

1	REM FORMATION	260	DATA 0,0,0,255,238,0,0
2	DATOS DEL GRAFICO BOLA	270	DATA 0,0,255,255,0,0,0
10	REM *****	280	DATA 17,255,255,136,0,0,51
20	REM **** DATOS PARA CONFECCIONAR ****	290	DATA 255,255,238,0,0,255,255
30	REM **** LA PELOTA Y SU MASCARA ****	300	DATA 255,255,136,51,255,255,255
40	REM *****	310	DATA 255,255,255,255,255,255,255
50	REM	320	DATA 255,255,255,255,0,0,0
60	REM	330	DATA 0,0,0,0,0,0,0
70	FOR N=87530 TO 87650	340	DATA 0,0,0,0,55,200,0
80	READ A:SUMA-SUMA+A	350	DATA 0,0,1,59,184,0,0
90	FOR N,A	360	DATA 0,7,119,220,192,0,0
100	NEXT	370	DATA 15,119,220,224,0,0,14
110	IF SUMA<66A73 THEN PRINT "ERROR EN DATAS"	380	DATA 255,238,224,0,1,14,255
120	DATA 255,255,255,255,255,255,255	390	DATA 238,240,0,1,14,255,238
130	DATA 255,136,51,255,255,255,238	400	DATA 240,0,3,29,255,255,112
140	DATA 0,0,255,255,255,136,0	410	DATA 128,3,29,255,255,112,128
150	DATA 0,51,255,255,0,0,0	420	DATA 3,29,255,255,112,128,3
160	DATA 17,255,238,0,0,0,0	430	DATA 29,255,255,112,128,3,29
170	DATA 255,238,0,0,0,0,255	440	DATA 255,255,112,128,1,14,255
180	DATA 204,0,0,0,0,119,204	450	DATA 238,240,0,1,14,255,238
190	DATA 0,0,0,0,119,136,0	460	DATA 240,0,0,14,255,238,224
200	DATA 0,0,0,51,136,0,0	470	DATA 0,0,15,119,220,224,0
210	DATA 0,0,51,136,0,0,0	480	DATA 0,7,119,220,192,0,0
220	DATA 0,51,136,0,0,0,0	490	DATA 1,59,184,0,0,0,0
230	DATA 51,136,0,0,0,0,51	500	DATA 55,200,0,0,0,0,0
240	DATA 204,0,0,0,0,119,204	510	DATA 0,0,0,0,0,0,0
250	DATA 0,0,0,0,119,238,0	520	DATA 0,0,0,0,0,0,0
		530	DATA 0,0,0,0,0,0,0

PROGRAMA CARGADOR

1 REM FILMATION

2 REM PROGRAMA CARGADOR

10 FOR W=8000 TO 8822F

20 READ A:SUMA=SUMA+A

30 POKE M,A

40 NEXT

50 IF SUMA<57408 THEN PRINT "ERROR EN DATAS"

60 DATA 1,9,129,33,25,128,195

70 DATA 209,188,17,128,195,30,128

80 DATA 195,100,128,79,206,83,80

90 DATA 82,73,84,197,0,0,0

100 DATA 0,0,221,94,0,221,86

110 DATA 2,221,110,4,221,102,5

120 DATA 34,52,130,237,83,57,130

130 DATA 237,83,61,130,221,110,6

140 DATA 221,102,7,34,54,130,221

150 DATA 78,8,221,70,10,128,50

160 DATA 50,130,121,50,49,130,4

170 DATA 4,12,12,237,67,59,130

180 DATA 65,33,0,0,17,8,0

190 DATA 25,16,253,34,63,130,195

200 DATA 157,128,221,110,0,221,102

210 DATA 2,34,57,130,237,91,61

220 DATA 130,123,189,32,4,62,2

230 DATA 24,7,56,3,175,24,2

240 DATA 62,1,50,51,130,122,188

250 DATA 32,4,62,2,24,7,56

260 DATA 4,62,1,24,1,175,50

270 DATA 56,130,34,61,130,64,93

280 DATA 195,183,128,33,65,130,237

290 DATA 75,59,130,62,2,50,51

300 DATA 130,50,56,130,217,91,57

310 DATA 130,205,201,129,205,18,129

320 DATA 201,33,65,130,237,75,59

330 DATA 130,229,213,197,205,201,129

340 DATA 205,212,128,205,18,129,205

350 DATA 69,129,193,209,225,205,110

360 DATA 129,201,33,65,130,237,91

370 DATA 63,130,58,56,130,254,2

380 DATA 40,5,254,0,40,2,25

390 DATA 25,235,58,51,130,254,2

400 DATA 40,5,254,1,40,2,19

410 DATA 19,33,113,132,58,50,130

420 DATA 203,39,203,39,203,39,71

430 DATA 197,6,0,58,49,130,79

440 DATA 237,176,19,19,193,16,242

450 DATA 261,237,91,54,130,33,65

460 DATA 130,237,75,63,130,9,35

470 DATA 221,33,113,132,58,50,130

480 DATA 203,39,203,39,203,39,71

490 DATA 197,58,49,130,71,126,221

500 DATA 119,0,26,186,119,19,35

510 DATA 221,35,16,243,35,35,193

520 DATA 16,233,201,237,91,52,130

530 DATA 33,65,130,237,75,63,130

540 DATA 9,35,58,50,130,203,39

550 DATA 203,39,203,39,71,197,58

560 DATA 49,130,71,26,182,119,19

570 DATA 35,16,249,35,35,193,16

580 DATA 239,201,221,229,205,31,130

590 DATA 235,36,44,120,203,39,203

600 DATA 39,203,39,50,47,130,121

610 DATA 50,48,130,213,235,33,176

620 DATA 191,66,22,0,29,25,17

630 DATA 80,0,25,16,253,221,225

640 DATA 58,47,130,71,24,21,124

650 DATA 230,56,254,56,40,6,124

660 DATA 198,8,103,24,8,17,80

670 DATA 0,124,238,56,103,25,197

680 DATA 229,58,48,130,71,197,221

690 DATA 126,8,119,35,221,35,193

700 DATA 16,245,225,193,16,214,221

710 DATA 225,221,221,229,235,36,44

720 DATA 120,203,39,203,39,203,39

730 DATA 50,47,130,121,50,43,130

740 DATA 213,225,32,176,191,66,22

750 DATA 0,29,25,17,80,0,25

760 DATA 16,253,221,225,58,47,130

770 DATA 71,24,21,124,239,56,254

780 DATA 56,40,6,124,198,0,103

790 DATA 24,8,17,80,0,124,238

800 DATA 56,103,25,197,229,58,48

810 DATA 130,71,197,126,221,119,0

820 DATA 25,221,35,193,16,245,225

830 DATA 193,16,214,221,225,201,205

840 DATA 25,189,197,1,100,0,11

850 DATA 120,177,32,251,193,201,0

PROGRAMA DEMO

1 REM FILMATION

2 REM PROGRAMA DEMO

10 MODE 1: BORDER 0:INK 0.0:INK 1.24:INK 2.23:INK 3.6

20 MEMORY 9999:LOAD "pibwin".38200

30 CALL 38200

40 GOSUB 300

50 INK 3.6,20000,20144,5,1

60 Y=5:Y=1

70 Y=Y+1:Y=Y+1

80 IF Y=22 THEN X=X-1:Y=Y-1:GOTO 120

90 IF X=72 THEN Y=Y-1:X=X-1:GOTO 220

100 GOSUB 270

110 GOTO 70

120 Y=Y-1:Y=Y+1

130 IF Y=4 THEN Y=Y+1:X=X-1:GOTO 70

140 IF X=72 THEN Y=Y+1:X=X-1:GOTO 170

150 GOSUB 270

160 GOTO 120

170 X=X-1:Y=Y+1

180 IF Y=4 THEN X=X+1:Y=Y+1:GOTO 220

190 IF X=0 THEN X=X+1:Y=Y+1:GOTO 120

200 GOSUB 270

210 GOTO 170

220 X=X-1:Y=Y+1

230 IF Y=22 THEN X=X+1:Y=Y-1:GOTO 170

240 IF X=0 THEN X=X+1:Y=Y-1:GOTO 70

250 GOSUB 270

260 GOTO 220

270 ISPRITE,Y,X

280 FOR n=1 TO 60:NEXT

290 RETURN

300 P=0

310 FOR n=7 TO 15

320 FOR y=2 TO 39

330 P=P+1:IF P=4 THEN P=1

340 PEN P

350 LOCATE y,n:PRINT CHR\$(202)

360 NEXT y:NEXT n

370 RETURN

PROGRAMA ENSAMBLADOR

```

1 ;FILMATION
2 ;LISTADO ENSAMBLADOR
10 ORG #3000
20
30
40 ;***ROUTINA DE IMPRESION SISTEMA FILMATION***
50
60
70
80 LD BC,TABLA
90 LD HL,ESPACE
100 JP #BCD1
110 TABLA: DEFW NAME
120 JP INISPR
130 JP MOVSPR
140 NAME: DEFW "O"
150 DEFB "N"*#B0
160 DEFW "SPRIT"
170 DEFB "E"*#B0
180 DEFB 0
190 ESPACE: DEFB 0
200
210
220 INISPR: LD E,(IX+0)
230 LD D,(IX+2)
240 LD L,(IX+4)
250 LD H,(IX+5)
260 LD (DIRGRA),HL
270 LD (POSMAN),DE
280 LD (POSANT),DE
290 LD L,(IX+6)
300 LD H,(IX+7)
310 LD (DIRMAS),HL
320 LD C,(IX+8)
330 LD B,(IX+10)
340 LD A,B
350 LD (ALTO),A
360 LD A,C
370 LD (ANCHG),A
380 INC B
390 INC B
400 INC C
410 INC C
420 LD (DIMENS),BC
430 LD B,C
440 LD HL,0
450 LD DE,B
460 SUMBU: ADD HL,DE
470 DJNZ SUMBU
480 LD (LONG),HL
490 JP INIMAN
500
510
520 MOVSPR: LD L,(IX+0)
530 LD H,(IX+2)
540 LD (POSMAN),HL
550 LD DE,(POSANT)
560 LD A,E
570 CP L
580 JR NZ,NOMIS
590 LD A,2;PARADO
600 JR PONFL1
610 NOMIS: JR C,VADER
620 XOR A
630 JR PONFL1
640 VADER: LD A,1
650 PONFL1: LD (I2DER),A
660 LD A,D
670 CP H
680 JR NZ,NOMIS1
690 LD A,2
700 JR PONFL2
710 NOMIS1: JR C,VABA1
720 LD A,1
730 JR PONFL2
740 VABA1: XOR A
750 PONFL2: LD (ARRABA),A
760 LD (POSANT),HL
770 LD 0,H
780 LD E,L
790 JP MOVMAN
800
810 HL+
820 ;***PINBUFF**
830 HL-
840 ;INICIALIZACION
850 :
860 ;DE-COORDENADAS DE IMPRESION
870 :
880 INIMAN: LD HL,BUFFER
890 LD BC,(DIMENS)
900 LD A,2
910 LD (I2DER),A
920 LD (ARRABA),A
930 LD DE,(POSMAN)
940 CALL PANMEM
950 CALL PINMAS
960 RET
970 :
980 ;MOVIMIENTOS
990 :
1000 ;DE-COORDENADAS DE IMPRESION
1010 ;I2DER=0 IZQUIERDA
1020 ;I2DER=1 DERECHA
1030 ;I2DER=2 PARADO
1040 ;DIRGRA-DIRECCION GRAFICO
1050 ;DIRMAS-DIRECCION MASCARA
1060 :
1070 MOVMAN: LD HL,BUFFER
1080 LD BC,(DIMENS)
1090 PUSH HL
1100 PUSH DE
1110 PUSH BC
1120 CALL PANMEM
1130 CALL TROZPAN
1140 CALL PINMAS
1150 CALL PINTB
1160 POP BC
1170 POP DE
1180 POP HL
1190 CALL PINBUF
1200 RET
1210 ;BC--COORDENADAS EN LA PANTALLA DE
1220 : IMPRESION
1230 :
1240 :
1250 ;COLOCA TROZO PANTALLA EN
1260 ;EL BUFFER
1270 :
1280 TROZPA: LD HL,BUFFER
1290 LD DE,(LONG);GRANCHO
1300 LD A,(ARRABA)
1310 CP 2
1320 JR Z,TROZE2
1330 CP 0
1340 JR Z,TROZE3
1350 ADD HL,DE
1360 TROZE2: ADD HL,DE
1370 TROZE3: EX DE,HL
1380 LD A,(I2DER)
1390 CP 2
1400 JR Z,TROZE1
1410 CP 1
1420 JR Z,TROZEM
1430 INC DE
1440 TROZE1: INC DE
1450 TROZEM: LD HL,BUFFER
1460 LD A,(ALTO)
1470 SLA A
1480 SLA A
1490 SLA A
1500 LD B,A
1510 TROZ1: PUSH BC
1520 LD B,0
1530 LD A,(ANCHG)
1540 LD C,A
1550 LDIR
1560 INC DE
1570 INC DE
1580 POP BC
1590 DJNZ TROZ1
1600 RET
1610 :
1620 ;PINTA MASCARA EN EL BUFFER
1630 ;Y LEE TROZPAN
1640 :
1650 PINMAS: LD DE,(DIRMAS)
1660 LD HL,BUFFER
1670 LD BC,(LONG)
1680 ADD HL,BC
1690 INC HL
1700 LD IX,BUFFER
1710 LD A,(ALTO)
1720 SLA A
1730 SLA A
1740 SLA A
1750 LD B,A
1760 MASSU: PUSH BC

```

1770	LD A,(ANCHD)	2390	LD HL,WC000-80	3010	DEC E
1780	LD B,A	2400	LD B,0	3020	ADD HL,DE
1790	MAGB1: LD A,(HL)	2410	LD 0,0	3030	LD DE,80
1800	LD (11+0),A	2420	DEC E	3040	L_BUC: ADD HL,DE
1810	LD A,(DE)	2430	ADD HL,DE	3050	D1NZ L_BUC
1820	AND (HL)	2440	LD DE,80	3060	POP IX
1830	LD (HL),A	2450	A_BUC: ADD HL,DE	3070	LD A,(ALT1)
1840	INC DE	2460	D1NZ A_BUC	3080	LD B,A
1850	INC HL	2470	POP IX	3090	JR COLDL
1860	INC IX	2480	LD A,(ALT1)	3100	M_BUC: LD A,H
1870	D1NZ MAGB1	2490	LD B,A	3110	AND S6
1880	INC HL	2500	JR COLOE	3120	CP S6
1890	INC HL	2510	E_BUC: LD A,H	3130	JR Z,E_PAS
1900	POP BC	2520	AND S6	3140	LD A,H
1910	D1NZ MAGB1	2530	CP S6	3150	ADD A,S
1920	RET	2540	JR Z,E_PAS	3160	LD H,A
1930 ;		2550	LD A,H	3170	JR COLDL
1940 ;PINTA FIGURA EN EL BUFFER		2560	ADD A,S	3180	M_PAS: LD DE,0080
1950 ;		2570	LD H,A	3190	LD A,H
1960	PIWTB: LD DE,(DIRGRA)	2580	JR COLOE	3200	KDR S6
1970	LD HL,BUFFER	2590	E_PAS: LD DE,0080	3210	LD H,A
1980	LD BC,(LONG)	2600	LD A,H	3220	ADD HL,DE
1990	ADD HL,BC	2610	KDR S6	3230	COLDL: PUSH BC
2000	INC HL	2620	LD H,A	3240	PUSH HL
2010	LD A,(ALTD)	2630	ADD HL,DE	3250	LD A,(ANCH1)
2020	SLA A	2640	COLDE: PUSH BC	3260	LD B,A
2030	SLA A	2650	PUSH HL	3270	M_BUC1: PUSH BC
2040	SLA A	2660	LD A,(ANCH1)	3280	LD A,(HL)
2050	LD B,A	2670	LD B,A	3290	LD (11+0),A
2060	FIGBU: PUSH BC	2680	E_BUC1: PUSH BC	3300	INC HL
2070	LD A,(ANCHD)	2690	LD A,(11X+0)	3310	INC IX
2080	LD B,A	2700	LD (HL),A	3320	POP BC
2090	FIGB1: LD A,(DE)	2710	INC HL	3330	D1NZ M_BUC1
2100	OR (HL)	2720	INC IX	3340	POP HL
2110	LD (HL),A	2730	POP BC	3350	POP EC
2120	INC DE	2740	D1NZ E_BUC1	3360	D1NZ M_BUC
2130	INC HL	2750	POP HL	3370	POP IX
2140	D1NZ FIGB1	2760	POP BC	3380	RET
2150	INC HL	2770	D1NZ E_BUC	3390	FLYBAW: CALL M0D19
2160	INC HL	2780	POP IX	3400	PUSH BC
2170	POP BC	2790	RET	3410	LD BC,100
2180	D1NZ FIGBU	2800	HL=DIRECCION DEL GRAFICO	3420	PAUS: DEC BC
2190	RET	2810	DE=COORDENADAS Y+256*X	3430	LD A,B
2200 ;HL=DIRECCION DEL GRAFICO		2820	BC=DIMENSIONES	3440	OR C
2210 ;DE=COORDENADAS Y+256*X		2830 ;		3450	JR N2,PAUS
2220 ;BC=DIMENSIONES		2840 ;		3460	POP BC
2230 ;		2850	PAUSEM: PUSH IX	3470	RET
2240 ;		2860	EX DE,HL	3480	
2250	PIWBUF: PUSH IX	2870	INC H	3490	ALT1: DEFS 1
2260	CALL FLYBAW	2880	INC L	3500	ANCH1: DEFS 1
2270	EX DE,HL	2890	LD A,B	3510	ANCHD: DEFS 1
2280	INC H	2900	SLA A	3520	ALTD: DEFS 1
2290	INC L	2910	SLA A	3530	IZDER: DEFS 1
2300	LD A,B	2920	SLA A	3540	DIRGRA: DEFS 2
2310	SLA A	2930	LD (ALT1),A	3550	DIRMAS: DEFS 2
2320	SLA A	2940	LD A,C	3560	ARABAR: DEFS 1
2330	SLA A	2950	LD (ANCH1),A	3570	POSMAK: DEFS 2
2340	LD (ALT1),A	2960	PUSH DE	3580	DIMENS: DEFS 2
2350	LD A,C	2970	EX DE,HL	3590	POSANT: DEFS 2
2360	LD (ANCH1),A	2980	LD HL,WC000-80	3600	LONG: DEFS 2
2370	PUSH DE	2990	LD B,0	3610	BUFFER: DEFS S60
2380	EX DE,HL	3000	LD 0,0	3620	BUFFAW: DEFS 240