

NUMBER 1

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to collect royalties. All articles will be returned to the
authors after being looked at or used.

Editorial

By Peter Ellison

As you picked up this magazine you probably said to yourself, " R.O.M., I thought that stood for 'Read only memory' ". It does but we at ROM have given the initials a different meaning. For the magazine it means, 'Read over & Memorize'. We don't really mean that but we hope that all you Atarians will make this magazine a habit. If you look in the front cover you will notice the magazine was printed in Canada. That is correct, we're a Canadian magazine and we hope we can serve both the Canadians and Americans alike.

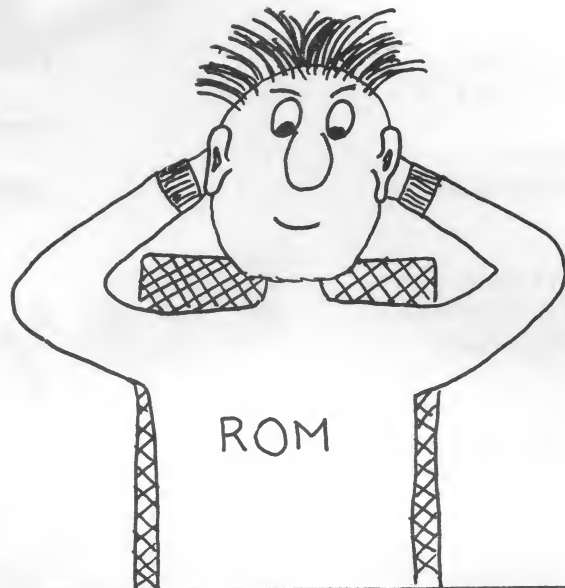
Each issue will be out every second month and then we hope to move to every month if we get enough reader support. This magazine will help you become a more capable programmer. Each issue will contain an assembly language program which will deal with learning to use it in a very effeciant way. Also there will be a beginning page for those who need help in getting started. Another section called 'The yellow brick road' will be devoted to giving memory locations and tables that can be used as reference sheets. Also 'Jumping Forth' will be a regular article that will deal with programming in the new language of forth. Each issue will also contain new products reviewed and ones that will be out in the near future.

Let me say a little about myself. I have had an Atari 800 since the old days when there was no GTIA chip and the only software out was Star Raiders. I've survived over the past few years but its been tough for all us devoted to this wonderful machine. I nearly bought the Apple II because of all the software for it, but my friend, who bought an Atari 800 just before I did, convinced me that in a few years the Atari would have lots of software. I believed him and he was right. Bob , the fellow who convinced me to buy the Atari, is with us and will be doing regular Assembly Language articles for all you beginning and advanced programmers.

In closing I'd like to say that we at ROM Inc. need lots of help so if you have any suggestions, comments, or programs please send them in and you won't go unrewarded.

So long for now,

Peter



Starting Page

By Peter Ellison

This section each issue will contain programs and tutorials that will help the beginning programmer get started. There will be articles in mostly basic and sometimes a little machine or assembler.

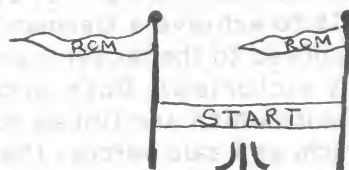
The first program is one that illustrates animation by using strings and player/missile graphics. When run a small orange man will run across the middle of the screen moving his arms and legs as would a real man would if running.

```
10 GRAPHICS 0:COLOR 3:SETCOLOR 2,16,1
90 REM DECLARATION OF VARIABLES
100 DIM P$(66),V$(33),D$(10)
110 FOR I=1 TO 22
115 REM READ PLAYER DATA
120 READ D$
130 P$(3*I-2,3*I)=D$
140 NEXT I
145 X=50:Y=60
145 REM INITIALIZE PLAYER/MISSILES
170 POKE 559,46
180 I=PEEK(106)-8:POKE 54279,I
190 PB=256*I
200 POKE 53277,3
210 FOR I=PB+512 TO PB+640
220 POKE I,0
230 NEXT I
240 POKE 704,55
250 POKE 53248,X
255 POKE 53256,1
260 C=C+1
270 IF C>2 THEN C=1
280 ON C GOTO 290,300,290
290 V$=P$(1,33):GOTO 310
300 V$=P$(34,66)
310 FOR I=1 TO 11
320 POKE PB+512+Y+I,VAL(V$(3*I-2,3*I))
330 NEXT I
340 X=X+2:POKE 53248,X
350 IF X>190 THEN 350
360 GOTO 260
390 REM PLAYER DATA
400 DATA 008,020,008,029,
042,072,040,012,018,114,067
410 DATA 008,020,008,024,
024,030,008,012,024,032,028
```

The second listing is a little different for it deals with another subject, sound. Sounds for the Atari can be made very easily in that all that you need to use is the Basic statement Sound A,B,C,D where A=the voice from 0-3,B=the pitch from 1-255,C=the distortion from 0-14(even numbers only), and D=the volume from 1-15(0 for rest or off). This list turns your keyboard into an organ

which plays the chords from low C to high F. When the program is run you can press any letter from A to R to play all of the chords. S or X will stop the sound completely. Remember if you have any programs or suggestions that you'd like to see done in 'Starting Page' please write.

```
0 DATA 81,64,53
1 DATA 96,76,64
2 GOTO 100
5 DATA 91,72,60
6 FOR K=1 TO 3:SOUND K,0,14,0:NEXT K
7 K=PEEK(764)
8 IF K=255 THEN 7
10 DATA 60,47,40
11 RESTORE K
12 DATA 53,42,35
13 FOR K=1 TO 3:READ S:SOUND K,S,14,6:NEXT K
14 TRAP 30000
15 DATA 108,85,72
17 GOTO 7
18 DATA 193,153,128
21 DATA 217,173,144
23 DATA 0,0,0
35 DATA 64,50,42
37 DATA 72,57,47
40 DATA 45,35,29
42 DATA 162,128,108
47 DATA 47,37,31
56 DATA 144,114,96
57 DATA 121,95,81
58 DATA 182,144,121
61 DATA 128,102,85
62 DATA 0,0,0
63 DATA 243,193,162
100 GRAPHICS 1:SETCOLOR 2,16,1:POSITION
7,10:?"#6;"CHORDS"
30000 GOTO 7
(Refer to Yellow Brick Road to see how PEEK(764)
is used).
```



The Raving Reviewer

By Tim Reekie
Tigers In The Snow
Strategic Simulations Inc.
465 Fairchild Drive, Suite 108,
Mountain View, California
94043
\$39.95 Diskette or cassette; 40K

SSI is a leader in computer strategic gaming. With *Tigers in the Snow*, have given us Hitler's last desperate attack on the Allies in World War II (affectionately known as, "The Battle of the Bulge"). For those unfamiliar with the battle, Hitler mounted a last ditch offensive through the Ardenne forest in Belgium which caught the Allies relatively weak and unprepared. The German Panzer units and infantry met some resistance but overall they advanced. But with the Allied reinforcements and airstrikes, and the Germans rapidly running out of fuel, the offensive was stalled and the rest is history.

The Game

There are four ways to play *Tigers in the Snow*:

- 1) Computer Vs. Itself
- 2) (a) Computer, as the Allies Vs. you, or the Germans.
(b) Computer, as the Germans Vs. you, as the Allies.
- 3) You Vs. a friend (or even better; an enemy).

For each of the above scenarios, there is a difficulty scale for each side from 1 to 9 which makes this an excellent game for beginners as well as the advanced. It always feels good for amateur wargamers, such as myself, to set the computer on 1 and myself on 9 and rip its defenses to shreds.

The basic idea of this game is for the Germans to do their patented blitz across country picking up various amounts of points for holding certain towns and generally killing the Allied armies. The Allies receive points mainly for holding the Germans.

At the beginning of the game, and indeed for over half the game, it seems that the Germans have an unbelievable advantage. This is merely an illusion, as you can well see if you remember who won the war!! It is, in fact, very difficult to achieve a German Strategic Victory (as opposed to the lesser marginal and operational victories). Both armies have Movement Points which are linked to the fuel received, which, as I said before, the Germans were in short supply of.

Both sides have several different terrains to travel over (clear, rough, forest, town, river) which take a certain number of movement points. Combat scenes are fought with, you

guessed it, Combat Points.

As with all excellent games, I could fill three pages just mentioning the historically accurate details. (For example, the part that weather played in the battle), but I have no more room. On to the ratings.

Ratings

These ratings will be used for all the games that will be reviewed in this magazine. It is obvious that an overall description of the game is not enough. I have decided to break down my opinions of this game into the following categories:

Playability: How easy, or difficult, the game is to understand and play.

Challenge: How challenging the game is and if it doesn't become too easy to play.

Graphics: Notes the overall quality mainly, but also takes into account speed and originality in design.

Sound: Includes the amount, type and especially the quality of sound in a game. I will also be giving marks for the fullest possible usage of the excellent sound potential of the Atari.

Documentation: This mainly will be the instruction booklet, but helpful hints, player aids and the like will be taken into consideration.

Overall: This will usually be the average of the first five, but would also include factors such as originality of the program, and the "lastingness" of the program (will you still be playing the game 6 months from ???).

I will usually give explanations for our numeric decisions, unless we feel the number is self explanatory or I have run out of room in this column.

The game is very playable, in that, once you have read the instructions, you can begin playing with an overall strategy. Just remember, Germans Blitz, Allies hold.

When playing the computer, the decision time tends to be too slow. Other than that the graphics are very good.

Before I get a nasty letter from SSI, I just want to say that I understand that it is extremely difficult to incorporate sound into strategy games and I really do sympathize, but I do want to make it clear to prospective buyers that if you wanted fantastic sound effects, then you're looking at the wrong program.

One area that was superbly done, was the instructions. The game and all the variables affecting play are laid out in a wonderful step-by-step guide. There is also a handy quick-look player aid as well as a map of the affected area. If you read between the lines of the "History of the Battle" you will find some helpful hints in playing the game.

My overall rating is: Turn up the stereo, sit back and enjoy another fine game from SSI.

Tigers in the Snow

Ratings Scale
 (1-Poor 10-Excellent)
 Playability-9
 Challenge-9
 Graphics-8
 Sound-4
 Documentation-10
 Overall Rating-8.5

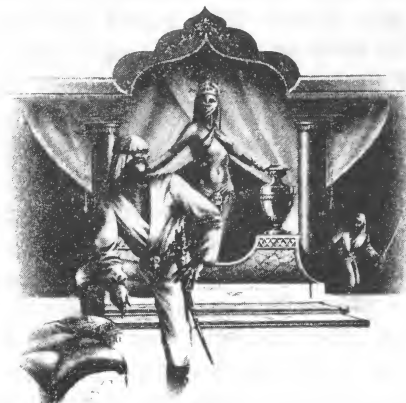
If you have any special requests or suggestions concerning my column, please address your letters to this magazine c/o The Raving Reviewer. Please keep the suggestions clean, I blush easily.



Fantasy for your ATARI

Ali Baba and the forty thieves

By Stuart Smith



Guide your alter ego, Ali Baba, through the thieves' mountain den in an attempt to rescue the beautiful princess. Treasure, magic, and great danger await you! One or more human players can guide up to seventeen friendly characters through the many rooms, halls, and caves. Some characters wander around randomly, making each adventure a little different.

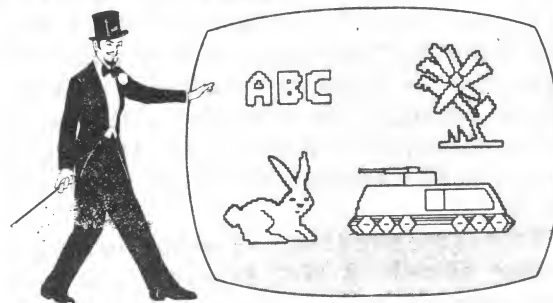
ALI BABA AND THE FORTY THIEVES is written in high resolution color graphics and includes music and sound effects. Adventures can be saved to disk and resumed at a later time. Requires 52K

On Diskette Only — \$32.95

Graphics for your ATARI

Character Magic

By Chris Hull



It's easy to create your own character sets and save them to diskette or cassette with CHARACTER MAGIC. But this is not just another character editor. CHARACTER MAGIC helps you use all the character types that the Atari is capable of, including descending characters (8 x 10 dots) and two types of five-color character graphics not supported by Atari's Operating System. Documentation includes examples of display lists that let you use these "secret" graphics modes. Requires 32K.

Cassette or Diskette - \$29.95

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6660 Reseda Blvd., Suite 105, Reseda, Ca 91335

(213) 344 6599

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Stock Broker-A game that lets you play the stock market.

By Bob Cockroft & Tim Reekie

This game was inspired from the board game 'Stock Ticker'(TM) where a person buys and sells stocks to try and earn more money. There are six stocks that are used in this game. They are; Grain, Industrial, Bonds, Oil, Silver, and Gold. The game can be played solitary or with as many players as you want. The game requires a minimum of 32K to run.

When we played this game we used the paper money and stocks from 'Stock Ticker' but if you want you can keep track of how much money and stocks you have on a piece of paper. When the program is run it takes a few seconds to set up the graph which keeps track of the stocks. The graph is made by the Atari's four players and two of the missiles. Each person starts out with a certain amount of money, which stocks can be bought with. When we played the game we each started with five thousand dollars and had a time limit before the game was over. You can make up your own type of rules. Send in your ideas.

Each player would then be given a chance to buy or sell stocks. The first question asked by the computer is 'what stock?' You would reply by typing in either; G-Grain, I-Industrial, B-Bonds, O=Oil, S-Silver, or A-Guld. The next question asked is whether you'll buy or sell the stock. B-Buy or S-Sell. After you choose what stock you wish to buy or sell you have to enter how much of the stock. Remember you must have enough money to pay for the stock (if buying) or have the stock (if selling). The computer will now print out how much you have to pay for the stock (if buying) or the amount of money received if selling.

The last question is whether you're finished or not (Y/N)? If everyone who is playing the game has bought or sold all they want for that turn type Y if not type N. When Y is type in the computer will begin to move the stocks according to the buying and selling that took place during that game turn. Dividends come on the bottom of the screen for each of the stocks. This dividend is how much you receive per thousand of the stock you own. Hot tips are helpful tips that appear on the bottom of the screen. These tips can be anything from saying Grain will fall to saying Gold will rise. These tips may not always be true but thats the chance you have to take when you play the market. After each tip or dividend you must push a key to continue.

Another added feature added to this stock market game is that you don't have to start the game with all the stocks at par. By typing

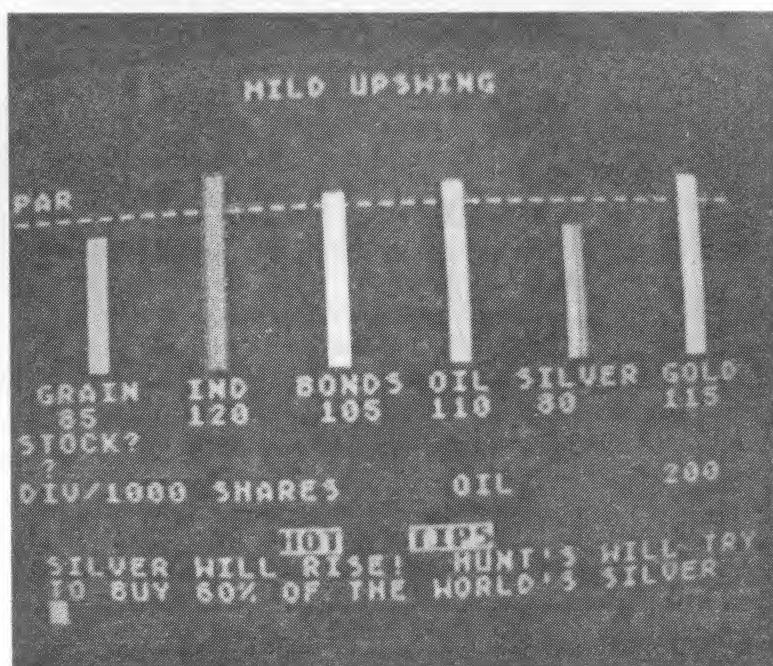
in P(where it asks for what stock) a couple of times it is possible to have some stocks go up and others go down. This can make the game more enjoyable to play.

Those are all the rules that we use, now type in the program and enter the world of big business. One more thing in closing. When a stock splits you may sell your stock at double the value or receive as much stock as you have. Remember the stock returns back to par when splitting. If a stock goes off the market you lose all the shares which you have in that particular stock. The stock also returns back to par.

For those who don't have time to type in the program below send \$4.00 and a blank disk or cassette to:

ROM
P.O. BOX 252,
Maple Ridge, B.C.
V2X 7G1

Stock Ticker is a register trademark of Parker Bros.
Below is a picture of the program when run:




```

1 SR=100:A=100:B=100:D=100:I=100:G=100
2 DIM ST$(1):DIM F$(1):DIM BS$(1)
3 DIM SR$(16):DIM MR$(14):DIM MU$(12):DIM PU$(18)
5 DIM FR$(120)
6 TR=0
7 DIM QQ$(3)
8 DIM S1$(6),S2$(6),S3$(6),S4$(6),S5$(6),S6$(6),T$(6)
9 S1$="GRAIN":S2$="IND":S3$="BONDS":S4$="OIL":S5$="SILVER":S6$="GOLD"
10 GRAPHICS 0
11 J1=70
12 GOL=0:GRA=0:IND=0:OIL=0:SIL=0:BON=0
13 DIM Q$(6)
14 PA=17
15 ST=0
16 DIM GR1$(120),GR2$(120),GR3$(120),GR4$(120),IN1$(120),IN2$(120),IN3$(120),IN4
$(120),BO1$(120),BO2$(120)
17 DIM BO3$(120),BO4$(120),OI1$(120),OI2$(120),OI3$(120),OI4$(120),SI1$(120),SI2
$(120),SI3$(120),SI4$(120)
18 DIM AU1$(120),AU2$(120),AU3$(120),AU4$(120)
19 GOSUB 2000
20 SST=0:GT=0:AT=0:IT=0:BT=0:OT=0
21 POKE 559,62
30 POKE 53252,154:POKE 53253,156
32 POKE 53254,177:POKE 53255,179
35 POKE 53248,66:POKE 53249,88:POKE 53250,110:POKE 53251,132
40 POKE 704,218
42 POKE 705,88
43 POKE 706,202
44 POKE 707,88
45 POKE 711,88
50 IP=PEEK(106)-16
60 POKE 54279,IP
70 POKE 53277,3
80 J=IP*256+1024
81 J1=IP*256+1280
82 J2=IP*256+1536
83 J3=IP*256+1792
85 GRB=IP*256+768
90 POKE J+132,240
120 POKE J1+132,240
122 POKE J2+132,240
124 POKE J3+132,240
150 POKE GRB+132,255
200 LO=255
205 GM=240:IM=240:BM=240:OM=240
210 GR=INT(G/2)
215 IN=INT(I/2)
220 BO=INT(B/2)
225 OI=INT(O/2)
230 SI=INT(SR/2)
235 AU=INT(A/2)
250 FOR MR=1 TO -100 STEP -1
255 IF MR<-GR THEN GM=0
260 IF MR<-IN THEN IM=0
265 IF MR<-BO THEN BM=0
270 IF MR<-OI THEN OM=0
280 POKE J+132+MR,GM
285 POKE J1+132+MR,IM
290 POKE J2+132+MR,BM
295 POKE J3+132+MR,OM
296 NEXT MR
300 IF SI=AU THEN BA=AU
305 IF SI>AU THEN BA=AU
310 IF SI<AU THEN BA=SI

```

```

370 IF SI=AU THEN FOR MR=-BA
375 IF SI>AU THEN TO=15:NA=SI
380 IF SI<AU THEN TO=240:NA=AU
390 FOR MR=-BA TO -100 STEP -1
395 IF MR<-NA THEN TO=0
400 POKE GRB+132+MR,TO
405 NEXT MR
410 FOR MR=1 TO -100 STEP -1
420 IF MR<-BA THEN 500
430 POKE GRB+132+MR,LO
440 NEXT MR
441 RETURN
500 POSITION 1,5
502 PRINT "PAR"
504 POSITION 2,13
505 PRINT "GRAIN"
506 POSITION 3,14:PRINT G:IF G<100 THEN POKE 40565,0
510 POSITION 9,13
515 PRINT "IND"
516 POSITION 9,14:PRINT I:IF I<100 THEN POKE 40571,0
520 POSITION 14,13
525 PRINT "BONDS"
526 POSITION 15,14:PRINT B:IF B<100 THEN POKE 40577,0
530 POSITION 20,13
535 PRINT "OIL"
536 POSITION 20,14:PRINT O:IF O<100 THEN POKE 40582,0
540 POSITION 24,13
545 PRINT "SILVER"
546 POSITION 25,14:PRINT SR:IF SR<100 THEN POKE 40587,0
550 POSITION 31,13
555 PRINT "GOLD"
556 POSITION 31,14:PRINT A:IF A<100 THEN POKE 40593,0
560 POSITION 1,6
570 PRINT "-----"
580 POSITION 1,14
1001 GOTO 1020
1010 GOSUB 200
1020 GOSUB 3000
1022 IF R>=TR THEN GOSUB 8000:R=R+1
1029 FOR II=1 TO 5
1030 Y=INT(RND(0)*6)
1031 G=G+GT:GT=0
1032 A=A+AT:AT=0
1033 I=I+IT:IT=0
1034 O=O+OT:OT=0
1035 S=S+ST:ST=0
1036 B=B+BT:BT=0
1040 YY=INT(RND(0)*3)
1050 YYY=INT(RND(0)*3)
1120 IF YYY=0 THEN D=5
1130 IF YYY=1 THEN D=10
1140 IF YYY=2 THEN D=20
1141 IF Y=0 THEN X1=G:T$=S1$
1142 IF Y=1 THEN X1=A:T$=S6$
1143 IF Y=2 THEN X1=I:T$=S2$
1144 IF Y=3 THEN X1=O:T$=S4$
1145 IF Y=4 THEN X1=SR:T$=S5$
1146 IF Y=5 THEN X1=B:T$=S3$
1150 IF YY=0 THEN GOTO 1200
1151 IF YY=1 THEN D=-D
1152 X=D+ZZ:IF Y=5 THEN B=B+X
1153 IF Y=0 THEN G=G+X
1154 IF Y=1 THEN A=A+X
1155 IF Y=2 THEN I=I+X

```

```

1156 IF Y=3 THEN O=O+X
1157 IF Y=4 THEN SR=SR+X
1159 IF G>199 THEN Q$=S1$:GOSUB 10000
1160 IF A>199 THEN Q$=S6$:GOSUB 10000
1161 IF I>199 THEN Q$=S2$:GOSUB 10000
1162 IF O>199 THEN Q$=S4$:GOSUB 10000
1164 IF B>199 THEN Q$=S3$:GOSUB 10000
1165 IF G<1 THEN Q$=S1$:GOSUB 10500
1166 IF A<1 THEN Q$=S6$:GOSUB 10500
1167 IF I<1 THEN Q$=S2$:GOSUB 10500
1168 IF O<1 THEN Q$=S4$:GOSUB 10500
1169 IF SR<1 THEN Q$=S5$:GOSUB 10500
1170 IF B<1 THEN Q$=S3$:GOSUB 10500
1172 IF SR>199 THEN Q$=S5$:GOSUB 10000
1178 IF G>199 OR G<1 THEN G=100
1180 IF A>199 OR A<1 THEN A=100
1182 IF I>199 OR I<1 THEN I=100
1184 IF B>199 OR B<1 THEN B=100
1186 IF O>199 OR O<1 THEN O=100
1188 IF SR>199 OR SR<1 THEN SR=100
1195 POKE 710,5
1200 IF X1<101 OR YY>0 THEN 1260
1210 W=10*D
1220 POSITION 1,PA
1230 PRINT "DIV/1000 SHARES",T$,W
1232 IF PA>21 THEN PA=16
1235 PA=PA+1
1260 NEXT II
1261 Z=0
1262 GOTO 1010
2000 GOL=0:GRA=0:IND=0
2010 OIL=0:SIL=0:BON=0
2020 SR$="SEVERE RECESSION"
2030 MR$="MILD RECESSION"
2040 MU$="MILD UPSWING"
2050 PU$="PHENOMENAL UPSWING"
2060 GOSUB 6000
2090 RETURN
3000 GOSUB 4000
3001 CO=CO+1
3009 POSITION 1,15
3010 PRINT "STOCK?      ":INPUT ST$
3011 FOR RU=1 TO 38:POKE 40642+RU,0:NEXT RU
3012 R=R+1
3013 FOR RU=10 TO 29:POKE 40082+RU,0:NEXT RU
3014 IF ST$="P" OR ST$="Q" THEN 3235
3015 POSITION 1,15
3020 PRINT "  B/S?":INPUT BS$
3021 FOR RU=1 TO 38:POKE 40642+RU,0:NEXT RU
3025 POSITION 1,15
3030 PRINT "QUANTITY?":INPUT Q
3031 FOR RU=1 TO 38:POKE 40642+RU,0:NEXT RU
3035 POSITION 1,15
3040 IF BS$="S" THEN Q=-Q
3050 IF ST$="A" THEN ST=GOL:X=A:GOTO 3117
3060 IF ST$="G" THEN ST=GRA:X=G:GOTO 3117
3070 IF ST$="I" THEN ST=IND:X=I:GOTO 3117
3080 IF ST$="O" THEN ST=OIL:X=O:GOTO 3117
3090 IF ST$="S" THEN ST=SIL:X=SR:GOTO 3117
3100 IF ST$="B" THEN ST=BON:X=B:GOTO 3117
3110 PRINT "RE-ENTER STOCK":GOTO 3010
3117 WT=X*Q:POSITION 20,16:PRINT "VALUE  ";WT/100
3122 C=(Q/((ST*2)+12000))*100
3123 ST=ST+Q

```



```

3124 MOE=INT(RND(0)*5)-3
3126 IF C<(-25+MOE) THEN X=X-40
3128 IF C<(-10+MOE) AND C>(-25+MOE) THEN X=X-25
3130 IF C<(-5+MOE) AND C>(-10+MOE) THEN X=X-10
3132 IF C>(5+MOE) AND C<(10+MOE) THEN X=X+10
3134 IF C>(10+MOE) AND C<(25+MOE) THEN X=X+15
3136 IF C>(25+MOE) THEN X=X+30
3137 LIN=INT(RND(0)*8)+1
3138 IF X<50 AND LIN=1 THEN X=X-40
3140 IF ST$="A" THEN A=X:GOL=ST
3150 IF ST$="G" THEN G=X:GRA=ST
3160 IF ST$="I" THEN I=X:IND=ST
3170 IF ST$="O" THEN O=X:OIL=ST
3180 IF ST$="S" THEN SR=X:SIL=ST
3190 IF ST$="B" THEN B=X:BON=ST
3200 PRINT "FINISHED?":INPUT F$
3203 IF F$="N" THEN 3009
3220 IF F$="Y" THEN 3235
3230 GOTO 3200
3235 FOR RU=1 TO 280:POKE 40659+RU,0:NEXT RU
3240 RETURN
4000 HT=INT(RND(0)*20)
4001 E=INT(RND(0)*100)
4002 IF E>65 THEN E=1
4010 IF HT>2 THEN RETURN
4109 CH=INT(RND(0)*25)+1
4112 POKE 559,62
4115 POSITION 1,19
4120 PRINT "          HOT      TIPS"
4131 IF CH=1 THEN FR$=GR1$:IF E=1 THEN GT=20
4134 IF CH=2 THEN FR$=GR2$:IF E=1 THEN GT=-20
4136 IF CH=3 THEN FR$=GR3$:IF E=1 THEN GT=15
4138 IF CH=4 THEN FR$=GR4$:IF E=1 THEN GT=-15
4140 IF CH=5 THEN FR$=IN1$:IF E=1 THEN IT=25
4142 IF CH=6 THEN FR$=IN2$:IF E=1 THEN IT=-25
4144 IF CH=7 THEN FR$=IN3$:IF E=1 THEN IT=20
4146 IF CH=8 THEN FR$=IN4$:IF E=1 THEN IT=-20
4148 IF CH=9 THEN FR$=BO1$:IF E=1 THEN BT=10
4150 IF CH=10 THEN FR$=BO2$:IF E=1 THEN BT=-10
4152 IF CH=11 THEN FR$=BO3$:IF E=1 THEN BT=5
4154 IF CH=12 THEN FR$=BO4$:IF E=1 THEN BT=-5
4156 IF CH=13 THEN FR$=SI1$:IF E=1 THEN ST=30
4158 IF CH=14 THEN FR$=SI2$:IF E=1 THEN ST=-30
4160 IF CH=15 THEN FR$=SI3$:IF E=1 THEN ST=20
4162 IF CH=16 THEN FR$=SI4$:IF E=1 THEN ST=-20
4164 IF CH=17 THEN FR$=OI1$:IF E=1 THEN OT=40
4166 IF CH=18 THEN FR$=OI2$:IF E=1 THEN OT=-40
4168 IF CH=19 THEN FR$=OI3$:IF E=1 THEN OT=30
4170 IF CH=20 THEN FR$=OI4$:IF E=1 THEN OT=-30
4172 IF CH=21 THEN FR$=AU1$:IF E=1 THEN AT=35
4174 IF CH=22 THEN FR$=AU2$:IF E=1 THEN AT=-35
4176 IF CH=23 THEN FR$=AU3$:IF E=1 THEN AT=25
4178 IF CH=24 THEN FR$=AU4$:IF E=1 THEN AT=-25
4180 ? FR$
4200 IF PEEK(753)=0 THEN 4200
4205 FOR RU=1 TO 120:POKE 40772+RU,0:NEXT RU
4210 GOTO 500
4400 RETURN
6000 GR1$="GRAIN WILL RISE!   UNEXPECTED FROST   DESTROYS AMERICAN CROPS"
6010 GR2$="GRAIN WILL FALL!   RECORD WHEAT CROPS   DUE TO GOOD WEATHER!"
6020 GR3$="GRAIN WILL RISE!   UNEXPECTED LOCUST   PLAGUES OVER PRAIRIES!"
6030 GR4$="GRAIN WILL FALL!   RUSSIANS REJECT     AMERICAN GRAIN EXPORTS!"
6040 IN1$="IND. WILL RISE!    C.P. RAIL WISHES    TO BUY MANY MAJOR INDUSTRIES!"

```

```

6050 IN2$="IND. WILL FALL!    INTEREST RATES    PREDICTED TO RISE SIGNICANTLY $
DON!"
6060 IN3$="IND. WILL RISE!    WORLD-WIDE INCREASE IN HOUSING STARTS!"
6070 IN4$="IND. WILL FALL!    WORLD-WIDE GENERAL STRIKE PLANNED FOR NEXT MONTH!"
6080 BO1$="BONDS WILL SKY-ROCKET WITH PREDICTED FALL IN INFLATON!"
6090 BO2$="BONDS WILL PLUMMET WITH PREDICTED RISE IN INFLATION!"
6100 BO3$="BONDS WILL RISE!    CANADA SAVINGS    BONDS WILL PAY 40% INTEREST!"
6110 BO4$="BONDS WILL FALL!    BANK OF CANADA    WILL BE UNABLE TO PAY BOND INTE
REST!"
6120 OI1$="OIL WILL RISE!    ARABS ARE PLOTTING    MAJOR OIL EMBARGO!"
6130 OI2$="OIL WILL FALL!    BRAZILIANS DEVISE    METHOD OF DERIVING OIL FROM COF
FEE!"
6140 OI3$="OIL WILL RISE!    PRINCE IBIN-AGDOF    CLOSSES ALL ARABIAN OIL WELLS AN
D CHICKEN-FARM INSTEAD!"
6150 OI4$="OIL WILL FALL!    AYATOLLAH WILL TRADE HIS OIL FOR WESTERN WATER!"
6160 SI1$="SILVER WILL FALL!    MAJOR SILVER    DEPOSIT FOUND IN THE ROCKIES!"
6170 SI2$="SILVER WILL FALL!    HUNT'S WILL DECIDE TO SELL ALL THEIR SILVER"
6180 SI3$="SILVER WILL RISE!    HUNT'S WILL TRY    TO BUY 60% OF THE WORLD'S SILVE
R"
6190 SI4$="SILVER WILL RISE!    SILVER CONSUMPTION    WILL INCREASE BY 50%"
7000 AU1$="GOLD WILL RISE!    RUSSIAN PLANS SECRET    NUCLEAR ATTACK ON WEST!"
7010 AU2$="GOLD WILL FALL!    RONNIE IS GOING TO    SELL ALL AMERICA'S GOLD RESERVE
S!"
7020 AU3$="GOLD WILL RISE!    FORT KNOX HAS BEEN    ROBBED!"
7030 AU4$="GOLD WILL FALL!    GOLD FOUND ON    PRAIRIES! 'MORE GOLD THAN WHEAT
'"
7040 RETURN
8000 CO=0
8030 TR=INT(RND(0)*4)+3
8040 TYPE=INT(RND(0)*7)
8050 R=1
8055 POSITION 12,1
8056 PRINT "
8057 POSITION 12,1
8060 IF TYPE=0 THEN PRINT SR$:ZZ=-30
8070 IF TYPE=1 THEN PRINT MR$:ZZ=-10
8080 IF TYPE=2 THEN PRINT MU$:ZZ=5
8090 IF TYPE=3 THEN PRINT PU$:ZZ=10
8094 IF TYPE=4 THEN PRINT MR$:ZZ=-10
8095 IF TYPE>4 THEN ? "STABLE ECONOMY"
8100 RETURN
10000 RESTORE
10001 READ P1,T1
10005 JJ1=5
10010 SOUND 1,4,1,0:FOR N1=1 TO 4:NEXT N1
10020 SOUND 1,P1,10,15
10030 FOR N1=1 TO JJ1:NEXT N1
10040 IF T1<>1 THEN FOR N=1 TO T1*(JJ1/2):NEXT N
10050 IF T1<>4 THEN 10001
10100 DATA 108,2,85,1,85,2,72,1,72,2,53,1,53,2,42,1,42,2,53,1,53,2,72,1,72,2,85,
1,85,2,47,1,47,2
10200 DATA 57,1,57,2,72,1,72,2,81,1,81,2,47,1,42,1,53,2,53,2,53,2,53,2,53,4
10250 POSITION 12,2: ? Q$:" SPLIT!!"
10298 RESTORE
10299 SOUND 1,1,1,0
10300 RETURN
10500 RESTORE 10600
10501 JJ1=6
10502 READ P1,T1
10510 SOUND 1,4,1,0:FOR N=1 TO 4:NEXT N
10520 SOUND 1,P1,10,15
10530 FOR N=1 TO JJ1:NEXT N
10540 IF T1<>1 THEN FOR N=1 TO T1*(JJ1/2):NEXT N
10550 IF T1<>4 THEN 10502

```

JUMPING FORTH

By Peter Ellison

This section each issue will deal with programming in Forth, but for this first issue only two reviews are written about two packages from Valpar International just to give a short description of an excellent version of 'Forth'. All of the programs in this section will be written in 'Valforth' but most versions of Forth are similar, making the programs in this section applicable to any Forth.

Valforth-"One Heck of a Language"

Forth for those people who don't know what it is, here is a definition: It is a stack oriented, high level language in which the user adds to the basic kernel of commands by defining words(commands) of his/her won. Forth is very fast because the Forth interpreter is only about 30 bytes compared to Pascal or Basic interpreters which are usually two thousand bytes long. Forth having such a small interpreter executes ten to twenty times faster than other interpreted languages. Machine code can be very easily incorporated into your program using the flexible 6502 assembler built into Valforth.

Now that you know what Forth is I will now tell you some of the advantages Valforth has over the other Forth versions. Number one it is very easy to write software for sale because in the Valforth package there is a special defined word called AUTO. This word when used to save your program will run your program when the computer is booted up. No one will be able to get at your program. Another advantage is it supports all player/missile graphics as well as all the graphic modes. Another advantage of Valforth is that it has a choice of two different editors. The first being the regular Fig(Forth Interest Group) as well as the special Valforth 1.0 editor. The Valforth 1.0 editor is actually a stripped down version of the Valforth 1.1 editor which is available on one of the many other user supported disks available from Valpar International. Another excellent thing Valforth offers is the ability to save your favourite system(s) on a disk which when booted up will have all your favourite systems loaded automatically.

The only bad thing that I can say about Valforth is the documentation. Some of the instructions are not made as clear as they could have been. One was the SAVE command. I had to experiment with that one a bit before I was clear on how it exactly worked. There are a few things different from fig-forth but they are all given at the beginning of the manual

supplied with Valforth. Before I bought Valforth I had never programmed in Forth but with the book 'Starting Forth' by Leo Brodie I've been making my way through it quite easily. Its a bit harder then basic but all the time I've spent on it so far has been worth the effort.

Player Missile & Sound Editor for Valforth

If you haven't read the review of Valforth I suggest you do that before you get too confused by reading this. When I bought this disk for my Valforth I was really suprised how fast and easy it was to move a player around the screen. I nearly screamed because I had spent many hours learning how to make assembly language subroutines to speed up my player and then to find out how easy it was with this package for my Valforth.

To initialize a player all that is needed is a simple command of PMINIT. To draw a player: first you change it to BASE 2(2 BASE!) for convenience, label it(LABEL PICT), and then draw your player with ones and zeros. Then change it back to base 10 by typing in DECIMAL. Next you must clear the player/missile memory by typing in PMCLR. This won't leave any junk on the screen if your starting a new player. Next you must turn on the players by typing in ON PLAYERS. Finally to get your player on the screen you type in PICT A B C N BLDPLY. This will build your player wherever you want. A=bytes long, B,C=the position the player is on the screen and, N=0-4 depending on what player you want.

You will now have a player on the screen at position(B,C). To move it is easier then making it, which was very simple. First you load in the stick utility from the disk and then type in the short program below:

```
:JOY
  BEGIN
  N STICK
  N PLMV
  ? TERMINAL
  UNTIL ;
```

Then type JOY<RTN> and you can use joystick number N to move it all around the screen. The PLMV command can be used to move a player in any direction. To make a multi-color player is very simple because one of the defined words is MCPLY. The way this is done is by combining two or more different players together.

This disk also has a Character Editor. It allows you to draw a character 8x8 using the joystick and call it back from the disk by using KLOAD. The disk also includes a very excellent sound editor. It allows you to experiment with the four different sound channels within your computer. Each of the four channels are interfaced to one of the four joystick ports. The joysticks allow the setting of

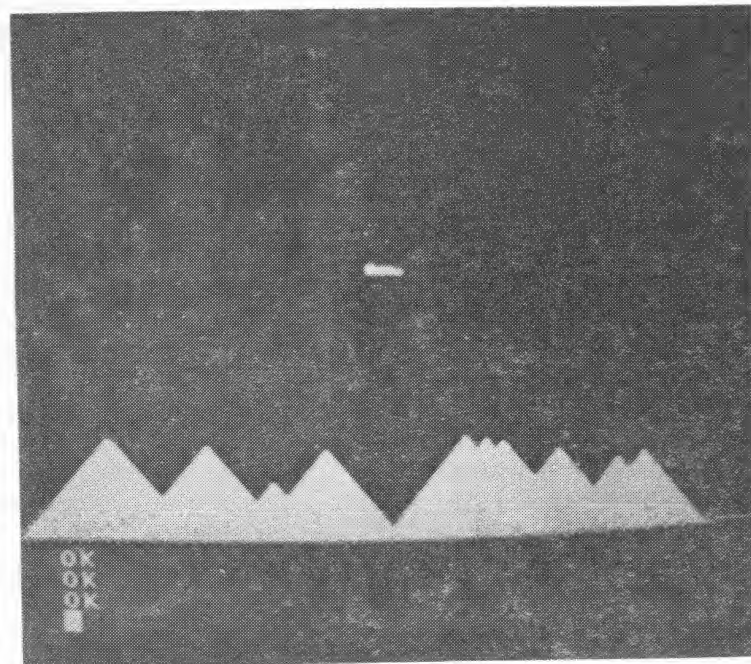
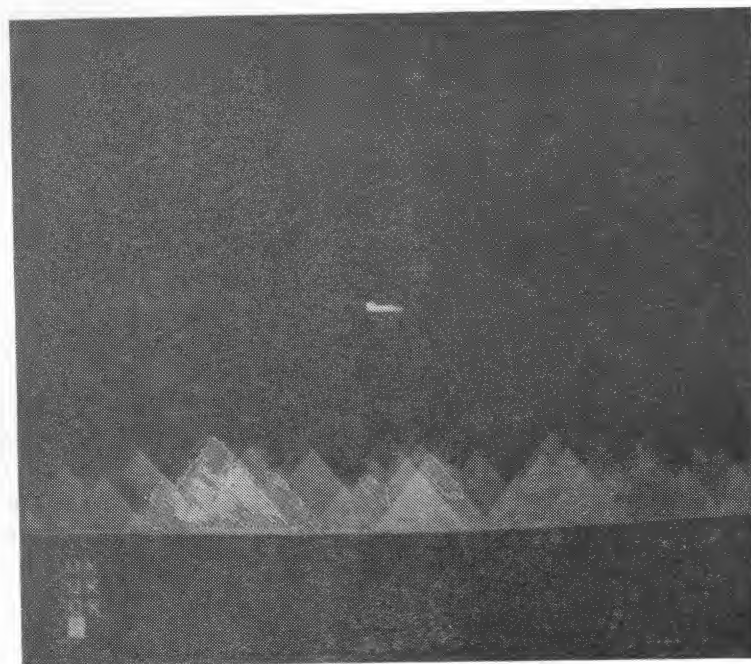
Scrolling Ship

By Bob Cockroft

Below is a program which when run will first draw random mountains on the screen, then random stars and then a space ship in the middle of the screen. After in the lower left corner of the screen "O.K." will be printed. Move the joystick in port one to the left or right and watch the ship fly. The mountains below are scrolling giving the ship the effect of moving. The ship will also fly up and down and fire bullets by pushing the red button. The bullets are directional, meaning when a bullet is fired, by moving the ship the bullet can be directed to whatever direction you want. The movement and firing of the ship is done in machine code by using the USR command.

Documentation

15-36 Draws mountains
40-82 Set up player/missiles
144-152 Draws player to the left
160-194 Draws player to the right
480-570 Missiles firing
2400-2720 Stick detection for left and right movement
2750-2900 Movement down
3000-3200 Movement up



```

1 REM *DEF9.MAS*
5 POKE 1782,0
10 GRAPHICS 8
15 COLOR 1
16 PLOT 0,156:DRAWTO 319,156
17 POKE 559,62
18 SETCOLOR 2,16,1
20 FOR T=1 TO 18
21 F=INT(RND(0)*240)+50:G=INT(RND(0)*30)+120:C=F
22 IF F>316 OR F<3 THEN 27
23 F=F-1:C=C+1:G=G+1
24 PLOT F,G:DRAWTO C,G
25 IF G=155 THEN RESTORE :GOTO 27
26 GOTO 23
27 IF G>316 OR G<3 THEN 27
28 NEXT T
30 POKE 53248,120
32 POKE 53252,120
33 FOR T2=1 TO 50
34 X3=INT(RND(0)*319):Y3=INT(RND(0)*150)
35 PLOT X3,Y3
36 NEXT T2
40 POKE 704,174
42 POKE 705,88:POKE 706,88:POKE 707,88
50 I=PEEK(106)-8
58 POKE 1783,120
60 POKE 54279,I
70 POKE 53277,3
75 POKE 53760,50
80 J=I*256+1024
82 M1=I*256+768
144 FOR X=1 TO 45
145 READ D
146 POKE 1535+X,D
147 NEXT X
148 DATA 172,254,6,169,192,153,1,156,169,252,153,2,156,169,255,153,3,156,169,3
150 DATA 153,3,155,169,0,153,4,156,153,0,156,153,2,155,153,4,155,169,1
152 DATA 141,253,6,76,232,46
160 FOR A=1 TO 45
170 READ R
175 POKE 1599+A,R
180 NEXT A
190 DATA 172,254,6,169,3,153,1,156,169,63,153,2,156,169,255,153,3,156
192 DATA 169,3,153,3,155,169,0,153,4,156,153,0,156,153,2,155,153,4,155,169,2
194 DATA 141,253,6,76,232,46
200 FOR T=1 TO 75
202 READ W
204 POKE 13999+T,W
205 NEXT T
207 DATA 173,255,6,201,0,208,9
208 DATA 173,253,6,141,248,6,141,255,6,173,248,6,201,1,240,13,160,206,140,222,54
,160,1,140,232,54
210 DATA 76,222,54,160,238,140,222,54,160,225,140,232,54,238,247,6,173,247,6,141
,4,208,201,225,208,13
212 DATA 169,120,141,247,6,169,0,141,248,6,141,255,6,76,27,47
480 FOR X1=1 TO 169
482 READ L1
488 POKE 14999+X1,L1
490 NEXT X1
500 DATA 169,50,141,0,210,160,0,200,192,254,208,251,172,254,6,238,246,6,174,246,
6,224,1,240
510 DATA 18,224,50,240,40,224,150,240,59,224,200,240,78,224,255,240,108

```

```

520 DATA 208,218,169,60,141,192,2,169,24,153,3,156,153,1,156,169,60,153,2,156,16
9,144,141,1,210
525 DATA 76,157,58
530 DATA 169,140,141,1,210,169,104,141,192,2,169,137,153,0,156
540 DATA 169,36,153,255,155,76,157,58,169,136,141,1,210,169,88,141,192,2,169,74,
153,254
550 DATA 155,169,16,153,253,155,76,157,58,169,132,141,1,210,169,60,141,192,2,169
560 DATA 149,153,253,155,169,34,153,252,155,169,8,153,251,155,169,90,153,1,156,7
6,157,58
570 DATA 169,0,153,0,156,153,255,155,153,254,155,153,253,155,153,252,155,153,251
,155,96
2400 FOR E=1 TO 290
2420 READ N
2430 POKE 11999+E,N
2440 NEXT E
2450 DATA 162,120,160,125,140,254,6,104
2460 DATA 172,84,128,192,80,208,5,160,40,140,84,128,192,8,240,247
2480 DATA 172,5,208,192,4,208,3,76,152,58
2500 DATA 160,5,140,1,210,172,132,2,192,0,208,3,76,176,54,172,255,6,192,0,240,3
2520 DATA 76,192,54,173,120,2,141,252,6,201,11,240,65
2550 DATA 201,7,240,40,201,14,240,30,201,6,240,26,201,5,240,25,201,9,240,21,201,
10,240,14,201,13
2600 DATA 240,13,160,0,200,192,254,208,251,76,232,46,76,123,47,76,190,47
2650 DATA 238,84,128,238,180,128,160,13,140,1,210,160,1,200,192,253,208,251,76,0
,6,206,84,128,206,180,128
2700 DATA 160,13,140,1,210,160,1,200,192,253,208,251,76,64,6
2720 DATA 160,15,140,1,210
2750 DATA 172,254,6,136,192,20,208,2,160,21,140,254,6,160,1,200,192,253,208,251,
173,252,6
2800 DATA 201,14,208,13,173,253,6,201,1,208,3,76,0,6,76,64,6
2900 DATA 201,10,240,9,238,180,128,238,84,128,76,0,6,206,180,128,206,84,128,76,6
4,6
2950 DATA 160,3,140,1,210
3000 DATA 172,254,6,200,192,185,208,2,160,184,140,254,6,160,1,200,192,253
3100 DATA 208,251,173,252,6,201,13,208,13,173,253,6,201,1,208,3
3200 DATA 76,0,6,76,64,6,201,9,240,9,238,180,128,238,84,128,76,0,6,206,180,128,2
06,84,128,76,64,6,96
4800 FOR G=1 TO 20
4900 PRINT "OK"
4960 NEXT G
5000 X=USR(12000)
5050 PRINT "TIM":GOTO 5050
6000 GRAPHICS 0
6010 RESTORE
6015 FOR P=12000 TO 14000
6020 PRINT P,PEEK(P)
6030 IF PEEK(764)=63 THEN 6080
6040 IF PEEK(753)=0 THEN 6040
6050 IF PEEK(764)=21 THEN 6130
6060 IF PEEK(764)=40 THEN 6190
6070 NEXT P
6080 RESTORE
6090 FOR P=1536 TO 1790
6100 PRINT P,PEEK(P)
6110 IF PEEK(753)=0 THEN 6110
6120 NEXT P
6130 RESTORE
6140 FOR X=14000 TO 15000
6150 PRINT X,PEEK(X)
6160 IF PEEK(753)=0 THEN 6160
6180 NEXT X
6190 RESTORE
6290 FOR X=14999 TO 18999

```

```

6300 PRINT X,PEEK(X)
6310 IF PEEK(753)=0 THEN 6310
6320 NEXT X

```


Yellow Brick Road

By Peter Ellison

This section in the magazine will be directed to poke & peek locations and other Atari memory locations that are looked up alot. This will make it faster for programming because you won't have to search for certain memory locations all through your reference manuals every time you program. Every month different locations will be given. Some of these locations can be found in the references pages that come with your computer but they won't be all on a few pages like the ones that will be in this section each issue.

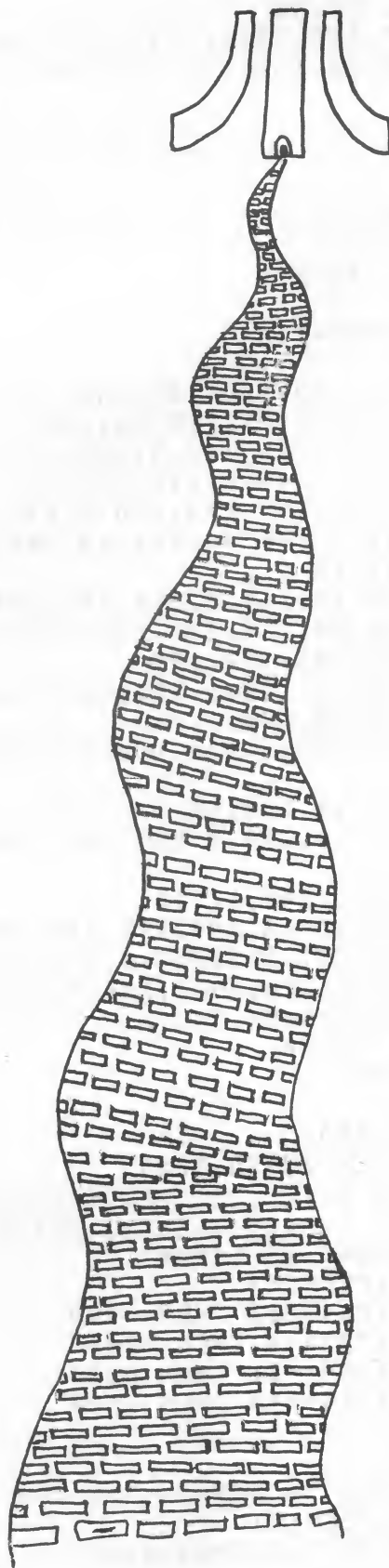
Many times for a game or business program a key must be pressed to continue during program execution and below is the location for each key on the keyboard. If no key is pressed PEEK(764) will be equal to 255.

KEY PEEK(764) KEY PEEK(764)

A	63	W	46
B	21	X	22
C	18	Y	43
D	58	Z	23
E	42	1	31
F	56	2	30
G	61	3	26
H	57	4	24
I	13	5	29
J	1	6	27
K	5	7	51
L	0	8	53
M	37	9	58
N	35	0	50
O	8	+(LEFT)	6
P	10	*(RIGHT)	7
Q	47	-(UP)	14
R	40	=(DOWN)	15
S	62		
T	45	RETURN	12
U	11	ESC	28
V	16		

Below is short program that when run will draw a cross in the center of the screen using the four cursor control arrows.

```
5 GRAPHICS 5:COLOR 1:SETCOLOR 2,16,1
6 X=35:Y=20
10 T=PEEK(764):IF T=255 THEN 10:REM TO
SEE IF KEY IS PRESSED
14 PLOT X,Y
20 POKE 764,255:REM RESET LOCATION 764
FOR NEXT KEY
30 IF T=6 THEN DRAWTO X-5,Y: "LEFT"
35 IF T=7 THEN DRAWTO X+5,Y: "RIGHT"
40 IF T=14 THEN DRAWTO X,Y-5: "UP"
45 IF T=15 THEN DRAWTO X,Y+5: "DOWN"
50 GOTO 10
```

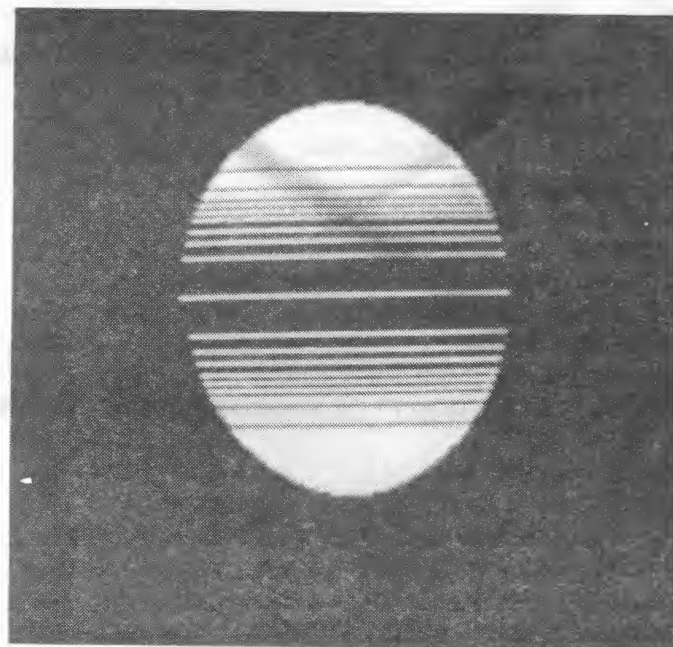


Satellite

By Bob Cockroft

This program below illustrates a satellite which orbits a planet. The satellite changes different colors as it travels around the planet and you can actually see its elliptical orbit.

This program requires at least 16K.



```
8 GRAPHICS 8
9 COLOR 1
11 PLOT 20,130:PLOT 234,20
12 SETCOLOR 2,16,1
18 B=101
19 A=201
20 COLOR 1
35 FOR X=100 TO 150
40 Y=-SQR(-(X-150)*(X-150)+2500)+95
54 A=A-1
55 PLOT X,Y:DRAWTO A,Y
60 NEXT X
65 FOR X=200 TO 145 STEP -1
70 Y=SQR(-(X-150)*(X-150)+2500)+95
84 B=B+1
85 PLOT X,Y:DRAWTO B,Y
90 NEXT X
100 PLOT 40,10:PLOT 200,50:PLOT 310,143
120 FOR X=70 TO 231
130 Y=SQR(-100*(X-150)*(X-150)
/6561+100)+95
135 PLOT X,Y
137 IF X>125 THEN 139
138 GOTO 141
139 IF X<177 THEN 142
141 R=X-1
142 Y=SQR(-100*(R-150)*(R-150)
/6561+100)+95
143 COLOR 0
144 PLOT R,Y
145 COLOR 1
150 NEXT X
160 FOR X=230 TO 69 STEP -1
161 IF X>198 THEN 170
162 IF X<102 THEN 163
163 IF X>102 THEN 165
164 GOTO 250
165 IF X<199 THEN 166
166 IF X>175 THEN 190
167 IF X<175 THEN 169
168 GOTO 170
169 IF X<126 THEN 200
170 Y=-SQR(-100*(X-150)*(X-150)
/6561+100)+95
180 PLOT X,Y
185 IF X<175 THEN 240
190 R=X+1
200 Y=-SQR(-100*(R-150)*(R-150)
/6561+100)+95
210 COLOR 0
220 PLOT R,Y
230 COLOR 1
240 NEXT X
250 FOR X=101 TO 69 STEP -1
255 COLOR 1
260 Y=-SQR(-100*(X-150)*(X-150) /6561+100)+95
265 PLOT X,Y
270 R=X+1
280 Y=-SQR(-100*(R-150)*(R-150) /6561+100)+95
290 COLOR 0
300 PLOT R,Y
310 COLOR 1
320 NEXT X
330 GOTO 120
400 FOR X=151 TO 170
405 COLOR 1
407 PLOT 151,133:DRAWTO 169,133
408 PLOT 150,141:DRAWTO 168,141
409 PLOT 148,95:DRAWTO 152,95
410 Y=SQR(-4096*(X-160)*(X-160) /100+4096)+95
415 COLOR 1
420 PLOT X,Y
450 R=X-1
460 Y=SQR(-4096*(R-160)*(R-160) /100+4096)+95
470 COLOR 0
480 PLOT R,Y
490 NEXT X
495 COLOR 1
500 FOR X=169 TO 150 STEP -1
501 PLOT 168,95:DRAWTO 172,95
502 PLOT 150,49:DRAWTO 170,49
503 PLOT 150,57:DRAWTO 170,57
510 Y=-SQR(-4096*(X-160)*(X-160) /100+4096)+95
520 PLOT X,Y
530 R=X+1
540 Y=-SQR(-4096*(R-160)*(R-160) /100+4096)+95
550 COLOR 0
560 PLOT R,Y
```

```

570 COLOR 1
580 NEXT X
590 GOTO 400
1000 R=INT(RND(0)*75)+1
1010 A=150-R
1020 B=150
1030 FOR X=A TO B
1040 Y=SQR(-(X-150)*(X-150)+R*R)+80
1050 E=150-X
1055 F=150+E
1060 PLOT X,Y:DRAWTO F,Y
1065 PLOT 10,30:PLOT 200,100:PLOT 140,130:PLOT
230,50
1070 NEXT X
1080 FOR X=A TO B
1090 Y=-SQR(-(X-150)*(X-150)+R*R)+80
1100 E=150-X
1110 F=150+E
1120 PLOT X,Y:DRAWTO F,Y
1121 PLOT 250,140
1122 NEXT X
1123 H=INT(RND(0)*11)
1124 T=INT(RND(0)*18)

```

```

1125 L=INT(RND(0)*10)
1126 X=INT(RND(0)*13)
1127 Y=INT(RND(0)*11)
1128 Z=INT(RND(0)*6)
1129 DIM C$(10)
1130 S=INT(RND(0)*6)+1
1131 B=INT(RND(0)*11)+1
1133 DIM A$(10)
1134 DIM B$(10)
1135 GOTO 1135

```



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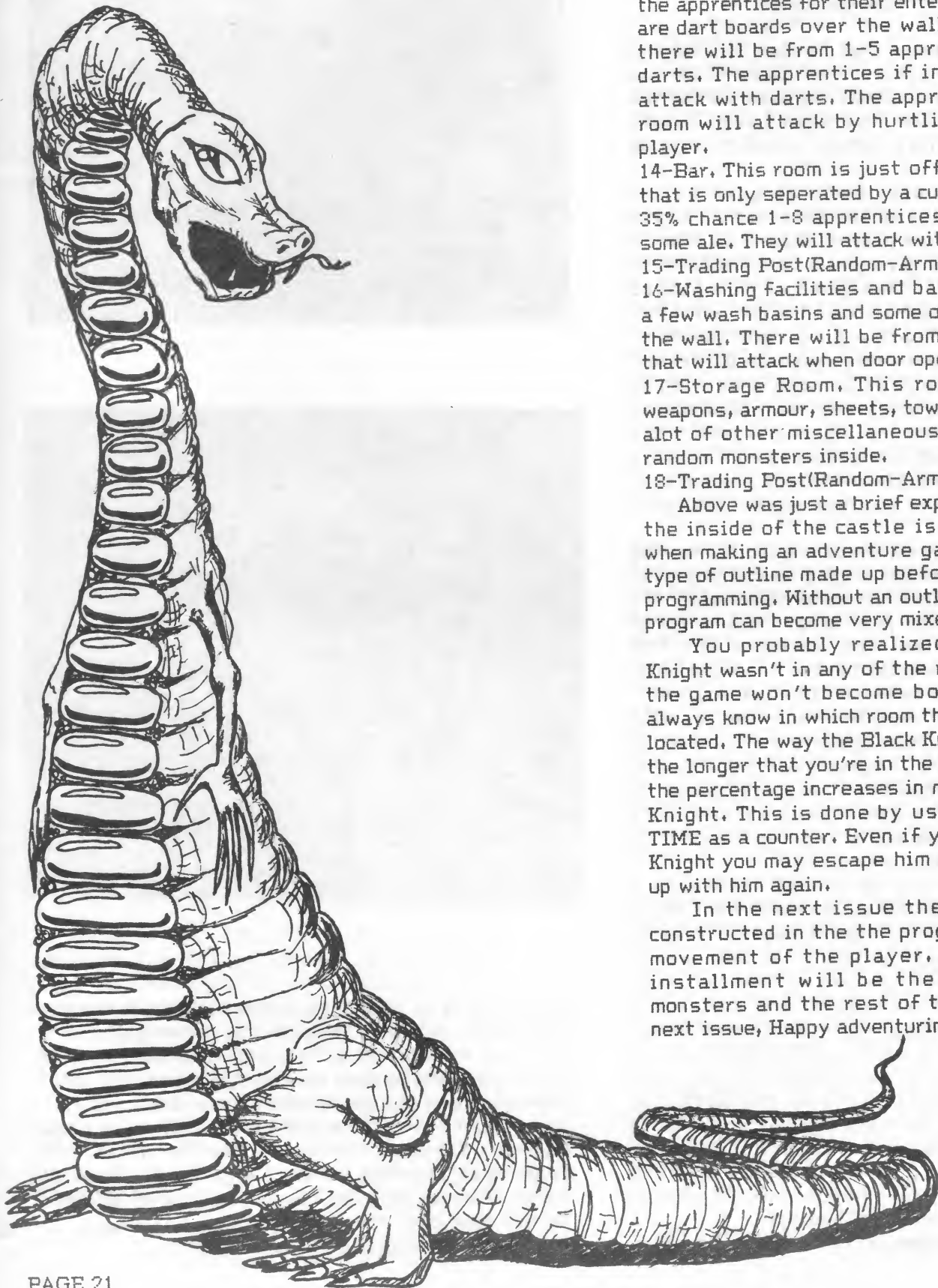
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11-This small room contains two wild boars that eat the scraps from the great feasts. These two swines will attack if they haven't eaten in a few days(30% chance).

12-Sleeping Quarters for Black Knight's savage apprentices. There will be from 1-5 apprentices either resting or sleeping. They will be suprised.

13-Games Room. This room is designated to the apprentices for their entertainment. There are dart boards over the walls. A 40% chance there will be from 1-5 apprentices playing darts. The apprentices if in the room will attack with darts. The apprentices if in the room will attack by hurtling darts at the player.

14-Bar. This room is just off the games room that is only seperated by a curtain. There is a 35% chance 1-8 apprentices will be having some ale. They will attack with daggers.

15-Trading Post(Random-Armour or Weapons)

16-Washing facilities and bathroom. This has a few wash basins and some outhouses against the wall. There will be from 1-4 apprentices that will attack when door open.

17-Storage Room. This room contains old weapons, armour, sheets, towels, blankets and alot of other miscellaneous equipment. Only random monsters inside.

18-Trading Post(Random-Armour or Weapons)

Above was just a brief explanation of what the inside of the castle is like. It is best when making an adventure game to have some type of outline made up before you just start programming. Without an outline the adventure program can become very mixed up.

You probably realized that the Black Knight wasn't in any of the rooms. That is so the game won't become boring in that you always know in which room the Black Knight is located. The way the Black Knight is found, is the longer that you're in the castle the higher the percentage increases in meeting the Black Knight. This is done by using the variable TIME as a counter. Even if you find the Black Knight you may escape him but you will meet up with him again.

In the next issue the castle will be constructed in the the program and also the movement of the player. And in the final installment will be the combat tables, monsters and the rest of the program. Until next issue, Happy adventuring!

Fast Games

By Peter Ellison

WIZARD OF WOR

Rocklan Corporation

10600 West Higgins Road

Rosemont, Illinois 60018

\$35.95 Diskette & Cassete

\$49.95 Rom Cartridge

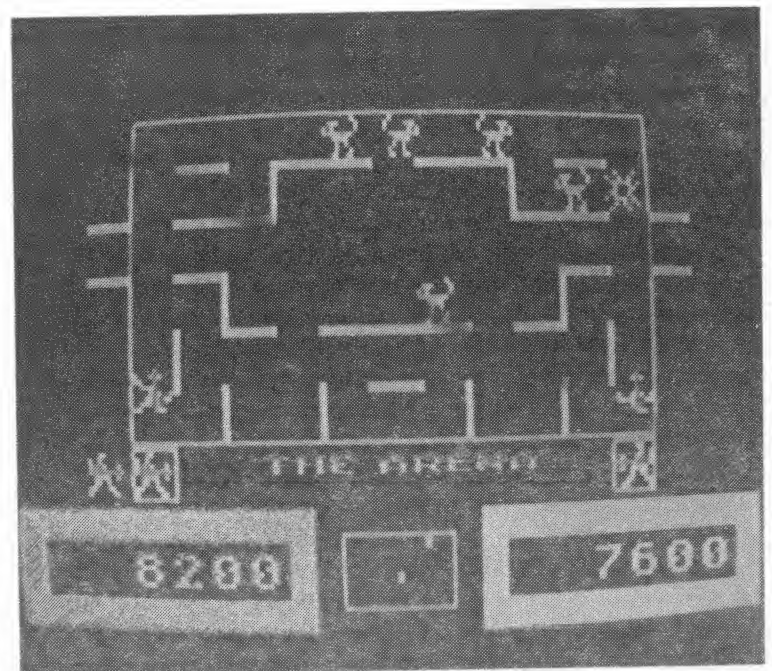
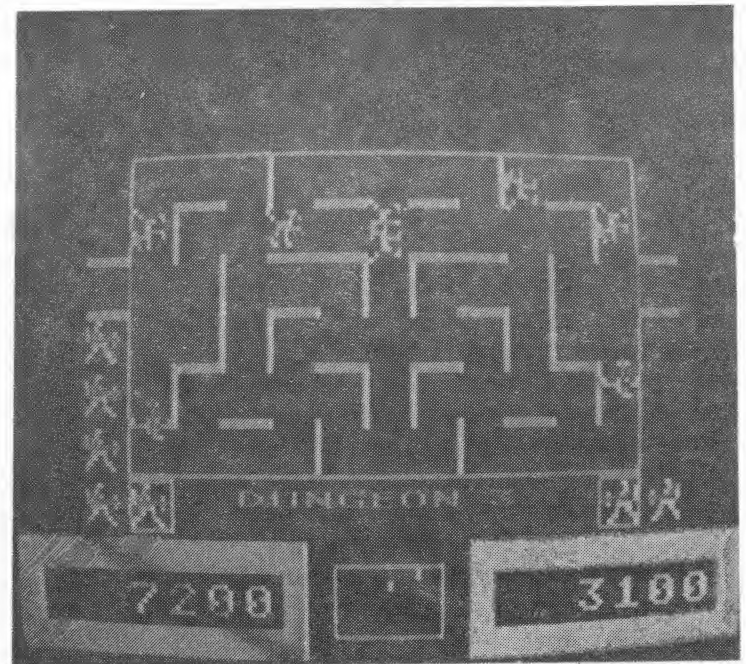
When I first heard that Roklan was coming out with three games that came from the arcade I was a little skeptical about what the quality would be like. But when I saw 'Wizard of Wor' I knew this company would be around for a while.

The graphics are nearly as good as the arcade and the play is the very same. If you have never seen or played Wizard of Wor in the arcades I will give you a basic outline of what the game is. This game can be played solitary or head to head with another player(Worrior). There are multiple levels of dungeons in where every maze is different except the 'pit' which is an open area with no maze at all. There are three main combatants in the game. They are; Burwors which are blue, Garwors which are yellow, and Thorwors which are red. The Thorwors are the hardest to hit of the three so their worth the most points.

There are many of these creatures moving about the maze either trying to run you over or shoot you with their lazer. You must try and shoot them with your lazer rifle which is your only defense. The Garwors and the Thorwors stay invisible most of the time until they come in the same corridor as yourself. The only way that you can track them is with the small radar which appears on the bottom of the screen. The dungeon maze isn't shown on the radar screen but it is fairly easy to figure out where the creatures are. The creatures appear as either red, yellow or blue squares on the radar screen.

After shooting all of the creatures a special winged monster called the Worluk flies around the screen with great speed trying to run over any player it sees. The only way it can escape is through one of the two side doors one on either side of the maze. The Worluk doesn't shoot but travels extremely fast. The Worluk is worth a 1000 points plus it doubles the score you make on the next dungeon. When the Worluk is hit the Wizard of Wor may appear hurtling lightning bolts in your direction. The wizard is able to teleport itself to anywhere in the maze at anytime which makes him very hard to hit. If you hit the wizard it is worth 2500 points.

There are a few extras included in this



game. One is by using the space bar the game may be paused. Another is when the game goes into attract mode the screen will give a little demonstration on how to play the game and what the different things on the screen are used for. The amount of Worriors can be chosen each game between 3, 5 or 7 worriors. Another excellent feature on the disk version only is the 'Hall of Fame'. You can save the top six scores of all time to the disk each time a high score is made, by removing the write protect tab on the disk.

Ratings

The game is very easy to play but difficult to master. The play is fast and furious and is easy to understand what you must do, Survive!

It is very challenging because every level is a different maze, making every game different. Also you never know when the Wizard of Wor is going to show up.

Graphics on a computer enhances any game. The graphics in this game are great. The players move quickly and the missiles fire smoothly.

The sounds created for this game are nearly identical to the arcade, except one thing; the wizard doesn't talk. This could have been done but was probably to much trouble.

Reading through the rules is very interesting because it presents a storybook approach telling you what each of the characters in the game are. The pictures in the instruction guide are good and accurate making the game easy to understand if never played.

My overall rating of Wizard of Wor is: The game is an excellent home version of the arcade game and is well worth the money.

Wizard of Wor
Playability-10
Challenge-8
Graphics-9
Sound-8
Documentation-9
Overall Rating-8.8

(Jumping Forth Cont.)

the pitch(horizontal) and distortion(vertical) of their corresponding channel. You control the sound of each channel by pressing the button on the joystick. By pressing all four buttons at the same time one is able to find the perfect sound.

I recommend this disk just for the player/missile part, the rest is a bonus.

These two packages can be purchased from:
Valpar International
3801-E. 34TH Street
Tucson, Arizona
85713

TRACK ATTACK

Broderbund Software, Inc
1938 Fourth Street, San Rafael,
California 94901
\$29.95 diskette; 32K

This game by Broderbund Software is done in hi-res graphics with a very original theme. This game was translated from the Apple to the Atari.

The game starts out where you are driving a car(souped up '86 Pierce Apple) around a small railway yard somewhere between Elizabeth, New Jersey and Johannesburg. Your object on the first level of play is to bash your car through the sides of the box cars and steal the gold from the train. The train continues to drive around the well constructed maze of tracks. If your car tries to bash through an empty boxcar(green) or the train engine(red) your car is immediately destroyed. You begin with only three lives which makes it very difficult. Once you steal the gold you must drive your car back to your storage compartment. While you're trying to steal gold from the train the old phantom watchman in his '52 De Soto is trying to ram his car into yours. He is very good at doing this, believe me.

To get to the second level you have to at least have one piece of gold in your storage compartment. When the train is coming down the left track and your car is moving along the side of it push your button and the new screen is loaded in. Here you're a little man running on the top of the train. The graphics are fantastic as you use your joystick to either jump down to the next box car or jump up. You actually see your little man do a flip as he jumps up to a boxcar. If you push the joystick for your little man to jump to soon or to late the man will fall crashing down to the track where he is run over returning you to level one missing one life.

If you're fortunate enough to jump all the boxcars and make it to the engine you are now promoted to train engineer and the third level. You now drive the train down the tracks and try to pick up all of the gold. While you're doing this the phantom car is driving around trying to stop you. If it crashes into you, you lose one life and you return back to level one losing all the points that you earn on level two and three. To return to level one without losing any points or lives steer the train down the right side of the track and push the red button. If you pick up all the gold and return to level one you receive a free man.

Ratings

One thing about the playability of Track

Attack is the game forces you to have another game, meaning it is very addicting. Its very hard after you finish a few games to turn the computer off and walk away.

The game is challenging but can be mastered for those very determined arcaders. The reason for this is because there are only three levels of play.

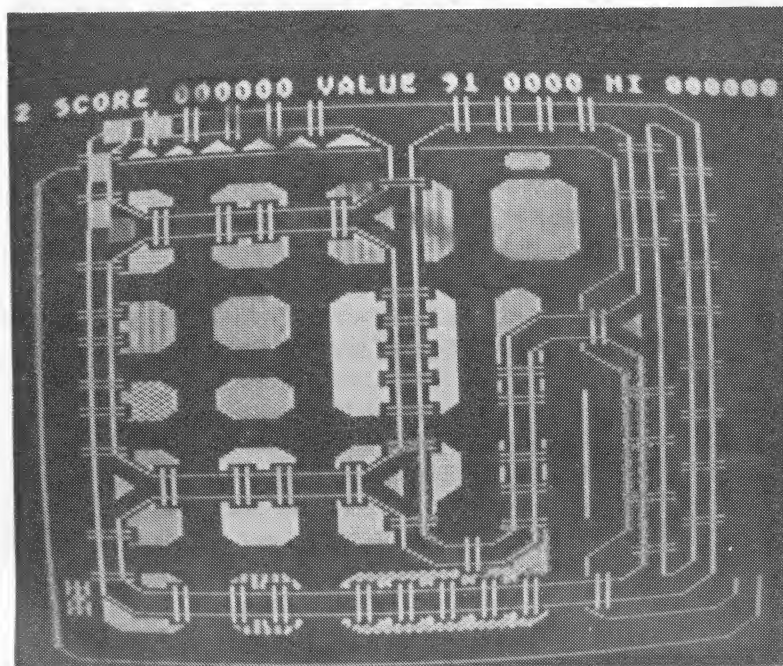
The graphics in this game are great. The second level of this game are really impressive. The movement of the little man is smooth and the train is very colorful with fine details.

One very poor thing about this game is the sound. All the sound that is heard when starting is the sound of a train chugging along. When you steal gold you hear a little bang and then when the gold is deposited there is a ding. Also when the train loads up with gold you hear a whistle. What Broderbund should have had going during the game was the sound of the car and maybe some music in the background. I say if you have the potential why don't you use it to the max. Sound is a problem when a game is transferred from an Apple II.

The documentation isn't long but is clear and to the point. It tells you the setting and what must be done on each level and how to advance to each level.

My overall rating for Track Attack is: Its a good change from all those 'shoot-em-up' games and is a game worth getting.

Track Attack
 Playability-10
 Challenge-8
 Graphics-10
 Sound-5
 Documentation-9
 Overall Rating-8.2



SHAMUS

Synapse

5327 Jacuzzi St., Suite 1

Richmond, CA 94804

\$29.95 Diskette & Cassete

This new adventure-arcade game from Synapse is a fast playing, colorful, and very difficult game to play. The object of the game as you take on the role of Secret agent 'Shamus' is to proceed through the different rooms in order to get to the bottom level where the Shadow's hideout is. Sounds easy doesn't it, well this game is not as easy as explained.

The first level you start at is the black level which has 37 different rooms. You begin in room number 0 and each room is numbered accordingly. The little man can move in any of the eight joystick positions and can also fire an inexhaustible supply of Ion-SHIVS (Ionic-Short High-Intensity Vaporizers) to disintegrate anything that gets in it's way. Each room that is entered has something inside of it. It may be a keyhole, key, mystery(?), or an extra life. The hallways joining certain rooms don't have any objects in them, except many types of drones, which are in every room. These drones attack with bullets and by moving into you. These drones are ROBO-Droids, Spriral drones, and Snap Jumpers. If you take to long in getting out of a room the shadow will come out of nowhere to get you. The only way of stopping him is to shoot him but that only stuns him for a second so get out of the room and your time will start over.

There are four different levels in the game and to get to each level you must open different doors with the keys you find. Each key is a different color to match the different colored keyholes. Besides having four different levels in the lair there are four different skill levels. They range from Novice to Expert, where novice being fairly slow moving and few drones, and expert moving extremely fast and many drones. Once you leave a room and then return back into the same room there will be more drones but no object if you have already taken it. If 'Shamus' touches any of the walls he will be electrocuted.

Ratings

The game is very easy to understand and enjoyable to play. You don't even need to read the instructions to start playing.

This game can make you very frustrated because its very challenging, maybe a bit to much. But the very persistent arcade player should be able to make it to the hideout. If you do write me.

The graphics are great in all respects of the word. The player moves smooth and the colors are pleasant. The firing of both the good and bad is excellent.

The sound is good and before the game is loaded in all the way, 'Alfred Hitchcock's' theme song plays in four-part harmony.

The documentation is not flashy but to the point. You don't really need to read the rules except to get some extra hints.

My overall rating of Shamus is: This game is excellent change to normal adventure games. It combines both the arcade action plus the mystery of an adventure.

Playability:10

Challenge:10

Graphics:10

Sound:9

Documentation:8

Overall Rating:9.4



Keyhole



Key



Mystery



Extra Life



Robo-Droids



Shadow



Spiral Drones



Snap Jumpers

New Products

Airstrike Game

English software announces the release of Airstrike. Available on 16K cassette and disk, Airstrike provides arcade realism which demands a high level of skill from the player in a fast shoot-out scenario.

Game features include: superb fine-scrolling graphics; top-notch color; multiple skill levels (each denoted by a different playfield); 100% machine language program; one or two player option. The suggested retail price is \$39.95.

English Software Company
934 Hermosa Avenue
Suite 13, Sandcastle Plaza
Hermosa Beach, CA 90254
(213)372-3440

New Product from K-Byte

K-Star Patrol is a game which has space ships confronting alien attack ships and an intergalactic leech. The package, with graphics, contains one ROM cartridge and a 12-page, full-color instruction booklet with complete rules of the game. For more information on K-Star Patrol (Model No. ATR1002) and other computer games and products, contact:

K-Byte
Division of Kay Enterprises Co.
1705 Austin Street
Troy, MI 48084
(313)524-9878

Two New Cartridge games from Broderbund

The first of the two is Choplifter. With realistic throttle action you maneuver a daredevil rescue chopper. You fight off enemy jet fighters and air mines above, and tank fire and air-to-ground missiles below, to rescue hostages held behind the lines and bring them out alive. On 16K Cartridge the suggested retail price is \$44.95.

The second game is called Serpentine. Giant serpents set forth to slay their slithery cousins. To add to the fun, the snakes lay eggs and fight ferociously to protect their young! A fast arcade-style game with five maze configurations and many levels of play. On 16K Cartridge the suggested retail price is \$39.95.

Both these packages can be purchased from:
Broderbund Software Inc.
1938 Fourth Street
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(415)456-6424

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The 800-style keyboard mounts on the Atari 400, replacing the membrane keyboard. Joytyper-400 plugs into the computer-no soldering required. The metal case mounts with adhesive pads, is painted Atari beige, and has a slim appearance. It has a suggested retail price of \$129.95.

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The Programmer's Institute

P.O. BOX 3191, Dept. T

Chapel Hill, NC 27514

(919)967-0861

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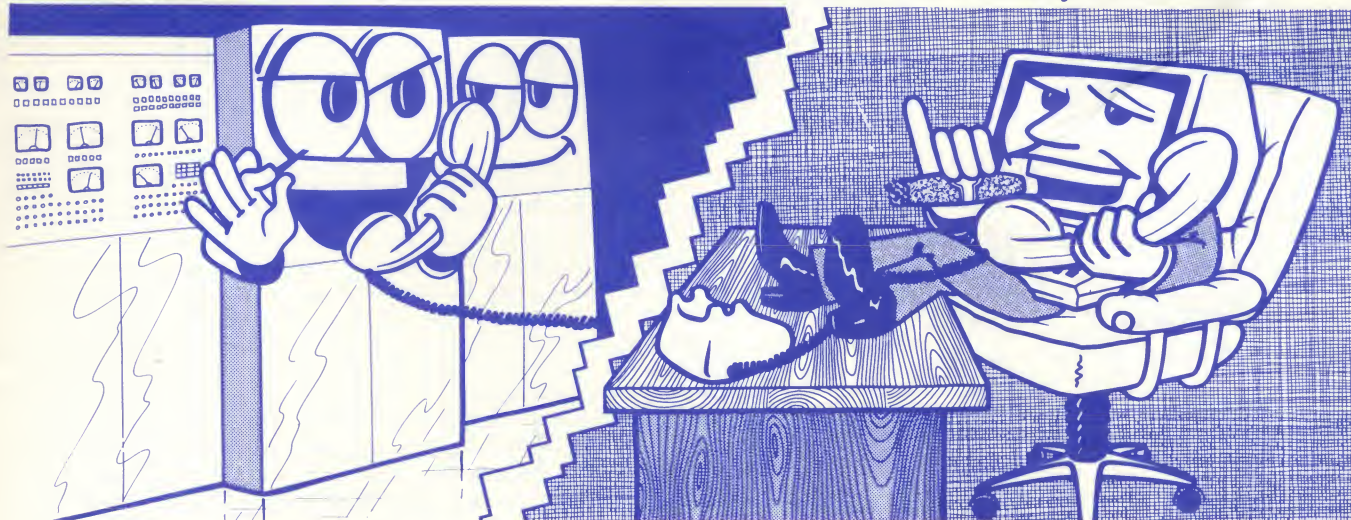
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(Stock Broker Cont.)

```
10600 DATA 144,3,144,3,144,1,144,3,121,3,128,2,128,3,144,2,144,3,153,3,144,4
10650 POSITION 12,2:?" Q$;"  DROPPED OFF!"
10699 SOUND 1,1,1,0
10700 RETURN
```

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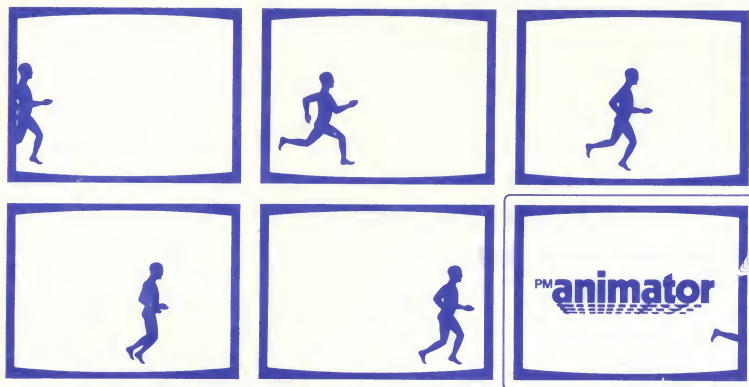
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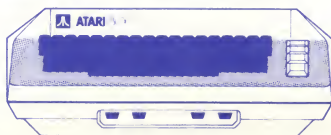


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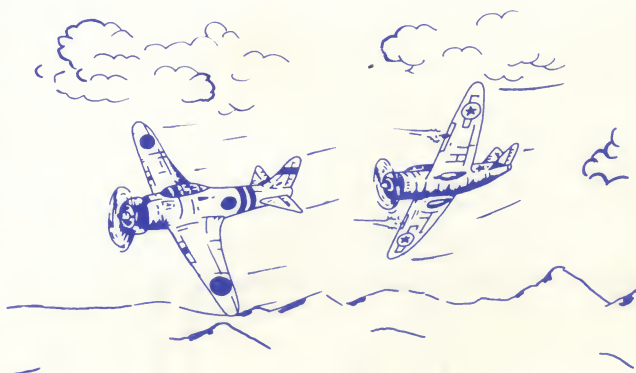
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