

# FREE BALL

**Free Ball** is a game written for the MSX platform in just 10 lines of BASIC code.

- `Title...` : Free Ball
- `Platform` : MSX
- `Author..` : Martin Rizzo
- `Language` : MSX BASIC 1.0
- `Category` : PUR-120

## Files

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|---------------------------|--|
| <code>FREEBALL.BAS</code> | The BASIC source code of the game (MSX)        |
| <code>FREEBALL.GIF</code> | Screenshot of the game                         |
| <code>FREEBALL.DSK</code> | 720Kb disk image to use with the emulator      |
| <code>LIST-01.PNG</code>  | Screenshot displaying lines from 1 to 5        |
| <code>LIST-02.PNG</code>  | Screenshot displaying lines from 6 to 10       |
| <code>README.PDF</code>   | Full documentation in PDF                      |
| <code>README.HTM</code>   | Full documentation in HTML                     |
| <code>README.MD</code>    | Full documentation in Markdown format          |
| <code>README.TXT</code>   | Text file with a brief description of the game |

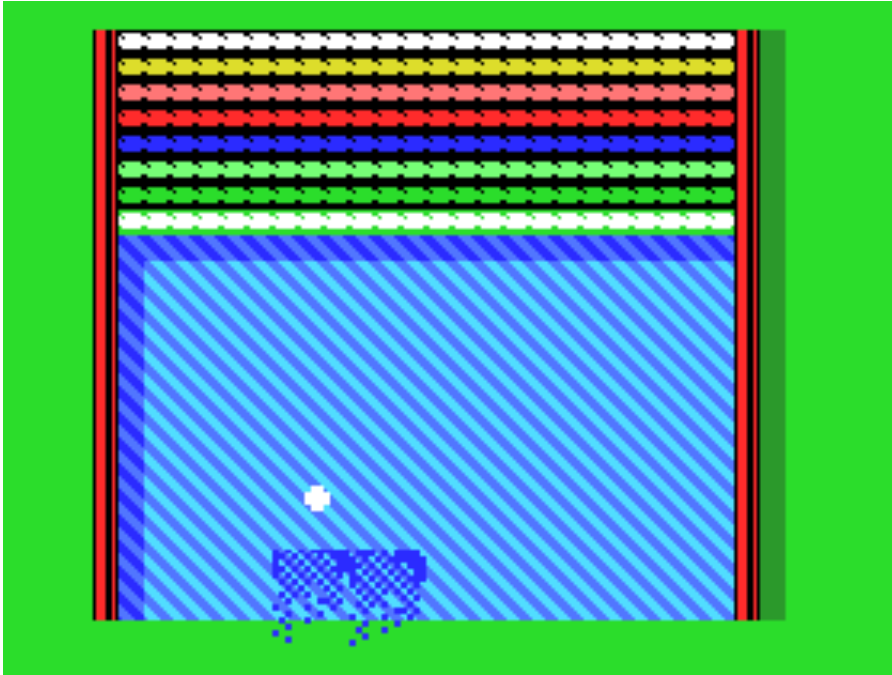
## Gameplay

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Your task is get the ball free again. In order to accomplish it, you must break all the bricks on the screen by hitting them with the ball. In addition, you must prevent the ball from falling into the bottom by using any of your 4 paddles to push it up.

The paddles are in fixed positions and they are activated pushing their assigned key but only one of them can be on the screen at the same time.

- Use the keys [2] and [3] to activate the two paddles at the left side.
- Use the keys [8] and [9] to activate the two paddles at the right side.
- The game is over when the ball falls into the bottom of the screen.
- Break all bricks, free the ball and you win!.



## How to Run the Game

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### Loading the game in blueMSX emulator

1. Download blueMSX FULL v2.8.2 (or above) from some of these links:
  - [blueMSX home page](#)
  - [blueMSX download page](#)
2. Install the emulator following the setup wizard.
3. Start blueMSX
4. Select `"File > Disk Drive A > Insert"`
5. Select the provided .DSK file (the disk image)
6. Select `"Emulation > Run"` and enjoy the game!

## Source Code

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```

LIST 1-5
1 DEFINT A-Z:DIMP(255):SCREEN1,3,0:WIDTH2
8:COLOR15,2:KEYOFF:ONSPRITE60SUB10:Q=3
0840:M$(0)="GAME_OVER":M$(1)="YOU_WIN"

2 RESTORE:X=0:FORI=0TO7:X=X\2:READU,P(I+
50),Q(I),A(I):FORJ=0TO8:T=1536-64*I+J:VP
OKET-248,141:VPOKET,255ANDX:VPOKET+128,U

3 NEXTJ,I:S=7:G=9:H=78:SPRITE$(0)="u%  ",
-U(T)AID C a≡p303030":SPRITE$(3)="≡≡\
":PLAY"514M63L64":DATA,24,38,5,126,72,48

4 X=128:Y=144:V=2:W=-4:LOCATE7,12:PRINT"
PRESS_SPACE":IFSTRIG(0)THENCLS:FORI=0TO1
8:READU:VPOKE8200+T,U:Q(T\3)=U:NEXTELSE4

5 FORI=-10TO12:T=16+I*(I<0):L$="α"+CHR$(
8*(T+1+(I<0)))+STRING$(23,8*T)+"ah":PRIN
TL$:L$(1ANDT)=L$:NEXT:L$=L$(1)+" "+L$(0)

```

Ok  
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```

LIST 6-10
6 K=P(ASC(INKEY$+" ")):VPOKEE,E:E=24:X=X
+V:Y=Y+W:T=(X>208)-(X<24):IFITHENX=116-T
*92:V=T*ABS(V):F=8205+T:E=155:PLAY"05B04

7 IFH>7ANDY<HTHENW=15-G:Y=HAND248:VPOKE8
219-G,0<HAND7)+1:H=H-2:LOCATE,H\8:PRINTL
$:PLAY"N36"ELSEIFKANDRTHENP=K:S=0:PLAY"A

8 G=H\8:FORI=0TO1:PUTSPRITEI,(I*24+P,209
-Q(S)),A(S),0:NEXT:PUTSPRITE3,(X,V):SPRI
TEON:S=S-(S<7):R=S>4:IFV=0ANDY<192THEN6

9 LOCATE8,11:PRINTM$(-<V<0)):PLAY"N24N20
":GOTO2:DATA4,191,0,51,1,255,0,53,1,255,
,54,1,126,,54,4,,120,54,5,,168,,14,30,30

10 SPRITEOFF:S=1:V=RND(1)*4+11-G:V=V-V*(
XAND2):W=G-15:RETURN:DATA30,30,24,204,24
,,117,84,97,193,33,49,65,129,145,161,241

```

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## Some Code References

### Variables & constants

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M$(0/1) = ENDING MESSAGE "GAMEOVER/WINNER!"
P      = PADDLE XPOS
O(n)   = BLOCK HIT COLOR
P(n)   = PADDLE XPOS TABLE
Q(n)   = PADDLE ANIMATION YPOS TABLE
A(n)   = PADDLE ANIMATION COLOR TABLE
S      = PADDLE ANIMATION STEP
R      = -1 WHEN PADDLE CAN BE RETRIGGERED
H      = CEILING HEIGHT (EACH HIT SUBTRACTS 2) H:[78-8]
G      = INVERTED DIFFICULTY LEVEL (=H\8)      G:[ 9-1]
T,T$   = TEMPORARY VARS
U,U$   = TEMPORARY VARS
<X,Y>  = BALL POSITION
<V,W>  = BALL VELOCITY VECTOR
F      = WALL FLASHING ANIMATION (WALL COLOR ADDRESS)
E      = WALL FLASHING ANIMATION (WALL COLOR)
Q      = CONSTANT = 30840

```