

# Escape!

The Robots have caught you, taken your weapons and locked you up. Suddenly you remember you still have your sonar wristwatch, which can be tuned to produce sounds of any frequency. If you can only find the resonant frequency of your Robot guards, they should vibrate so much they fall apart.

You must be careful not to use frequencies that are too low or the building will vibrate and collapse on top of you. If you go too high, you will get such a terrible headache you will have to give up.

Can you escape the horrors of the Robot prison? (Look carefully at the program for a clue to the range of frequencies to try.)



```
▲●10 CLS
 20 PRINT "ESCAPE"
★▲●30 LET F=INT(RND*100+1)

40 LET L=1
50 LET H=1

60 FOR G=1 TO 5
70 PRINT "GUESS? ";
80 INPUT F1
90 IF ABS(F-F1)<5 THEN GOTO 290

100 IF F-F1>40 THEN GOTO 170

110 IF F1-F>40 THEN GOTO 230
120 PRINT "NO VISIBLE EFFECT"
130 NEXT G
140 PRINT "YOU TOOK TOO LONG."
150 PRINT "THE FREQ. WAS ";F
160 STOP

170 IF L=2 THEN GOTO 210
180 PRINT "TOO LOW...CAREFUL"
190 LET L=2
200 GOTO 130
210 PRINT "THE BUILDING COLLAPSED"
220 STOP

230 IF H=2 THEN GOTO 270
240 PRINT "TOO HIGH...OUCH"
250 LET H=2
260 GOTO 130
270 PRINT "YOUR HEAD ACHES - GIVE UP"
280 STOP
290 PRINT "YOU'VE DONE IT"
300 STOP
```

## How the program works

Chooses a number between 1 and 100 for frequency of robots and puts it in F.

Puts 1 in L and H. These are used if you go too low or too high - see lines 170-190 and 230-250.

Beginning of loop which allows you to have 5 turns.

Gets a guess from you and puts it in F1.

Checks if your guess is within 5 of F. If it is, jumps to 290 to print YOU'VE DONE IT.

Jumps to 170 if your guess is so low it is less than F by more than 40.

Jumps to 230 if your guess is so high it is more than F by more than 40.

Prints if your guess was within 40 of F and goes back for next turn. If all turns have been used, it prints the answer.

Checks the value of L. The first time this part of the program is reached, L is 1. So the computer moves down the program to print a warning, change L to 2 and go back for another turn. Next time line 170 comes into operation the program jumps straight to 210 to tell you you've lost.

These lines check H in the same way to give you a warning first time you go too high and tell you you've lost the second time.

## Puzzle corner

The three Robot guards each have their own resonant frequency. You can't escape until you have found all three. How could you change the program to do this?



## How to make the game harder

Change the 5 in line 90 to a lower number. This means you have to get closer to F to win. You can also increase the possible range of F by changing 100 in line 30 to a higher number.

The above listing will work on a ZX81. For other computers, make the changes below.

```
●10 HOME
▲10 PRINT CHR$(147)
★▲●30 LET F=INT(RND(1)*100+1)
18 ■30 LET F=INT(RND(0)*100+1)
```