Ø,211,3Ø2,328,475
,474,Ø,Ø,Ø,3Ø8,183,2Ø5,242,Ø,Ø,Ø
,17Ø,Ø,164,Ø,264,399,Ø,Ø,368,35Ø
,Ø,344,199,113,17Ø,119,85,122,84
,9Ø,Ø,Ø,97,66,Ø,Ø,Ø,Ø,Ø,Ø
247 DATA27,29,21,36,17,45,12,59,
11,69,11,87,19,116,23,124,Ø,Ø,41
,34,37,45,43,63,43,77,22,86,23,1
ØØ,35,1Ø5,35,126,Ø,Ø,Ø,Ø,58,44
248 DATA57,68,55,8Ø,54,93,46,99,
53,113,5Ø,121,Ø,Ø,Ø,Ø,8Ø,52,83,7
4,79,79,71,95,Ø,Ø,77,118,57,133,
Ø,Ø,Ø,Ø,1Ø5,47,1Ø8,63,89,82
249 DATA87,91,9Ø,1Ø1,82,115,73,1
32,8Ø,137,Ø,Ø,121,48,12Ø,69,123,
88,13Ø,96,122,1Ø6,1Ø3,119,128,13
6,123,151,Ø,Ø,142,47,139,59,138,
8Ø,143,98,137,95
25Ø DATA126,117,144,137,138,151,
Ø,Ø,Ø,Ø,155,7Ø,153,81,157,86,151
,97,147,118,16Ø,135,156,147,Ø,Ø,
Ø,Ø,163,69,164,76,173,87,181,1ØØ
,172,112,179,133,19Ø,142,Ø,Ø,Ø,Ø
,186,67
251 DATA179,69,187,85,185,1ØØ,18
6,113,191,124,2Ø4,158,Ø,Ø,Ø,Ø,2Ø
8,66,193,77,216,81,195,94,211,1Ø
7,2Ø7,12Ø,2Ø4,143,228,51,225,65,
232,73,222,82,221,88,219,97,219,
1Ø9
252 DATA 221,114,213,124,234,58,
232,65,23Ø,69,227,85,224,89,227,
88,226,1Ø1,Ø,Ø,Ø,Ø,239,47,244,63
,236,67
253 DATA DRIVE,drive,FUN,fun,GAS
/REST RM,gas/rest rm,EAT,eat,MOT
EL,motel,MAP,map,FUN AT MOTEL,fu
n at motel
254 CLS:PRINT@13,"STATUS";:PRINT
@32,"FUEL";:PRINT@57,"DAY#";:PRI
NT@128,"TOTALS-MILES";:PRINT@146
,"MONEY";:PRINT@16Ø,RW$;:PRINT@2
ØØ,"ENJOYMENT INDEX";:PRINT@224,
RW$;:RETURN
255 FOR C1=1 TO LEN(MS$)
256 A$=MID$(MS$,C1,1):CN=ASC(A$)
-32:DRAW"C"+STR$(FX)+"S16BM"+STR
$(X1)+","+STR$(Y1)+";"+L$(CN):X1
=X1+32:NEXT:RETURN
257 PLAY"L2ØAGA":FOR TT=1 TO 4ØØ
:NEXT:PRINT@448,STRING$(5Ø,32);;
RETURN
258 'INFO
259 CLS:PRINT@33,"WHICH TYPE OF
CAR WILL YOU BE      USING FOR YO
UR VACATION?":PRINT@139,"1) COMP
ACT":PRINT@2Ø3,"2) MIDSIZE":PRIN
T@267,"3) LUXURY"
26Ø PRINT@326,"SELECT CAR BY NUM
BER"
261 A$=INKEY$:IF VAL(A$)<1 OR VA
L(A$)>3 THEN 261
262 K=VAL(A$):AG=(K+1)*6:MP=432/
AG
263 CLS:PRINT@33,"AT WHAT SPEED
DO YOU WISH TO        APPROXIMAT
```

```
ELY DRIVE?":PRINT@139,"1) 45 MPH
":PRINT@2Ø3,"2) 5Ø MPH":PRINT@26
7,"3) 55 MPH":PRINT@331,"4) 6Ø M
PH":PRINT@388,"SELECT SPEED BY N
UMBER"
264 A$=INKEY$:IF VAL(A$)<1 OR VA
L(A$)>4 THEN 264
265 CS=(VAL(A$)+8)*5
266 CLS:PRINT@33,"HOW MUCH MONEY
  DO YOU PLAN TO       SPEND FOR Y
OUR VACATION?":
267 FOR X=1 TO 4:PX(X)=RND(4ØØ)+
5ØØ*X:PRINT@64*X+74,USING"#) $$#
###";X,PX(X):NEXT
268 PRINT@388,"SELECT AMOUNT BY
NUMBER"
269 A$=INKEY$:IF A$<"1" OR A$>"4
" THEN 269
27Ø TC=PX(VAL(A$))
271 CLS:PRINT@225,"DO YOU WISH T
O PLAN THE ENTIRE       ROUTE OF TH
E TRIP? (Y/N)"
272 A$=INKEY$
273 IFA$="Y" THEN ZZ=1 ELSE IF A
$="N" THEN ZZ=Ø ELSE 272
274 RETURN
275 PRINT@Ø,STRING$(128,32);:PRI
NT@72,"YOUR FINAL SCORE";:E1=1ØØ
:E2=1ØØ+ABS(TC)/2ØØ*5Ø:GOSUB 128
:PRINT@256,STRING$(223,32);:PRIN
T@296,"HOME SWEET HOME":PRINT@38
5,"WOULD YOU LIKE TO TAKE ANOTHE
R        VACATION? (Y/N)"
276 A$=INKEY$:IF A$="Y" THEN RUN
 ELSE IF A$="N" THEN END ELSE 27
6
277 'PLAN AHEAD
278 IF (XF=XS AND YF=YS) OR CC>4
9 THEN 282
279 POKE 32327+2*CC,XS:POKE 3232
8+2*CC,YS:GOSUB 167:GOSUB 212
28Ø CC=CC+1
281 GOTO 278
282 POKE 32327+2*CC,XF:POKE 3232
8+2*CC,YF:RETURN
283 PM=PM+MD
284 COLOR8,8:LINE(56,2Ø)-(184,28
),PSET,BF:MS$="TOTAL MILES"+STR$
(PM):Y1=2Ø:GOSUB2Ø1:RETURN
285 'RETR
286 XM=XF:YM=YF:XS=PEEK(32327):Y
S=PEEK(32328):CC=1
287 IF (XM>XS AND YM>YS) OR (XM<
XS AND YM<YS) THEN MD=VAL(SC$(((
(XM+XS)/2)-1)/2,(((YM+YS)/2)-1)/
2)):GOTO289
288 MD=VAL(M$((XS+XM)/2,(YS+YM)/
2))
289 COLOR 8,8:LINE(56,2Ø)-(18Ø,2
8),PSET,BF:LINE(Ø,173)-(255,195)
,PSET,BF:Y1=173:MS$="PREPLANNED
ROUTE":GOSUB 2Ø1
29Ø Z2=1:GOSUB 212:RETURN
291 'RETR2
292 COLOR8,8:LINE(Ø,Ø)-(255,2Ø),
PSET,BF:PMODE 4,1:SCREEN1,1:PMOD
E 3
293 XM=XS:YM=YS:XS=PEEK(2*CC+323
27):YS=PEEK(2*CC+32328):IF(XM>XS
 AND YM>YS) OR (XM<XS AND YM<YS)
 THEN MD=VAL(SC$((((XM+XS)/2)-1)
/2,(((YM+YS)/2)-1)/2)):GOTO 295
294 MD=VAL(M$((XS+XM)/2,(YS+YM)/
2))
295 CC=CC+1
296 Y1=Ø:MS$=M$(XM,YM)+" TO":GOS
UB 2Ø1:Y1=1Ø:MS$=M$(XS,YS)+STR$(
MD)+" MILES":GOSUB 2Ø1
297 GOSUB 212:FOR DD=1 TO 1ØØØ:N
EXT:GOSUB131:RETURN
298 PRINT@256,STRING$(223,32):PR
INT@257,"THE VACATION WAS SO BAD
 THAT       YOUR FAMILY DUMPED YOU
OUT OF    THE CAR AND LEFT FOR HO
ME.":PLAY"L4GEC":PRINT@385,"DON'
T WORRY, PRESS ANY KEY AND
 YOU CAN GO HOME TOO."
299 A$=INKEY$:IF A$=""THEN 299 E
LSE 275
3ØØ PCLEAR4:GOTO1
```
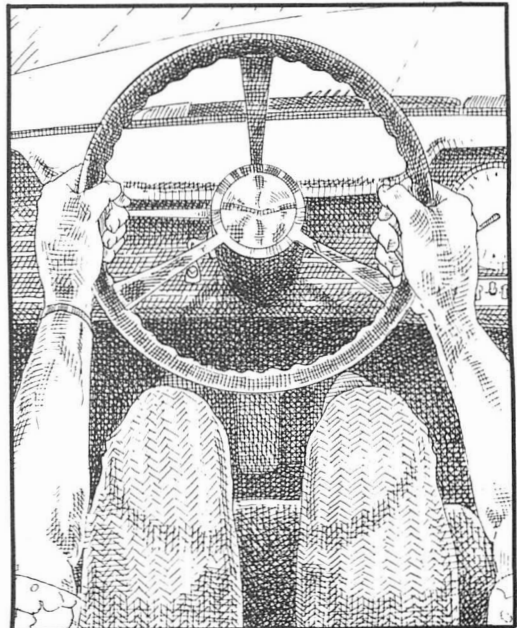
Lifestyle

Program by Dr. Charles Santee

The expression "Life is a rat race" could never be more true than in this Simulation. What starts out to be a normal day for you will soon become a hectic and often humorous experience. In this life-like Simulation, you have to develop your priorities and be ready to deal with the consequences when they are wrong. Even though it's only make believe, you will be amazed and amused at these familiar situations and the frequency of their occurrence.

About the Listings

This program is very long and requires some special techniques for combining the BASIC and assembly language parts of the program. The two have been merged with the machine code, discretely tucked away at the end of BASIC and hidden from the user's view. The pointers to the end of BASIC have been moved to "capture" the machine code. The machine code has two functions: the first accomplishes the actual merge of BASIC and machine code while the

second acts as the "workhorse" part of the program. It provides a set of code and tables that allows text and graphics to be combined on the screen.

All set then? Follow these steps closely:

Step 1 — Enter Listing 1 using an assembler. Save it with the filename GRAPRINT. Be sure to use the extension BIN when saving the assembled code. You should end up with a save called GRAPRINT/BIN.

Step 2 — Enter the *Test* program (Listing 2) in BASIC. Save the completed program to disk or tape.

Step 3 — Merge the assembled code (Listing 1) with Listing 2 (*Test*) as follows:

1) Reset the computer or type POKE 113,3:EXEC40999.
2) Load the assembled code. For tape users, type CLOADM "GRAPRINT". Disk users can simply LOADM "GRAPRINT". Do *not* execute!
3) Load the BASIC *Test* program. Tape users type CLOAD "TEST" and disk users type LOAD "TEST".
4) Find the end of the BASIC program by typing PRINT PEEK(&H1B)*256 + PEEK(&H1C).
5) Execute the merge routine in the assembly code by typing EXEC &H6000.
6) Find the new location for the end of BASIC: type PRINT PEEK(&H1B)*256 + PEEK(&H1C).
7) Subtract the old location for BASIC (Step 4) from the new location (Step 6).
8) EDIT Line 20 of the BASIC program so the value of ZU = PEEK(&H1B)*256 + PEEK(&H1C)−(the value found in Step 7). The value of ZU is the address where the assembly code starts in memory.
9) Run the program. If the merge is successful, you will see a circle and a message on the screen. Answer 'Y' to the question and the program ends the *Test* so you can simply add the remaining part of the program to complete the Simulation.
10) Before adding the final code, save the merged code to disk or tape so the merge process won't have to be repeated. You can now edit, add to, delete and renumber the BASIC program per the next step. The assembled code is not altered.
11) Complete the program by adding all the lines of code in Listing 3. You may have to reset the computer and reload the merged code to obtain adequate memory for this BASIC listing. If you have the Second RAINBOW Simulations Tape, you can merge the ASCII file for the *Style*

listing by positioning the tape just after *Test* and entering the following line:

```
OPEN"I",-1,"":POKE 111,255:EXEC 44156
```

12) Save this final BASIC program as LIFESTYL. It will only be necessary to run Listing 3 for subsequent sessions of *Lifestyle* if you correctly follow all of these above steps.

13) It would be helpful to also type in Listing 4 since it summarizes all of the rules of the Simulation. Save this BASIC listing as RULES.

Upon running *Lifestyle* you are presented with a high resolution layout of CoCo Town, showing its various business establishments, police stations and your home. You must use the right joystick to move your "car" about the streets in your normal daily routine. When given a menu for action at the bottom of the screen, press the appropriate number.

You will find that the merchants in CoCo Town are generally friendly and honest folks. Some require cash for payment while others accept checks, which are automatically deducted from your bank account. It is a good idea to carry some cash for emergencies, but be careful, CoCo Town has a crime rate, too. The bank credits your account with interest and it also charges loan interest if you are overdrawn. The interest accrues whenever you hear the tune "We're in the Money." You may retire at anytime, but don't do so unless you have made sufficient financial plans.

Altering the Simulation

If you prefer to customize the Simulation to more closely resemble your own lifestyle, here is some information you will need.

The string CC$ in Line 30 of Listing 3 is a 24-unit rotating counter that controls all the counting of events that occur in the program. Change this counter to substantially change the flow of the Simulation. The string consists of 24 two-digit numbers. Each number indicates the number of movements (times 24) that occur before an event is announced.

For example, the first counter is "07." After 7 times 24, or 168 movements, the program announces "Go home — You need some rest." After the initial warning, a player has 3 times 24 movements (72) before the next related event occurs. In the first example, the player then has 72 movements left to "go home" before "The boss says you are too tired. You need some rest." If the player follows the directions of the first message, the counter is reset to its initial value. If the player ignores the message for too long, disaster is likely to strike, usually resulting in a loss of money.

You may reset these counters to any number between one and 99, but remember that the string must consist of 24 two-digit numbers or a total of 48 characters. Try changing the values to match your own lifestyle. Maybe you can bring some order to an otherwise wild and crazy world.

Charles Santee teaches special education and college and business courses. He was a regional finalist in the Johns Hopkins University search for computing to aid the handicapped. Dr. Santee lives in Westmont, Illinois.

GRAPRINT　　　32K ECB

```
6ØØØ                    ØØØØ2           ORG     $6ØØØ
6ØØØ 9E    1B           ØØØØ4  FIRST    LDX     $1B      *GET THEN END OF BASIC
6ØØ2 1F    12           ØØØØ6           TFR     X,Y
6ØØ4 3Ø    8D ØØ12      ØØØ12           LEAX    STLEN,PCR
6ØØ8 A6    8Ø           ØØØ14  TFR      LDA     ,X+
6ØØA A7    AØ           ØØØ16           STA     ,Y+
6ØØC 8C    633Ø         ØØØ18           CMPX    #LAST
6ØØF 26    F7           ØØØ2Ø           BNE     TFR
6Ø11 1Ø9F  1B           ØØØ21           STY     $1B
6Ø14 86    27           ØØØ22           LDA     #39      *PROTECT THE LOADER
6Ø16 A7    8C E7        ØØØ24           STA     FIRST,PCR
6Ø19 39                 ØØØ26           RTS
6Ø1A       ØØ           ØØ11Ø  STLEN    FCB     Ø            LENGTH OF STRING
6Ø1B       Ø3F2         ØØ12Ø  STLOC    FDB     1Ø1Ø    *LOCATION OF STRING
6Ø1D       Ø3F2         ØØ13Ø  SCLOC    FDB     1Ø1Ø    *LOCATION OF SCREEN
6Ø1F 1ØAE  8C F8        ØØ14Ø  START    LDY     STLOC,PCR
6Ø23 AE    8C F7        ØØ15Ø           LDX     SCLOC,PCR
6Ø26 A6    8D FFFØ      ØØ16Ø  LOOP1    LDA     STLEN,PCR
6Ø2A 27    3Ø           ØØ17Ø           BEQ     DONE
6Ø2C 8Ø    Ø1           ØØ175           SUBA    #1       *GET THE NEXT CHARACTER
6Ø2E A7    8D FFE8      ØØ18Ø           STA     STLEN,PCR
6Ø32 A6    AØ           ØØ19Ø           LDA     ,Y+
6Ø34 81    21           ØØ2ØØ           CMPA    #$21     *CHECK TO SEE IF IN TABLE
6Ø36 25    Ø8           ØØ21Ø           BLO     SPA
6Ø38 81    7A           ØØ22Ø           CMPA    #$7A
6Ø3A 22    Ø4           ØØ23Ø           BHI     SPA
6Ø3C 8Ø    21           ØØ24Ø           SUBA    #$21
6Ø3E 2Ø    Ø2           ØØ25Ø           BRA     MULT
6Ø4Ø 86    3F           ØØ26Ø  SPA      LDA     #$3F     *IF NOT IN TABLE USE SPACE
6Ø42 C6    Ø8           ØØ27Ø  MULT     LDB     #Ø8         FIND CHARACTER IN TABLE
6Ø44 3D                 ØØ28Ø           MUL
6Ø45 33    8D ØØ14      ØØ29Ø           LEAU    TABLE,PCR
6Ø49 33    CB           ØØ3ØØ           LEAU    D,U
6Ø4B C6    8Ø           ØØ31Ø           LDB     #$8Ø
6Ø4D A6    CØ           ØØ32Ø  LOOP2    LDA     ,U+      *PUT GRAPHIC ON SCREEN
6Ø4F 43                 ØØ33Ø           COMA
```

```
6Ø5Ø A7  85    ØØ34Ø         STA   B,X
6Ø52 CB  2Ø    ØØ35Ø         ADDB  #$2Ø
6Ø54 C1  8Ø    ØØ36Ø         CMPB  #$8Ø
6Ø56 26  F5    ØØ37Ø         BNE   LOOP2
6Ø58 3Ø  Ø1    ØØ38Ø         LEAX  1,X
6Ø5A 2Ø  CA    ØØ39Ø         BRA   LOOP1
6Ø5C 39        ØØ4ØØ DONE    RTS
6Ø5D 2Ø2Ø      ØØ41Ø TABLE   FDB   $2Ø2Ø    !
6Ø5F 2Ø2Ø      ØØ42Ø         FDB   $2Ø2Ø
6Ø61 2ØØØ      ØØ43Ø         FDB   $2ØØØ
6Ø63 2ØØØ      ØØ44Ø         FDB   $2ØØØ
6Ø65 4848      ØØ45Ø         FDB   $4848    "
6Ø67 48ØØ      ØØ46Ø         FDB   $48ØØ
6Ø69 ØØØØ      ØØ47Ø         FDB   Ø
6Ø6B ØØØØ      ØØ48Ø         FDB   Ø
6Ø6D 5Ø5Ø      ØØ49Ø         FDB   $5Ø5Ø    #
6Ø6F F8ØØ      ØØ5ØØ         FDB   $F8ØØ
6Ø71 F85Ø      ØØ51Ø         FDB   $F85Ø
6Ø73 5ØØØ      ØØ52Ø         FDB   $5ØØØ
               ØØ521
6Ø75 2Ø78      ØØ53Ø         FDB   $2Ø78    $
6Ø77 8Ø7Ø      ØØ54Ø         FDB   $8Ø7Ø
6Ø79 Ø8FØ      ØØ55Ø         FDB   $Ø8FØ
6Ø7B 2ØØØ      ØØ56Ø         FDB   $2ØØØ
6Ø7D C8C8      ØØ561         FDB   $C8C8    %
6Ø7F 1Ø2Ø      ØØ562         FDB   $1Ø2Ø
6Ø81 4Ø98      ØØ563         FDB   $4Ø98
6Ø83 98ØØ      ØØ564         FDB   $98ØØ
6Ø85 1Ø78      ØØ57Ø         FDB   $1Ø78    &
6Ø87 8Ø6Ø      ØØ58Ø         FDB   $8Ø6Ø
6Ø89 8Ø78      ØØ59Ø         FDB   $8Ø78
6Ø8B 1ØØØ      ØØ6ØØ         FDB   $1ØØØ
6Ø8D 2Ø2Ø      ØØ61Ø         FDB   $2Ø2Ø    '
6Ø8F 2ØØØ      ØØ62Ø         FDB   $2ØØØ
6Ø91 ØØØØ      ØØ63Ø         FDB   Ø
6Ø93 ØØØØ      ØØ64Ø         FDB   Ø
6Ø95 1Ø2Ø      ØØ65Ø         FDB   $1Ø2Ø    (
6Ø97 4Ø4Ø      ØØ66Ø         FDB   $4Ø4Ø
6Ø99 4Ø2Ø      ØØ67Ø         FDB   $4Ø2Ø
6Ø9B 1ØØØ      ØØ68Ø         FDB   $1ØØØ
6Ø9D 4Ø2Ø      ØØ69Ø         FDB   $4Ø2Ø    )
6Ø9F 1Ø1Ø      ØØ7ØØ         FDB   $1Ø1Ø
6ØA1 1Ø2Ø      ØØ71Ø         FDB   $1Ø2Ø
6ØA3 4ØØØ      ØØ72Ø         FDB   $4ØØØ
6ØA5 ØØ88      ØØ73Ø         FDB   $ØØ88    *
6ØA7 5ØF8      ØØ74Ø         FDB   $5ØF8
6ØA9 5Ø88      ØØ75Ø         FDB   $5Ø88
6ØAB ØØØØ      ØØ76Ø         FDB   Ø
6ØAD ØØ2Ø      ØØ77Ø         FDB   $ØØ2Ø    +
6ØAF 2ØF8      ØØ78Ø         FDB   $2ØF8
6ØB1 2Ø2Ø      ØØ79Ø         FDB   $2Ø2Ø
6ØB3 ØØØØ      ØØ8ØØ         FDB   Ø
6ØB5 ØØØØ      ØØ81Ø         FDB   Ø        ,
6ØB7 ØØ3Ø      ØØ82Ø         FDB   $ØØ3Ø
6ØB9 3Ø1Ø      ØØ83Ø         FDB   $3Ø1Ø
6ØBB 2ØØØ      ØØ84Ø         FDB   $2ØØØ
6ØBD ØØØØ      ØØ85Ø         FDB   Ø        -
6ØBF ØØF8      ØØ86Ø         FDB   $ØØF8
```

6ØC1	ØØØØ	ØØ87Ø	FDB	Ø
6ØC3	ØØØØ	ØØ88Ø	FDB	Ø
6ØC5	ØØØØ	ØØ89Ø	FDB	Ø	.
6ØC7	ØØØØ	ØØ9ØØ	FDB	Ø
6ØC9	ØØ3Ø	ØØ91Ø	FDB	$ØØ3Ø
6ØCB	3ØØØ	ØØ92Ø	FDB	$3ØØØ
6ØCD	ØØ88	ØØ93Ø	FDB	$ØØ88	/
6ØCF	1Ø2Ø	ØØ94Ø	FDB	$1Ø2Ø
6ØD1	4Ø8Ø	ØØ95Ø	FDB	$4Ø8Ø
6ØD3	8ØØØ	ØØ96Ø	FDB	$8ØØØ
6ØD5	3Ø48	ØØ97Ø	FDB	$3Ø48	Ø
6ØD7	4848	ØØ98Ø	FDB	$4848
6ØD9	4848	ØØ99Ø	FDB	$4848
6ØDB	3ØØØ	Ø1ØØØ	FDB	$3ØØØ
6ØDD	2Ø6Ø	Ø1Ø1Ø	FDB	$2Ø6Ø	1
6ØDF	2Ø2Ø	Ø1Ø2Ø	FDB	$2Ø2Ø
6ØE1	2Ø2Ø	Ø1Ø3Ø	FDB	$2Ø2Ø
6ØE3	7ØØØ	Ø1Ø4Ø	FDB	$7ØØØ
6ØE5	7Ø88	Ø1Ø5Ø	FDB	$7Ø88	2
6ØE7	Ø83Ø	Ø1Ø6Ø	FDB	$Ø83Ø
6ØE9	4Ø8Ø	Ø1Ø7Ø	FDB	$4Ø8Ø
6ØEB	F8ØØ	Ø1Ø8Ø	FDB	$F8ØØ
6ØED	7Ø88	Ø1Ø9Ø	FDB	$7Ø88	3
6ØEF	Ø83Ø	Ø11ØØ	FDB	$Ø83Ø
6ØF1	Ø888	Ø111Ø	FDB	$Ø888
6ØF3	7ØØØ	Ø112Ø	FDB	$7ØØØ
6ØF5	1Ø3Ø	Ø113Ø	FDB	$1Ø3Ø	4
6ØF7	5Ø9Ø	Ø114Ø	FDB	$5Ø9Ø
6ØF9	F81Ø	Ø115Ø	FDB	$F81Ø
6ØFB	1ØØØ	Ø116Ø	FDB	$1ØØØ
6ØFD	F88Ø	Ø117Ø	FDB	$F88Ø	5
6ØFF	FØØ8	Ø118Ø	FDB	$FØØ8
61Ø1	Ø888	Ø119Ø	FDB	$Ø888
61Ø3	7ØØØ	Ø12ØØ	FDB	$7ØØØ
61Ø5	7Ø8Ø	Ø121Ø	FDB	$7Ø8Ø	6
61Ø7	8ØFØ	Ø122Ø	FDB	$8ØFØ
61Ø9	8888	Ø123Ø	FDB	$8888
61ØB	7ØØØ	Ø124Ø	FDB	$7ØØØ
61ØD	F8Ø8	Ø125Ø	FDB	$F8Ø8	7
61ØF	1Ø2Ø	Ø126Ø	FDB	$1Ø2Ø
6111	4Ø8Ø	Ø127Ø	FDB	$4Ø8Ø
6113	8ØØØ	Ø128Ø	FDB	$8ØØØ
6115	7Ø88	Ø129Ø	FDB	$7Ø88	8
6117	887Ø	Ø13ØØ	FDB	$887Ø
6119	8888	Ø131Ø	FDB	$8888
611B	7ØØØ	Ø132Ø	FDB	$7ØØØ
611D	7Ø88	Ø133Ø	FDB	$7Ø88	9
611F	887Ø	Ø134Ø	FDB	$887Ø
6121	Ø8Ø8	Ø135Ø	FDB	$Ø8Ø8
6123	7ØØØ	Ø136Ø	FDB	$7ØØØ
6125	ØØ2Ø	Ø137Ø	FDB	$ØØ2Ø	:
6127	2ØØØ	Ø138Ø	FDB	$2ØØØ
6129	2Ø2Ø	Ø139Ø	FDB	$2Ø2Ø
612B	ØØØØ	Ø14ØØ	FDB	Ø
612D	ØØ3Ø	Ø141Ø	FDB	$ØØ3Ø	;
612F	3ØØØ	Ø142Ø	FDB	$3ØØØ
6131	3Ø1Ø	Ø143Ø	FDB	$3Ø1Ø
6133	2ØØØ	Ø144Ø	FDB	$2ØØØ

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6135	Ø81Ø	Ø145Ø	FDB	$Ø81Ø	<
6137	2Ø4Ø	Ø146Ø	FDB	$2Ø4Ø	
6139	2Ø1Ø	Ø147Ø	FDB	$2Ø1Ø	
613B	Ø8ØØ	Ø148Ø	FDB	$Ø8ØØ	
613D	ØØØØ	Ø149Ø	FDB	$Ø	>
613F	F8ØØ	Ø15ØØ	FDB	$F8ØØ	
6141	F8ØØ	Ø151Ø	FDB	$F8ØØ	
6143	ØØØØ	Ø152Ø	FDB	Ø	
6145	8Ø4Ø	Ø153Ø	FDB	$8Ø4Ø	>
6147	2Ø1Ø	Ø154Ø	FDB	$2Ø1Ø	
6149	2Ø4Ø	Ø155Ø	FDB	$2Ø4Ø	
614B	8ØØØ	Ø156Ø	FDB	$8ØØØ	
614D	7Ø88	Ø157Ø	FDB	$7Ø88	?
614F	Ø81Ø	Ø158Ø	FDB	$Ø81Ø	
6151	ØØ2Ø	Ø159Ø	FDB	$ØØ2Ø	
6153	ØØ2Ø	Ø16ØØ	FDB	$ØØ2Ø	
6155	7Ø88	Ø161Ø	FDB	$7Ø88	@
6157	Ø868	Ø162Ø	FDB	$Ø868	
6159	9A88	Ø163Ø	FDB	$9A88	
615B	7ØØØ	Ø164Ø	FDB	$7ØØØ	
615D	2Ø5Ø	Ø165Ø	FDB	$2Ø5Ø	A
615F	8888	Ø166Ø	FDB	8888	
6161	F888	Ø167Ø	FDB	$F888	
6163	88ØØ	Ø168Ø	FDB	$88ØØ	
6165	FØ48	Ø169Ø	FDB	$FØ48	B
6167	487Ø	Ø17ØØ	FDB	$487Ø	
6169	4848	Ø171Ø	FDB	4848	
616B	FØØØ	Ø172Ø	FDB	$FØØØ	
616D	7Ø88	Ø173Ø	FDB	$7Ø88	C
616F	8Ø8Ø	Ø174Ø	FDB	$8Ø8Ø	
6171	8Ø88	Ø175Ø	FDB	$8Ø88	
6173	7ØØØ	Ø176Ø	FDB	$7ØØØ	
6175	FØ48	Ø177Ø	FDB	$FØ48	D
6177	4848	Ø178Ø	FDB	4848	
6179	4848	Ø179Ø	FDB	4848	
617B	FØØØ	Ø18ØØ	FDB	$FØØØ	
617D	F88Ø	Ø181Ø	FDB	$F88Ø	E
617F	8ØFØ	Ø182Ø	FDB	$8ØFØ	
6181	8Ø8Ø	Ø183Ø	FDB	$8Ø8Ø	
6183	F8ØØ	Ø184Ø	FDB	$F8ØØ	
6185	F88Ø	Ø185Ø	FDB	$F88Ø	F
6187	8ØFØ	Ø186Ø	FDB	$8ØFØ	
6189	8Ø8Ø	Ø187Ø	FDB	$8Ø8Ø	
618B	8ØØØ	Ø188Ø	FDB	$8ØØØ	
618D	788Ø	Ø189Ø	FDB	$788Ø	G
618F	8Ø98	Ø19ØØ	FDB	$8Ø98	
6191	8888	Ø191Ø	FDB	8888	
6193	78ØØ	Ø192Ø	FDB	$78ØØ	
6195	8888	Ø193Ø	FDB	8888	H
6197	88F8	Ø194Ø	FDB	$88F8	
6199	8888	Ø195Ø	FDB	8888	
619B	88ØØ	Ø196Ø	FDB	$88ØØ	
619D	7Ø2Ø	Ø197Ø	FDB	$7Ø2Ø	I
619F	2Ø2Ø	Ø198Ø	FDB	$2Ø2Ø	
61A1	2Ø2Ø	Ø199Ø	FDB	$2Ø2Ø	
61A3	7ØØØ	Ø2ØØØ	FDB	$7ØØØ	
61A5	Ø8Ø8	Ø2Ø1Ø	FDB	$Ø8Ø8	J
61A7	Ø8Ø8	Ø2Ø2Ø	FDB	$Ø8Ø8	

61A9	Ø888	Ø2Ø3Ø	FDB	$Ø888	
61AB	7ØØØ	Ø2Ø4Ø	FDB	$7ØØØ	
61AD	889Ø	Ø2Ø5Ø	FDB	$889Ø	K
61AF	AØCØ	Ø2Ø6Ø	FDB	$AØCØ	
61B1	AØ9Ø	Ø2Ø7Ø	FDB	$AØ9Ø	
61B3	88ØØ	Ø2Ø8Ø	FDB	$88ØØ	
61B5	8Ø8Ø	Ø2Ø9Ø	FDB	$8Ø8Ø	L
61B7	8Ø8Ø	Ø21ØØ	FDB	$8Ø8Ø	
61B9	8Ø8Ø	Ø211Ø	FDB	$8Ø8Ø	
61BB	F8ØØ	Ø212Ø	FDB	$F8ØØ	
61BD	88D8	Ø213Ø	FDB	$88D8	M
61BF	A8A8	Ø214Ø	FDB	$A8A8	
61C1	8888	Ø215Ø	FDB	$8888	
61C3	88ØØ	Ø216Ø	FDB	$88ØØ	
61C5	88C8	Ø217Ø	FDB	$88C8	N
61C7	A898	Ø218Ø	FDB	$A898	
61C9	8888	Ø219Ø	FDB	$8888	
61CB	88ØØ	Ø22ØØ	FDB	$88ØØ	
61CD	F888	Ø221Ø	FDB	$F888	O
61CF	8888	Ø222Ø	FDB	$8888	
61D1	8888	Ø223Ø	FDB	$8888	
61D3	F8ØØ	Ø224Ø	FDB	$F8ØØ	
61D5	FØ88	Ø225Ø	FDB	$FØ88	P
61D7	88FØ	Ø226Ø	FDB	$88FØ	
61D9	8Ø8Ø	Ø227Ø	FDB	$8Ø8Ø	
61DB	8ØØØ	Ø228Ø	FDB	$8ØØØ	
61DD	7Ø88	Ø229Ø	FDB	$7Ø88	Q
61DF	8888	Ø23ØØ	FDB	$8888	
61E1	A89Ø	Ø231Ø	FDB	$A89Ø	
61E3	68ØØ	Ø232Ø	FDB	$68ØØ	
61E5	FØ88	Ø233Ø	FDB	$FØ88	R
61E7	88FØ	Ø234Ø	FDB	$88FØ	
61E9	AØ9Ø	Ø235Ø	FDB	$AØ9Ø	
61EB	88ØØ	Ø236Ø	FDB	$88ØØ	
61ED	7Ø88	Ø237Ø	FDB	$7Ø88	S
61EF	4Ø2Ø	Ø238Ø	FDB	$4Ø2Ø	
61F1	1Ø88	Ø239Ø	FDB	$1Ø88	
61F3	7ØØØ	Ø24ØØ	FDB	$7ØØØ	
61F5	F82Ø	Ø241Ø	FDB	$F82Ø	T
61F7	2Ø2Ø	Ø2411	FDB	$2Ø2Ø	
61F9	2Ø2Ø	Ø2412	FDB	$2Ø2Ø	
61FB	2ØØØ	Ø2413	FDB	$2ØØØ	
61FD	8888	Ø2414	FDB	$8888	U
61FF	8888	Ø2415	FDB	$8888	
62Ø1	8888	Ø2416	FDB	$8888	
62Ø3	7ØØØ	Ø2417	FDB	$7ØØØ	
62Ø5	8888	Ø2418	FDB	$8888	V
62Ø7	885Ø	Ø2419	FDB	$885Ø	
62Ø9	5Ø2Ø	Ø242Ø	FDB	$5Ø2Ø	
62ØB	2ØØØ	Ø2421	FDB	$2ØØØ	
62ØD	8888	Ø2422	FDB	$8888	W
62ØF	88A8	Ø243Ø	FDB	$88A8	
6211	A8D8	Ø244Ø	FDB	$A8D8	
6213	88ØØ	Ø245Ø	FDB	$88ØØ	
6215	8888	Ø246Ø	FDB	$8888	X
6217	5Ø2Ø	Ø247Ø	FDB	$5Ø2Ø	
6219	5Ø88	Ø248Ø	FDB	$5Ø88	
621B	88ØØ	Ø249Ø	FDB	$88ØØ	

621D	8888	Ø25ØØ	FDB	$8888	Y
621F	5Ø2Ø	Ø251Ø	FDB	$5Ø2Ø	
6221	2Ø2Ø	Ø252Ø	FDB	$2Ø2Ø	
6223	2ØØØ	Ø253Ø	FDB	$2ØØØ	
6225	F8Ø8	Ø254Ø	FDB	$F8Ø8	Z
6227	1Ø2Ø	Ø255Ø	FDB	$1Ø2Ø	
6229	4Ø8Ø	Ø256Ø	FDB	$4Ø8Ø	
622B	F8ØØ	Ø257Ø	FDB	$F8ØØ	
622D	1Ø1Ø	Ø258Ø	FDB	$1Ø1Ø	[
622F	1Ø92	Ø259Ø	FDB	$1Ø92	
6231	5438	Ø26ØØ	FDB	$5438	
6233	1ØØØ	Ø261Ø	FDB	$1ØØØ	
6235	ØØ2Ø	Ø262Ø	FDB	$ØØ2Ø	\
6237	4ØF8	Ø263Ø	FDB	$4ØF8	
6239	4Ø2Ø	Ø264Ø	FDB	$4Ø2Ø	
623B	ØØØØ	Ø265Ø	FDB	$ØØØØ	
623D	ØØ2Ø	Ø266Ø	FDB	$ØØ2Ø	]
623F	1ØF8	Ø267Ø	FDB	$1ØF8	
6241	1Ø2Ø	Ø268Ø	FDB	$1Ø2Ø	
6243	ØØØØ	Ø269Ø	FDB	$ØØØØ	
6245	1Ø38	Ø27ØØ	FDB	$1Ø38	^
6247	5492	Ø271Ø	FDB	$5492	
6249	1Ø1Ø	Ø272Ø	FDB	$1Ø1Ø	
624B	1ØØØ	Ø273Ø	FDB	$1ØØØ	
624D	ØØØØ	Ø274Ø	FDB	Ø	NOT USED
624F	ØØØØ	Ø275Ø	FDB	Ø	
6251	ØØØØ	Ø276Ø	FDB	Ø	
6253	ØØØØ	Ø277Ø	FDB	Ø	
6255	ØØØØ	Ø278Ø	FDB	Ø	SPACE
6257	ØØØØ	Ø279Ø	FDB	Ø	
6259	ØØØØ	Ø28ØØ	FDB	Ø	
625B	ØØØØ	Ø281Ø	FDB	Ø	
625D	ØØØØ	Ø282Ø	FDB	Ø	a
625F	38Ø8	Ø283Ø	FDB	$38Ø8	
6261	7888	Ø284Ø	FDB	$7888	
6263	78ØØ	Ø285Ø	FDB	$78ØØ	
6265	8Ø8Ø	Ø286Ø	FDB	$8Ø8Ø	b
6267	8ØFØ	Ø287Ø	FDB	$8ØFØ	
6269	8888	Ø288Ø	FDB	$8888	
626B	BØØØ	Ø289Ø	FDB	$BØØØ	
626D	ØØØØ	Ø29ØØ	FDB	$Ø	c
626F	7Ø88	Ø291Ø	FDB	$7Ø88	
6271	8Ø88	Ø292Ø	FDB	$8Ø88	
6273	7ØØØ	Ø293Ø	FDB	$7ØØØ	
6275	Ø8Ø8	Ø294Ø	FDB	$Ø8Ø8	d
6277	Ø878	Ø295Ø	FDB	$Ø878	
6279	8888	Ø296Ø	FDB	$8888	
627B	7ØØØ	Ø297Ø	FDB	$7ØØØ	
627D	ØØØØ	Ø298Ø	FDB	Ø	e
627F	7Ø88	Ø299Ø	FDB	$7Ø88	
6281	F88Ø	Ø3ØØØ	FDB	$F88Ø	
6283	7ØØØ	Ø3Ø1Ø	FDB	$7ØØØ	
6285	3Ø2Ø	Ø3Ø2Ø	FDB	$3Ø2Ø	f
6287	2ØF8	Ø3Ø3Ø	FDB	$2ØF8	
6289	2Ø2Ø	Ø3Ø4Ø	FDB	$2Ø2Ø	
628B	6ØØØ	Ø3Ø5Ø	FDB	$6ØØØ	
628D	ØØØØ	Ø3Ø6Ø	FDB	Ø	g
628F	7888	Ø3Ø7Ø	FDB	$7888	

6291	78Ø8	Ø3Ø8Ø	FDB	$78Ø8	
6293	3ØØØ	Ø3Ø9Ø	FDB	$3ØØØ	
6295	8Ø8Ø	Ø31ØØ	FDB	$8Ø8Ø	h
6297	BØC8	Ø311Ø	FDB	$BØC8	
6299	8888	Ø312Ø	FDB	$8888	
629B	88ØØ	Ø313Ø	FDB	$88ØØ	
629D	ØØ2Ø	Ø314Ø	FDB	$ØØ2Ø	i
629F	ØØ2Ø	Ø315Ø	FDB	$ØØ2Ø	
62A1	2Ø2Ø	Ø316Ø	FDB	$2Ø2Ø	
62A3	7ØØØ	Ø317Ø	FDB	$7ØØØ	
62A5	ØØ1Ø	Ø318Ø	FDB	$ØØ1Ø	j
62A7	ØØ1Ø	Ø319Ø	FDB	$ØØ1Ø	
62A9	1Ø9Ø	Ø32ØØ	FDB	$1Ø9Ø	
62AB	6ØØØ	Ø321Ø	FDB	$6ØØØ	
62AD	8Ø8Ø	Ø322Ø	FDB	$8Ø8Ø	k
62AF	9ØAØ	Ø323Ø	FDB	$9ØAØ	
62B1	CØAØ	Ø324Ø	FDB	$CØAØ	
62B3	9ØØØ	Ø325Ø	FDB	$9ØØØ	
62B5	4Ø4Ø	Ø326Ø	FDB	$4Ø4Ø	l
62B7	4Ø4Ø	Ø327Ø	FDB	$4Ø4Ø	
62B9	4Ø4Ø	Ø328Ø	FDB	$4Ø4Ø	
62BB	6ØØØ	Ø329Ø	FDB	$6ØØØ	
62BD	ØØØØ	Ø33ØØ	FDB	$Ø	m
62BF	88D8	Ø331Ø	FDB	$88D8	
62C1	A888	Ø332Ø	FDB	$A888	
62C3	88ØØ	Ø333Ø	FDB	$88ØØ	
62C5	ØØØØ	Ø334Ø	FDB	$Ø	n
62C7	BØC8	Ø335Ø	FDB	$BØC8	
62C9	8888	Ø336Ø	FDB	$8888	
62CB	88ØØ	Ø337Ø	FDB	$88ØØ	
62CD	ØØØØ	Ø338Ø	FDB	$Ø	o
62CF	7Ø88	Ø339Ø	FDB	$7Ø88	
62D1	8888	Ø34ØØ	FDB	$8888	
62D3	7ØØØ	Ø341Ø	FDB	$7ØØØ	
62D5	ØØØØ	Ø342Ø	FDB	$Ø	p
62D7	FØ88	Ø343Ø	FDB	$FØ88	
62D9	FØ8Ø	Ø344Ø	FDB	$FØ8Ø	
62DB	8ØØØ	Ø345Ø	FDB	$8ØØØ	
62DD	ØØØØ	Ø346Ø	FDB	$Ø	q
62DF	7Ø88	Ø347Ø	FDB	$7Ø88	
62E1	8878	Ø348Ø	FDB	$8878	
62E3	Ø8ØØ	Ø349Ø	FDB	$Ø8ØØ	
62E5	ØØØØ	Ø35ØØ	FDB	$Ø	r
62E7	98EØ	Ø351Ø	FDB	$98EØ	
62E9	8Ø8Ø	Ø352Ø	FDB	$8Ø8Ø	
62EB	8ØØØ	Ø353Ø	FDB	$8ØØØ	
62ED	ØØØØ	Ø354Ø	FDB	$Ø	s
62EF	7Ø8Ø	Ø355Ø	FDB	$7Ø8Ø	
62F1	7ØØ8	Ø356Ø	FDB	$7ØØ8	
62F3	7ØØØ	Ø357Ø	FDB	$7ØØØ	
62F5	ØØ2Ø	Ø358Ø	FDB	$ØØ2Ø	t
62F7	F82Ø	Ø359Ø	FDB	$F82Ø	
62F9	2Ø2Ø	Ø36ØØ	FDB	$2Ø2Ø	
62FB	3ØØØ	Ø361Ø	FDB	$3ØØØ	
62FD	ØØØØ	Ø362Ø	FDB	$Ø	u
62FF	8888	Ø363Ø	FDB	$8888	
63Ø1	8898	Ø364Ø	FDB	$8898	
63Ø3	68ØØ	Ø365Ø	FDB	$68ØØ	

63Ø5	ØØØØ	Ø366Ø	FDB	Ø	v
63Ø7	8888	Ø367Ø	FDB	$8888	
63Ø9	5Ø5Ø	Ø368Ø	FDB	$5Ø5Ø	
63ØB	2ØØØ	Ø369Ø	FDB	$2ØØØ	
63ØD	ØØØØ	Ø37ØØ	FDB	$Ø	w
63ØF	8888	Ø371Ø	FDB	$8888	
6311	A8D8	Ø372Ø	FDB	$A8D8	
6313	88ØØ	Ø373Ø	FDB	$88ØØ	
6315	ØØØØ	Ø374Ø	FDB	Ø	x
6317	885Ø	Ø375Ø	FDB	$885Ø	
6319	2Ø5Ø	Ø376Ø	FDB	$2Ø5Ø	
631B	88ØØ	Ø377Ø	FDB	$88ØØ	
631D	ØØØØ	Ø378Ø	FDB	Ø	y
631F	8888	Ø379Ø	FDB	$8888	
6321	F8Ø8	Ø38ØØ	FDB	$F8Ø8	
6323	38ØØ	Ø381Ø	FDB	$38ØØ	
6325	ØØØØ	Ø382Ø	FDB	Ø	z
6327	F81Ø	Ø383Ø	FDB	$F81Ø	
6329	2Ø4Ø	Ø384Ø	FDB	$2Ø4Ø	
632B	F8ØØ	Ø385Ø	FDB	$F8ØØ	
632D	ØØØØ	Ø3852	FDB	Ø	
632F	ØØ	Ø3854	FCB	Ø	
633Ø	ØØ	Ø386Ø LAST	FCB	Ø	
	ØØØØ	Ø3862	END		

TEST

```
1Ø CLEAR 15ØØ:DIM M$(24),W$(24),
S$(12),G(4Ø)
2Ø ZU=PEEK(27)*256+PEEK(28)-79Ø
3Ø CC$="Ø714Ø9152Ø3Ø245Ø3537Ø919
15261317599914383Ø2ØØ918"
4Ø PMODE 4,1:SCREEN 1,1:PCLS 1:C
IRCLE (126,96),9Ø,2:W$="THIS IS
A TEXT":H1=1Ø:V1=2Ø:GOSUB 183Ø
5Ø W$="IF OK PRESS 'Y'":H1=7:V1=
1Ø:GOSUB 183Ø
6Ø X$=INKEY$:IF X$="" THEN 6Ø EL
SE IF X$<>"Y" THEN END
7Ø DEL4Ø-7Ø
183Ø V=V1*8-4:H=H1*8-4
184Ø NX=INT(H/8)+V*32:VX=INT(NX/
256):HX=NX-VX*256
185Ø X=VARPTR(W$):POKE ZU,PEEK(X
):POKE ZU+1,PEEK(X+2):POKE ZU+2,
PEEK(X+3):POKE ZU+3,PEEK(188)+VX
:POKE ZU+4,HX
186Ø DEFUSR=(ZU+5):F=USR(Ø)
187Ø RETURN
188Ø '******* MACHINE ROUTINE ST
ARTS AFTER BASIC *************"
```

STYLE

```
1Ø CLEAR 15ØØ:DIM M$(24),W$(24),
S$(12),G(4Ø)
2Ø ZU=PEEK(27)*256+PEEK(28)-79Ø
3Ø CC$="Ø714Ø9152Ø3Ø245Ø3537Ø919
15261317599914383Ø2ØØ918"
4Ø GOTO 189Ø
5Ø HH=JOYSTK(Ø):VV=JOYSTK(1)
6Ø II=II+1:IF II>4Ø THEN II=Ø:MB
=MB+INT(MB*I1):PLAY"O5T8L2EGL4EF
L1G"
7Ø M=VAL(MID$(M$,C,2)):M=M+(1*(M
>(-5))):MID$(M$,C,2)=RIGHT$(STR$
(M),2)
8Ø IF M=Ø THEN GOSUB 127Ø:GOTO 1
ØØ
9Ø IF M=(-3) THEN GOSUB 139Ø
```

```
100 C=C+2:IF C>48 THEN C=1
110 AH=(HH>40)*-1+(HH<24)*1:AV=(
VV>40)*-1+(VV<24)*1
120 TR=(H1<2 AND AH=-1) + (H1>31
 AND AH=1)+(V1<2 AND AV=-1)+(V1>
18 AND AV=1)
130 COLOR 1,0
140 IF TR=0 THEN NX$=MID$(M$(V1+
AV),H1+AH,1) ELSE NX$=""
150 IF (NX$="*" OR NX$>CHR$(64))
 THEN IF MID$(KY$,ASC(NX$)+64*(N
X$<>"*"),1)<>"*"  THEN LINE(H1*8
-6,V1*8-7)-(H1*8-2,V1*8-1),PSET,
B:V1=V1+AV:H1=H1+AH
160 COLOR0,1:LINE(H1*8-6,V1*8-7)
-(H1*8-2,V1*8-1),PSET,B:PLAY"O1T
200L200CEG":IF NX$>CHR$(64) THEN
 IF MID$(KY$,ASC(NX$)-64,1)="*"
THEN 50
170 IF NX$>CHR$(64) AND NX$<CHR$
(77) THEN GOSUB 1790:ON ASC(NX$)
-64 GOSUB 200,240,310,350,470,51
0,750,820,900,1130,1150,1280
180 IF NX$>CHR$(64) THEN GOSUB 1
800:GOSUB 1770
190 GOTO 50
200 W$="WHAT DO YOU WANT TO DO?"
:GOSUB 1830:W$=" 1 REST":V1=22:G
OSUB 1830:W$=" 2 BE WITH THE FAM
ILY":V1=23:GOSUB 1830
210 X$=INKEY$:IF X$<"1" OR X$>"2
" THEN 210
220 IFX$="1" THEN MID$(M$,1,2)=M
ID$(TM$,1,2):WK=0:MID$(KY$,2,1)=
" ":KY=2:CC=1:GOSUB 1780:PLAY S$
(3):RETURN
230 IF X$="2" THEN MID$(M$,3,2)=
MID$(TM$,3,2):MID$(KY$,4,1)=" ":
KY=4:CC=1:GOSUB 1780:PLAY S$(6):
RETURN
240 W$="WHAT DO YOU WANT TO DO?"
:GOSUB 1830:W$=" 1 work":V1=22:G
OSUB 1830:W$=" 2 ask for a raise
":V1=23:GOSUB 1830
250 X$=INKEY$:IF X$="" THEN 250
260 GOSUB 1770:V1=21
270 IF WK>2 THEN V1=21:GOTO 1410
280 IF X$="1" THEN MP=MP+PC:WK=W
K+1:W$="YOUR EARNED"+STR$(PC):V1
=22:GOSUB 1830:W$="YOU NOW HAVE
$"+STR$(MP):V1=23:GOSUB 1830:PLA
Y S$(2):MID$(M$,5,2)=MID$(TM$,5,
2):RETURN
290 IF MID$(M$,7,2)<"1"  THEN W$
="CONGRATULATIONS":GOSUB 1830:WE
=0:PC=PC+INT(PC*.5):W$="YOUR NEW
 PAY IS $"+STR$(PC):V1=23:GOSUB
1830:PLAY S$(9):MID$(M$,7,2)=MID
$(TM$,7,2):RETURN
300 W$="YOU HAVEN'T WORKED ENOUG
H":GOSUB 1830:W$="FOR A RAISE":V
1=22:GOSUB 1830:PLAY S$(8):RETUR
N
310 IF VAL(MID$(M$,9,2))>0 AND V
AL(MID$(M$,11,2))>0 THEN W$="NO
MAIL TODAY":GOSUB 1830:PLAY S$(8
):RETURN
320 IF VAL(MID$(M$,9,2))<1 THEN
LK=RND(500):W$="GOOD NEWS - YOU
RECEIVE":GOSUB 1830:W$="A LETTER
 WITH $"+STR$(LK):MP=MP+LK:V1=22
:GOSUB 1830:MID$(M$,9,2)=MID$(TM
$,9,2):PLAY S$(2)
330 IF VAL(MID$(M$,11,2))<1 THEN
 LK=RND(500):W$="BAD NEWS A BIL"
:V1=23:GOSUB 1830:W$="BILL = $"+
STR$(LK)+" OVEDUE = $"+STR$(INT(
IN*LK)):MB=MB-LK-INT(LK*IN):V1=2
4:GOSUB 1830:MID$(M$,11,2)=MID$(
TM$,11,2):PLAY S$(1):IN=0
340 RETURN
350 NM$="":H1=2:V1=21:W$="YOUR B
ANK BALANCE IS"+STR$(MB):GOSUB 1
830:W$="YOU ARE CARRYING"+STR$(M
P):V1=23:GOSUB 1830:PLAY PU$:GOS
UB 1770
360 GOSUB 1810
370 V1=22:W$=" 1 take out money"
:GOSUB 1830:V1=23:W$=" 2 put in
money":GOSUB 1830:V1=24:W$=" 3 j
ust visiting":GOSUB 1830
380 X$=INKEY$:IF X$<"1" OR X$>"3
" THEN 380
```
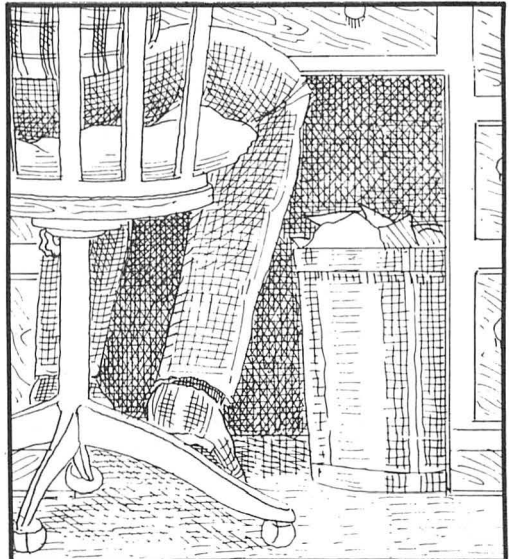
```
390 GOSUB 1770:ON VAL(X$) GOTO 4
10,410
400 RETURN
410 W$="HOW MUCH":V1=23:GOSUB 18
30
420 Y$=INKEY$:IF (Y$<"0" OR Y$>"
9") AND Y$<>CHR$(13) THEN 420
430 PLAY"T8L8EG"
440 IF Y$=CHR$(13) THEN MB=MB+NM
*(X$="1")+NM*(X$="2")*(-1):MP=MP
+NM*(X$="1")*(-1)+NM*(X$="2"):GO
SUB 1770:W$="YOU NOW HAVE"+STR$(
MB)+" IN THE BANK":V1=22:H1=1:GO
SUB 1830:W$="YOU ARE CARRYING"+S
TR$(MP):V1=23:GOSUB 1830:PLAY PU
$:RETURN
450 NM$=NM$+Y$:NM=VAL(NM$):IF (N
M>MP AND X$="2") OR (NM>MB AND X
$="1") THEN GOSUB 1770:GOTO 350
460 V1=24:H1=1:W$=NM$:GOSUB 1830
:GOTO 420
470 IF VAL(MID$(M$,17,2))>0 AND
VAL(MID$(M$,19,2))>0 THEN W$="NO
 TAXES DUE NOW":GOSUB 1830:PLAYS
$(7):RETURN
480 IF VAL(MID$(M$,19,2))<1 THEN
 T=INT(PC*2.4):P=INT(T*F2):F2=0:
W$="INCOME TAX ="+STR$(T)+" PENA
LTY ="+STR$(P):GOSUB 1830:MB=MB-
T-P:PLAY S$(5):MID$(M$,19,2)=MID
$(TM$,19,2):F2=0
490 IF VAL(MID$(M$,17,2))<1 THEN
 V1=23:W$="REAL ESTATE TAX = 12
00":GOSUB 1830:W$="LATE PAYMENT
FEE ="+STR$(F1):F1=0:MB=MB-1200-
F1:V1=24:GOSUB 1830:PLAY S$(10):
MID$(M$,17,2)=MID$(TM$,17,2)
500 RETURN
510 W$="WHAT DO YOU WANT TO DO?"
:GOSUB 1830:V1=22:W$=" 1 buy gas
":GOSUB 1830:W$=" 2 fix the car"
:V1=23:GOSUB 1830:W$=" 3 just vi
siting":V1=24:GOSUB 1830
520 X$=INKEY$:IF X$<"1" OR X$>"3
" THEN 520
530 ON VAL(X$) GOTO 550,620,540
540 RETURN
550 GP$="":GOSUB 1770:W$="GAS CO
STS $1.00 / GAL.":V1=21:GOSUB 18
30:NG=10-VAL(MID$(M$,21,2)):W$="
YOU NEED"+STR$(NG)+" TO FILL UP"
:V1=22:GOSUB 1830:W$="HOW MANY G
ALLONS DO YOU WANT":V1=23:GOSUB
1830
560 X$=INKEY$:IF (X$<"0" OR X$>"
9") AND X$<>CHR$(13) THEN 560
570 IF X$=CHR$(13) THEN 590
580 GP$=GP$+X$:GP=VAL(GP$):IF GP
>NG  THEN 550 ELSE W$=GP$:V1=24:
GOSUB 1830:PLAY"T99L99O5GEC":GOT
O 560
590 IF GP>MP THEN W$="YOU DON'T
HAVE ENOUGH MONEY":V1=24:GOSUB 1
830:PLAY S$(1):GOSUB 1770:GOTO 5
10
600 CL=0:PMODE3,1:FOR A=1 TO GP:
PLAY "T16L16O4CEG":CL=ABS(CL-1):
COLOR CL+2,1:LINE(A*10+10,186)-(
A*10+20,191),PSET,BF:NEXT A:MP=M
P-GP:PMODE 4,1:MID$(M$,21,2)=RIG
HT$(STR$(VAL(MID$(M$,21,2))+GP),
2)
610 GOSUB 690:PLAY S$(7):RETURN
620 GOSUB 1770:ON (RND(4)) GOSUB
650,660,670,680
630 IF FC>MP THEN W$="CASH ONLY
- NOT ENOUGH MONEY":V1=23:GOSUB
 1830:MID$(KY$,4,2)=" ":KY=4:CC=
1:GOSUB 1780:PLAY S$(1):RETURN
640 W$="I THINK WE FIXED IT":V1=
24:GOSUB 1830:GOSUB 690:MID$(M$,
23,2)=MID$(TM$,23,2):MP=MP-FC:RE
TURN
650 W$="A COMPLETE OVERHALL = $1
000":V1=21:GOSUB 1830:FC=1000:RE
TURN
660 W$="JUST A LITTLE GASKET = $
25":V1=21:GOSUB 1830:FC=25:RETUR
N
670 W$="A NEW MUFFLER = $100":FC
=100:V1=21:GOSUB 1830:RETURN
680 W$="A NEM TRANSMISSION = $50
0":FC=500:V1=21:GOSUB 1830:RETUR
N
690 CC=1:KY$=STRING$(12," "):FOR
 A=1 TO 12:KY=A:GOSUB 1780:PLAY"
T50O5CDEFGAB":NEXT A
700 IF (VAL(MID$(M$,1,2))<(-2))
OR (WK>3)  THEN KY=2:MID$(KY$,2,
1)="*":CC=0:GOSUB 1780
710 IF  VAL(MID$(M$,29,2))<(-2)
THEN KY=1:MID$(KY$,1,1)="*":CC=0
:GOSUB 1780
720 IF VAL(MID$(M$,3,2))<(-2) TH
EN KY=4:MID$(KY$,4,1)="*":CC=0:G
OSUB 1780
730 IF VAL(MID$(M$,31,2))<(-2) T
HEN KY=11:MID$(KY$,11,1)="*":CC=
0:GOSUB 1780
740 RETURN
750 W$="WHAT DO YOU WANT TO DO":
GOSUB 1830:W$=" 1 pay the heatin
g bill":V1=22:GOSUB 1830:W$=" 2
fix the old furnace":V1=23:GOSUB
 1830:W$ = " 3 just warming up":
V1=24:GOSUB 1830
```

```
760 X$=INKEY$:IF X$<"1" OR X$>"3
" THEN 760
770 GOSUB 1770
780 IF X$="3" THEN PLAY S$(4):RE
TURN
790 IF X$="1" AND VAL(MID$(M$,25
,2))>0 THEN W$="HEATING BILL NOT
 DUE YET":V1=22:GOSUB 1830:PLAY
S$(4):RETURN
800 IF X$="1"THEN HH=200-VAL(MID
$(M$,25,2)):W$="THE COST FOR HEA
TING IS"+STR$(HH):MB=MB-HH:V1=22
:GOSUB 1830:PLAY S$(4):MID$(M$,2
5,2)=MID$(TM$,25,2):RETURN
810 CF=(VAL(MID$(TM$,27,2))-VAL(
MID$(M$,27,2)))*30:W$="THE FURNA
CE IS FIXED FOR"+STR$(CF):GOSUB
1830:MB=MB-CF:MID$(M$,27,2)=MID$
(TM$,27,2):PLAY S$(5):RETURN
820 W$="WHAT DO YOU WANT TO DO?"
:GOSUB 1830:W$=" 1 buy clothes":
V1=22:GOSUB 1830:W$=" 2 buy food
":V1=23:GOSUB 1830:W$=" 3 window
 shopping only":V1=24:GOSUB 1830
830 X$=INKEY$:IF X$<"1" OR X$>"3
" THEN 830
840 IF X$="3" THEN PLAY S$(9):RE
TURN
850 GOSUB 1770:
860 IFX$="2" THEN CL=RND(50)+50:
W$="FOOD COSTS"+STR$(CL):V1=21:G
OSUB 1830:IF MP<CL THEN W$="YOU
DON'T HAVE ENOUGH CASH":V1=23:GO
SUB 1830:PLAY S$(1):RETURN
```
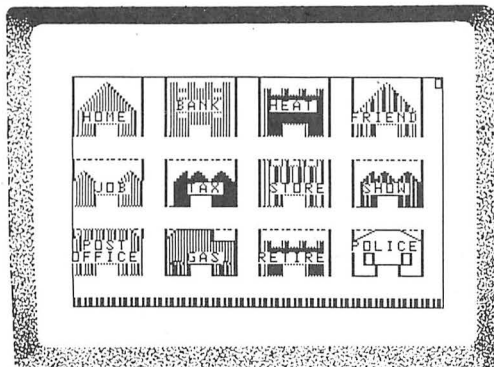


```
870 IF X$="2" THEN MP=MP-CL:PLAY
 S$(9):MID$(M$,29,2)=MID$(TM$,29
,2):MID$(KY$,1,1)=" ":KY=1:CC=1:
GOSUB 1780:RETURN
880 CL=RND(100)+100:W$="CLOTHES
COST"+STR$(CL):V1=21:GOSUB 1830:
IF MP<CL THEN W$="YOU DON'T HAVE
 ENOUGH MONEY":V1=23:GOSUB 1830:
```

```
PLAY S$(9):RETURN
890 MP=MP-CL:PLAY S$(9):MID$(M$,
31,2)=MID$(TM$,31,2):MID$(KY$,11
,1)=" ":KY=11:CC=1:GOSUB 1780:RE
TURN
900 W$="WHAT DO YOU WANT TO DO":
GOSUB 1830:W$=" 1 retire":V1=22:
GOSUB 1830:W$=" 2 just visiting"
:V1=23:GOSUB 1830
910 X$=INKEY$:IF X$<"1" OR X$>"2
" THEN 910
920 IF X$="2" THEN RETURN
930 IF MB+MP>HS THEN HS=MB+MP
940 GOSUB 1770:W$="HIGH SCORE TH
IS TIME ="+STR$(HS):V1=21:GOSUB
1830:W$="YOUR SCORE ="+STR$(MP+M
B):V1=22:GOSUB 1830:W$="SAVE SCO
RE ON DISK? (Yes/No)":V1=23:GOSU
B 1830
950 X$=INKEY$:IF X$="N" THEN 109
0 ELSE IF X$<>"Y" THEN 950
960 SC=0
970 FOR X=3 TO 11:DSKI$ 0,17,X,A
$,B$
980 IF INSTR(A$,"SCORE")<>0 OR I
NSTR(B$,"SCORE")<>0 THEN SC=1
990 NEXT X
1000 IF SC=0 THEN OPEN "O",#1,"S
CORE":CLOSE
1010 AA=0:OPEN"I",#1,"SCORE"
1020 IF EOF(1) THEN 1040
1030 PLAY"T4L4C":AA=AA+1:INPUT#1
,HS$(AA):GOTO 1020
1040 CLOSE
1050 LS=0:V1=21:GOSUB 1770:H1=1:
W$="scores":GOSUB 1830:FOR A=1 T
O AA:W$=HS$(A):V1=V1+1:IF V1>24
THEN V1=22:H1=H1+6
1060 GOSUB 1830:NEXT A:V1=V1+1:I
F V1>24 THEN V1=22:H1=H1+6
1070 HS$(A)=STR$(MB+MP):W$=HS$(A
):GOSUB 1830:IF A>9 THEN SR=2 EL
SE SR=1
1080 OPEN"O",#1,"SCORE":FOR B=SR
 TO A:WRITE#1,HS$(B):NEXT B:CLOS
E
1090 MX=0:FOR B=1 TO A:IF MX<VAL
(HS$(B)) THEN MX=VAL(HS$(B))
1100 NEXT B:V1=21:H1=10:W$="HIGH
 SCORE =" + STR$(MX):GOSUB 1830:
PLAY S$(7):PLAY S$(7)
1110 GOSUB 1770:W$="PLAY AGAIN?
(Yes/No)":V1=21:H1=1:GOSUB 1830
1120 X$=INKEY$:IF X$="N" THEN CL
S:END ELSE IF X$="Y" THEN RUN EL
SE 1120
1130 IF VAL(MID$(M$,37,2))<1 THE
N WN=RND(5000):W$="YOU FRIEND GI
```

VES YOU A STOCK":GOSUB 1830:W$="
MARKET TIP - YOU GAIN"+STR$(WN):
MB=MB+WN:V1=22:GOSUB 1830
1140 W$="I AM GLAD YOU COULD VIS
IT":V1=24:GOSUB 1830:PLAY S$(3):
MID$(M$,37,2)=MID$(TM$,37,2):MID
$(M$,39,2)=MID$(TM$,39,2):RETURN
1150 ST=RND(60)+30:W$="SHOW TICK
ETS COST"+STR$(ST):GOSUB 1830:IF
 MP<ST THEN W$="YOU DON'T HAVE E
NOUGH MONEY":V1=23:GOSUB 1830:PL
AY S$(1):RETURN
1160 W$="WHO WILL SEE THE SHOW?"
:V1=22:GOSUB 1830:W$="(1) kids (
2) spouce":V1=23:GOSUB 1830
1170 K$=INKEY$:IF K$<"1" OR K$>"

2" THEN 1170
1180 V1=24:WT$="LET THE SHOW BEG
IN":FOR H1=1 TO LEN(WT$):W$=MID$
(WT$,H1,1):GOSUB 1830:SOUND H1*1
0,2:NEXT H1
1190 J1=16:K1=176
1200 PMODE 3,1:FOR A=1 TO 16:CL=
RND(3):COLOR CL,0:LINE(J1-A,K1-A
)-(J1+A,K1+A),PSET,B:NEXT A:PMOD
E 4,1:SL=1:NS=0
1210 FOR A=1 TO 2:GET(0,160)-(32
,191),G,G
1220 FOR B=0 TO 224 STEP 32:Q=AB
S(Q-1):PUT (B,160)-(B+32+Q,190+Q
),G,PSET
1230 PP$=PP$(NS):EL=INSTR(SL,PP$
,";"):PLAY MID$(PP$,SL,EL-SL):SL
=EL+1:IF EL=LEN(PP$) THEN NS=NS+
1:SL=1:IF NS>4 THEN NS=1
1240 NEXT B,A
1250 MP=MP-ST:IF K$="1" THEN MI
D$(M$,41,2)=MID$(TM$,41,2) ELSE
MID$(M$,43,2)=MID$(TM$,43,2)
1260 GOTO 690
1270 GOSUB 1790:W$=W$(INT(C/2)+1
):H1=1:V1=21:GOSUB 1830:PLAY PD$

:GOSUB 1770:GOSUB 1800:RETURN
1280 IF VAL(MID$(M$,41,2))<(-2)
THEN W$="TO GET YOUR SON OUT OF
JAIL":GOSUB 1830:W$="COST YOU $8
00":MB=MB-800:MID$(M$,41,2)=MID$
(TM$,41,2):PLAY S$(10):IF VAL(MI
D$(M$,45,2))<0 OR VAL(MID$(M$,47
,2))<0 THEN W$="YOU HAVE OTHER B
USINESS HERE":V1=23:GOSUB 1830
1290 IF VAL(MID$(M$,45,2))>(-1)
AND VAL(MID$(M$,47,3))>(-1) THEN
 GOSUB 690
1300 V1=21:H1=1:W$="WHAT DO YOU
WANT TO DO":GOSUB 1830
1310 H1=4:W$="1 pay for a ticket
":V1=22:GOSUB 1830:W$="2 buy a l
iscense":V1=23:GOSUB 1830:W$="3
just visiting":V1=24:GOSUB 1830"
1320 X$=INKEY$:IF X$<"1" OR X$>"
3" THEN 1320
1330 GOSUB 1770:ON VAL(X$) GOTO
1340,1360,1380
1340 IF VAL(MID$(M$,45,1))<1 THE
N TC=30*CK*CK:W$="TICKET COSTS $
"+STR$(TC):MB=MB-TC:CK=0:V1=21:G
OSUB 1830:PLAY S$(8):MID$(M$,45,
2)=MID$(TM$,45,2):GOSUB 690:RETU
RN
1350 RETURN
1360 W$="YOU NEW LISENSE COSTS $
70":GOSUB 1830:IFVAL(MID$(M$,47,
2))<(-2) THEN W$="FINE FOR NO LI
SCENSE = $500":FI=500:V1=23:GOSU
B 1830:GOSUB 690 ELSE FI=0
1370 MID$(M$,47,2)=MID$(TM$,47,2
):MB=MB-70-FI:PLAY S$(7):RETURN
1380 RETURN
1390 GOSUB 1790:V1=21:H1=1:ON IN
T(C/2)+1 GOSUB 1410,1420,1430,14
40,1450,1460,1470,1480,1490, 151
0,1530,1560,1570,1580,1610,1620,
1630,1640,1650,1660,1670,1690,17
00,1750
1400 GOSUB 1800:IF QR=1 THEN QR=
0:RETURN ELSE PLAY PD$:GOSUB 177
0:RETURN
1410 W$="YOU ARE TOO TIRED":GOSU
B 1830:W$="THE BOSS SAYS - ":V1=
22:GOSUB 1830:W$="NO WORK UNTIL
YOU GET SOME REST":V1=23:GOSUB 1
830:MID$(KY$,2,1)="*":KY=2:CC=0:
GOSUB 1780:PLAY S$(3):RETURN
1420 W$="YOUR SPOUSE IS UPSET BE
CAUSE":GOSUB 1830:W$="AND HIDES
THE BANK BOOK":V1=22:GOSUB 1830:
W$="GO SPEND TIME WITH THE FAMIL
Y":V1=23:GOSUB 1830:MID$(KY$,4,1
)="*":KY=4:GOSUB 1780:PLAY S$(1)

```
:RETURN
1430 W$="YOU ARE TOO LATE FOR WO
RK":GOSUB 1830:W$="YOUR PAY IS R
EDUCED":V1=22:GOSUB 1830:PC=PC-I
NT(PC*.05):W$="YOU NOW EARN $"+S
TR$(PC):V1=23:GOSUB 1830:PLAY S$
(1):RETURN
1440 W$="YOU ARE PASSED OVER FOR
 A":GOSUB 1830:W$="PROMOTION":MI
D$(M$,7,2)=MID$(TM$,7,2):V1=22:G
OSUB 1830:PLAY S$(1):RETURN
1450 W$="YOUR LETTER WAS LOST AT
 THE":GOSUB 1830:W$="POST OFFICE
":V1=22:GOSUB 1830:MID$(M$,9,2)=
MID$(TM$,9,2):PLAY S$(6):RETURN
1460 W$="YOU HAVE AN UNPAID BILL
":GOSUB 1830:W$="OVERDUE PAYMENT
S = 20%":V1=22:GOSUB 1830:W$="GE
T THE BILL AT THE POST OFFICE":V
1=23:GOSUB 1830:IN=IN+.2:MID$(M$
,11,2)="-1":PLAY S$(5):RETURN
1470 W$="YOU ARE ROBBED":GOSUB 1
830:MP=0:PLAY S$(1):RETURN
1480 I1=RND(15)*.01:W$="THE BANK
 IS CHANGING THE":GOSUB 1830:W$=
"INTEREST RATE - NEW RATE ="+STR
$(I1):V1=22:GOSUB 1830:PLAY S$(2
):RETURN
1490 W$="YOUR REAL ESTATE TAXES
ARE":GOSUB1830:W$="PAST DUE - LA
TE FINE = $200":F1=F1+200:V1=22:
GOSUB1830:PLAYS$(5):MID$(M$,17,2
)="-1":IFF1>600THENW$="MONEY TAK
EN FROM BANK":V1=24:GOSUB1830:MB
=MB-2000:MID$(M$,17,2)=MID$(TM$,
17,2):PLAYS$(5):F1=0:RETURN
1500 MID$(M$,17,2)="-1":RETURN
1510 W$="YOU ARE LATE PAYING INC
OME TAX":GOSUB1830:W$="SUFFER A
PENALTY OF 10%  ":V1=22:GOSUB183
0:F2=F2+.1:PLAYS$(8):IF F2>.3 TH
EN W$="MONEY IMPOUNDED FROM BANK
":V1=24:GOSUB1830:MB=MB-(PC*4.8)
:MID$(M$,19,2)=MID$(TM$,19,2):PL
AY S$(8):F2=0:RETURN
1520 MID$(M$,19,2)="-1":RETURN
1530 W$="YOU RAN OUT OF GAS":GOS
UB 1830:W$="YOU MUST BUY SOME GA
S":V1=22:GOSUB 1830:KY$=STRING$(
12,"*"):MID$(KY$,6,1)=" ":CC=0:M
ID$(KY$,9,1)=" "
1540 FOR A=12 TO 1 STEP -1:IF A<
>6 AND A<>9 THEN KY=A:GOSUB 1780
:PL$="T405L16;"+STR$(A):PLAY PL$
1550 NEXT A:RETURN
1560 W$="YOUR CAR BROKE DOWN":GO
SUB 1830:W$="YOU MUST FIX YOUR C
AR":V1=22:GOSUB 1830:CC=0:GOTO 1
54 0
1570 W$="YOUR HEATING BILL IS OV
ERDUE":GOSUB 1830:W$="THE BILL I
S TAKEN FROM THE BANK":V1=22:GOS
UB 1830:MB=MB-300:PLAY S$(10):RE
TURN
1580 W$="THE OLD FURNACE CATCHES
 THE":GOSUB 1830:W$="HOUSE ON F
IRE":V1=22:GOSUB 1830:PMODE 3,1:
COLOR 1,1:LINE(0,0)-(48,40),PSET
,BF:W$="A NEW HOUSE COSTS"+STR$(
MB):MB=0
1590 PLAY"O5T100":FOR A=1 TO 8:F
OR B=1 TO 12:P$=STR$(B):PLAY P$:
NEXT B,A:V1=24:GOSUB 1830:COLOR
0,1:LINE(0,0)-(48,40),PSET,BF:PO
KE 178,151:LINE(0,0)-(48,40),PSE
T,B:DRAW"BM4,40C2":DRAW H$:PAINT
(24,24),2,2:V1=4:H1=2:W$="HOME":
GOSUB 1830
1600 PMODE 4,1:RETURN
1610 W$="THE FAMILY IS STARVING"
:GOSUB 1830:W$="DON'T RETURN HOM
E WITHOUT FOOD":V1=22:GOSUB 1830
:MID$(KY$,1,1)="*":KY=1:CC=0:GOS
UB 1780:RETURN
1620 W$="YOU NEED BETTER CLOTHES
 ":GOSUB 1830:W$="TO SEE THE SHO
W":V1=22:GOSUB 1830:MID$(KY$,11,
1)="*":KY=11:CC=0:GOSUB 1780:RET
URN
1630 W$="YOU ARE HALF WAY  THROU
GH THIS":GOSUB 1830:W$="GAME. PL
AN WELL AND YOU WILL":V1=22:GOSU
B 1830:W$="RETIRE A RICH PERSON"
:V1=23:GOSUB 1830:PLAY S$(3):RET
URN
1640 W$="YOU ARE FORCED TO RETIR
E":GOSUB 1830:PLAY S$(1):PLAY S$
(2):GOTO 930
1650 W$="YOUR FRIEND HAD SOME GO
OD":GOSUB 1830:W$="ADVICE  - BUT
 YOU MISSED IT":V1=22:GOSUB 1830
:MID$(M$,37,2)=MID$(TM$,37,2):PL
AY S$(1):RETURN
1660 W$="YOUR FRIEND DESERTS YOU
":GOSUB 1830:W$="TAKING THE CAR
AND YOUR SPOUSE":V1=22:GOSUB 183
0:W$="YOU LOOSE $3000":V1=23:GOS
UB 1830:MB=MB-3000:PLAY S$(1):MI
D$(M$,39,2)=MID$(TM$,39,2):RETUR
N
1670 W$="YOUR CHILD IS BORED AT
HOME":GOSUB 1830:W$="HE STEALS A
 CAR":V1=22:GOSUB 1830:W$="GOTO
THE POLICE STATION - NOW":V1=23:
GOSUB 1830:KY$=STRING$(11,"*")+"
 ":CC=0:FOR KY=1 TO 11:GOSUB 178
```

```
0:PLAY"T16L16BAGFEDC":NEXT KY
1680 MID$(KY$,9,1)=" ":KY=9:CC=1
:GOSUB 1780:RETURN
1690 W$="YOUR SPOUSE IS BORED AN
D STARTS":GOSUB 1830:W$="SPENDIN
G MONEY":V1=22:GOSUB 1830:W$="BA
NK ACCOUNT REDUCED 25%":V1=23:GO
SUB 1830:W$="BETTER GO OUT SOON"
:V1=24:GOSUB 1830:MB=INT(MB*.75)
:MID$(M$,43,2)="-1":RETURN
1700 TK$="N":MID$(M$,45,2)="-1":
IF VT<2 OR VT>17  OR HT<2 OR HT>
30 THEN QR=1:RETURN
1710 M1$=MID$(M$(VT-1),HT-1,3):M
2$=MID$(M$(VT),HT-1,3):M3$=MID$(
M$(VT+1),HT-1,3):IF AV=0 AND M2$
="***" AND ((AH=(-1) AND M1$="**
*") OR (AH=1 AND M3$="***")) THE
N TK$="Y"
1720 IF AH=0 THEN IF (AV=(-1)AND
M2$=" **") OR (AV=1 AND M2$="**
") THEN TK$="Y"
1730 IF TK$="N" THEN QR=1:RETURN
1740 W$="YOU GET A TICKET FOR DR
IVING":GOSUB 1830:W$="ON THE WRO
NG SIDE OF THE ROAD":V1=22:GOSUB
 1830:PLAY S$(1):MID$(M$,45,2)=M
ID$(TM$,45,2):CK=CK+1:IF CK> 2 T
HEN GOTO 1760 ELSE RETURN
1750 W$="YOU ARE ARRESTED FOR DR
IVING":GOSUB 1830:W$="WITHOUT A
LICENSE":V1=22:GOSUB 1830:PLAY S
$(1):KY$=STRING$(11,"*")+" ":CC=
0:FOR KY=1 TO 11:GOSUB 1780:PLAY
"T20L8CEG":NEXT KY:MID$(KY$,9,1)
=" ":KY=9:CC=1:GOSUB 1780:RETURN
1760 FOR A=1 TO 5:PLAY"T4L4O4CO3
C":NEXT A:GOSUB 1770:W$="TOO MAN
Y TICKETS":V1=21:GOSUB 1830:KY$=
STRING$(11,"*")+" ":CC=0:FOR KY=
1 TO 11:GOSUB 1780:PLAY "T8L8CEG
":NEXT KY:MID$(M$,45,2)="-5":MID
$(KY$,9,1)=" ":KY=9:CC=1:GOSUB 1
780:RETURN
1770 COLOR 1,0:LINE(0,160)-(255,
191),PSET,BF:RETURN
1780 HL=INT((KY-1)/3)*64+18:VV=K
Y-INT((KY-1)/3)*3:VL=VV*48-8:COL
OR CC,1:LINE(HL,VL)-(HL+12,VL),P
SET:RETURN
1790 HT=H1:VT=V1:V1=21:H1=1:RETU
RN
1800 H1=HT:V1=VT:RETURN
1810 H1=1:V1=21:W$="WHAT DO YOU
WANT TO DO":GOSUB 1830:RETURN
1820 GOTO 1820
1830 V=V1*8-4:H=H1*8-4
1840 NX=INT(H/8)+V*32:VX=INT(NX/
256):HX=NX-VX*256
1850 X=VARPTR(W$):POKE ZU,PEEK(X
):POKE ZU+1,PEEK(X+2):POKE ZU+2,
PEEK(X+3):POKE ZU+3,PEEK(188)+VX
:POKE ZU+4,HX
1860 DEFUSR=(ZU+5):F=USR(0)
1870 RETURN
1880 '******* MACHINE ROUTINE ST
ARTS AFTER BASIC **************"
1890 PP$(0)="L4T4O3CCO2GL5OT4O2G
O3CEGO2GO3CEGL4;L4L8O3CO2BL4O2AO
2GL5OT4O2GO3AO4EGO2GO3AO4EGL4;L4
O3DL5OT4O3DO3DF+O4CO3DO3DF+O4CL4
O2GL5OT4O2GO3GO4DFO2GO3GO4DFL4L4
O3CL5OT4O2GO3CEGO2GO3CEGL4O2G;"
1900 PP$(1)="L5OT4O2GO3GO4DFO2GO
3GO4DFL4;O3CO3CO2G;L5OT4O2GO3CEG
O2GO3CEGL4;L8O3CO2BL4O2AO2G;L5OT
4O2GO3AO4EGO2GO3AO4EGL4;L8O3DO3D
O3DO3DL4O3DO3EL2O3DL4L4L4;L5OT4O
```


157

```
3DO3GO4DFO3DO3GO4DFL4;"
191Ø PP$(2)="L5ØT4O3DO3GO4DFO3DO
3GO4DFL4;;L5ØT4O3DO3GO4DFO3DO3GO
4DFL4;L8O3CO3CO2AO2AO2GO2GO2AO2G
L4O3CL4O2AO2AL4O2GO2AL8O3E-O3DO3
CO2AL4O3E-O2AL2O3CL4L4L2;"
192Ø PP$(3)="L5ØT4O3CO3FAO4CO3CO
3FAO4CO3CO3FAO4CO3CO3FAO4CO3CO3F
AO4CL2;L4L4O3CO3CO2GL8O3CO2BL4O2
AO2GL2O3D;L5ØT4O3DO3DF+O4CO3DO3D
F+O4CO3DO3DF+O4CO3DO3DF+O4CO3DO3
DF+O4CO3DO3DF+O4CO3DO3CL2;O2G;"
193Ø CM$=STRING$(24,"Ø")
194Ø M$=CC$:I1=.Ø5
195Ø PU$="O1L4T8CP4EP4GP1CP4EP4G
P1CP4EP4GP1":PD$="L2T8O3CO2CP1O3
CO2CP1O3CO2CP1O3CL1O1C"
196Ø MB=1ØØØ:PC=1ØØ
197Ø MP=1ØØ
198Ø REM
199Ø TM$=M$
2ØØØ KY$=STRING$(12," ")
```
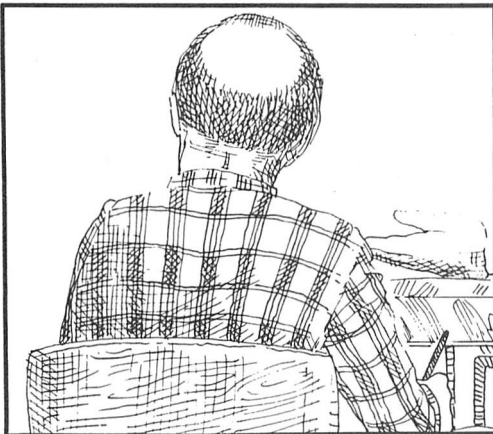


```
2Ø1Ø S$(1)="T3L2O2DL4FB-L2O3DP4O
2DL4F+AO3L1D":S$(2)="T5O3L2.CP8C
P8O2L4B-L4.B-A-L2.E-":S$(3)="T4L
4O3DDGAL2BL4GL8.G-L4EO4CCL2C":S$
(4)="T4L4O2GGBO3DL2.GE":S$(5)="T
2O3L8EO2L4GL8AL4O3CDL8EEL4EE":S$
(6)="T4O3L2.EL4CO2BGBO3DL2.C"
2Ø2Ø S$(7)="T4L4O2EL8AO1ABO2L4CL
8DEL4FL8GAL4O3CO2B":S$(8)="T2O3L
8CCL4CL8O2BAL2E":S$(9)="T4O2L4CC
O1GP4L8O2CO1BB-L4A":S$(1Ø)="T4L4
O3CO2B-AB-AB-AL2GL4AGAGAGL2F"
2Ø3Ø MN$="BU1U6R4D6L4"
2Ø4Ø PMODE 4,1:PCLS1:SCREEN 1,1:
PMODE 3,1
2Ø5Ø W$(1)="GO HOME - you need s
ome rest":W$(2)="GO HOME - your
family needs you":W$(3)="TIME FO
```

```
R WORK":W$(4)="GO TO WORK - try
for a raise":W$(5)="GET A LETTER
 AT THE POST OFFICE":W$(6)=W$(5)
2Ø6Ø W$(8)="CHECK YOUR BANK ACCO
UNT":W$(7)="DEPOSIT YOUR MONEY":
W$(9)="PAY YOUR REAL ESTATE TAX"
:W$(1Ø)="PAY YOUR INCOME TAX":W$
(11)="YOUR CAR NEEDS GAS":W$(12)
="YOUR CAR NEEDS REPAIR":W$(13)=
"PAY THE HEATING BILL":W$(14)="Y
OUR FURNACE NEEDS FIXING"
2Ø7Ø W$(15)="BUY SOME FOOD":W$(1
6)="BUY SOME CLOTHES":W$(17)="PL
AN WISELY FOR YOUR RETIREMENT":W
$(18)="THINK ABOUT RETIRING":W$(
19)="VISIT YOUR FRIEND":W$(2Ø)="
YOUR FRIEND IS UNHAPPY"
2Ø8Ø W$(21)="YOUR KIDS WANT TO S
EE A SHOW":W$(22)="YOUR SPOUSE N
EEDS A NIGHT OUT":W$(23)="A POLI
CE CAR IS FOLLOWING YOU":W$(24)=
"YOU NEED A NEW DRIVER'S LICENSE
"
2Ø9Ø H$="U16E2ØF2ØD16L12U8L16D8L
12"
21ØØ T$="R4D4R8U4R4D4R8U4R4D4R8U
4R4"
211Ø FOR H=Ø TO 128 STEP 64
212Ø POKE 178,151
213Ø FOR V=56 TO 1Ø4 STEP 48
214Ø LINE(H,V)-(H+48,V+32),PSET,
B
215Ø NEXT V,H
216Ø FOR H=Ø TO 128 STEP 64:LINE
(H,Ø)-(H+48,4Ø),PSET,B:NEXT H
217Ø FOR V=56 TO 1Ø4 STEP 48:LIN
E(192,V)-(24Ø,V+32),PSET,B:NEXT
V
218Ø LINE(192,Ø)-(24Ø,4Ø),PSET,B
219Ø LINE(Ø,152)-(254,158),PSET,
BF
22ØØ PMODE 4,1
221Ø COLOR Ø,2:LINE(Ø,Ø)-(255,15
8),PSET,B
222Ø PMODE 3,1
223Ø B$="U36;XT$;D36L12U8L16D8L1
2BM+12,Ø;BU12U4L8D4R8BR16R8U4L8D
4BU14U4R8D4L8BL16L8U4R8D4"
224Ø DRAW "C2BM4,4Ø":DRAW H$
225Ø PAINT (24,24),3,2
226Ø DRAW "C2BM196,4Ø":DRAW H$
227Ø POKE 178,12Ø:PAINT(216,24),
,2
228Ø DRAW "C2BM68,4Ø":DRAWB$
229Ø PAINT(88,16),2,2
23ØØ HT$="U32;XT$;D32L12U8L16D8L
12":DRAW "BM132,4ØC2":DRAW HT$
231Ø PAINT(14Ø,36),1,2
```

```
2320 DRAW "BM132,88C2":DRAW HT$:
POKE 178,90:PAINT(140,80),,2
2330 P$="BM192,136ClU24M+16,-8Rl
6M+16,+8D24L16U8L16D8L16BE8U8R6D
8L6BR26R6U8L6D8":DRAW P$
2340 PAINT (200,116),0,1
2350 F$="U16E8D8E8F8E8F8D16L14U8
L16D8Ll0":DRAW"BM198,88Cl":DRAW
F$:POKE 178,40:PAINT(200,80),,1
2360 G$="BM64,136ClU24E8R24D8R16
D24L16U8L16D8L16BR6U6H2E2R4F2G2D
6BR28U6H2E2R4F2G2D6":DRAW G$:PAI
NT(72,120),3,1:PAINT(72,132),2,1
:PAINT(104,132),2,1
2370 PO$="BM0,136C2U24E8R32F8D24
L16U8L16D8L16":DRAW PO$:POKE 178
,5:PAINT(8,130),,2
2380 DRAW"BM70,88Cl":DRAW F$:PAI
NT(72,80),1,1
2390 TB$=LEFT$(B$,56):MID$(TB$,2
,2)="24":MID$(TB$,10,2)="24":DRA
W"BM132,136C2":DRAW TB$:PAINT(14
0,130),1,2
2400 J$="C2BM0,88U16E8F8R16E8F8D
16L16U8L16D8L16":DRAW J$:PAINT(4
,84),3,2
2410 Vl=4:Hl=2:W$="HOME":GOSUB 1
830
2420 Hl=10:Vl=3:W$="BANK":GOSUB
1830
2430 Hl=18:Vl=3:W$="HEAT":GOSUB
1830
2440 Vl=4:Hl=25:W$="FRIEND":GOSU
B 1830
2450 Vl=10:Hl=3:W$="JOB":GOSUB 1
830:Hl=11:W$="TAX":GOSUB 1830
2460 Hl=18:W$="STORE":GOSUB 1830
:Hl=26:W$="SHOW":GOSUB 1830
2470 Vl=15:Hl=2:W$="POST":GOSUB
1830:Vl=16:Hl=1:W$="OFFICE":GOSU
B 1830
2480 Hl=11:W$="GAS":GOSUB 1830:H
l=17:Vl=16:W$="RETIRE":GOSUB 183
0
2490 Vl=15:Hl=25:W$="POLICE":GOS
UB 1830
2500 FOR M=1 TO 19:M$(M)="
**      **      **        **":NEXT
 M
2510 FOR M=6 TO 18 STEP 6:M$(M)=
STRING$(32,"*"):M$(M+1)=M$(M):NE
XT M
2520 COLOR 0,1
2530 FOR HM=1  TO 4:FOR VM=1 TO
3
2540 MID$(M$(VM*6-1),HM*8-5,2)=S
TRING$(2,CHR$(64+(HM-1)*3+VM))
2550 LH=(HM*64-46):LV=(VM*48-7):
LINE(LH,LV)-(LH+13,LV-8),PSET,BF
2560 NEXT VM,HM
2570 Hl=32:Vl=1
2580 PMODE 4,1
2590 C=1
2600 GOTO 50
```

```
5 B$=CHR$(142)+STRING$(30,140)+C
HR$(141)
6 FOR A=1 TO 4:C$=C$+CHR$(138)+S
TRING$(30,32)+CHR$(133):NEXT A
8 D$=CHR$(139)+STRING$(30,131)+C
HR$(135)
9 CLS:PRINTSTRING$(192,175):PRIN
T@43,;"LIFE";CHR$(175);"STYLE";:
PRINT@79,"by";:PRINT@102,"DR.";C
HR$(175);"CHARLES";CHR$(175);"H.
";CHR$(175);"SANTEE";
10 READ P$:IF P$="END" THEN REST
ORE:GOTO 10
15 PRINT@160,B$;C$;C$;D$;
20 H=2:V=6:LB=28:GOSUB 10000
30 P$="PRESS enter TO CONTINUE":
PRINT@485,P$;:PLAY"P32"
40 PRINT@491,"ENTER";:PLAY"P32"
50 X$=INKEY$:IF X$<>CHR$(13) THE
```

159

```
N 3Ø
6Ø GOTO 1Ø
2ØØ DATA "WELCOME TO life style!
!        THE OBJECT OF THIS SIM
ULATION IS TO BUILD AN ADEQUATE
SAVINGS ACCOUNT FOR YOUR RETIREM
ENT.  YOU CAN DO THIS BY FOLLOWI
NG A WELL BALANCED LYFE STYLE."
2Ø5 DATA "TO MOVE AROUND OUR TOW
N USE THE JOYSTICK - TO MAKE A D
ECISION PRESS A NUMBER KEY - YOU
 WILL ONLY NEED TO PRESS enter W
HEN YOU (1) ENTER A MONEY AMOUNT
 (2) SELECT THE NUMBER OF GALONS
 OF gas YOU WANT."
21Ø DATA "TRY TO EARN MONEY BY G
OING TO THE JOB.  DEPOSIT THE MO
NEY IN THE BANK.  YOU WILL RECEI
VE GENTLE REMINDERS WHEN YOU MUS
T DEAL WITH CERTAIN LIFE PROBLEM
S. IGNORING PROBLES ONLY MAKES T
HINGS WORSE!!"
215 DATA "SOME OF OUR BUSINESSES
 REQUIRE cash. MAKE SURE TO CARR
Y ENOUGH MONEY.  OTHER WILL ACCE
PT CHECKS (THE MONEY IS DRAWN FR
OM YOUR BANK ACCOUNT)."
22Ø DATA "WHEN YOU HEAR THE SONG
 we're in the money YOU WILL REC
EIVE INTEREST ON YOUR BANK ACCOU
NT - IT PAYS TO SAVE!!!"
27Ø DATA  "--------------------
------- to see these instruction
s again press ENTER ....... to s
top instructions press BREAK. --
--------------------------"
5ØØ DATA "END"
1ØØØØ '(1) PRINT ROUTINE"""""""""
""""""""(H,V,LB,P$)"""""""""""""""
1ØØ1Ø P$=P$+" "
1ØØ2Ø TB=LB:IF V>15 THEN PRINT:V
=15
1ØØ3Ø IF TB > LEN (P$) THEN PRIN
T@ (H+32*V),P$;:RETURN
1ØØ4Ø IF LEFT$(P$,1)=" " THEN P$
=RIGHT$(P$,LEN(P$)-1):GOTO 1ØØ2Ø
1ØØ5Ø T$=LEFT$(P$,LB):IF INSTR(T
$," ")=Ø THEN PRINT@(H+32*V),T$;
:P$=RIGHT$(P$,LEN(P$)-TB):V=V+1:
GOTO 1ØØ2Ø
1ØØ6Ø IF MID$(P$,TB,1)<>" " THEN
 IF TB>1 THEN TB = TB - 1:GOTO 1
ØØ6Ø
1ØØ7Ø PRINT@ (H+32*V),LEFT$(P$,T
B);:P$=RIGHT$(P$,LEN(P$)-TB):V=V
+1:GOTO 1ØØ2Ø
```
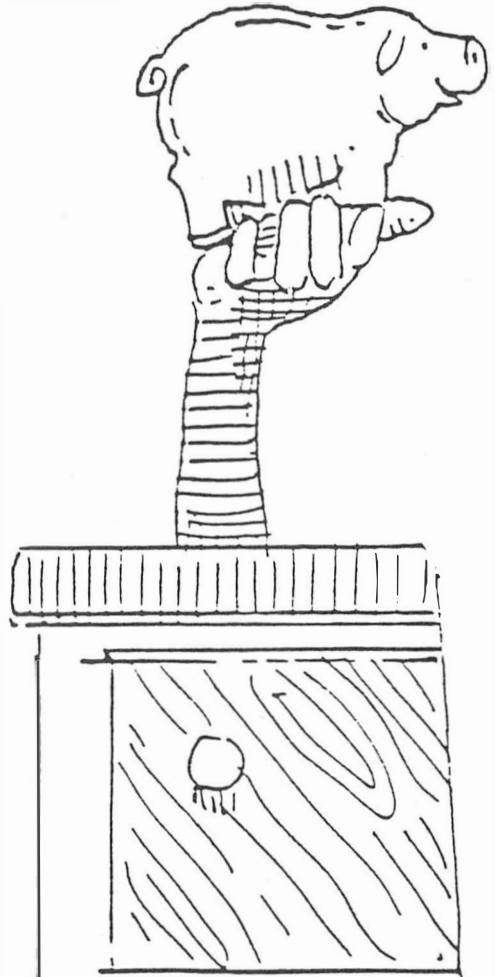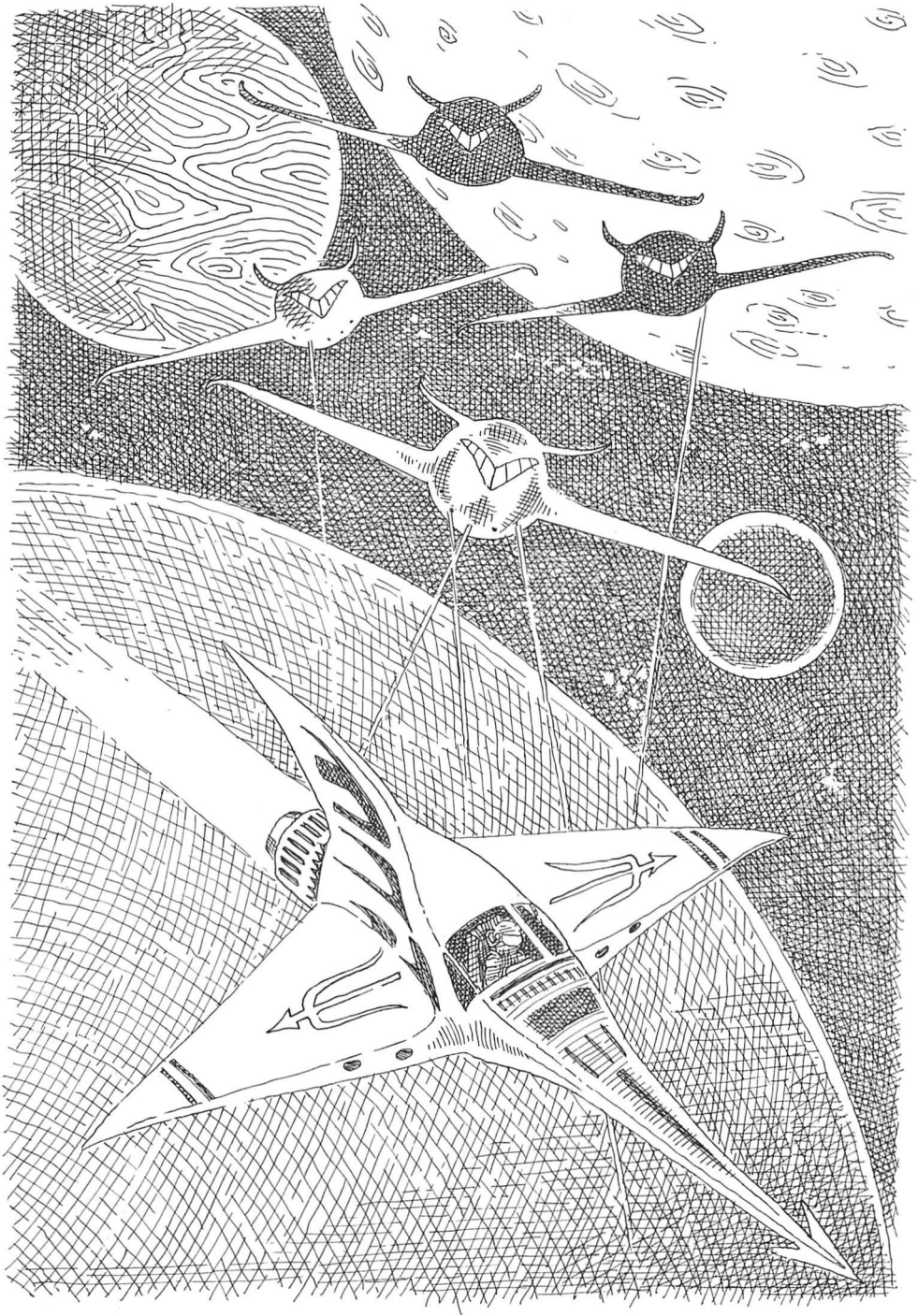
PROJECT THETA

Program by Randy Simpson

I t seems light-years have passed since your last enemy encounter as you cruise through the Theta galaxy on patrol. Suddenly, the on-board radar detects enemy craft entering your sector. You hurriedly arm your weapon system, ready your laser cannon and switch on the target-seeking computer to prepare yourself for the battle to follow.

The enemy has been identified by the computer's sensing circuits as four of the evil Zygor's scout ships, which are extremely fast and unpredictable in their flight patterns. You must destroy all four ships before they have a chance to guide Zygor's fleet to invade the Earth.

This is a fun and challenging Simulation that features a high resolution PMODE4 screen with a view of the galaxy from the cockpit of your X-25L fighter rocket. After loading and running the listing, a title screen appears. When the music introduction stops, press any key to start. The target screen appears as a rectangular box

in the center of the screen. The on-board tracking system keeps the target within your effective range, but you have to maneuver the ship using your joystick to maintain the small square laser sight directly over the target.

You may notice that your laser cannons are not up to their original specifications, and while the aiming circuits are functional, there are times when the system does not fire consistently. Hopefully, your past experience in situations such as this will enable you to overcome this adverse condition. You must make a note in the ship's log to have the problem corrected the next time you are space docked.

If the pace of this Simulation is too fast for you, try decreasing the value of TMR in Line 2. If you would like to speed up the action, just remove the REM apostrophe in lines 23, 93 and 139. This activates the speed-up POKEs.

Have fun with this one. You will find it nearly impossible to hit all four targets in the allotted time. Remember that you have to have your square sight directly over the target — unlike horseshoes and hand grenades, close doesn't count in *Project Theta!*

Randy Simpson lives in Glendale, Arizona, and has been programming for five years. He has extensive training in electronics technology and repairs computers for Radio Shack.

THETA   16K ECB

```
1 REM
  ****************************
  *        PROJECT THETA     *
  *        SIGMA SOFT 1983    *
  *        PROGRAMMED  BY:    *
  * R A N D Y   S I M P S O N *
  ****************************
2 TMR=10000
3 CLS4
4 SS$="T5CEFL1GP4L4CEFL1GP4L4CEF
L2GECEL1D"
5 FOR PK=1024 TO 1247:POKE PK,32
:NEXT
6 FOR PK=1057 TO 1086:POKE PK,42
:NEXT
7 FOR PK=1185 TO 1214:POKE PK,42
:NEXT
8 POKE 1089,42:POKE 1121,42:POKE
 1153,42:POKE 1086,42:POKE 1118,
42:POKE 1150,42:POKE 1182,42
9 POKE1128,45:PRINT@105,"project
";:PRINT@113,"theta";:POKE 1142,
45
10 PRINT@224," "
11 PRINT@330,"sigma";CHR$(128);"
soft";
12 PRINT@416," HIT ANY KEY TO BE
GIN              HIT <H> FOR HELP"
13 FOR DE=480 TO 511:POKE1024+DE
,32:NEXT
14 PLAYSS$
15 A$=INKEY$:IF A$=""THEN 15
16 IF A$="H"THEN 146
17 SC=0
18 HX=125:VY=96
19 CLS0
20 SOUND 200,2:SOUND 178,1:SOUND
 40,3:SOUND 180,4
21 PRINT@230," PREPARE FOR BATTL
E ";
```

```
22 PMODE 4,1
23 'POKE 65495,Ø
24 PCLS
25 LINE (4,4)-(252,188),PSET,B
26 LINE (4,4)-(64,16Ø),PSET
27 LINE (4,188)-(64,16Ø),PSET
28 LINE (252,188)-(192,16Ø),PSET
29 LINE (252,4)-(192,16Ø),PSET
3Ø LINE (64,16Ø)-(192,16Ø),PSET
31 LINE (64,16Ø)-(64,188),PSET
32 LINE (192,16Ø)-(192,188),PSET
33 LINE (64,163)-(192,163),PSET
34 LINE (67,166)-(17Ø,184),PSET,
B
35 CIRCLE(18Ø,172),5,1
36 LINE (97,166)-(97,184),PSET
37 FOR A=1 TO 4Ø
38 H=RND(3Ø):V=RND(18)
39 PSET(H+67,V+166,1)
4Ø NEXT A
41 LINE(12Ø,166)-(12Ø,184),PSET
42 S=166
43 FOR A=1 TO 9
44 L=RND(2Ø)+97
45 S=S+2
46 LINE(1ØØ,S)-(L,S),PSET
47 NEXT A
48 LINE(13Ø,166)-(13Ø,184),PSET
49 LINE(136,175)-(164,175),PSET
5Ø LINE(146,172)-(154,178),PSET,
BF
51 PSET(138,18Ø,1)
52 LINE(8,4)-(68,156),PSET
53 LINE(248,4)-(188,156),PSET
54 LINE(68,156)-(188,156),PSET
55 PAINT(36,184),1,1
56 PAINT(228,184),1,1
57 PAINT(5,5),1,1
58 FOR S=1 TO 2ØØ
59 H=RND(252):V=RND(148)
6Ø PSET(H,V,1)
61 NEXT S
62 TIMER=Ø
63 LINE(93,64)-(168,139),PRESET,
BF
64 POKE 65494,Ø
65 SCREEN 1,Ø
66 REM START OF LAZER CONTROL
67 P=PEEK(6528Ø)
68 IF TIMER>TMR THEN 114
69 IF P=254 THEN 94
7Ø IF P=126 THEN 94
71 E=HH:F=VV
72 HH=JOYSTK(Ø)+94
73 VV=JOYSTK(1)+65
74 XX=HX:YY=VY
75 R=RND(5)
76 IF R=1 THEN HX=HX+1Ø
77 IF R=2 THEN HX=HX-1Ø
78 IF R=3 THEN VY=VY+1Ø
79 IF R=4 THEN VY=VY-1Ø
8Ø IF HX>157 THEN HX=157
81 IF HX<94 THEN HX=94
82 IF VY>128 THEN VY=128
83 IF VY<65 THEN VY=65
84 IF R=5 THEN HX=RND(63)+94:VY=
RND(63)+65
85 LINE(HX,VY)-(HX+5,VY+5),PSET,
BF
86 LINE(XX,YY)-(XX+5,YY+5),PRESE
T,BF
87 LINE(HH,VV)-(HH+1Ø,VV+1Ø),PSE
T,B
88 IF HH<>E THEN LINE(E,F)-(E+1Ø
,F+1Ø),PRESET,B
89 IF VV<>F THEN LINE(E,F)-(E+1Ø
,F+1Ø),PRESET,B
9Ø LINE(93,64)-(168,139),PSET,B
91 CIRCLE(HX,VY),5,Ø
```
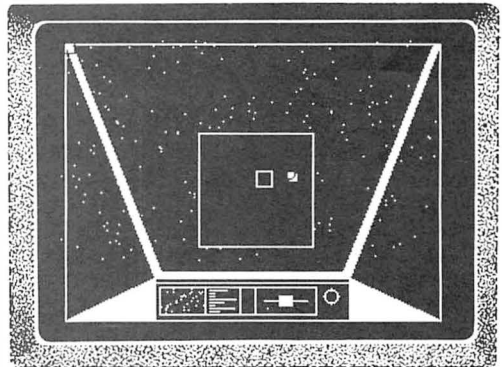


```
92 GOTO 66
93 'POKE 65495,Ø
94 LINE(68,156)-(HH+5,VV+5),PSET
95 LINE(188,156)-(HH+5,VV+5),PSE
T
96 LINE(68,156)-(HH+5,VV+5),PRES
ET
97 LINE(188,156)-(HH+5,VV+5),PRE
SET
98 LINE(93,64)-(168,139),PSET,B
99 IF TIMER>TMR THEN 114
1ØØ SOUND 255,1
1Ø1 I=HH+5:O=VV+5
1Ø2 IF I>HX AND I<HX+5 AND O>VY
AND O<VY+5 THEN 1Ø5
1Ø3 POKE 65494,Ø
1Ø4 GOTO71
1Ø5 FOR R=1 TO 14 STEP 3
1Ø6 CIRCLE(I,O),R,1
1Ø7 SOUND R,1
1Ø8 NEXT R
```

```
109 FOR R=1 TO 14 STEP 3
110 CIRCLE(I,O),R,Ø
111 NEXT R
112 SC=SC+1
113 GOTO 71
114 D=92:R=63:DD=169:RR=14Ø
115 FOR EE=Ø TO 38
116 LINE(D,R)-(DD,RR),PRESET,B
117 D=D+1:R=R+1:DD=DD-1:RR=RR-1
118 LINE(D,R)-(DD,RR),PSET,B
119 NEXT EE
12Ø SCREEN Ø,Ø
121 CLSØ
122 IF SC>3 THEN 127
123 PRINT@192," PROJECT THETA YO
UR MISSION       HAS FAILED.  EAR
TH HAS BEEN          DESTROYED ! "
124 PLAY"A"
125 A$=INKEY$:IF A$=""THEN 125
126 GOTO 17
127 CLS(Ø)
128 PCLS
129 SCREEN 1,1
13Ø PMODE 4,1
131 KL=Ø:LK=Ø:UT=256:TU=192
132 FOR R=Ø TO 6Ø
133 LINE(KL,LK)-(UT,TU),PSET,B
134 KL=KL+3:LK=LK+3:UT=UT-3:TU=T
U-3
135 NEXT R
136 CLS3
137 PRINT@128," ****************
************* * PROJECT THETA
YOUR MISSION *  * HAS BEEN COMPL
ETED THE      *  * EARTH IS SAVED
!             *  ****************
***************"
138 PRINT@384," TARGET WAS HIT "
;SC;" TIMES"
139 'POKE 65495,Ø
14Ø PLAY"T5CEFL1GP4L4CEFL1GP4L4C
EFL2GECEL1D"
141 PLAY"P8L4EEDL2CL4CL2EL4GGGL1
FL4EFL2GEL4CL8DD+EGL4AL1Ø3C"
142 POKE 65494,Ø
143 A$=INKEY$
144 IF A$=""THEN 143
145 GOTO 17
146 CLS
147 PRINT:PRINT" PROJECT THETA Y
OUR MISSION IS   TO STOP THE POW
ERFUL ZYGOR     BEFORE ZYGOR DE
STROYS THE       EARTH! "
148 PRINT:PRINT" TO STOP ZYGOR Y
OU MUST HIT     ZYGOR AT LEAST
4 TIMES USING    YOUR LAZER AND
LONG RANGE       TARGETING SCANN
ER.              ZYGOR WILL NOT
DIE SO AFTER     YOU HAVE STOPPE
D HIM YOU MAY    STILL FIRE UPON
 ZYGOR UNTIL "
149 PRINT" YOUR TIME IS UP.
          good luck project the
ta";
15Ø A$=INKEY$:IF A$=""THEN 15Ø
151 GOTO 3
152 'THE END
```
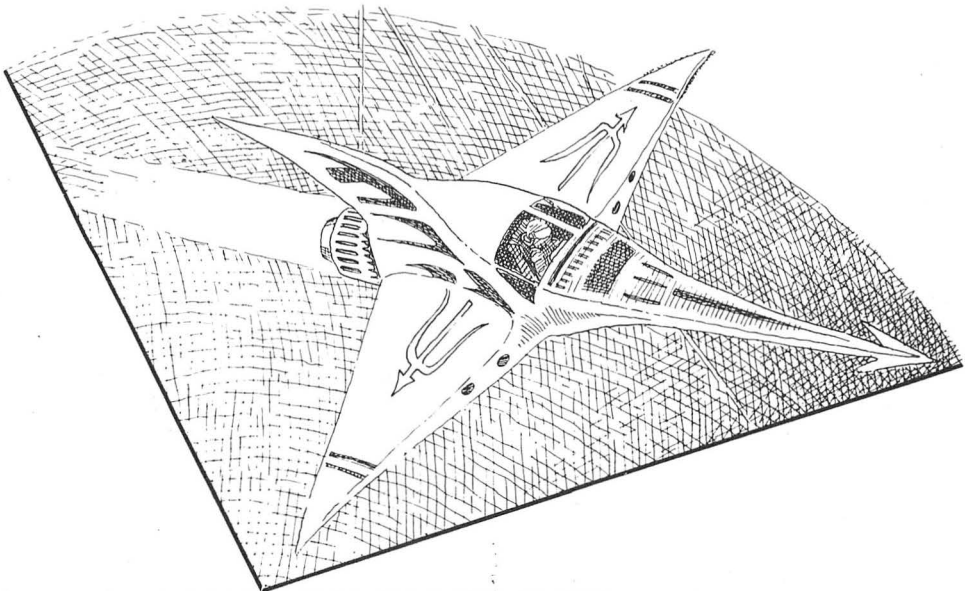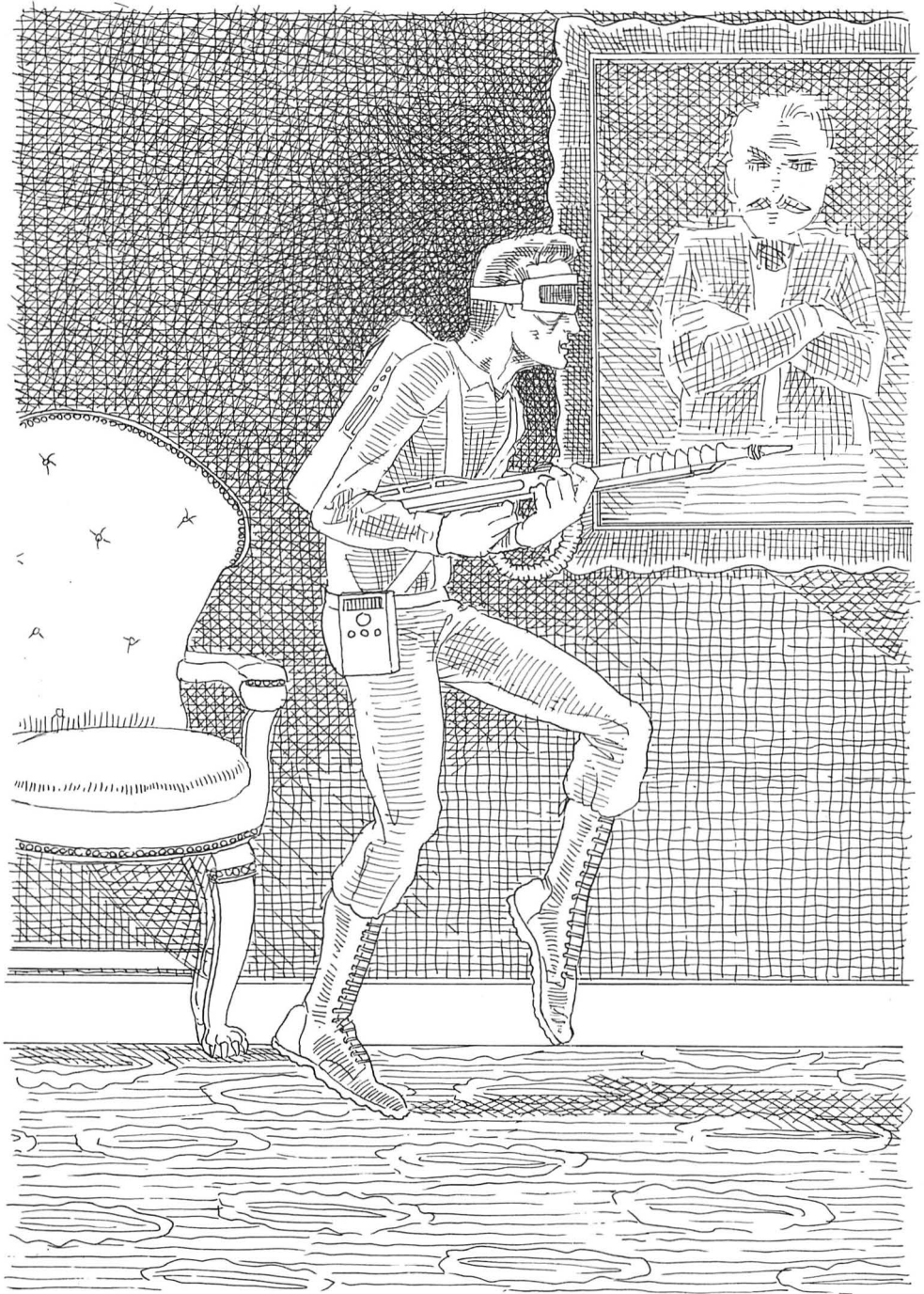
Ghostgetters

Program by Baron Quintana

A s you arm yourself with your specially made Model 3.8G laser gun, you shudder at the thought of what you are about to face. It had all started on Halloween, some 20 years ago. The Duncan Mansion had always been one of the town's showplaces, with lots of flowers, trees and even a beautiful garden with a pond and great white swans cruising lazily on its mirrored surface.

As the elder Duncan grew older, it had been rumored that some members of the family were more interested in his fortune than his welfare. Then, on a cold and rainy Halloween in 1966, it happened. The many trick-or-treaters who went to the door that night were all frightened out of their wits as they heard screams from inside the house. The screams were not from a man, but sounded as though they were coming from a young girl. The next morning, Duncan was found floating face down in the pond, and his wife and daughter were never heard from again.

So the mystery lingers to this day. The police never found a killer, Mrs. Duncan and Julie have still not been found, and no one has ever claimed the Duncan fortune. No one is interested in buying the property because of the reported hauntings and screaming that go on there nightly. The place has taken on a sinister look from lack of maintenance; it's full of bats, spiderwebs and, apparently, ghosts!

You have been hired by the CoCoville City Council to rid the mansion of these poltergeists so the property can be reclaimed. Your highly sophisticated equipment allows you to "see" ghosts, and your laser gun is capable of ending their siege. If the reports of nightly screaming are accurate, it is suspected that Julie is being held captive and there may be a chance that she can be freed from her ghostly captors.

Simply run this program to get the spirits moving. Use the right joystick to aim your laser at the windows. It's not necessary to push the firebutton — just aim next to the window in which the ghost appears — but be careful, if Julie appears, the laser will be fatal. Your score is shown in the two upper corners of the house: the left one is your current score and the right one is the high score for the game. When Julie does appear, there is a 50 percent chance that she will be attacked by a ghost. When the bats appear after the first wave of ghosts, they will always attack the girl.

If you would like to slow down the action, try changing the value of SP in Line 1250 to 10. If you would like to speed things up, add POKE 65495,0 to the beginning of the listing. The game will be over if Julie is attacked three times by a ghost, a bat, or heaven forbid, your laser gun! This one is fun, but you gotta be quick.

Baron Quintana is a student at the Episcopal School of Dallas. He is the founder of Baron Products, which produces software. Baron participates in junior championship level tennis tournaments around Texas and plans to study electrical or computer engineering in college.

```
10 GOSUB2280
20 CLS0:PRINT@32," THIS PROGRAM
WAS WRITTEN FOR     THE RAINBOW'
S SECOND ANNUAL     SIMULATION C
ONTEST !"
30 X=20:Y=15:S=1
40 FOR CT=0 TO 19
50 X=X+1:Y=Y-S
60 S=S-.1
70 SET(X,Y,4)
80 NEXT CT
90 X=24:Y=15:S=1
100 FOR CT=0 TO 11
110 X=X+1:Y=Y-S
120 S=S-.17
130 SET(X,Y,8)
140 NEXT CT
150 SET(29,14,2):SET(30,13,2):SE
T(32,14,2):SET(31,13,2)
160 SCREEN0,1
170 PRINT@32*8," PLEASE WAIT ONE
 MOMENT UNTIL      THE GHOSTS HAV
E ENTERED THE      MANSION .":SCR
EEN0,1:PLAY"L25505V3":FOR CT=0 T
O 7:PLAY"1;2;3;4;5;V31;B;V3;6;7;
8;9":NEXT CT
180 PMODE4,1:PCLS
190 LINE(128,0)-(120,10),PSET
200 LINE(124,4)-(127,9),PSET:LIN
E(127,9)-(126,11),PSET
210 LINE(120,10)-(122,12),PSET:L
INE(122,12)-(120,14),PSET
220 DIML1(3):GET(120,0)-(128,14)
,L1,G
230 LINE(120,10)-(117,14),PSET
240 LINE(126,11)-(130,13),PSET
250 LINE(120,14)-(122,16),PSET
260 DIML2(6):GET(117,0)-(130,16)
,L2,G
270 PCLS
280 CIRCLE(5,5),2:CIRCLE(5,5),4
290 PSET(5,1,0):PSET(5,9,0):PSET
(1,5,0):PSET(9,5,0)
300 CIRCLE(5,5),3,0
310 DIMFC(1):GET(2,2)-(8,8),FC,G
320 PCLS
330 CIRCLE(215,159),3,1,1,.00,.5
0
340 DRAW"BM212,159;M212,155;BM21
8,159;M218,155"
350 DRAW"BM212,155;M210,151;BM21
8,155;M220,151"
360 DRAW"BM211,151;M214,153;BM21
9,151;M216,153":PSET(215,151,1)
370 DRAW"BM214,155;R2"
380 DRAW"BM212,155;M210,155;BM21
```

```
8,155;M220,155"
390 DRAW"BM210,155;M205,152;BM22
0,155;M225,152"
400 DRAW"BM205,152;M201,154;BM22
5,152;M229,154;BM205,152;BM205,1
52;M203,157;BM225,152;M227,157"
410 DRAW"BM205,152;M207,160;BM22
5,152;M223,160"
420 DRAW"BM201,154;M203,157;BM22
9,154;M227,157"
430 DRAW"BM203,157;M207,160;BM22
7,157;M223,160"
440 DRAW"BM207,160;M213,161;BM22
3,160;BM217,161;M219,163;BM213,1
61;M211,163;BM223,160;M219,161"
450 DIMBT(18):GET(201,143)-(229,
167),BT,G:PCLS
460 CIRCLE(216,146),2
470 CIRCLE(215,150),3,1,1,.40,.7
7
480 CIRCLE(214,153),2,1,3,.30,.6
5
490 CIRCLE(216,155),4,1,.4,.00,.
50
500 CIRCLE(220,148),3,1,1,.34,.9
5
510 CIRCLE(218,152),3,1,3,.75,.2
5
520 CIRCLE(220,151),3,1,3,.75,.2
5
530 CIRCLE(214,146),2,1,1,.70,.3
0
540 CIRCLE(214,151),3,1,3,.25,.7
5
```

```
550 CIRCLE(212,151),3,1,3,.25,.7
5
560 CIRCLE(211,158),2,1:CIRCLE(2
18,151),2,2:PSET(217,149,0):PSET
(214,149,0):PSET(213,149,0):PSET
(217,148,0):PSET(215,148,0):CIRC
LE(220,158),2,1
570 PSET(216,153,1):PSET(217,153
,1)
580 PSET(215,150,1):PSET(218,150
,1)
590 CIRCLE(213,162),3,1,1,.00,.5
0
600 CIRCLE(219,162),3,1,1,.00,.5
0
610 DRAW"BM208,159;M212,168;BM22
0,168;M223,159"
620 DRAW"BM208,159;M201,154;BM21
0,157;M201,150;BM218,159;M229,15
4;BM219,162;M229,157"
630 DIMGL(18):GET(201,143)-(229,
167),GL,G
640 PCLS
650 LINE(200,142)-(230,168),PSET
,B
660 CIRCLE(215,150),8,1,1,.50,.0
0
670 CIRCLE(207,155),3,1,2,.25,.7
5
680 CIRCLE(207,163),2,1,2,.75,.2
5
690 CIRCLE(221,155),2,1,2,.25,.7
5
700 CIRCLE(221,162),3,1,2,.75,.2
5
710 PAINT(220,150),1,1
720 CIRCLE(219,149),2,2
730 CIRCLE(212,147),2,2
740 PSET(213,152,0):PSET(215,152
,0):PSET(211,153,0):PSET(217,153
,0):PSET(213,145,0):PSET(214,146
,0):PSET(218,147,0):PSET(217,148
,0)
750 DIMGT(19):GET(201,143)-(229,
167),GT,G
760 PCLS
770 CIRCLE(128,155),20,1,1,.50,0
0
780 LINE(108,155)-(108,188),PSET
:LINE(148,155)-(148,188),PSET:LI
NE(108,188)-(148,191),PSET,B
790 LINE(149,188)-(240,191),PSET
,B:LINE(107,188)-(16,191),PSET,B
800 LINE(148,173)-(240,173),PSET
:LINE(240,173)-(240,188),PSET:LI
NE(108,173)-(16,173),PSET:LINE(1
6,173)-(16,188),PSET
810 LINE(153,173)-(163,175),PSET
,B:LINE(103,173)-(93,175),PSET,B
:LINE(153,188)-(163,186),PSET,B:
LINE(103,188)-(93,186),PSET,B:LI
NE(155,175)-(161,186),PSET,B:LIN
E(101,175)-(95,186),PSET,B
820 LINE(173,173)-(183,175),PSET
,B:LINE(83,173)-(73,175),PSET,B:
LINE(173,188)-(183,186),PSET,B:L
INE(83,188)-(73,186),PSET,B:LINE
(175,175)-(181,186),PSET,B:LINE(
81,175)-(75,186),PSET,B
830 LINE(190,175)-(238,186),PSET
,B:LINE(18,175)-(66,186),PSET,B
840 LINE(173,173)-(183,170),PSET
,B:LINE(83,173)-(73,170),PSET,B:
LINE(153,173)-(163,170),PSET,B:L
INE(103,173)-(93,170),PSET,B
850 FORCT=167TO140STEP-3
860 CIRCLE(178,CT),3:CIRCLE(78,C
T),3:CIRCLE(98,CT),3:CIRCLE(158,
CT),3:NEXTCT
870 LINE(173,139)-(183,136),PSET
,B:LINE(83,139)-(73,136),PSET,B:
LINE(153,139)-(163,136),PSET,B:L
INE(103,139)-(93,136),PSET,B
880 LINE(15,135)-(241,132),PSET,
B
890 DRAW"BM16,135;M16,173;BM240,
135;M240,173"
900 LINE(200,142)-(230,168),PSET
,B:LINE(56,142)-(26,168),PSET,B
910 LINE(173,132)-(183,129),PSET
,B:LINE(83,132)-(73,129),PSET,B:
LINE(153,129)-(163,132),PSET,B:L
INE(103,129)-(93,132),PSET,B
920 FORCT=126TO99STEP-3
930 CIRCLE(178,CT),3:CIRCLE(78,C
T),3:CIRCLE(98,CT),3:CIRCLE(158,
CT),3:NEXTCT
940 LINE(173,97)-(183,94),PSET,B
:LINE(83,97)-(73,94),PSET,B:LINE
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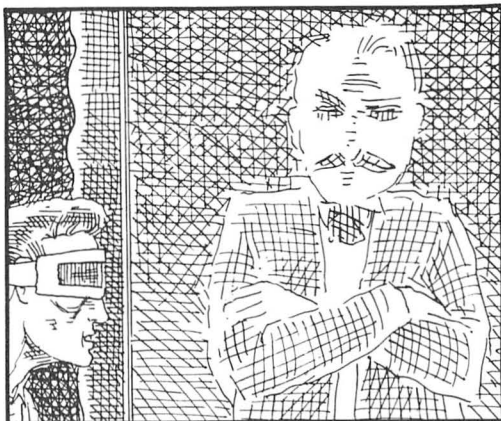
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(153,97)-(163,94),PSET,B:LINE(10
3,97)-(93,94),PSET,B
95Ø LINE(15,93)-(241,9Ø),PSET,B
96Ø DRAW"BM16,94;D38;BM24Ø,94;D3
8"
97Ø LINE(2ØØ,95)-(23Ø,121),PSET,
B
98Ø LINE(199,62)-(231,72),PSET,B
99Ø LINE(56,95)-(26,121),PSET,B
1ØØØ LINE(25,62)-(57,72),PSET,B
1Ø1Ø '
1Ø2Ø LINE(22,9Ø)-(6Ø,4Ø),PSET,B
1Ø3Ø LINE(234,9Ø)-(196,4Ø),PSET,
B
1Ø4Ø DRAW"BM22,4Ø;M41,2Ø;M6Ø,4Ø"
1Ø5Ø DRAW"BM234,4Ø;M215,2Ø;M196,
4Ø"
1Ø6Ø CIRCLE(7Ø,7Ø),1Ø,1,1,.5Ø,.7
5
1Ø7Ø CIRCLE(186,7Ø),1Ø,1,1,.75,.
ØØ
1Ø8Ø CIRCLE(7Ø,5Ø),7,1,2,.ØØ,.25
1Ø9Ø CIRCLE(186,5Ø),7,1,2,.25,.5
Ø
11ØØ FORCT=74TO178STEP6
111Ø LINE(CT,5Ø)-(CT+6,48),PSET,
B
112Ø LINE(CT,4Ø)-(CT+6,42),PSET,
B
113Ø LINE(CT+3,42)-(CT+3,48),PSE
T
114Ø NEXTCT
115Ø LINE(67,62)-(189,62),PSET
116Ø LINE(7Ø,63)-(186,64),PRESET
,B
117Ø LINE(71,61)-(185,61),PSET
118Ø LINE(22,4Ø)-(6Ø,42),PSET,B:
LINE(234,4Ø)-(198,42),PSET,B
119Ø CIRCLE(128,8Ø),5:CIRCLE(1ØØ
,71),7:CIRCLE(156,71),7
12ØØ DRAW"BM128,75;M128,85;BM123
,8Ø;M133,8Ø;BM93,71;M1Ø7,71;M1ØØ
,64;M1ØØ,78"
121Ø LINE(149,71)-(161,71),PSET:
LINE(156,64)-(156,78),PSET
122Ø GOTO2Ø8Ø
123Ø CR=1:SP=2Ø:HT=Ø:WV=1:RD=2:D
T=Ø:SS=Ø:TM=Ø:SC=Ø
124Ø WV=5
125Ø SP=6
126Ø CLSØ:PRINT@(32*7)+8,"YOU WI
LL DIE !";:SCREENØ,1:PLAY"L5ØO1V
2ØCV21CV22CV23CV24CV25CV26CV27CV
28CV29CV3ØCV31CV3ØDV29DV28DV27DV
26DV25DV24DV23DV22DV21DV2ØDV19DV
18DV17DV16DV15DV14DV13DV12DV11DV
1ØDV9DV8DV7DV6DV5DV4DV3DV2DV1D"
127Ø SCREEN1,1:PS=Ø:CR=Ø
128Ø '
129Ø J=JOYSTK(Ø):K=JOYSTK(1)
13ØØ IFJ<31ANDK<31THENLINE(X,Y)-
(X+6,Y+6),PRESET,BF:X=6Ø:Y=1Ø6:P
UT(X,Y)-(X+6,Y+6),FC,PSET:PP=1
131Ø IFJ<31ANDK>3ØTHENLINE(X,Y)-
(X+6,Y+6),PRESET,BF:X=6Ø:Y=154:P
UT(X,Y)-(X+6,Y+6),FC,PSET:PP=3
132Ø IFJ>3ØANDK<31THENLINE(X,Y)-
(X+6,Y+6),PRESET,BF:X=19Ø:Y=1Ø6:
PUT(X,Y)-(X+6,Y+6),FC,PSET:PP=2
133Ø IFJ>3ØANDK>3ØTHENLINE(X,Y)-
(X+6,Y+6),PRESET,BF:X=19Ø:Y=154:
PUT(X,Y)-(X+6,Y+6),FC,PSET:PP=4
134Ø IF RND(4Ø)<>1 THEN 142Ø
135Ø RX=RND(5Ø)+1ØØ
136Ø PUT(RX,Ø)-(RX+8,14),L1,PSET
137Ø PLAY"L255;T9;O1;V2ØCV19EV18
CV17E":PLAY"T2"
138Ø SCREENØ,1:SCREEN1,1
139Ø PUT(RX-2,Ø)-(RX+11,16),L2,P
SET
14ØØ PLAY"L255O1V2ØCV19EV18CV17E
V16CV15EV14CV13EV12CV11EV1ØC"
141Ø LINE(RX-2,Ø)-(RX+11,16),PRE
SET,BF
142Ø IFPP=PS ANDCR=1THENSCREEN1,
Ø:SOUND255,2:SCREEN1,1:PUT(A,B)-
(A+28,B+24),GL,NOT:PLAY"L2ØØ;V5;
5;AC;BC;V1Ø;O4;V15;ABC;O5;V25;BA
C;V31;ABAC;V25;AC;O4;V2Ø;BC;O5;V
15;AC;V5;BACC":PUT(A,B)-(A+28,B+
24),GL,PSET:TM=SP-1:DT=DT+1:GOTO
 149Ø
143Ø IFPP=PS THENHT=HT+1:SC=SC+1
:SC=SC+(CR*5)-1:PLAY"T8L255O1V3Ø
```
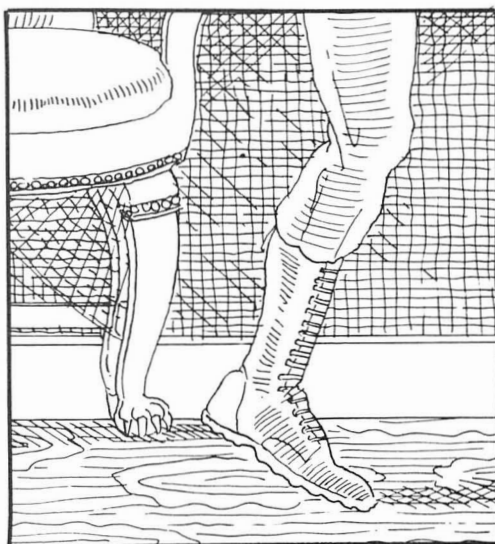
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AV27BV25O2CV22DV2ØEV17FV15GV13AV
1ØBV8O3CV5DV2ØT2":GOTO145Ø
144Ø GOTO 149Ø
145Ø '
146Ø IF CR=2 THEN PUT(A,B)-(A+28
,B+24),GT,NOT ELSE PUT(A,B)-(A+2
8,B+24),BT,NOT
147Ø LINE(26,63)-(56,71),PRESET,
BF:AA$=STR$(SC):DRAW"BM29,7Ø;C1"
:GOSUB219Ø:CS=SC:RC=CR
1475 PLAY"L255O5V1AV2AV3AV4AV5AV
6AV5AV4AV3AV2AV1AV2Ø"
148Ø GOTO 157Ø
149Ø TM=TM+1
15ØØ IFDT=3THEN2Ø1Ø
151Ø IFTM>SP-2 THENUP=1:GOTO153Ø
```
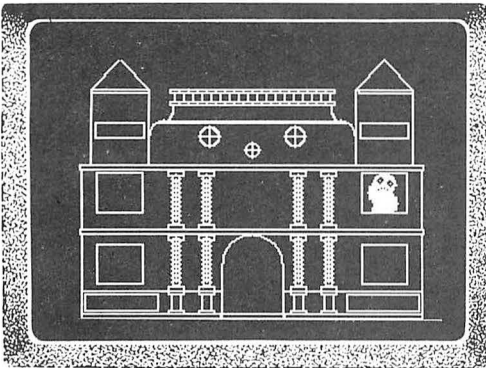


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152Ø GOTO128Ø
153Ø '
154Ø IFUP=1ANDCR=3THENUP=Ø:GOTO1
84Ø
155Ø IFUP=1ANDCR=2ANDRND(2)=1THE
NUP=Ø:GOTO184Ø
156Ø IFRND(4)=1ANDCR=1THENRX=RND
(16)+1Ø8:RY=RND(25)+157:PSET(RX,
RY,1):PSET(RX+3,RY,1):PLAY"P9":P
SET(RX+3,RY,Ø):PSET(RX,RY,Ø):PLA
Y"P3Ø":PSET(RX,RY,1):PSET(RX+3,R
Y,1):PLAY"P8":PSET(RX,RY,Ø):PSET
(RX+3,RY,Ø)
157Ø TM=Ø:IF RD=2 THEN IF RND(3)
=1 THEN CR=1 ELSE CR=2
158Ø IF RD=3 THEN CR=RND(RD)
159Ø LINE(A,B)-(A+28,B+24),PRESE
T,BF
16ØØ IFHT=1ØTHEN171Ø
161Ø V=RND(4)
162Ø IFV=PP THEN161Ø
163Ø IFV=1THENPS=1:A=27:B=96
164Ø IFV=2THENPS=2:A=2Ø1:B=96
165Ø IFV=3THENPS=3:A=27:B=143
166Ø IFV=4THENPS=4:A=2Ø1:B=143
167Ø IFCR=1THENPUT(A,B)-(A+28,B+
24),GL,PSET
168Ø IFCR=2THENPUT(A,B)-(A+28,B+
24),GT,PSET
169Ø IFCR=3THENPUT(A,B)-(A+28,B+
24),BT,PSET
17ØØ GOTO128Ø
171Ø '
172Ø WV=WV+1:HT=Ø
173Ø IFWV=6THENRM=3:RD=3
174Ø CLSØ
175Ø PRINT@(32*7)+7,"* GIRL";WV-
5;"SAVED *";
176Ø SP=SP-1:IF SP<4 THEN SP=4
177Ø SCREENØ,1
178Ø SS=SS+1
179Ø IFSS=1THENPLAY"T2L16O4AGL2A
P8L16GFEDL8C#P8L2D"
18ØØ IFSS=2THENFORCT=1TO2:PLAY"L
15;V2Ø;O2;B;O1;B;O2;A;O1;B;O2;D;
O1;B;O2;C;O1;B;O2;B;O1;B;O2;A;O1
;B;G;B":NEXTCT:GOTO127Ø
181Ø IFSS=3THENFORCT=1TO3:PLAY"L
15;V27;O4;BEEBEEBEEBEEBEO5;C;O4;E":
NEXTCT:PLAY"O4;B":GOTO127Ø
182Ø IFSS=4THENSS=Ø:FORCT=1TO3:S
OUND2Ø4,3:SOUND2Ø7,3:SOUND2Ø4,3:
SOUND193,3:NEXTCT:GOTO127Ø
183Ø GOTO127Ø
184Ø '
185Ø PLAY"L255;O1;V2Ø;1;O2;2;O3;
3;O4;4;O5;5;V25;6;7;V3Ø;8;9;1Ø;1
1;12"
186Ø PUT(A,B)-(A+28,B+24),GL,PSE
T
187Ø PLAY"L255;O3;V25;GG;V2Ø;FF;
V15;DD;V1Ø;EE;V5;CC;V3;BB;V1;AA"
188Ø FORCT=1TO3
189Ø PUT(A,B)-(A+28,B+24),GL,PSE
T
19ØØ PLAY"L255;O5;V31;GF;V25;GF;
V31;F"
191Ø IF CR=3 THENPUT(A,B)-(A+28,
B+24),BT,PSET ELSE PUT(A,B)-(A+
28,B+24),GT,PSET
192Ø PLAY"L255;O1;V2Ø;1;V25;2;V2
Ø;1"
193Ø NEXTCT
194Ø FOR CT=1 TO 3
195Ø PUT(A,B)-(A+28,B+24),GL,PSE
T
196Ø PUT(A,B)-(A+28,B+24),GL,NOT
197Ø NEXT CT
198Ø DT=DT+1:IFDT=3THEN2Ø1Ø
199Ø LINE(A,B)-(A+28,B+24),PRESE
T,BF
2ØØØ GOTO157Ø
```
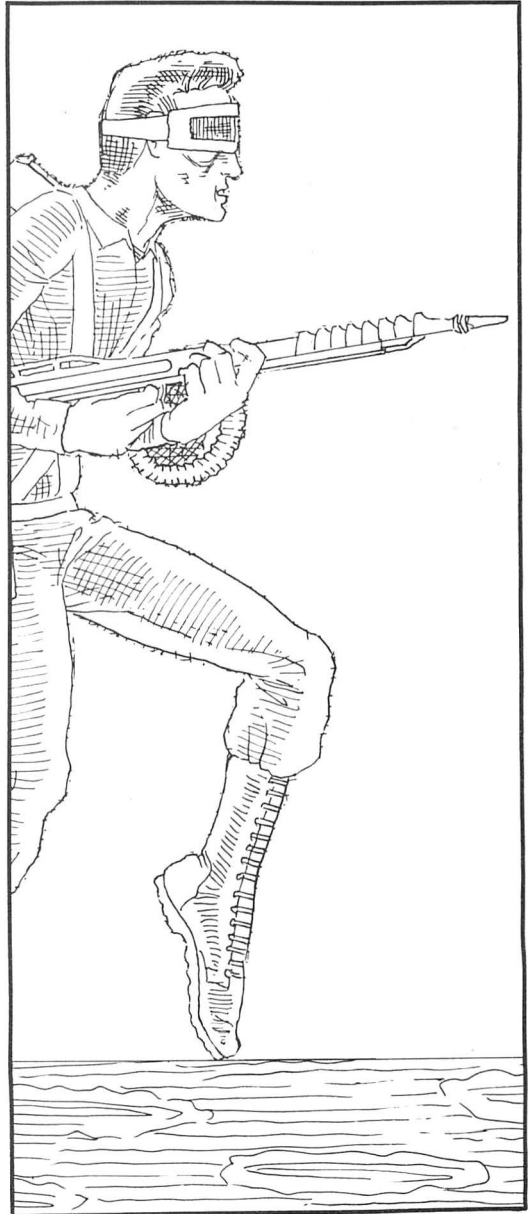
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2010 '
2020 LINE(A,B)-(A+28,B+24),PRESE
T,BF
2030 SCREEN1,0
2040 PLAY"L5;O1;V15;F;L10;P200;F
;L12;F;P200;F;L5;G#;L10;GG;FF;L1
0;E;L3;F"
2050 IFSC>HC THENHC=SC:DRAW"BM20
3,70;C0;S4":AA$=STR$(CH):GOSUB21
90:DRAW"BM203,70;C1":AA$=STR$(HC
):GOSUB2190:PLAY"P1;P1":CH=HC
2060 DRAW"BM29,70;C0;S4":AA$=STR
$(SC):GOSUB2190
2070 FORCT=1TO500:NEXTCT
2080 '
2090 CLS1
2100 PRINT@(32*2)+9,"ghostgetter
";
2110 PRINT@(32*4)+6,"BY BARON QU
INTANA";
2120 PRINT@(32*6)+1,"PRESS JOYST
ICK BUTTON TO PLAY";
2130 PRINT@(32*8)+4,"LAST";SC;:P
RINT@(32*8)+17,"HIGH";HC;
2140 SCREEN0,0:PLAY"T1;L5;O2;V13
;C;E-;G;O3;C;L3;O2;A-;P20;T2;L12
;G;P20;F;P20;E-;P20;D;L10;C"
2150 SCREEN0,1
2160 IFPEEK(65280)=12CORPEEK(652
80)=254THENIT=0:GOTO1230
2170 IT=IT+1:IFIT=1300THENIT=0:G
OTO2140
2180 GOTO2160
2190 'CHARGEN
2200 IFSC>9999THENSC=9999
2210 FORXE=1TOLEN(AA$)
2220 QO=ASC(MID$(AA$,XE,1))
2230 FORYY=1TO10
2240 IFLL$(YY)=MID$(AA$,XE,1)THE
NDRAWAA$(YY):GOTO2260
2250 NEXTYY
2260 NEXTXE
2270 RETURN
2280 '
2290 FORXE=1TO10
2300 READLL$(XE),AA$(XE)
2310 NEXTXE:RETURN
2320 DATA"0","BM+1,0;H1;U4;E1;R2
;F1;D4;G1;L2;BM+6,0"
2330 DATA"1","BM+1,0;R1;NR1;U6;G
1;BM+6,+5"
2340 DATA"2","NR4;U1;E1;R1;E2;U1
;H1;L2;G1;BM+7,+5"
2350 DATA"3","BM+0,-1;F1;R2;E1;H
2;E2;H1;L3;BM+7,6"
2360 DATA"4","BM+3,0;U2;NR1;L3;U
1;E3;D3;BM+4,3"
2370 DATA"5","BM+0,-1;F1;R2;E1;U
2;H1;L3;U2;R4;BM+3,+6"
2380 DATA"6","BM+4,-5;H1;L2;G1;D
4;F1;R2;E1;U1;H1;L3;BM+7,+3"
2390 DATA"7","U1;E4;U1;L4;BM+7,+
6"
2400 DATA"8","BM+1,-0;H1;U1;E1;H
1;U1;E1;R2;F1;D1;G1;NL2;F1;D1;G1
;L2;BM+6,0"
2410 DATA"9","BM+0,-1;F1;R2;E1;U
4;H1;L2;G1;D1;F1;R2;BM+4,+3"
```