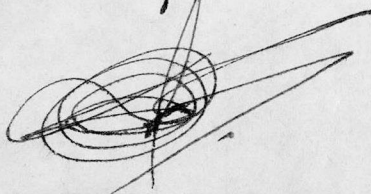


Confidencial Información

20 Mayo 1980

A handwritten signature or scribble consisting of several overlapping loops and lines, located below the date.

Prohibida toda reproducción total
o parcial ~~de~~ si autorización escrita
del editor.

SWITCH

1 2

COIN

1

		FREE PLAY
+		1M 2P
	+	1M 3P
+	+	1M 4P

FP

SWITCH 5 → VELOCIDAD BALAS

SWITCH 6 → BALAS CHINOS

SWITCH

3 4

COIN

2

		4M 1P
+		2M 1P
	+	3M 1P
+	+	1M 1P

FP

6 5 4 3 MON 1 MON 2

0	0	0	0	N:U.	N:U
0	0	0	1	NU	N:U
0	0	1	0	NU	N:U
0	0	1	1	NU	N:U
0	1	0	0	1 Mon 3p	4 → 1
0	1	0	1	1,2 → 3 3 → 4	3 → 1
0	1	1	0	1 → 3 2 → 4	2 → 1
0	1	1	1	1 → 4	1 → 1
1	0	0	0	1 Mon 2p	4 → 1
1	0	0	1	1,3 → 2 3 → 3	3 → 1
1	0	1	0	1 → 2 2 → 3	2 → 1
1	0	1	1	1 → 3	1 → 1
1	1	0	0	1 Mon 1p	4 → 1
1	1	0	1	1,2 → 1 2 → 2	3 → 1
1	1	1	0	1 → 1 2 → 2	2 → 1
1	1	1	1	1 → 2	1 → 1

x →

x →

x

4M 1P

IMAGEN MOVIL

IMPRESA FIRA

2 4 16 32 64 128
 0 0 0 0 0 0
 1 0 0 0 0 0
 * 0 1 0 0 0 0
 1 1 0 0 0 0
 0 0 0 0 0 0
 1 0 0 0 0 1
 0 1 0 0 0 0
 1 1 0 0 0 1
 0 0 1 0 0 0
 1 0 1 0 0 0
 * 0 1 1 0 0 0
 1 1 1 0 0 0
 0 0 1 0 0 0
 1 0 1 0 0 1
 0 1 1 0 0 0
 1 1 1 0 0 1
 0 0 0 1 0 0
 1 0 0 1 0 0
 * 0 1 0 1 0 0
 1 1 0 1 0 0
 0 0 0 1 0 0
 1 0 0 1 0 1
 0 1 0 1 0 0
 1 1 0 1 0 1
 0 0 1 1 0 0
 1 0 1 1 0 0
 * 0 1 1 1 0 0
 1 1 1 1 0 0
 0 0 1 1 0 0
 1 0 1 1 0 1
 0 1 1 1 0 0
 1 1 1 1 0 1
 0 0 0 1 1 0
 1 0 0 1 1 0
 * 0 1 0 1 1 0
 1 1 0 1 1 0
 0 0 0 1 1 0
 1 0 0 1 1 1
 0 1 0 1 1 0
 1 1 0 1 1 1
 0 0 1 1 1 0
 1 0 1 1 1 0
 * 0 1 1 1 1 0
 1 1 1 1 1 0
 0 0 1 1 1 0
 1 0 1 1 1 1
 0 1 1 1 1 0
 1 1 1 1 1 1
 0 0 1 1 1 0
 1 0 1 1 1 1
 0 1 1 1 1 0
 1 1 1 1 1 1

Grupo Pos Ver 1
 Objeto a pintar 1
 Colorido total 1
 Posición Hor Obj 1
 Pos Vert Bomba 1
 Pos Hor Bomba 1
 Grupo Pos Ver 2
 Objeto a pintar 2
 Colorido total 2
 Pos Hor Obj 2
 Pos Vert Bomba 2
 Pos Hor Bomba 2
 Grupo Pos Ver 3
 Objeto a pintar 3
 Colorido total 3
 Pos Hor Obj 3
 Pos Vert Bomba 3
 Pos Hor Bomba 3
 Grupo Pos Ver 4
 Objeto a pintar 4
 Colorido total 4
 Pos Hor Obj 4
 Pos Vert Bomba 4
 Pos Hor Bomba 4
 Grupo Pos Ver 5
 Objeto a pintar 5
 Colorido total 5
 Pos Hor Obj 5
 Pos Ver Bomba 5
 Posición Hor Bomba 5
 Grupo Pos Ver 6
 Objeto a pintar 6
 Colorido total 6
 Pos Hor Obj 6
 Pos Ver Bomba 6
 Posición Hor Bomba 6
 Grupo Pos Ver 7
 Objeto a pintar 7
 Colorido total 7
 Pos Hor Obj 7
 Pos Vert Bomba 7
 Posición Hor Bomba 7
 Grupo Pos Ver 8
 Objeto a pintar 8
 Colorido total 8
 Pos Hor Obj 8
 Pos Vert Bomba 8
 Posición horizontal misil 1

→ 4 bits maza peso zona pantalla

Libres de RAM.

5880 a 58FF
 5840
 5842
 5844
 5846
 5848
 584A
 584C
 584E
 5850
 5852
 5854
 5856
 5858
 585A
 585C
 585E

Vert 58 (0110)(0001)
 Hor 58 (0110)(0011)
 6 3

V 587D
 H 587F

@@@@@@

5800 - 58FF

58+ ↓ Hexa

0111

584X
 585X
 586X
 587X

OBJ RAM = 0101.1xxx xxxv → 5800-5FFF → 3K
 VRAM = 0101.0xxx xxxv → 5000-5800 → 2K

WOR = 7800-7FFF
 DIPSW = 7000-77FF
 SW1 = 68FF-6FFF
 SW0 = 6000-67FF
 OBJ RAM RD = 5800-5FFF
 VRAM RD = 5000-5800

RD.

PITCH = 7800-7FFF
 PORT = 7000-77FF
 SOUND = 68FF-6FFF
 LAMP = 6000-67FF
 OBJ RAM WR = 5800-5FFF
 VRAM WR = 5000-5800

→ B1
 WR →
 → A000-A7FF
 → 9000-9800

RAM PROGRAM 1K → 4000-44FF → 2K → duplicated
 ROM PROGRAM 10K → 0000-3FFF → 16K

8.000

ROM 1 → 0000-0FFF

~~ROM 2 → 4800-4FFF, 5800-6FFF~~

ROM 2 → 4000-4FFF

ROM 3 → 2000-2FFF

1P START - C1

2P START - C2

} A800

PI SHOOT - 10

PI RIGHT - 08

PI LEFT - 04

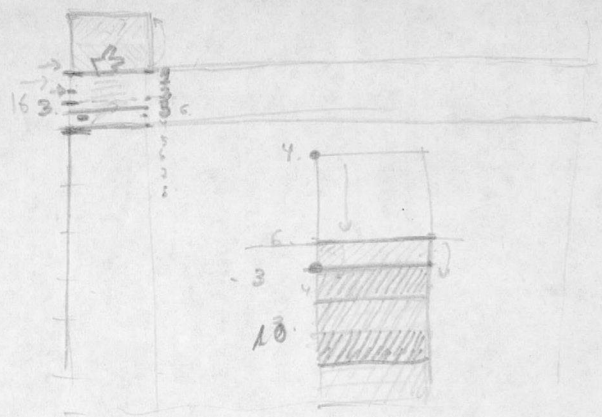
COIN 2 - 02

COIN 1 - 01

} A000

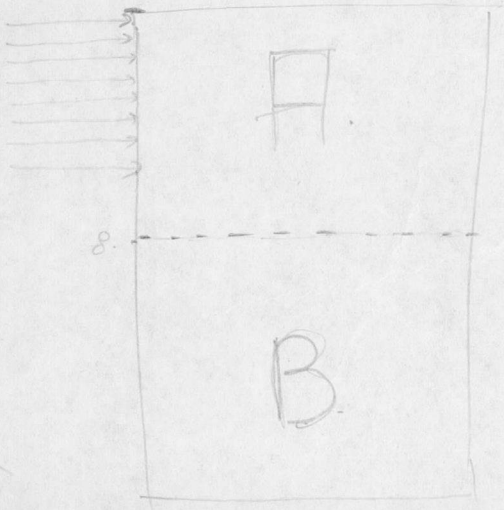
16
8
128

8V.



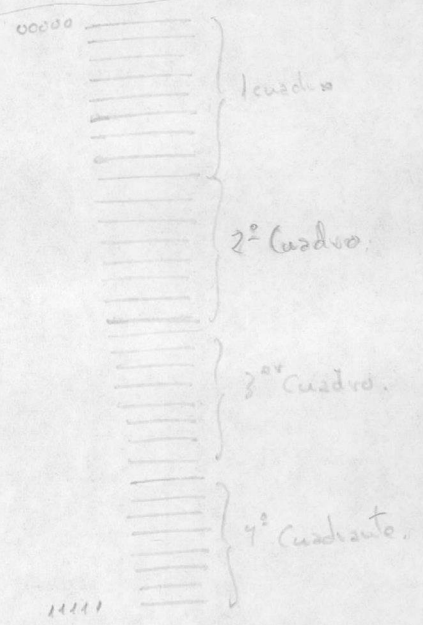
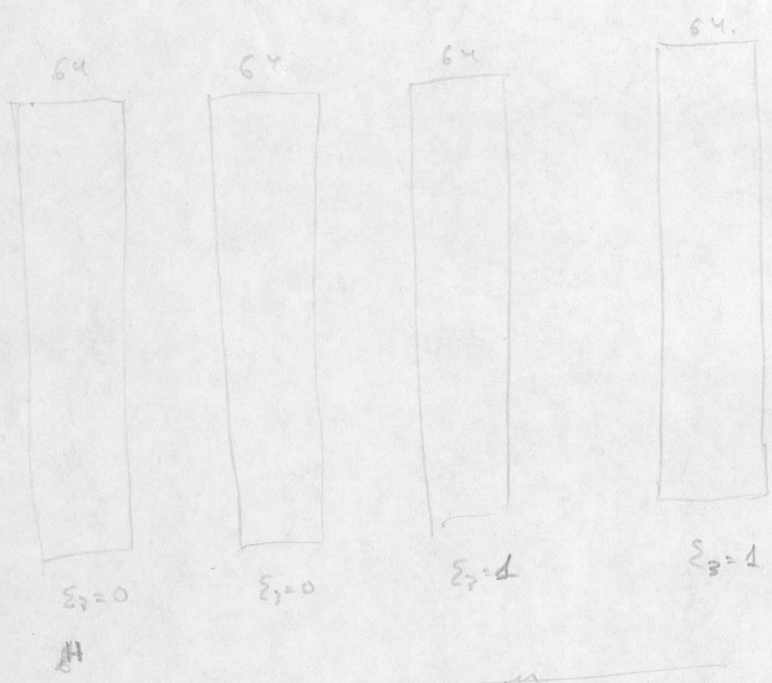
10111

1er Cuadr.	2º
3º	Cuadr.

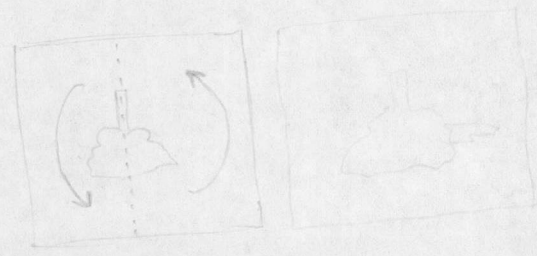


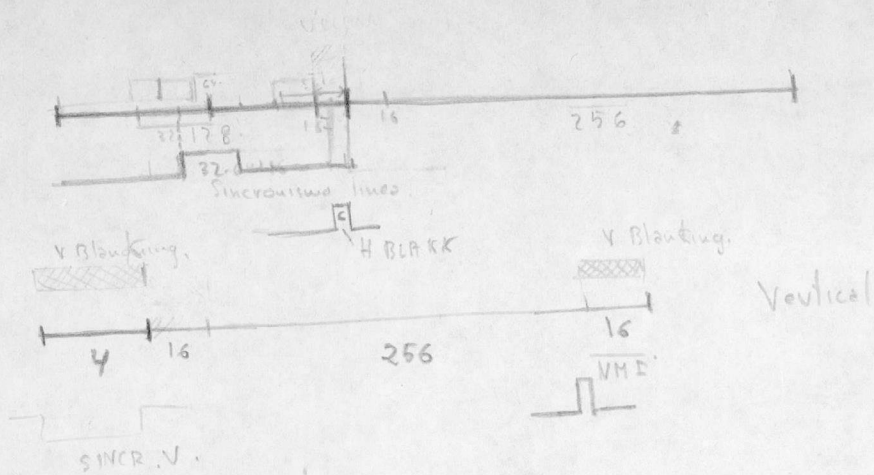
4-16
27 (64)

256 objetos. } → puedo acceder a 64 objetos.



64 cuadros diferentes



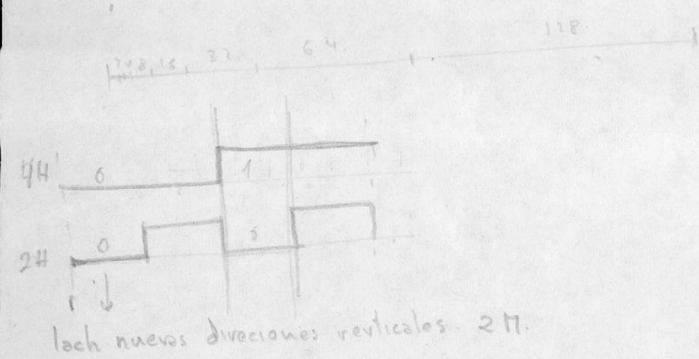


Acceso a 2101-2.

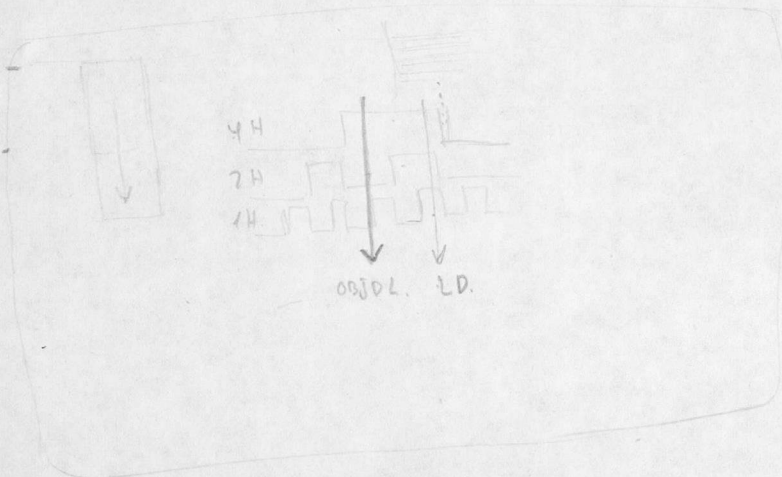
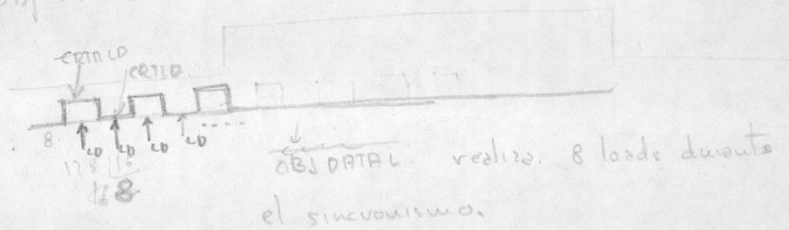
Durante toda la línea accede.

4H.
8H.
16H.
32H.
64H.
128H.
256H.

128 Bytes.

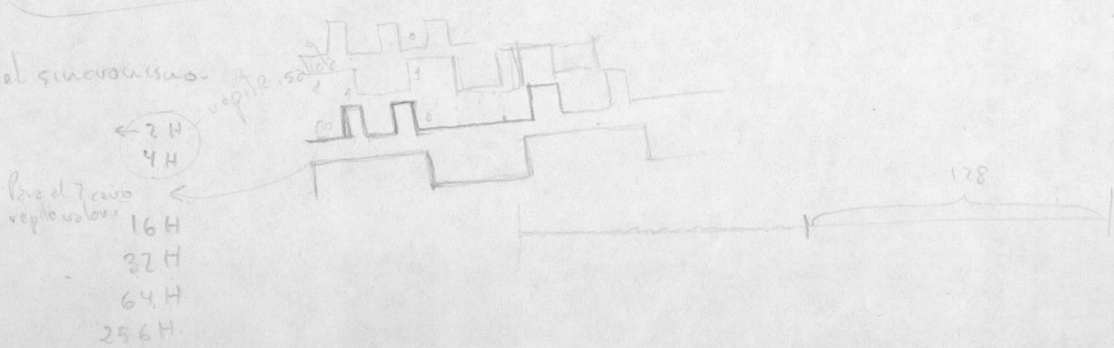


Obj DATA →



Obj D6 Imagen invertida.
Obj D7 Imagen lateral.

Durante el sincronismo.



SRD

GS 3 D112C

CNTRLD

8H

TD

VPL



conductor group 16 lines

conductor mist

1/4

SLD HLO

1/4

