

# CERBERUS

operation. & maintenance.

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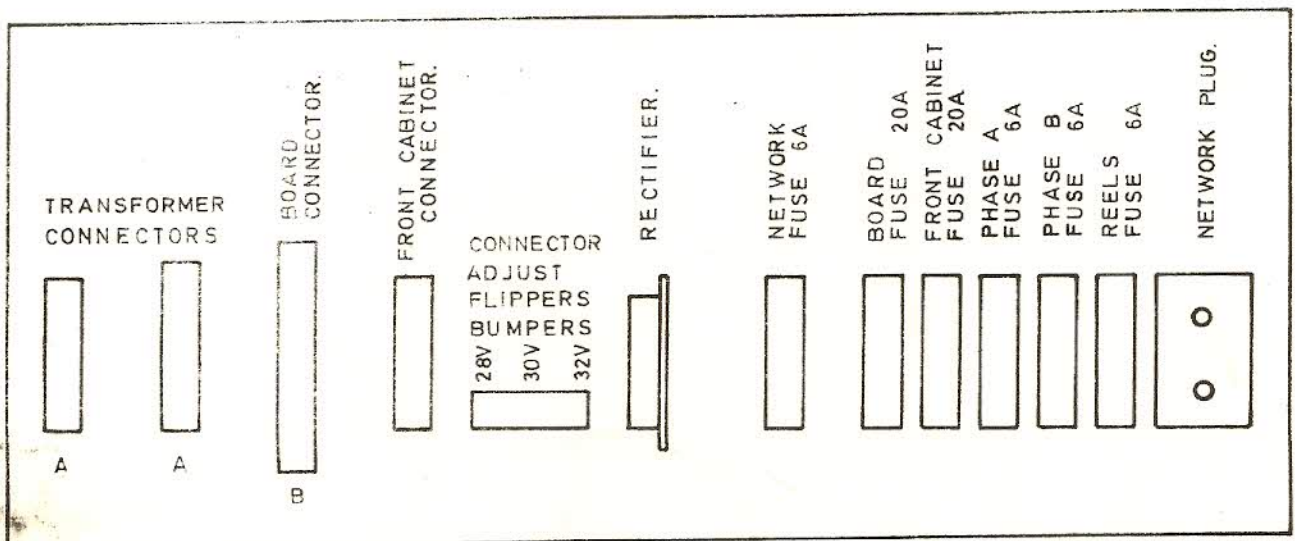
— INSTALLATION —

## INTRODUCTION

- Assemble the machine.
- Connect the harnesses (see section on connection of harnesses)
- Check the network voltage (the machine leaves the factory with 220V A.C., 150 W; to vary the input voltage see section on voltage change).
- Check fuses.
- Locate possible errors in connection (connectors displaced or wrongly connected).

## HARNESSES CONNECTED

- Connect harness from the transformer to the lateral platform of the cabinet (A) figure 2.
- Connect harnesses from the board to:
  - a) lateral platform (B) figure 2.
  - b) Thyristors board (12) figure 2. Connectors 8, 9, 10 & 11.
  - c) IOS board (16) figure 2. Connector 3.
  - d) RELES board (15) figure 2. Connector 6.
- Connect harness from the cabinet to the IOS board. Connector 3.
- Connect harness from lateral platform to:
  - a) RELES board (15) figure 2. Connector 7.
  - b) THYRISTORS board (12) figure 2. Connector 9.
  - c) PSU board (13) figure 2. Connector 1.
  - d) frontal connector (8 ways).
- Connect faston terminals on frontal.



## VOLTAGE CHANGE

This is effected by way of the selector situated on the transformer (figure 1).

The voltages are printed for better localization:

- Lift the board.
- Place the mobile terminal (red-green) in the position corresponding to the voltage available (figure 1).

The interior plug (5) situated on the lateral platform (figure 1) is 220V and is not affected by the network switch.

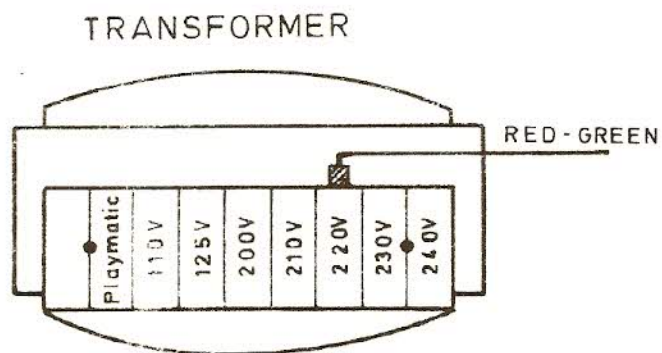
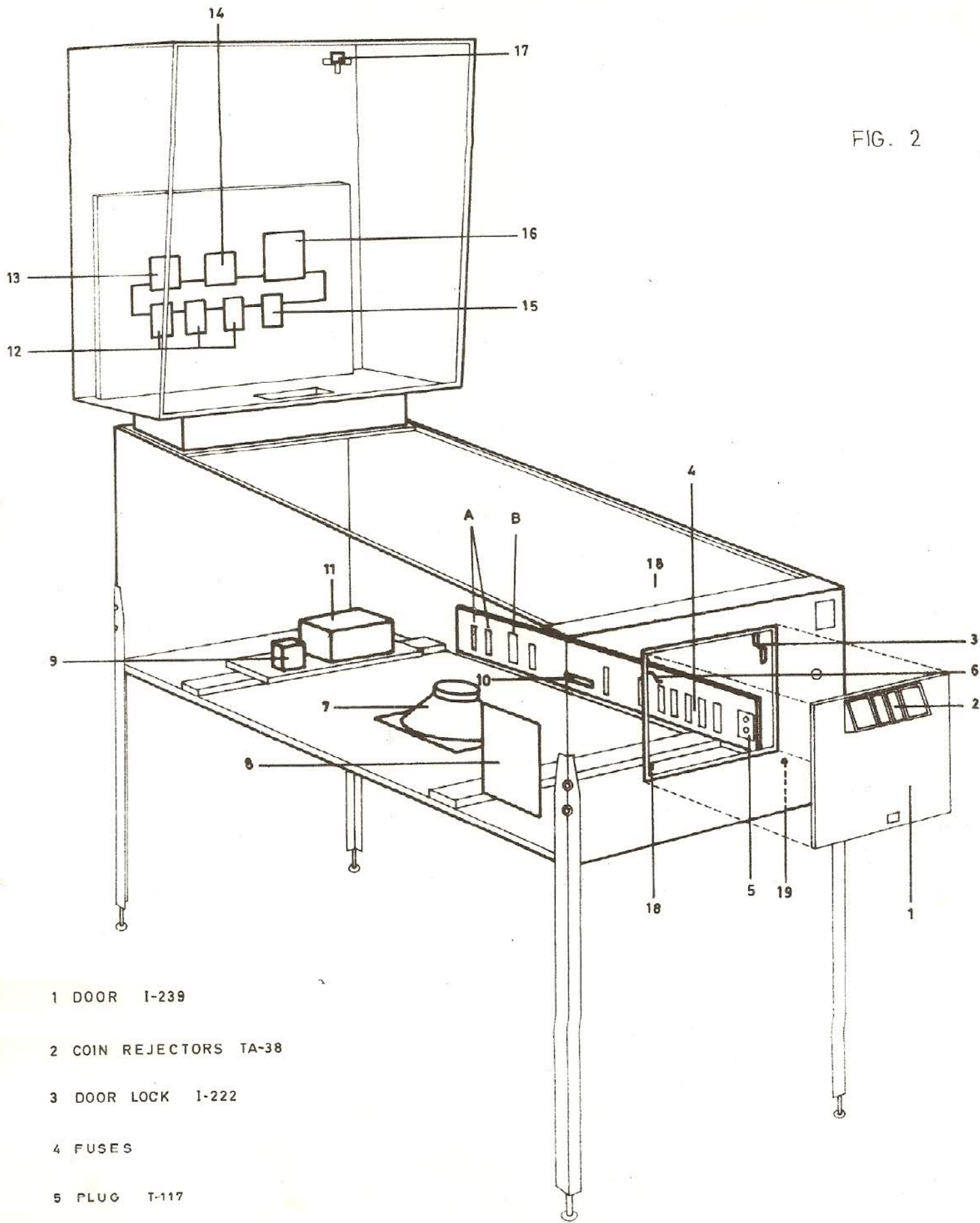


FIG. 1

FIG. 2



1 DOOR I-239

2 COIN REJECTORS TA-38

3 DOOR LOCK I-222

4 FUSES

5 PLUG T-117

6 ALARM CONTACT R-144AB

7 LOUDSPEAKER T-133

8 SYNTHETIZER EF-86

9 BALLAST T-156

10 Flippers & bumpers regulator.

11 TRANSFORMER RT-1020

12 THYRISTORS EF-39

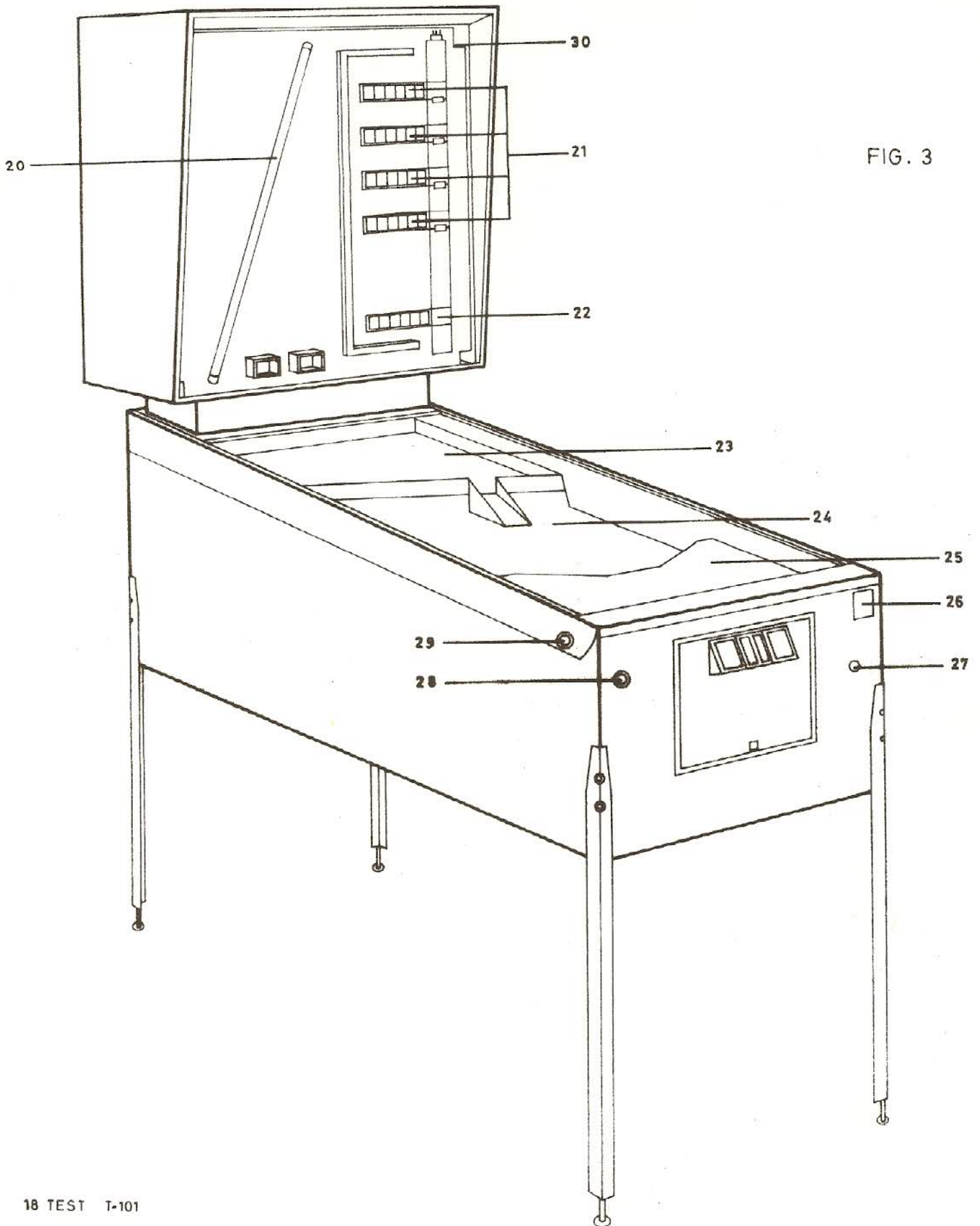
13 POWER SUPPLY EF-51

14 MPU EF-44

15 RELAYS EF-55

16 IOS EF-52

17 TACA ER-359



18 TEST T-101

19 SWITCH T-80

20 FLUORESCENT T 155

21 PLAYER DISPLAYS EF-46

22 GAME DISPLAYS EF-45

23 Upper playfield

24 Lower playfield

25 CARD HOLDER I-681

26 PLUNGER I-499

27 Push-select button T-101

28 GAME BUTTON I-182

29 FLIPPERS BUTTON I-182

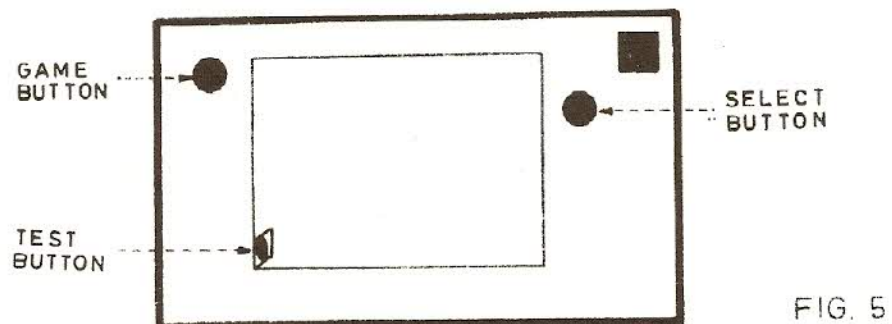
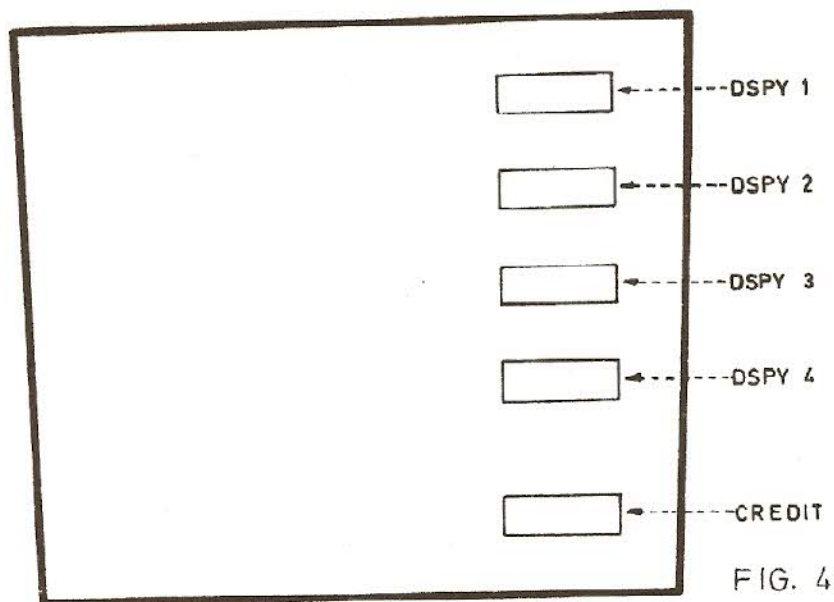
30 Hinges with strap I-483 I-484



— OPERATION —

## TEST

- Disconnect and connect the machine with the test button pressed (figure 5).
- Release this when the machine enters test state.
- The counters advance from 000.000 to 999.999 repeating the cycle (test state).
- On the CREDIT counter (see figure 4) 00, will appear, this indicates that there is no contact closed.
- On closing any contact, the number corresponding to said contact will appear on the CREDIT counter (see figure 7)



## DESCRIPTION OF GAME

- Each dropped target lights a segment on the central display.
- On forming a number, the "SUPER BONUS" is reflected in that number.
- When the ball enters the righthand kickout hole a bonus is discharged and when an "O" is formed on the central display a left "SPECIAL" is prepared.
- Putting the light out in the three "30.000" corridors twice lights the "SPECIAL".
- The MULTIBALL kickouts lights in the "30.000" corridors. When the balls enters the lighted kickouts they are kept back and a new ball comes out of the channel.
- If one or two balls are kept back and the one in play is lost, the FLIPPERS are cancelled till the balls which have been kept back enter the channel.
- With the three balls kept back the game "MULTIBALL" is reached (for 15 seconds the balls which enter the channel do not count).
- The X3, X4, X5 and lit when the ball passes along the central corridor.
- the central corridor also lights the "100.000", the "EXTRA BALL" of same and the superior "SPECIAL".

## ADJUST & BOOKKEEPING

### - READING COIN & GAME TOTALS (BOOKKEEPING)

- Machine in GAME OVER.
- Press test button once and the following will appear:
  - a) 1st player display - - n° of coins accepted by 1st rejector.
  - b) 2nd player display - - n° of coins accepted by 2nd rejector.
  - c) 3rd player display - - n° of coin accepted by 3rd rejector.
  - d) 4th player display - - Number of games played (free & paid)
  - e) CREDIT display - - A "C" appears (it means "coins").
- If we press the button of the IOS board, the 4 totals (a, b, c, d) return to zero.

### - READING PRIZE TOTALS

- Machine in GAME OVER (disconnect and connect).
- Press test button twice or once if this is at the previously mentioned stage and the following will appear:
  - a) 1st player display - - total prizes for "SPECIAL"
  - b) 2nd player display - - total "EXTRA BALL" given
  - c) 3rd player display - - total prizes by scoring
  - d) 4th player display - - total FREE GAMES gived
  - e) CREDIT display - - A "T" appears (it means "totals")

### - STANDARD ADJUSTMENT

- Machine in GAME OVER.
- Press test button three times, the following will appear:
  - a) 1st, 2nd, 3rd & 4th player displays - - blank
  - b) CREDIT counter display - - - - - "ST"
- On pressing the game button all adjustments are modified to STANDARD value (see table of adjustments) figure 6; on the 1st player display "ST" will appear

- INDEPENDIENT ADJUSTMENT

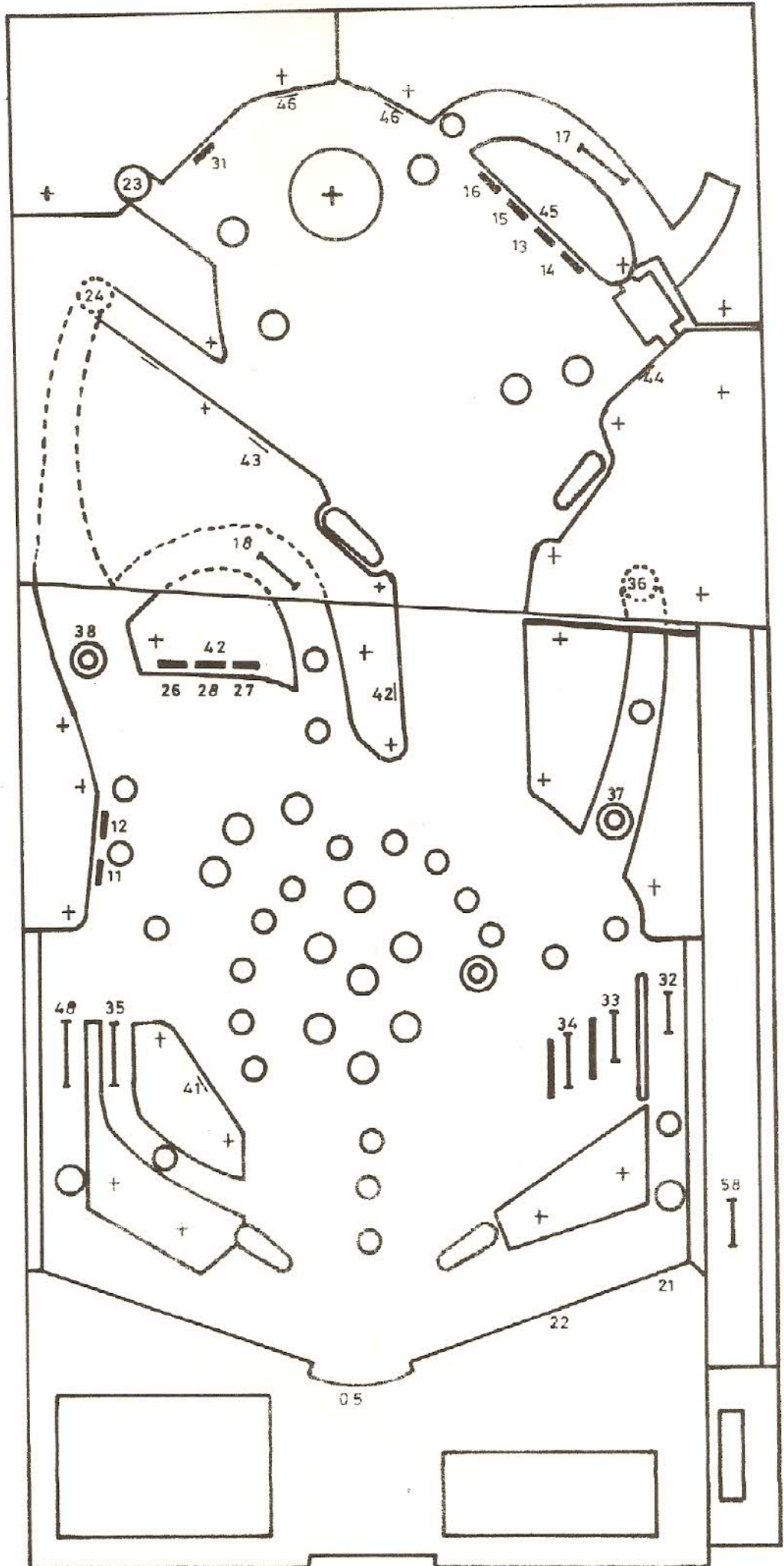
- Starting from the previously mentioned stage, "ST", each time the test button is pressed the next adjustment zone is reached.
- The zone number will appear on the CREDIT counter.
- The value to which it is adjusted will appear on the 1st player display.
- To modify said value the GAME BUTTON is pressed.

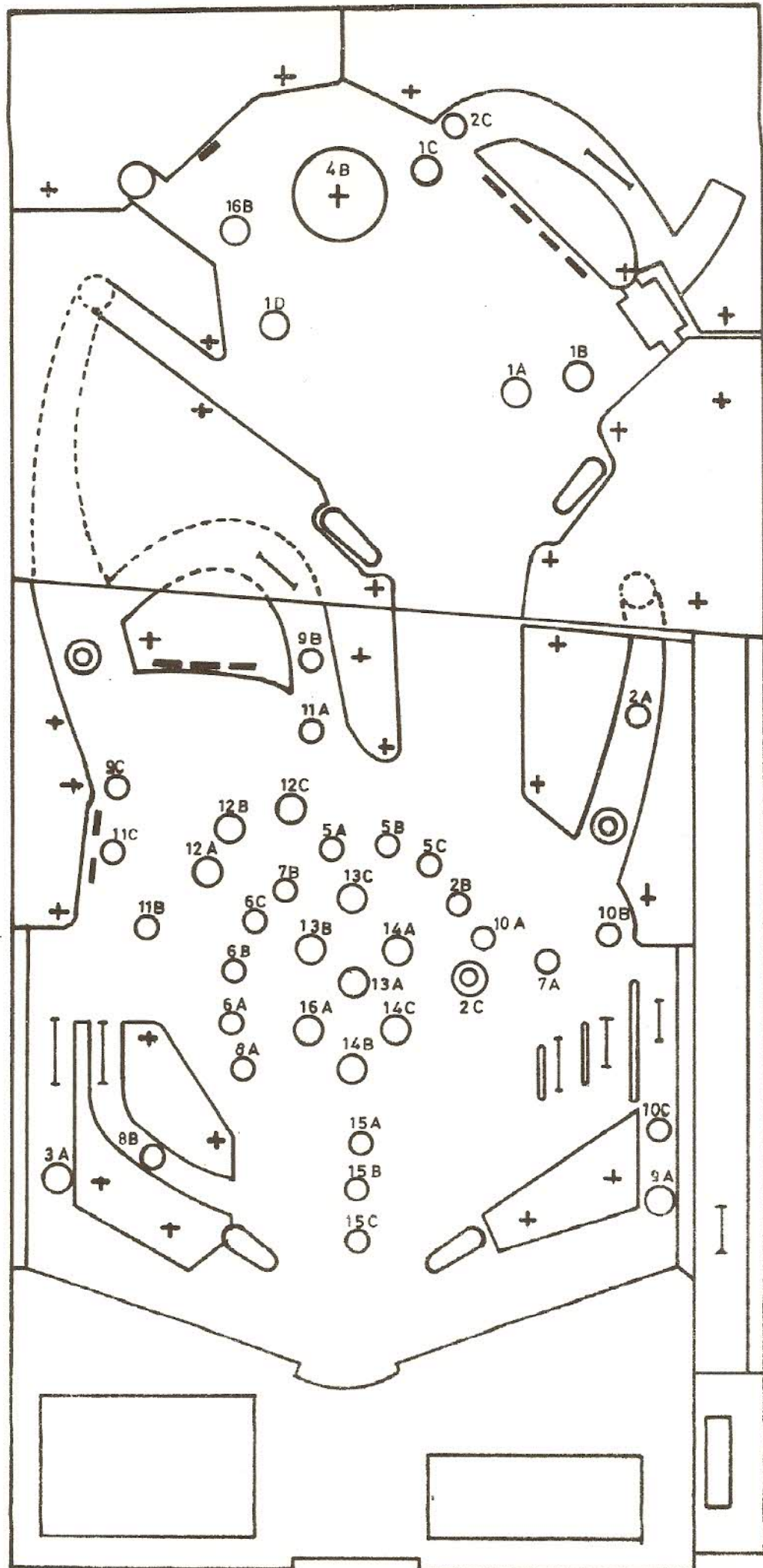
OBJECT OF ADJUSMENT	AREA	READING	STANDARD
MAXIMUM NUMBER OF CREDITS	01	00 to 99	15
"HIGH SCORE" SCORING	02	000 to 990	700.000
FREE GAME FIRST SCORE	03	000 to 990	500.000
FREE GAME SECOND SCORE	04	000 to 990	650.000
FREE GAME THIRD SCORE	05	000 to 990	000.000
Games per coin first coin rejector.	06	0'3-0'5-1-1'5 up to 39	0'3
Games per coin second coin rejector.	07	0'3-0'5-1-1'5 up to 39	2
Games per coin third coin rejector.	08	0'3-0'5-1-1'5 up to 39	5
MAXIMUM NUMBER OF EXTRA BALL	09	0-1-2-3 extra ball	3
Free games given for HIGH SCORE	10	0-1-2-3 free game	1
Games for each player	11	0=several 1=1 only	0
PRIZES FOR SPECIAL	12	0=game 1=ball	0
PRIZES FOR SCORING	13	0=game 1=ball	0
MATCH FEATURE	14	active non active	0
MULTIBALL <i>accounted baller</i>	15	memorize non memori.	0
GAME OVER	16	sound non sound	0
LOWER TARGETS	17	1K 10K	0
BUMPERS	18	100/1K 1K/10K	0
CORRIDOR 18	19	100ptos. 1K ptos.	0

- There is a connector on the lateral platform to this effect (10) (see figure 2), indicating to the voltage that it can be regulated.
- Depending on the strength required, the following voltages are available: 28V, 30V & 32V.

SWITCHES

FIG. 9

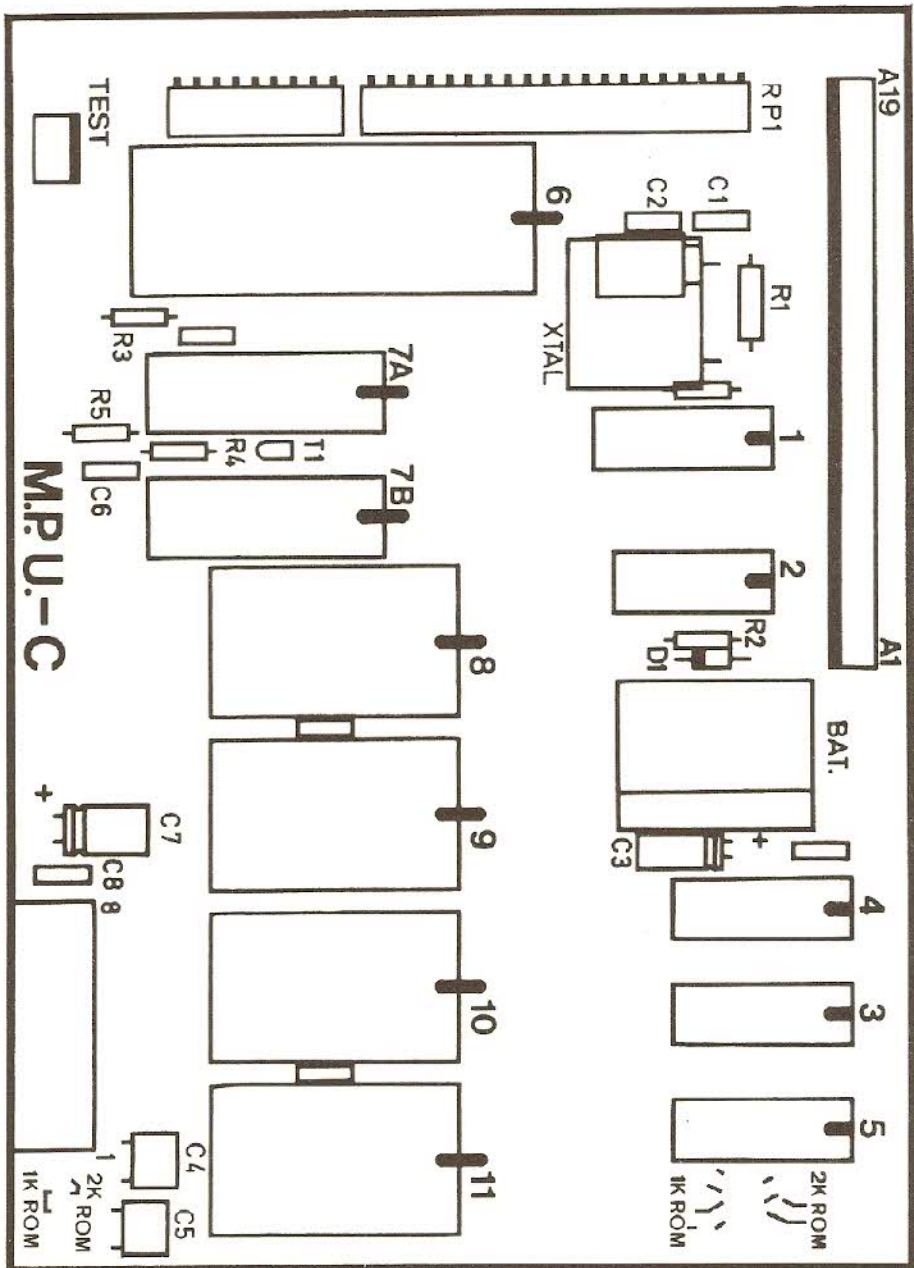




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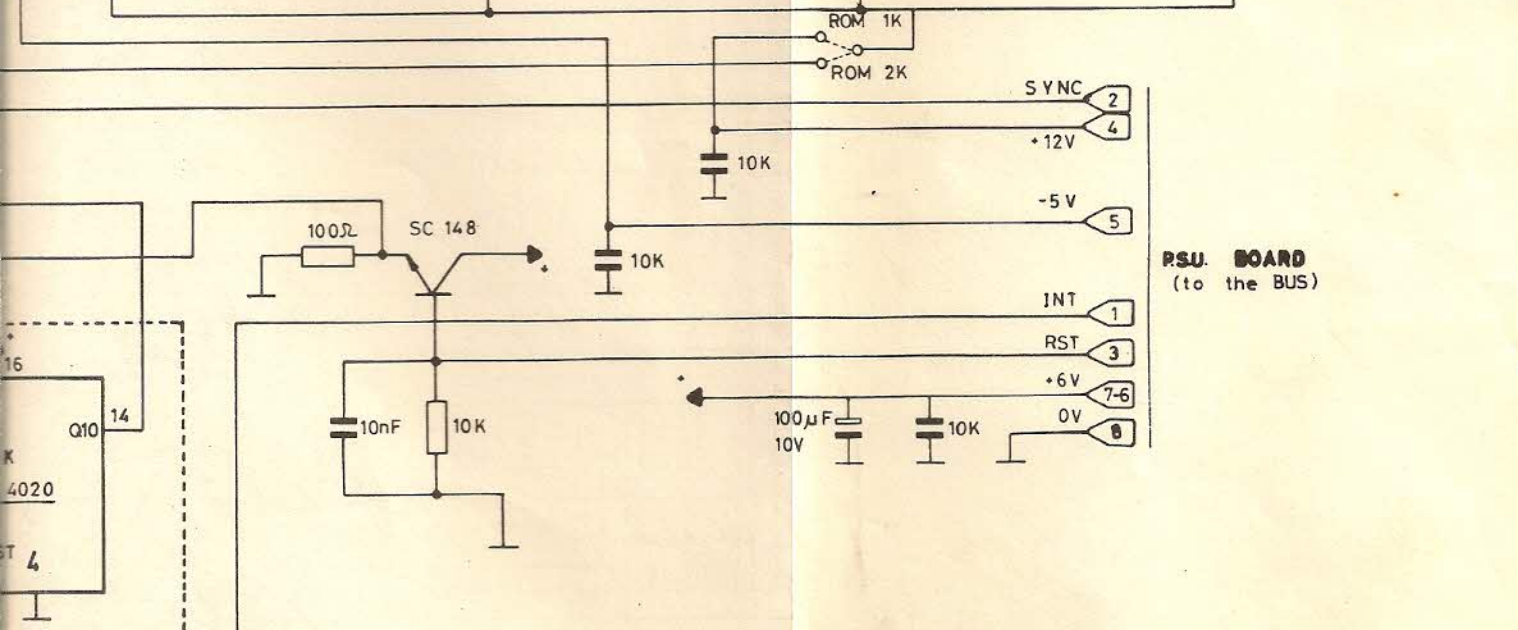
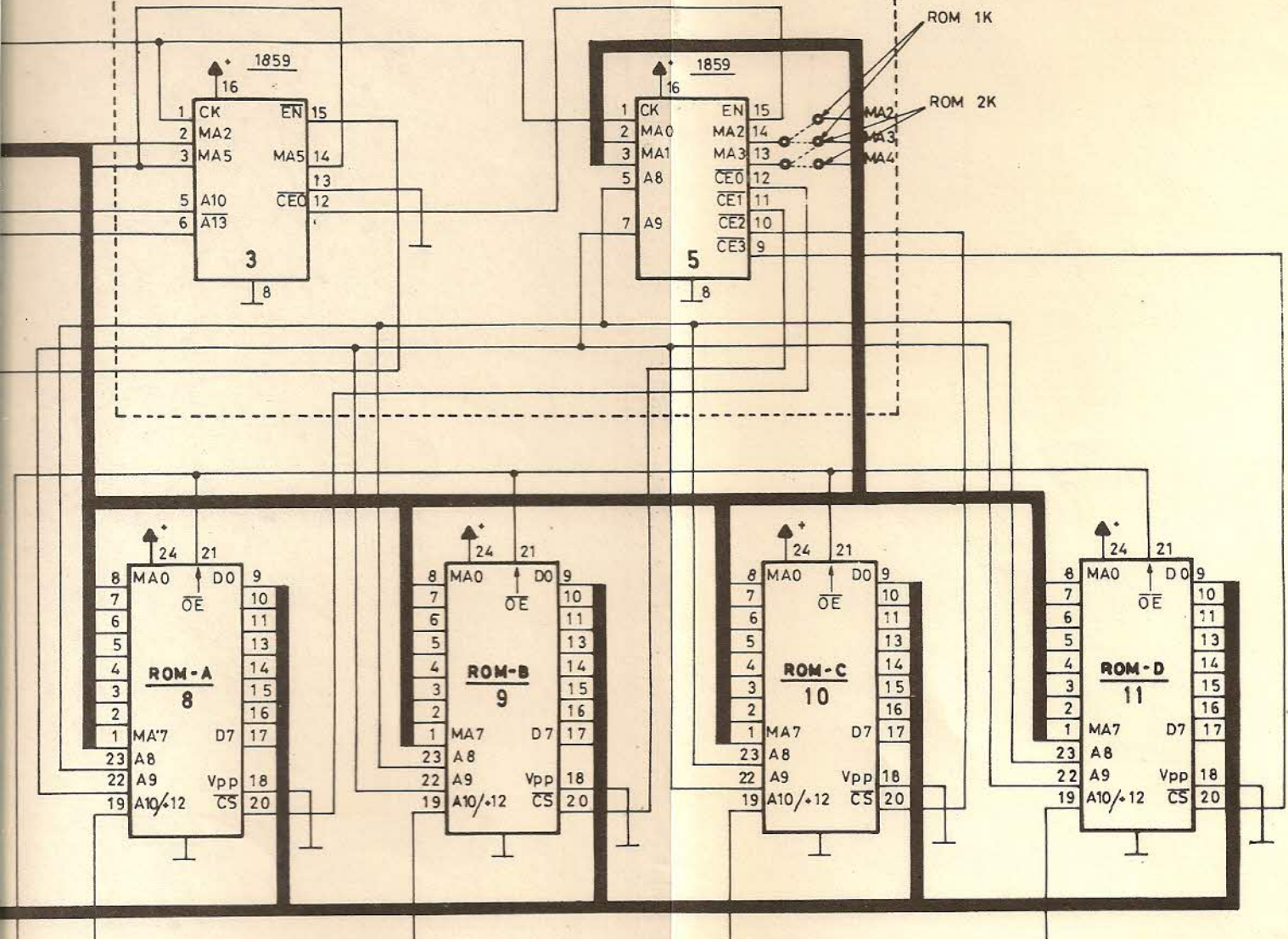
SCHEMES





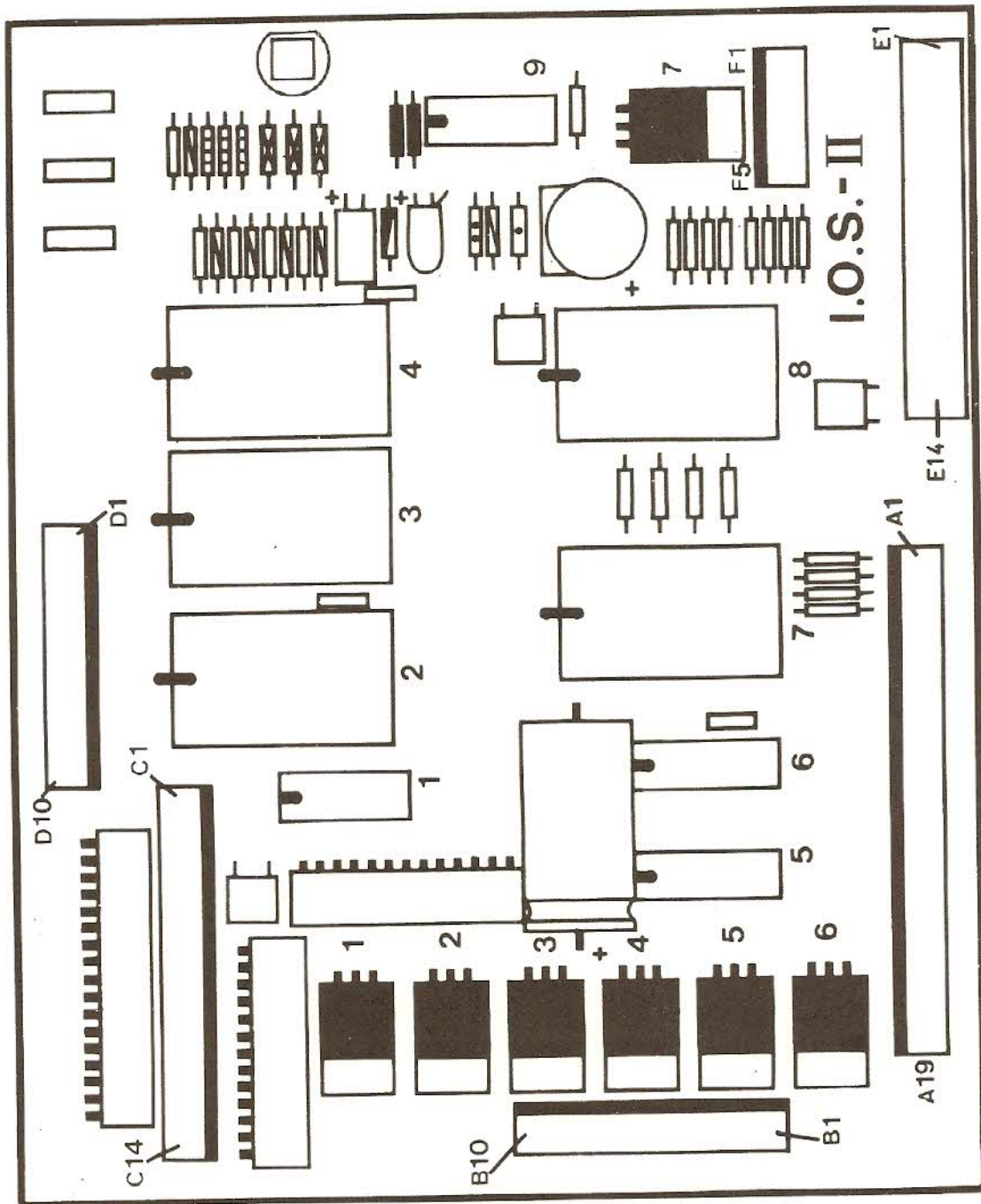
**MPU-C**

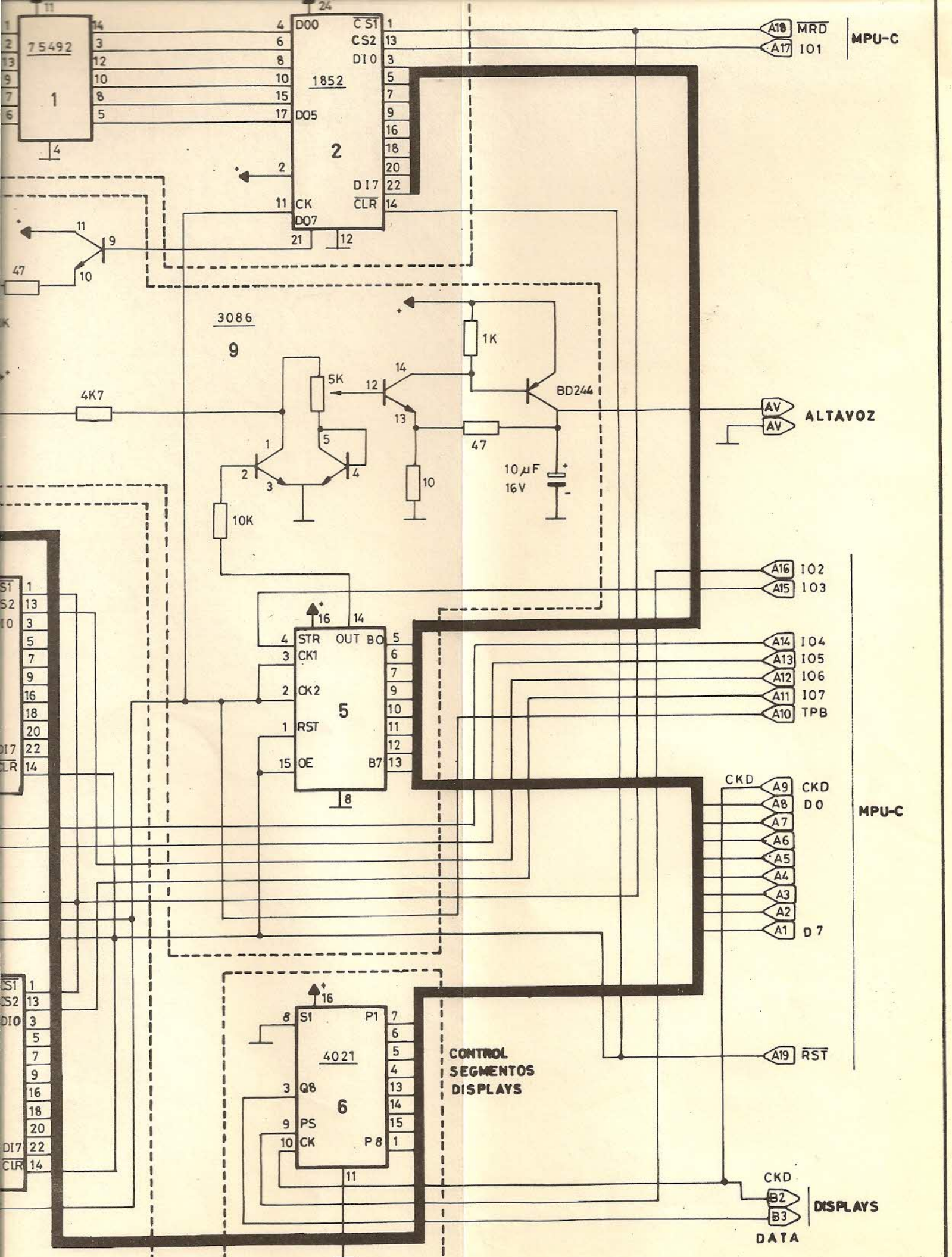
**SELECTORES DE ROM Y RAM.**

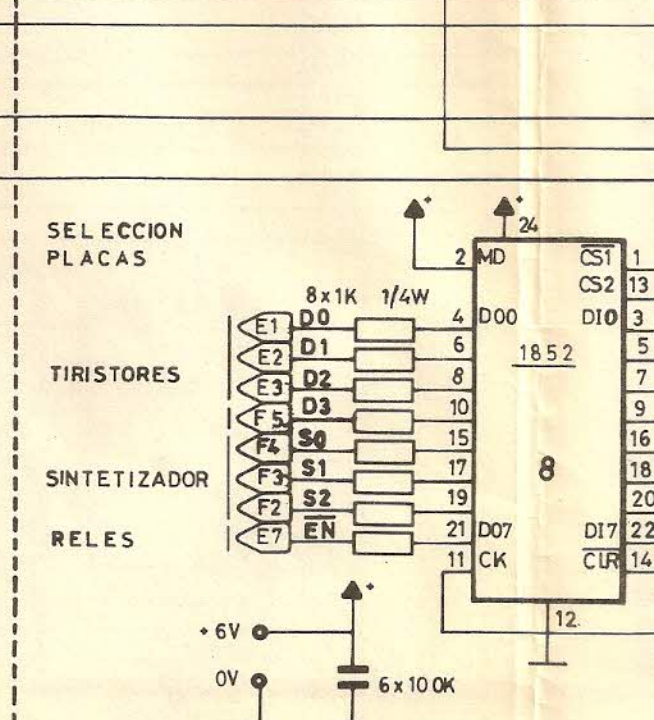
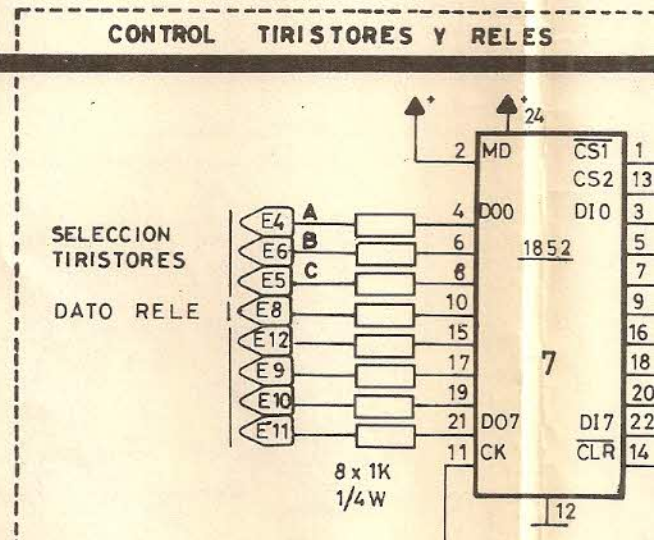
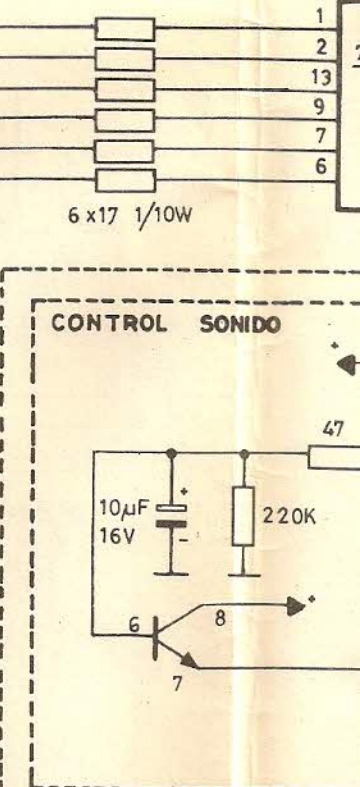
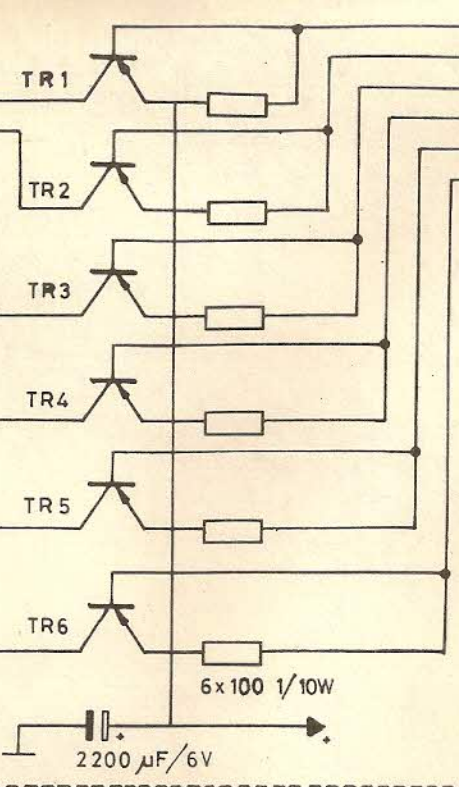
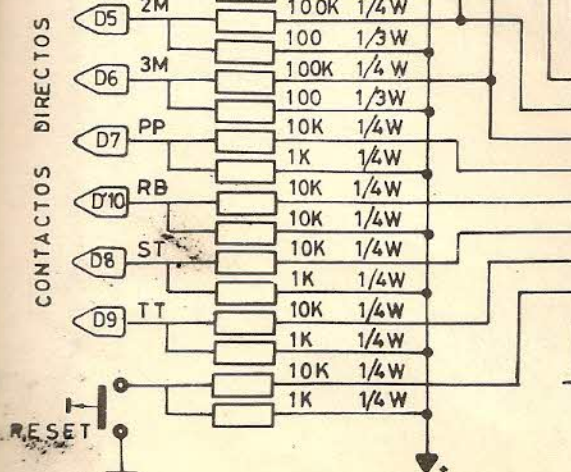
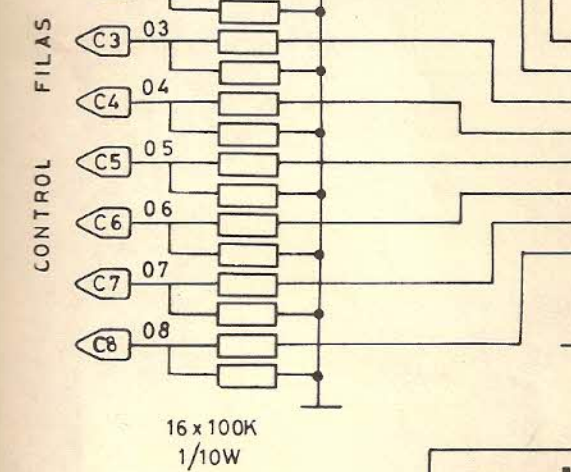
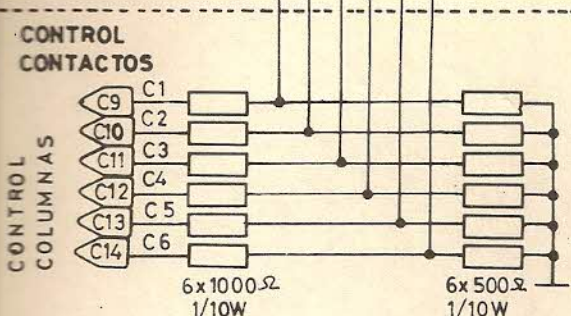
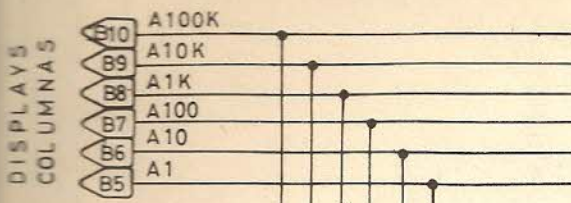


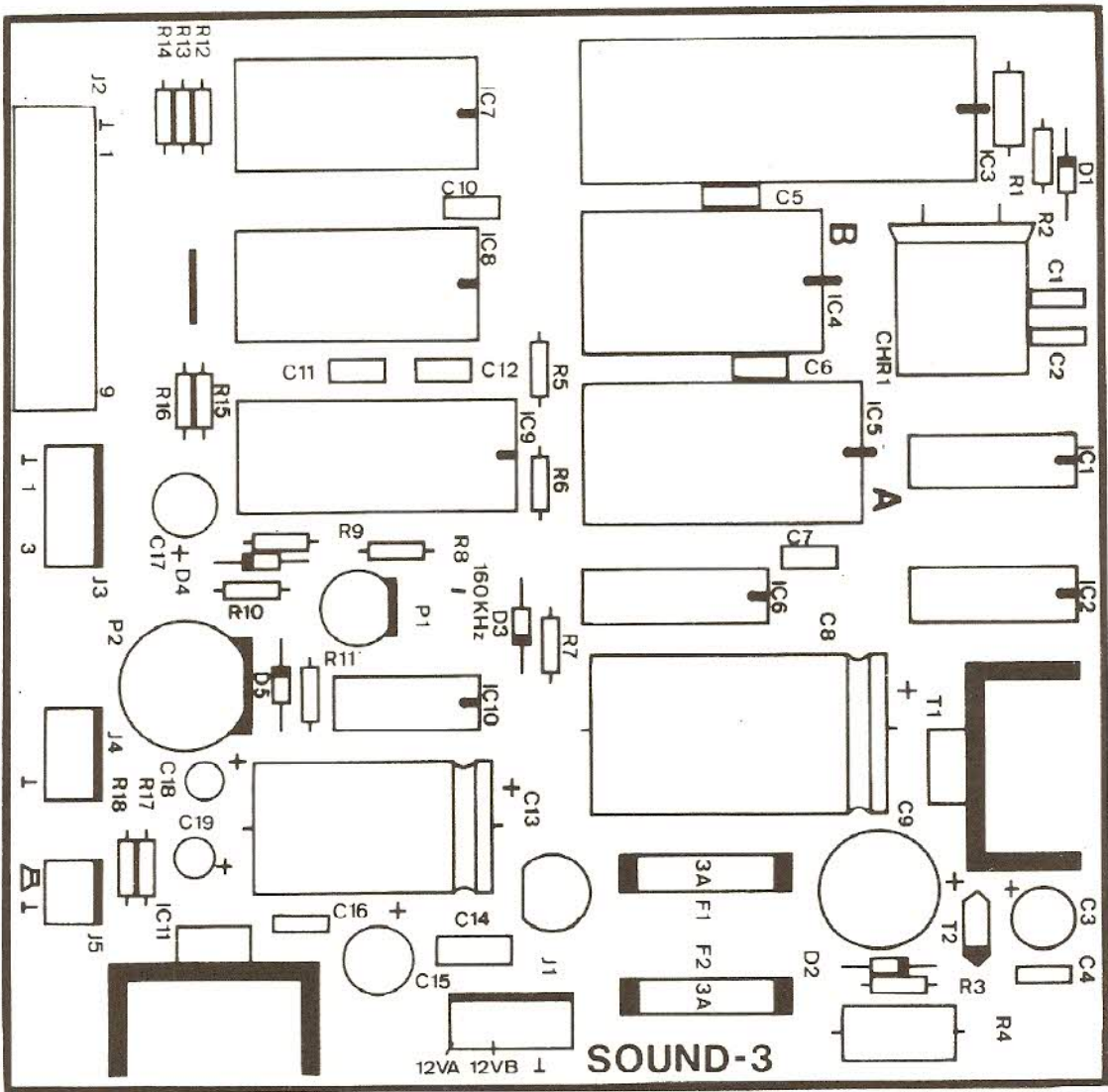
SPLAYS.

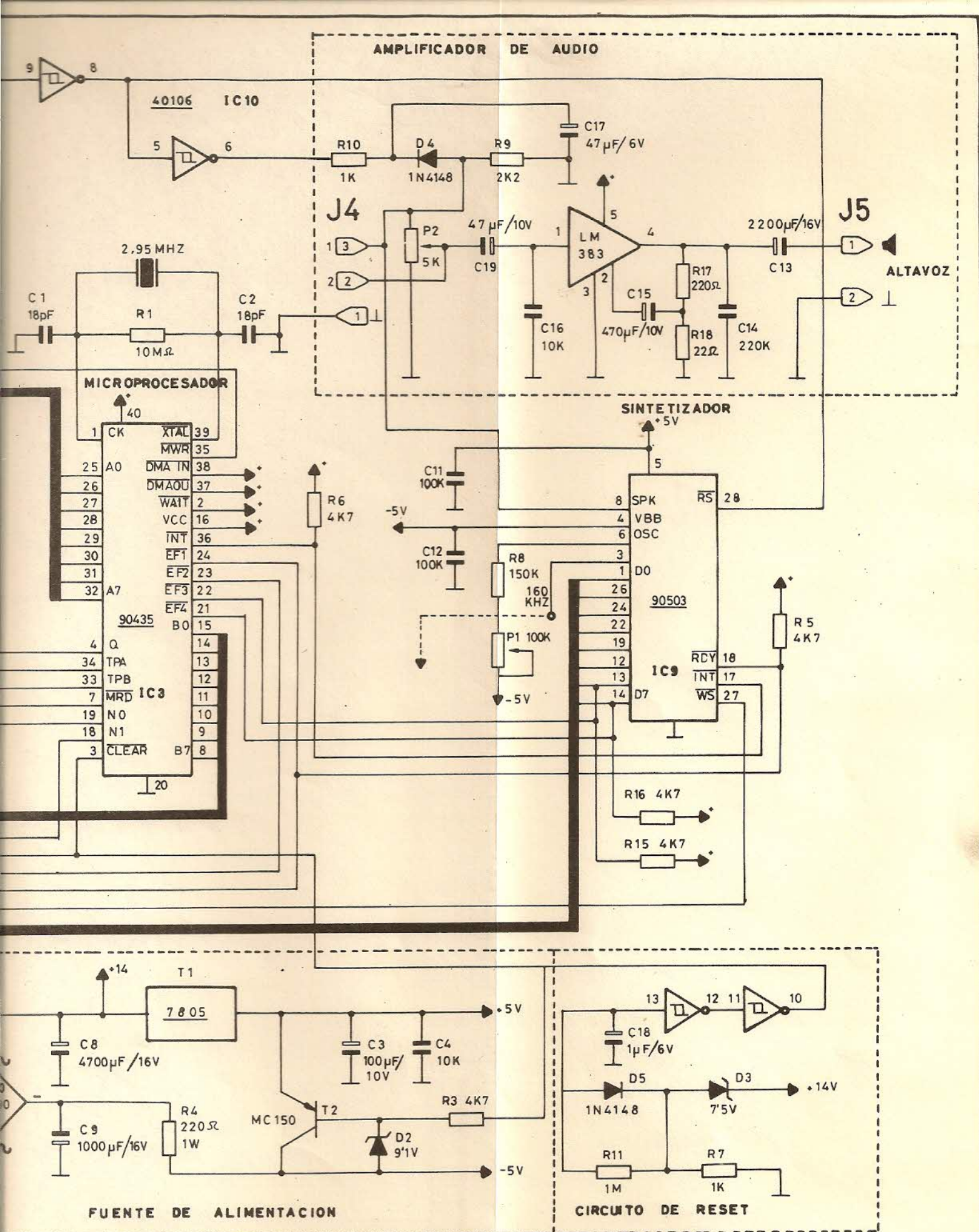






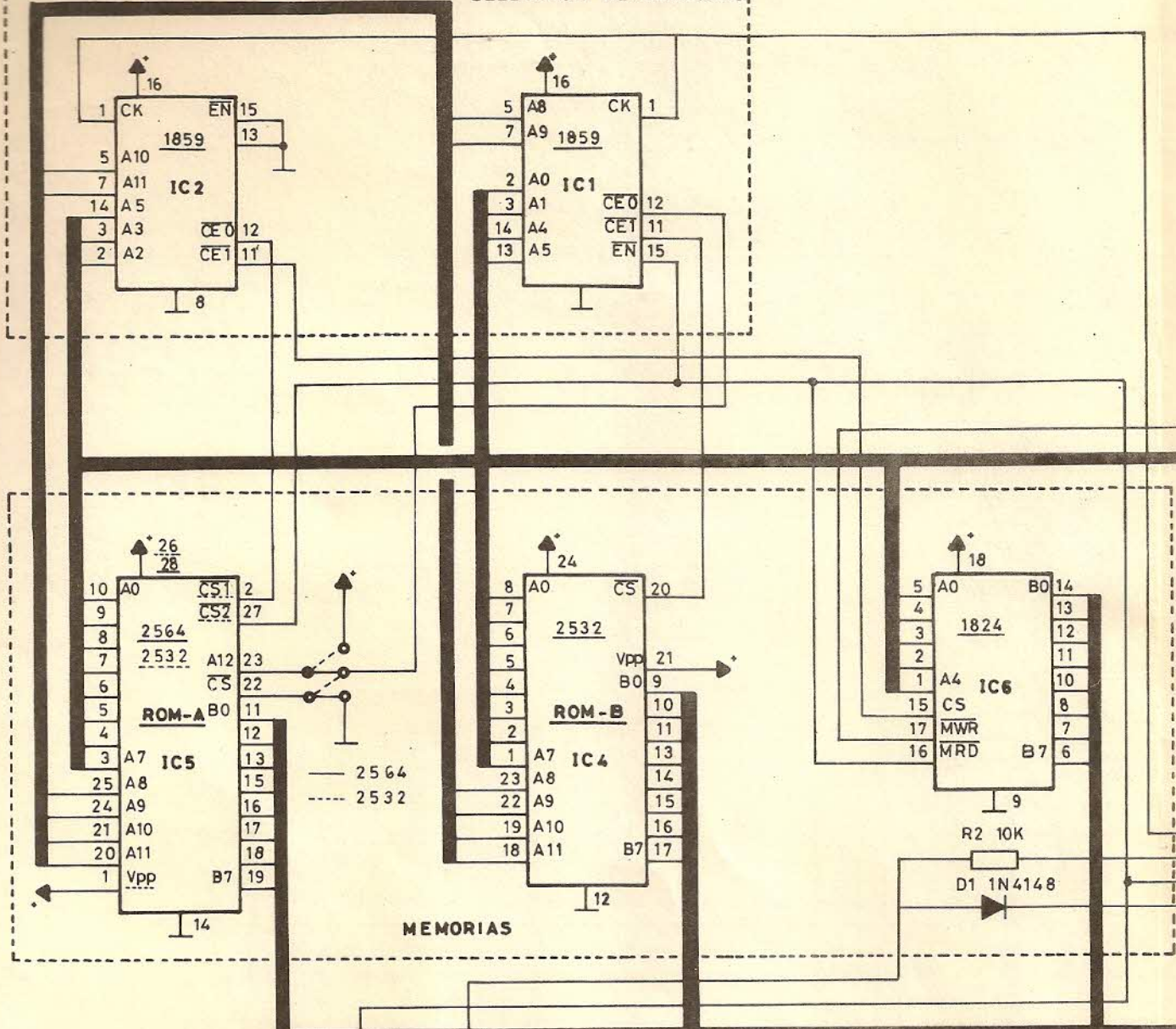






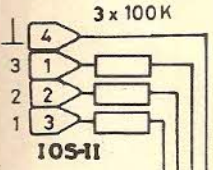


SELECCION DE MEMORIAS

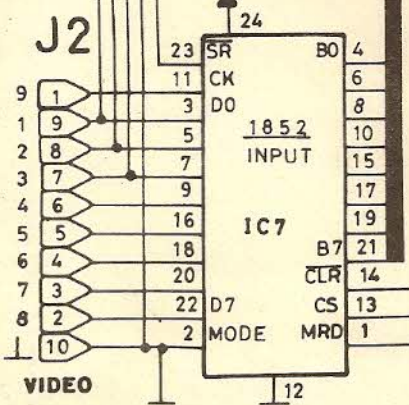


MEMORIAS

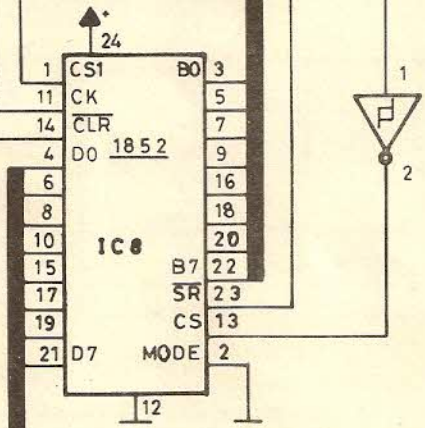
J3



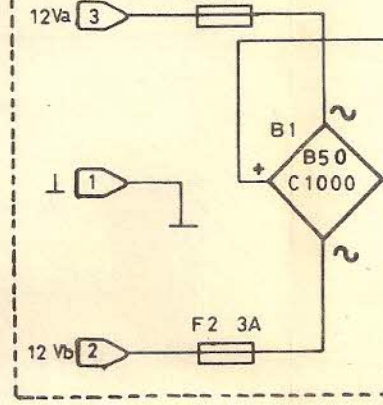
ENTRADAS

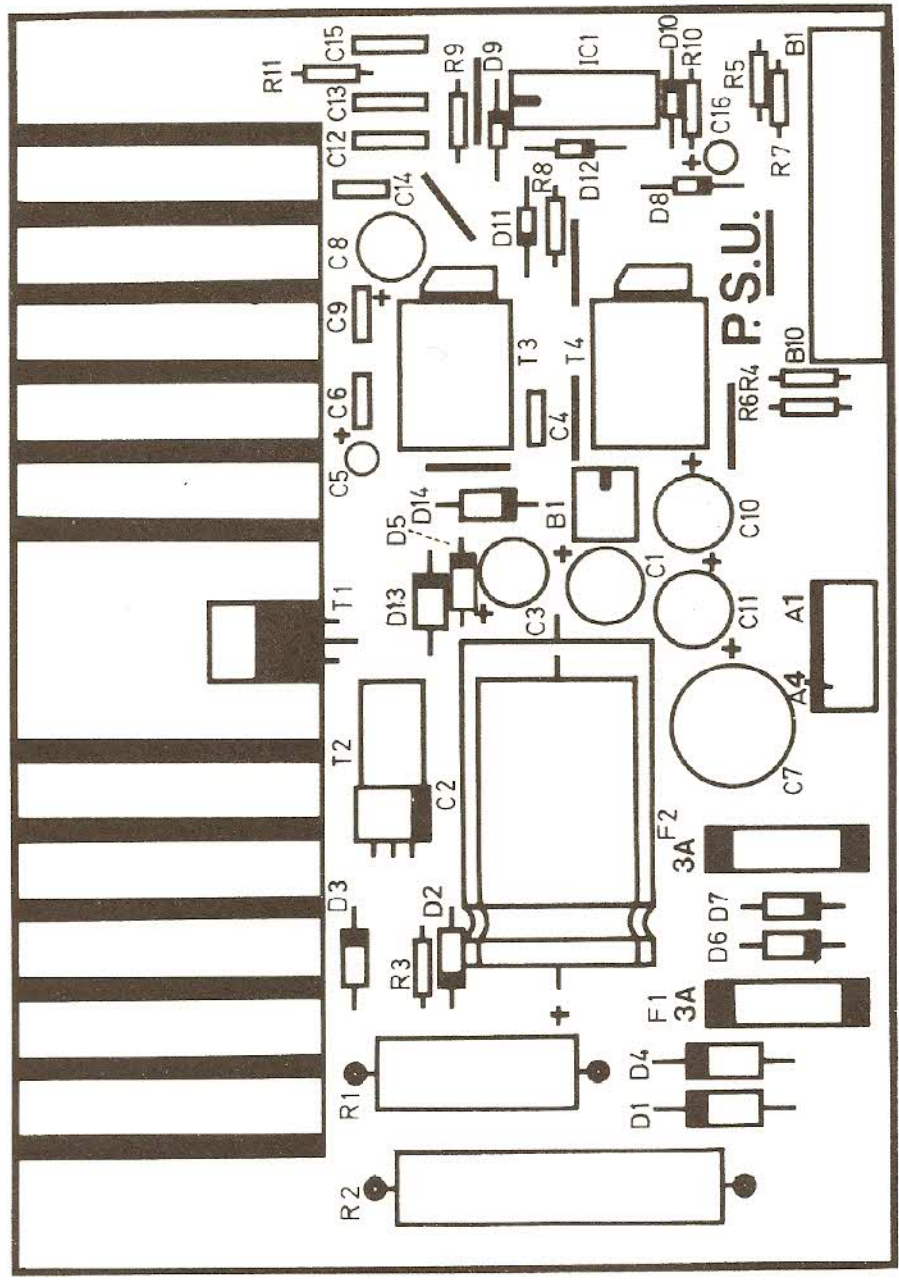


INTERFACE SINTETIZADOR

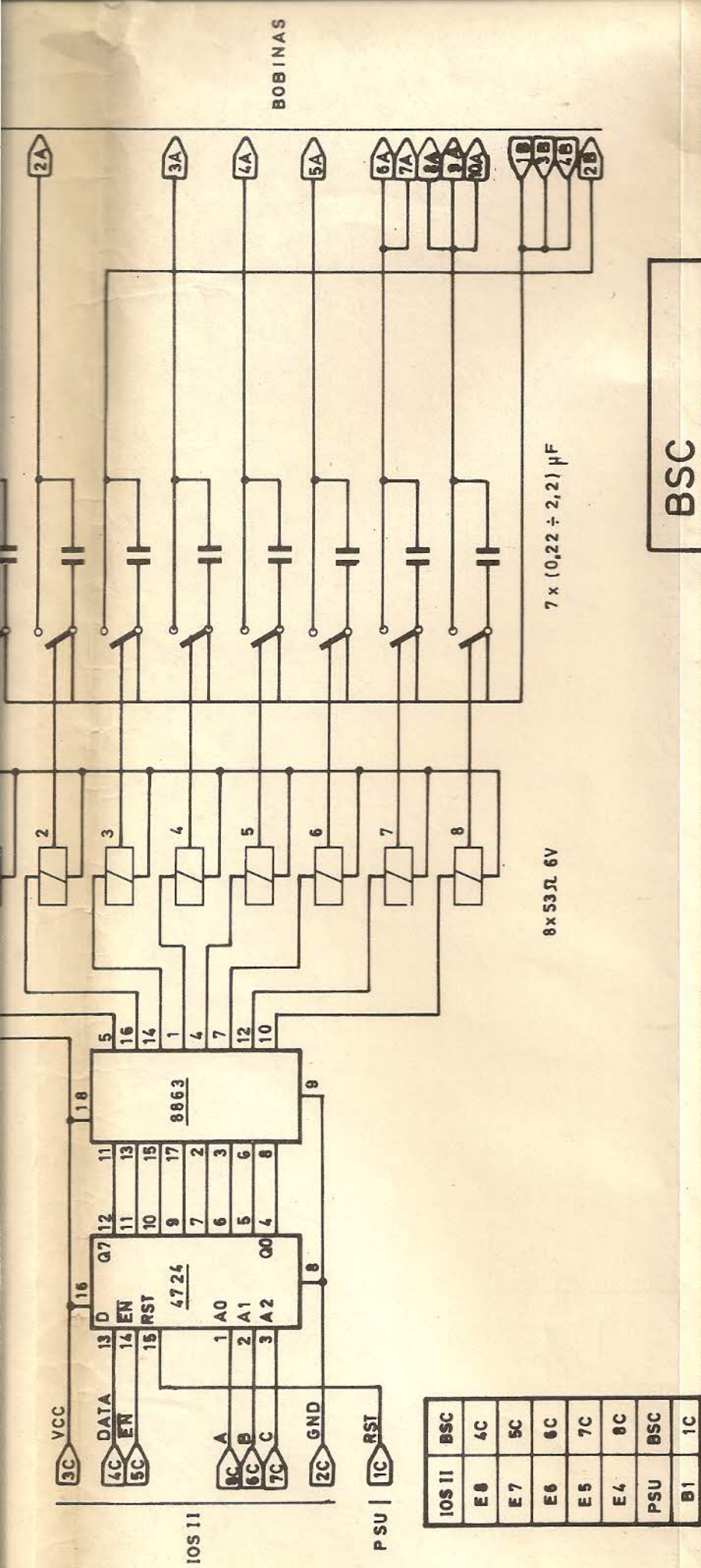


J1

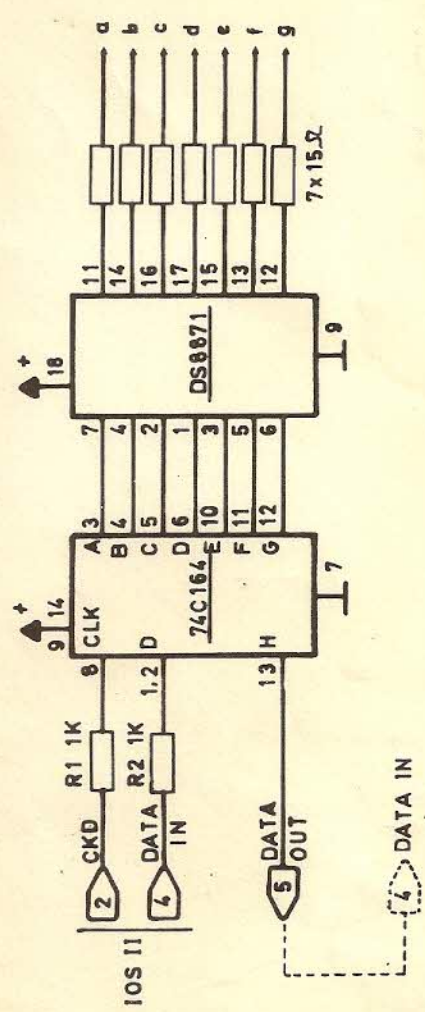
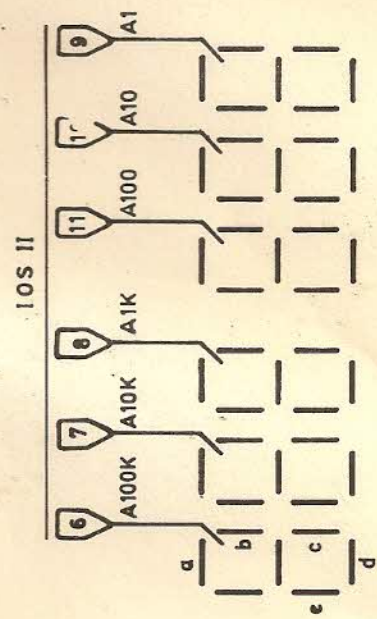






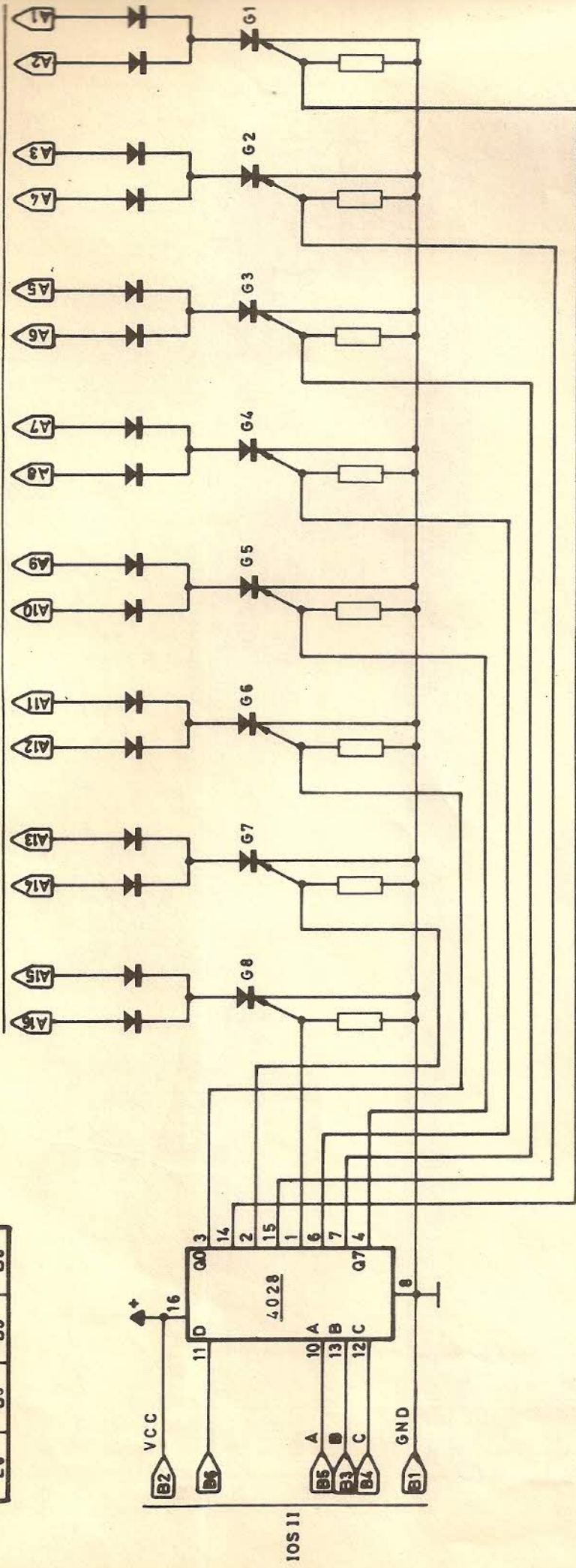


IOS II	DPY
B10	6
B9	7
B8	8
B7	11
B6	10
B5	9
B3	4
B2	2



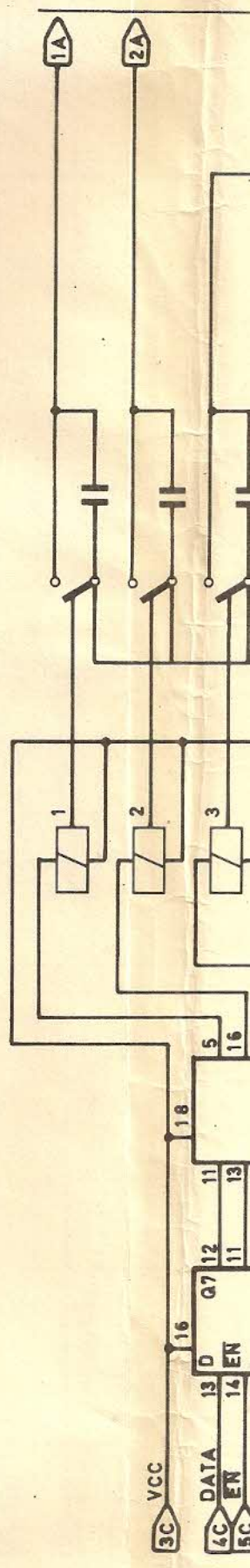
IOS II	BCL A	BCL B	BCL C
E1	B6	—	—
E2	—	B6	—
E3	—	—	B6
E4	B5	B5	B5
E5	B4	B4	B4
E6	B3	B3	B3

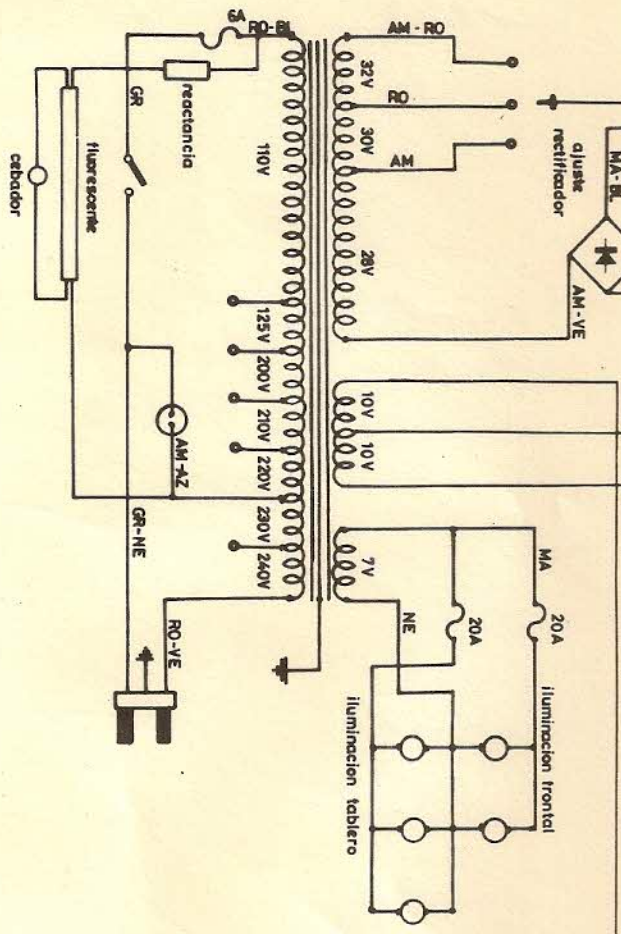
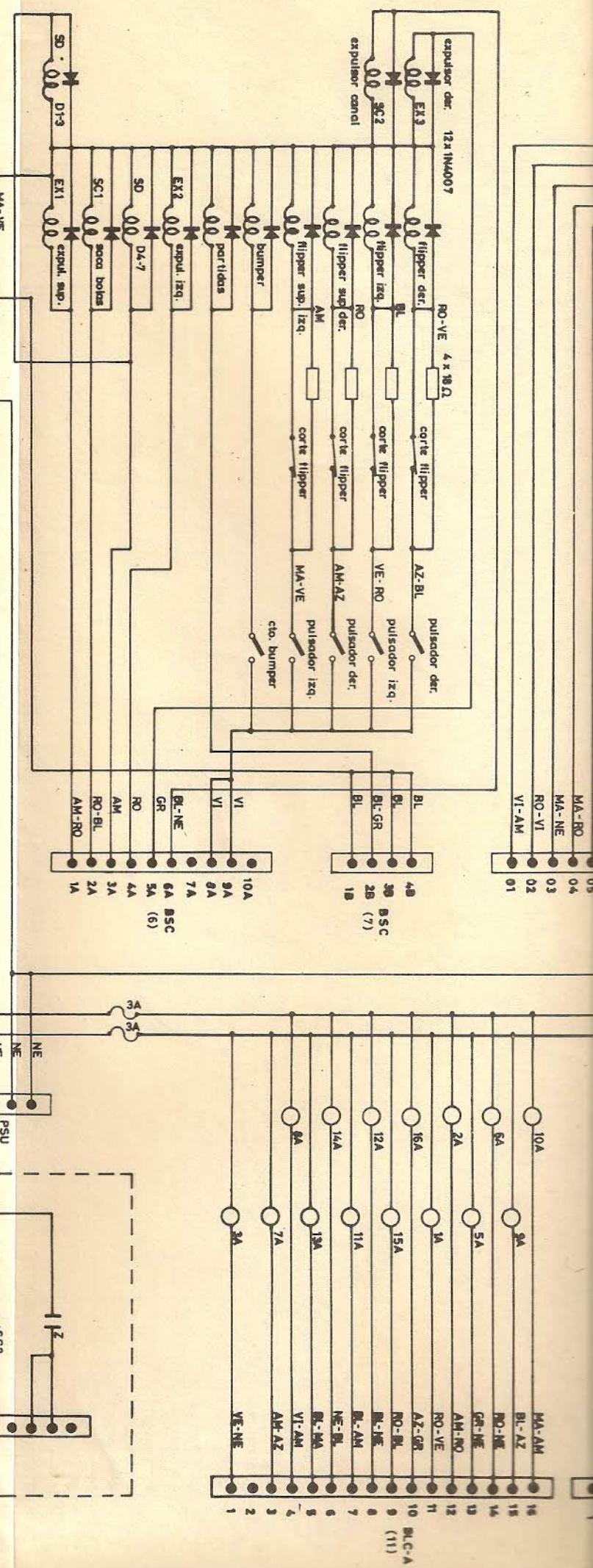
BOMBILLAS



16 x 1N4001      8 x C106F      8 x 430 Ω

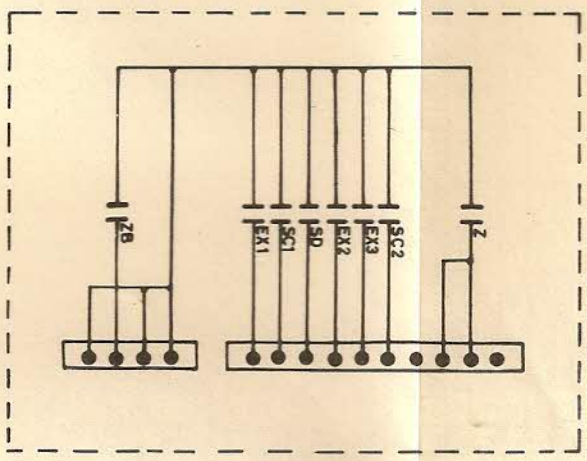
BCL



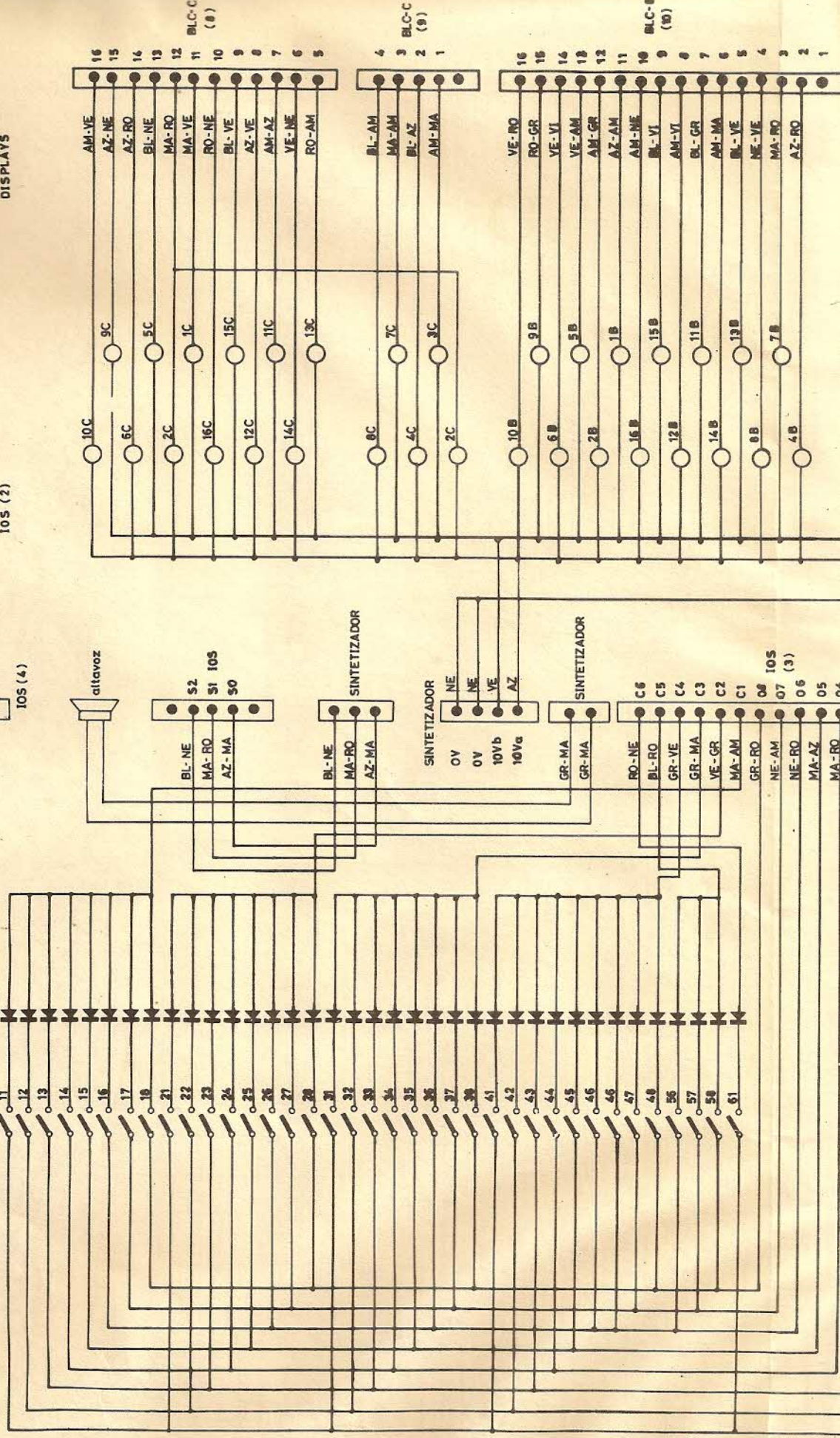
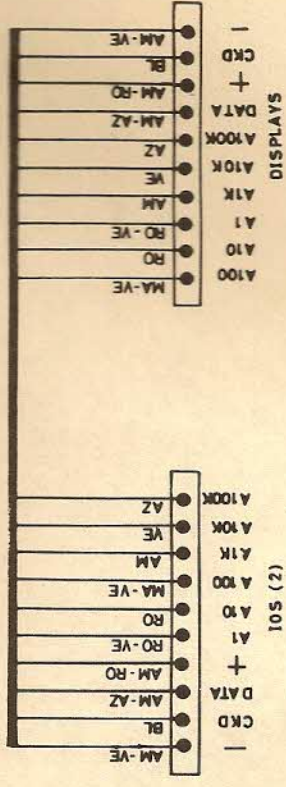
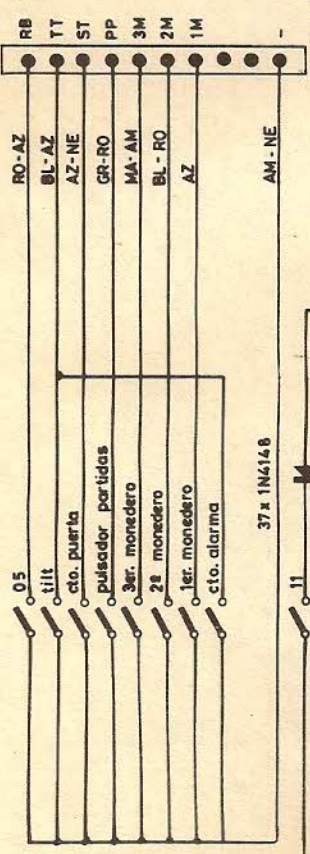


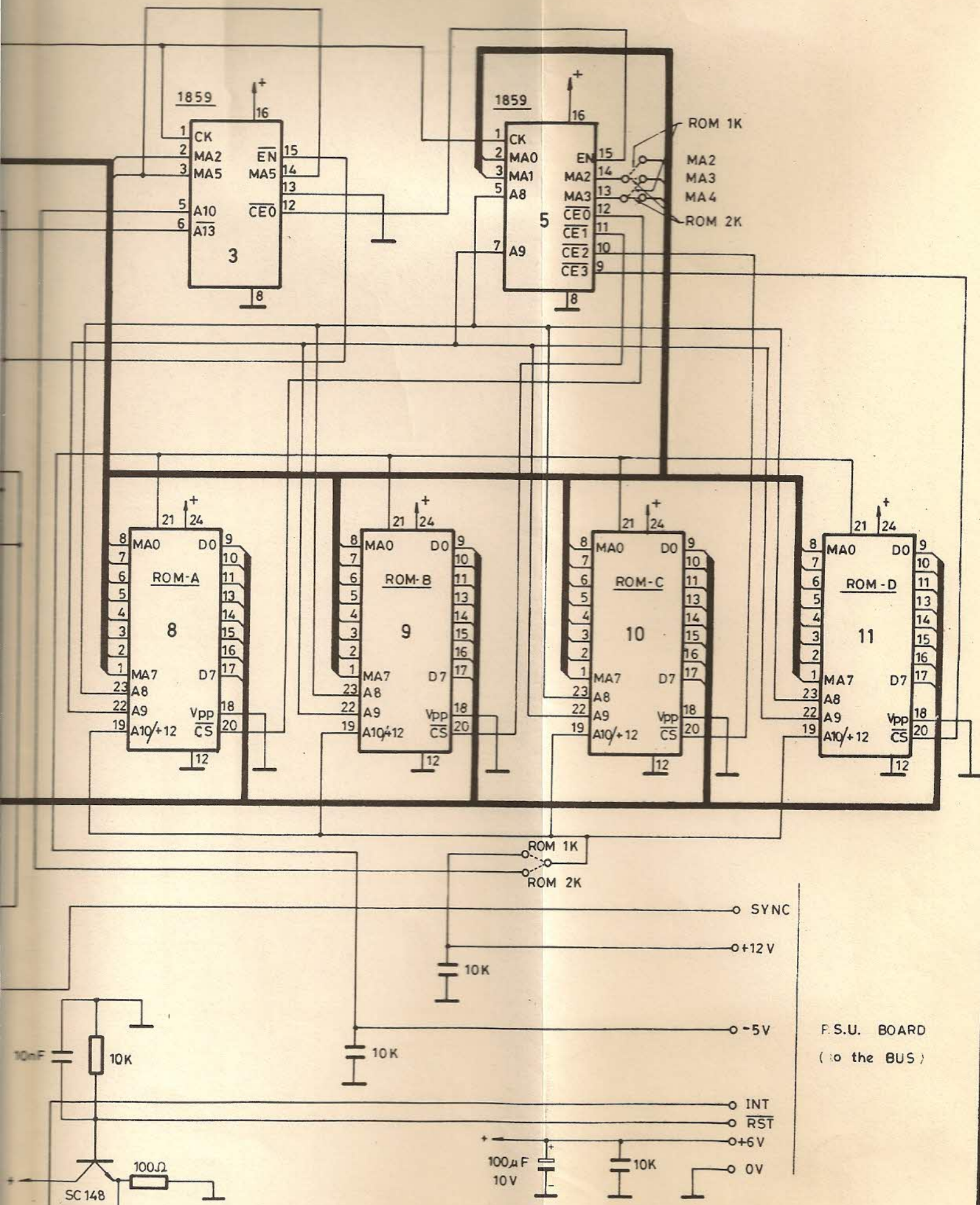
**CERBERUS**  
 solid state system  
 P.L.AVMATIC S.A.  
 c/ Tucumán 26-28  
 telf.- 345 85 04  
 telen. 53912 P.L.AV E  
 BARCELONA (ESPAÑA)

BOBINAS	
saca bolas	AC-1484
partidas	AC-763
expulsor canal	AC-1005
D1-3	AC-1405
D4-7	AC-1405
bumpers	AC-2057
flippers	AC-2060
expulsor	AC-2061
expulsor vertical	AC-2068



BLC-A  
 9 (11)



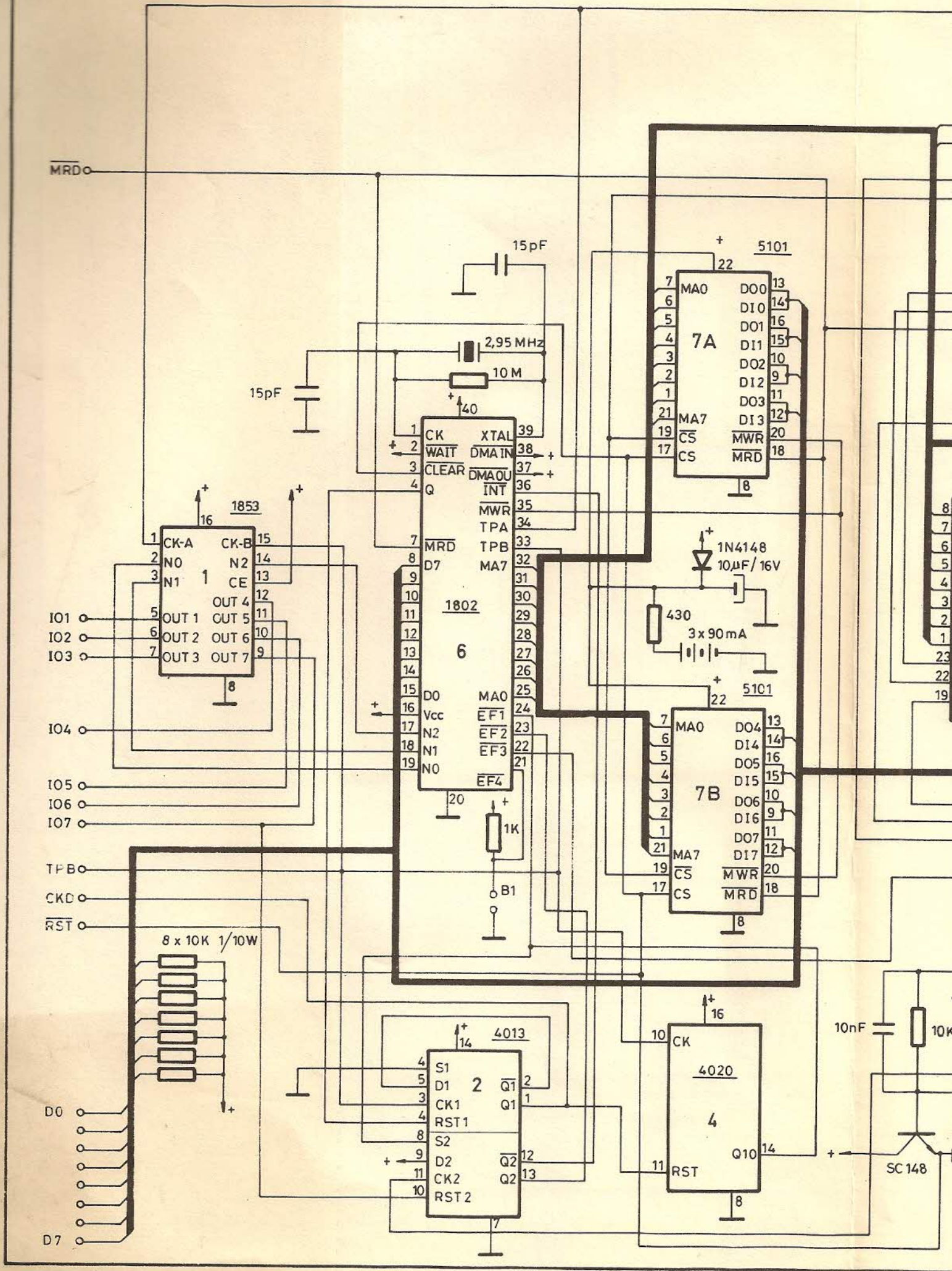


playmatic s.a.

PIN - BALL MACHINE  
MPU-C board

DIBUJADO *[signature]*  
COMPROBADO





MRDO

15pF

2,95 MHz

10 M

15pF

5101

7A

7B

1853

1802

6

5101

4013

4020

4

10nF

SC148

IO1

IO2

IO3

IO4

IO5

IO6

IO7

TPBO

CKD

RST

D0

D7

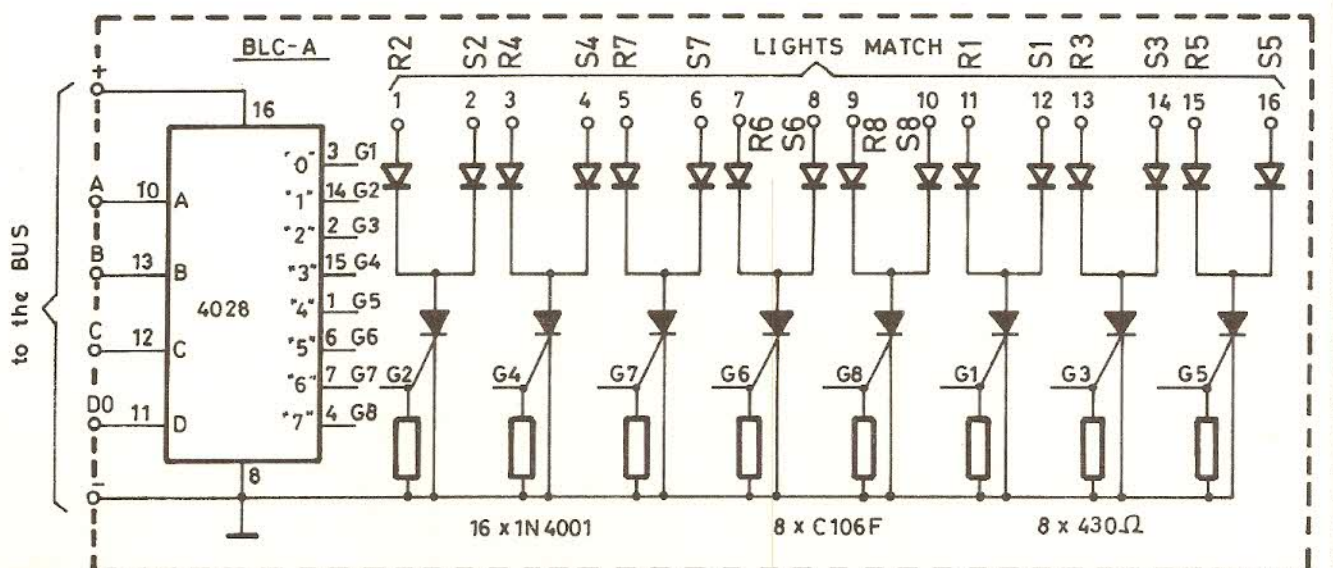
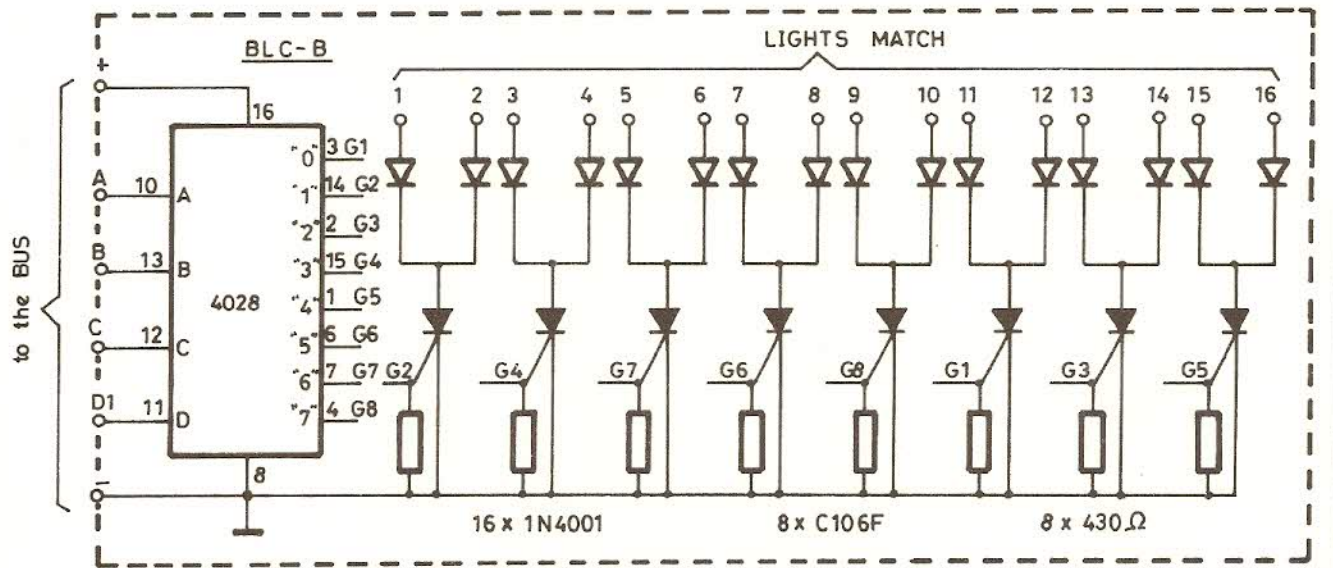
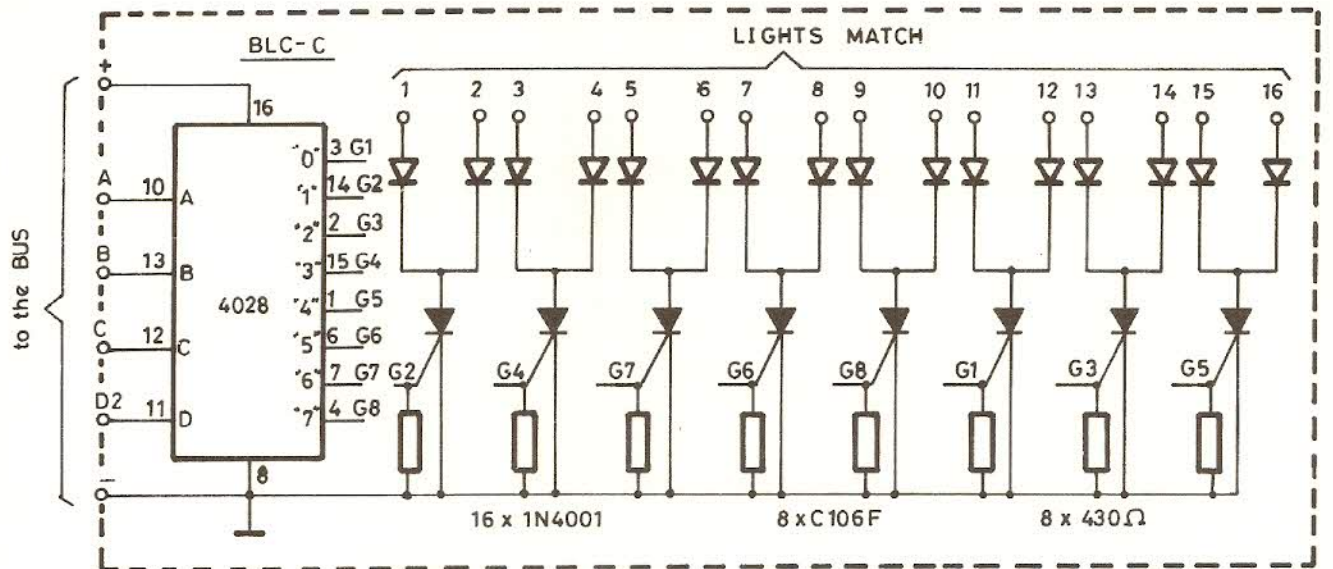
8 x 10K 1/10W

1N4148  
10µF/16V

430  
3 x 90mA

B1

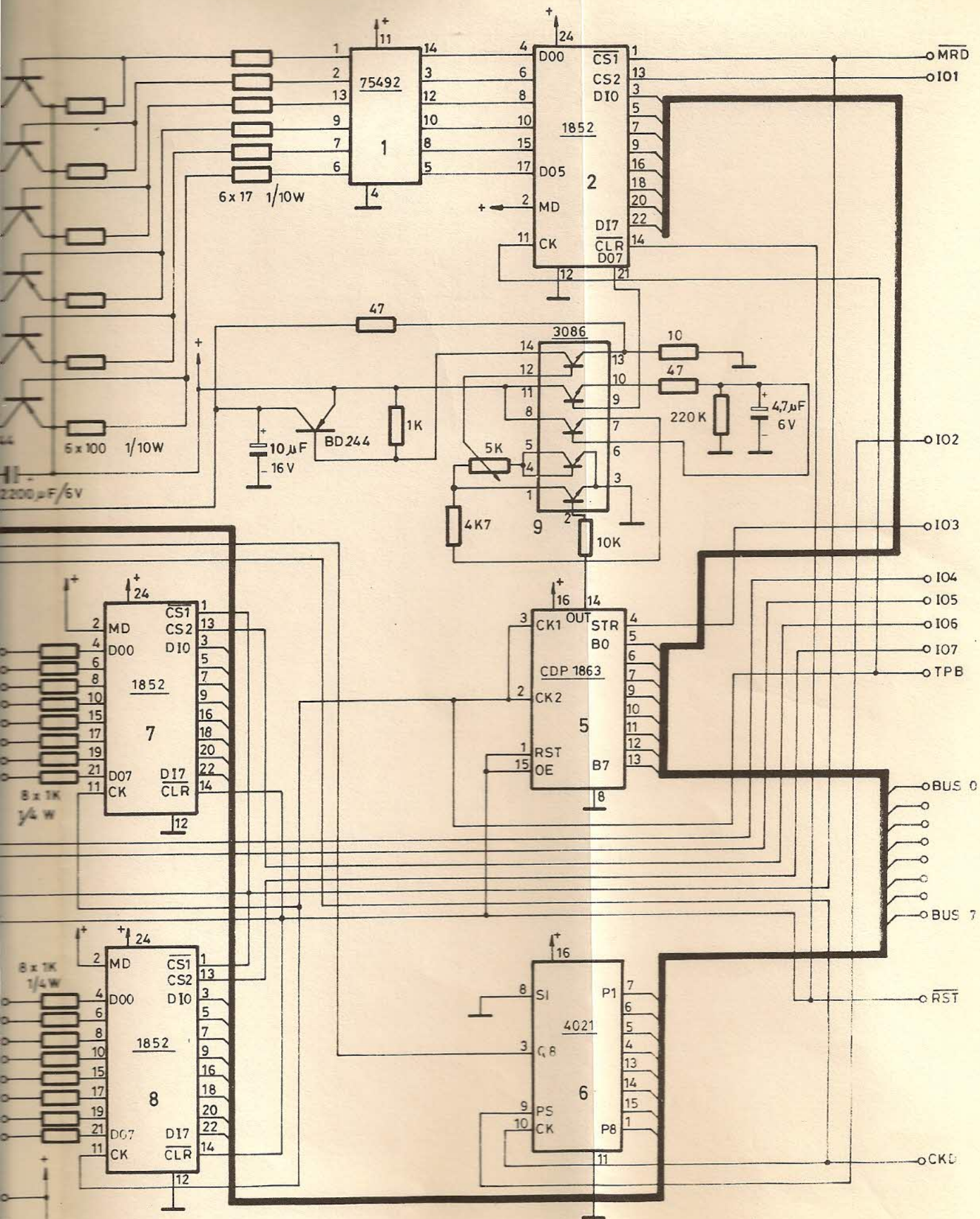
Q10



**playmatic s.a.**

PIN-BALL MACHINE  
B.L.C. board (A,B,C)

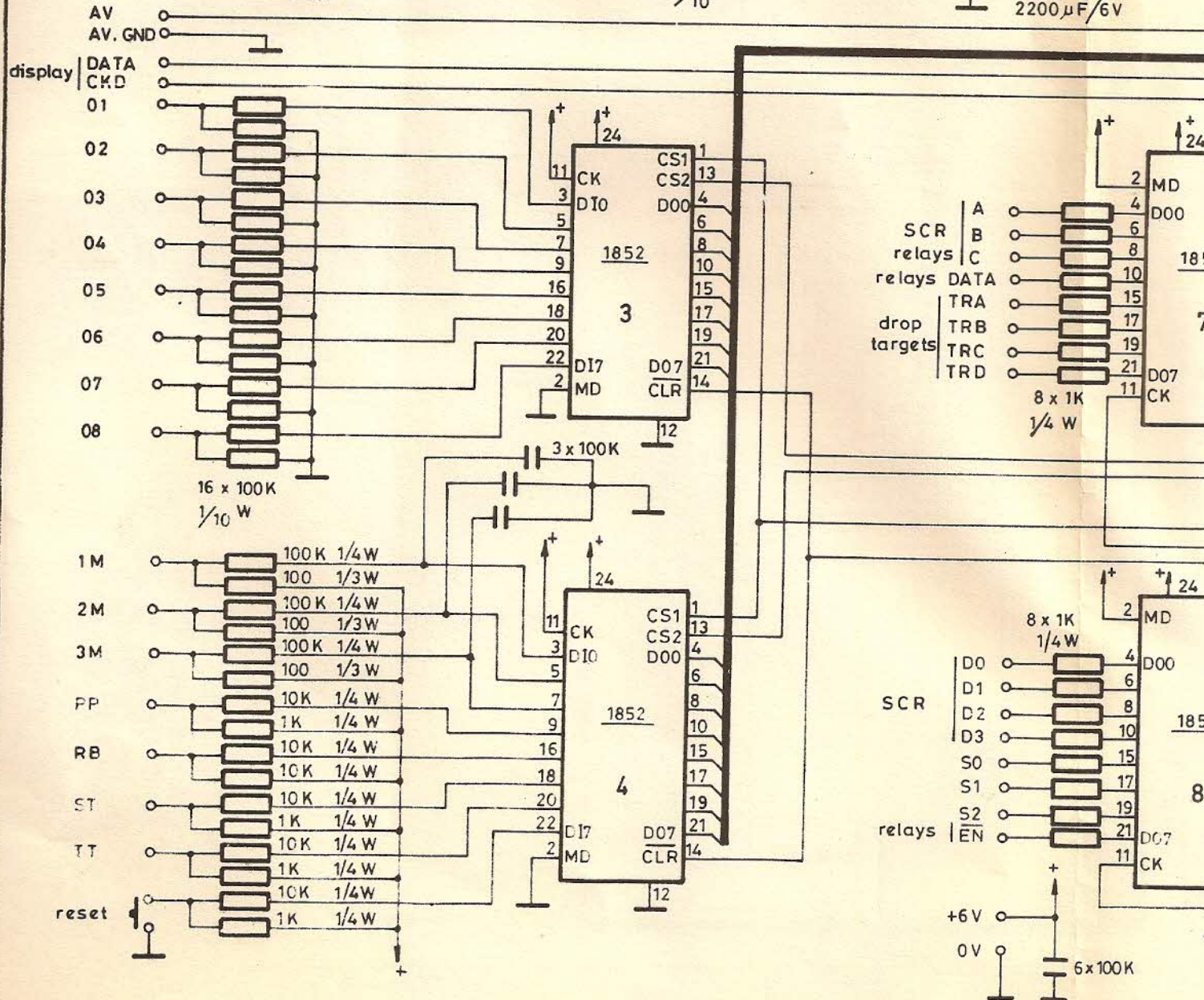
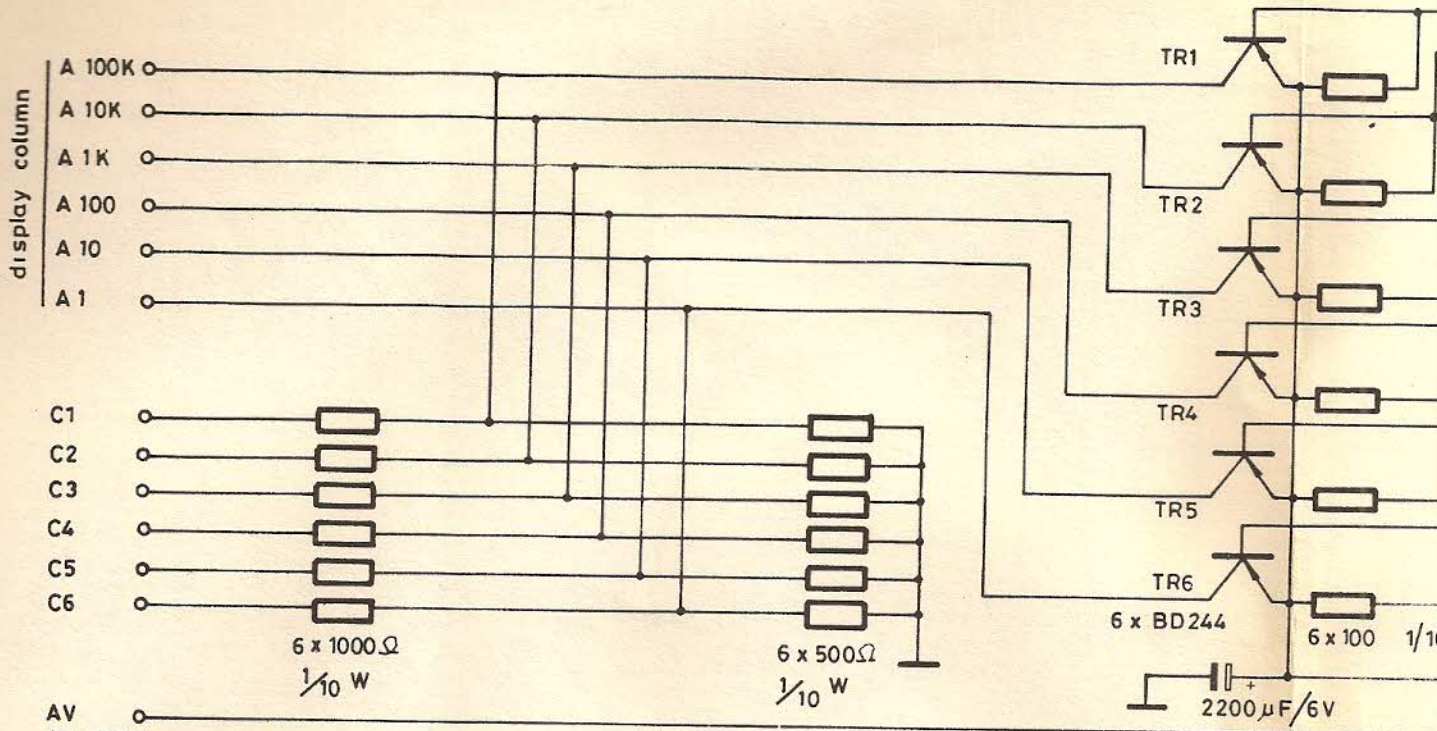
DIBUJADO *Ferrando*  
COMPROBADO



playmatic s.a.

PIN-BALL MACHINE  
IOS - II

DIBUJADO *Treva*  
COMPROBADO



**playmatic sa**  
TUCUMAN, 26 - 28  
TELEF. 345 85 04  
Dir. Teleg. PLAYMATIC  
BARCELONA - 30

