



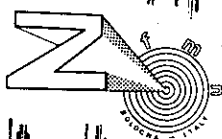
F.LLI ZACCARIA S.n.c.

di Zaccaria Marino - Franco - Natale

COSTRUZIONI GIOCHI D'ATTRAZIONE

Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy
Telefono (051) 72 23 81 - 82 con ricerca automatica
Telex 213683 ZACC. I.

Electrical Diagrams



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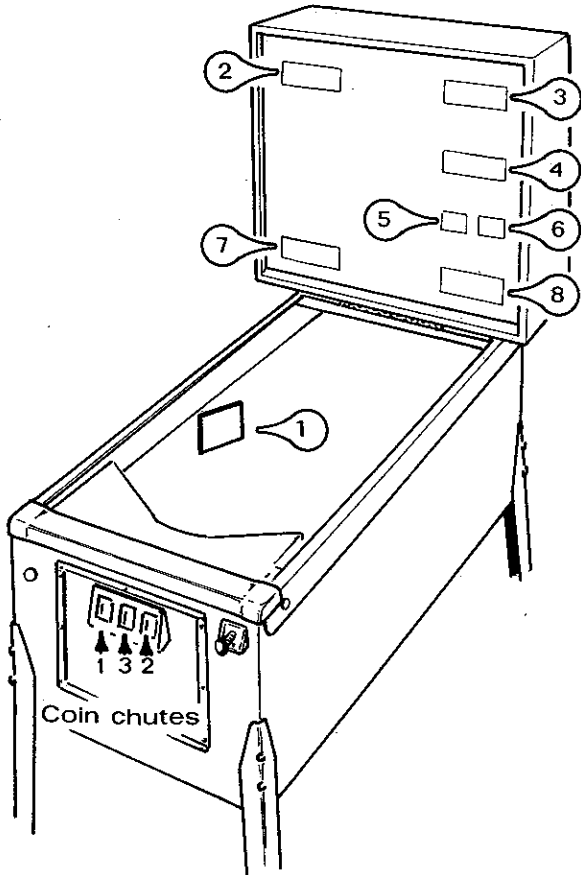
URL: <http://www.langaas.org/pinball/>

E-mail: thomas@langaas.org

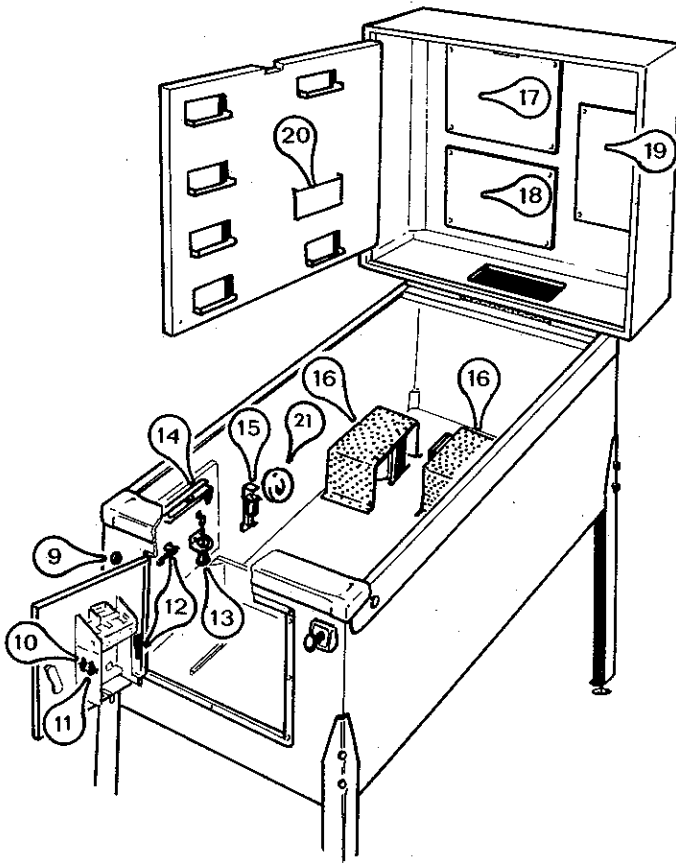
LIST OF ILLUSTRATIONS

Assembly drawing

- Layout for C.P.U. board
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- Diagram for INTERFACE board
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- Diagram for POWER board
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- Diagram for COILS _____ (wiring)
- Diagram for LAMPS _____ (wiring)

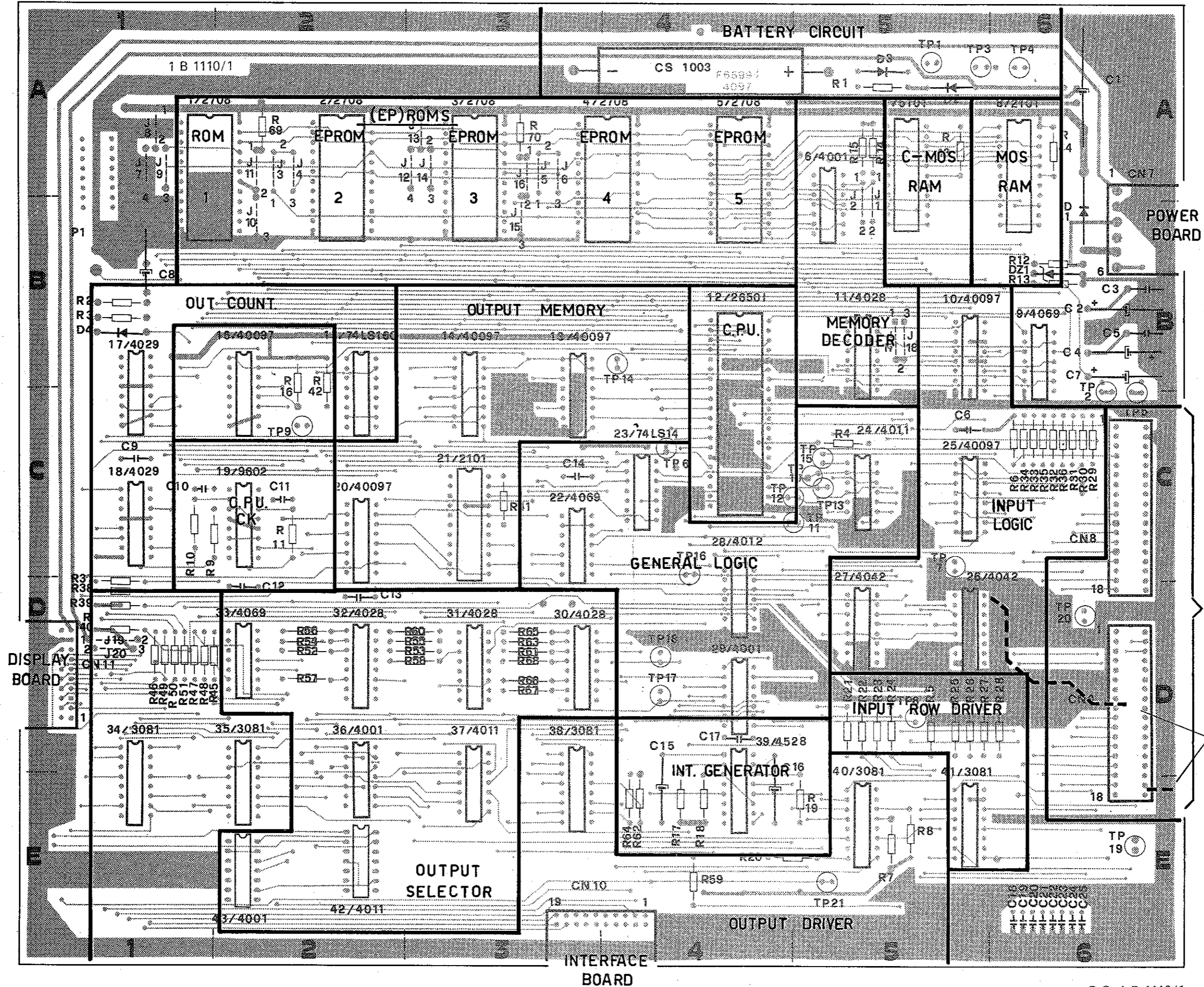


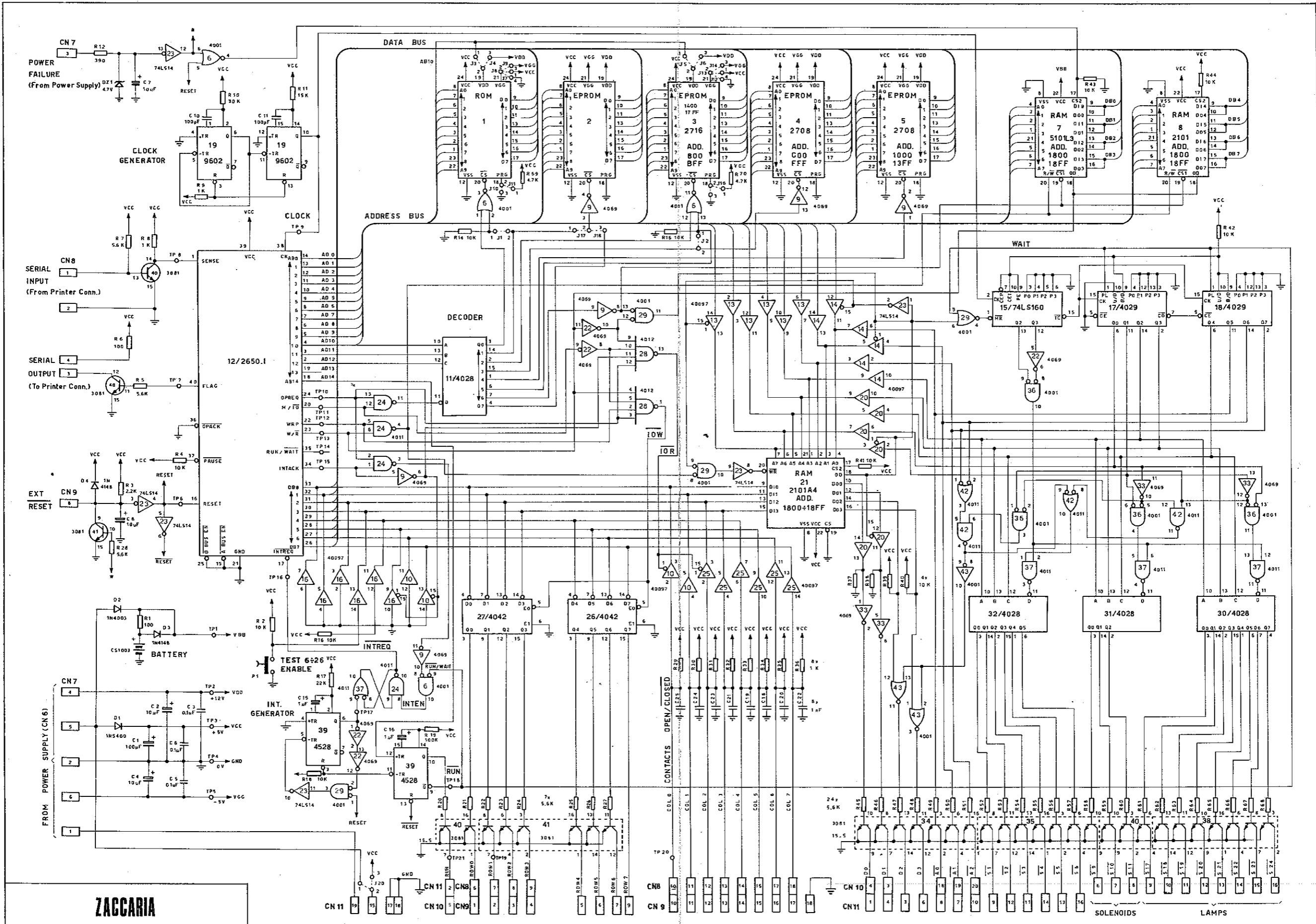
- 1 LIGHT EFFECTS
- 2 1st Player display
- 3 2nd Player display
- 4 Highest score display
- 5 Credit display
- 6 Display balls to play-match-game time bonus-bonus time countdown.
- 7 3rd Player display
- 8 4th Player display



- 9 Credit button
- 10 High score reset
- 11 Self test button
- 12 Antichock tilt
- 13 Bob tilt
- 14 "Roll ball," tilt
- 15 Knocker
- 16 Transformers
- 17 CPU board
- 18 INTERFACE board
- 19 POWER board
- 20 SOUND board
- 21 Little bell

C.P.U. board



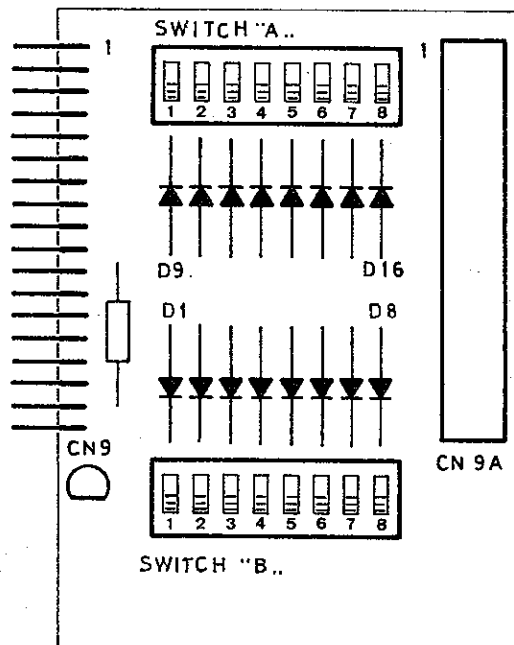


ZACCARIA

COD. 181310/1a
 ELECTRICAL DIAGRAM for
 CPU BOARD 181110/1a

TO DISPLAYS TO CONTACTS FROM CONTACTS DATA ADDRESS SELECTIONS TO DISPLAYS SELECTIONS TO DRIVER BOARD

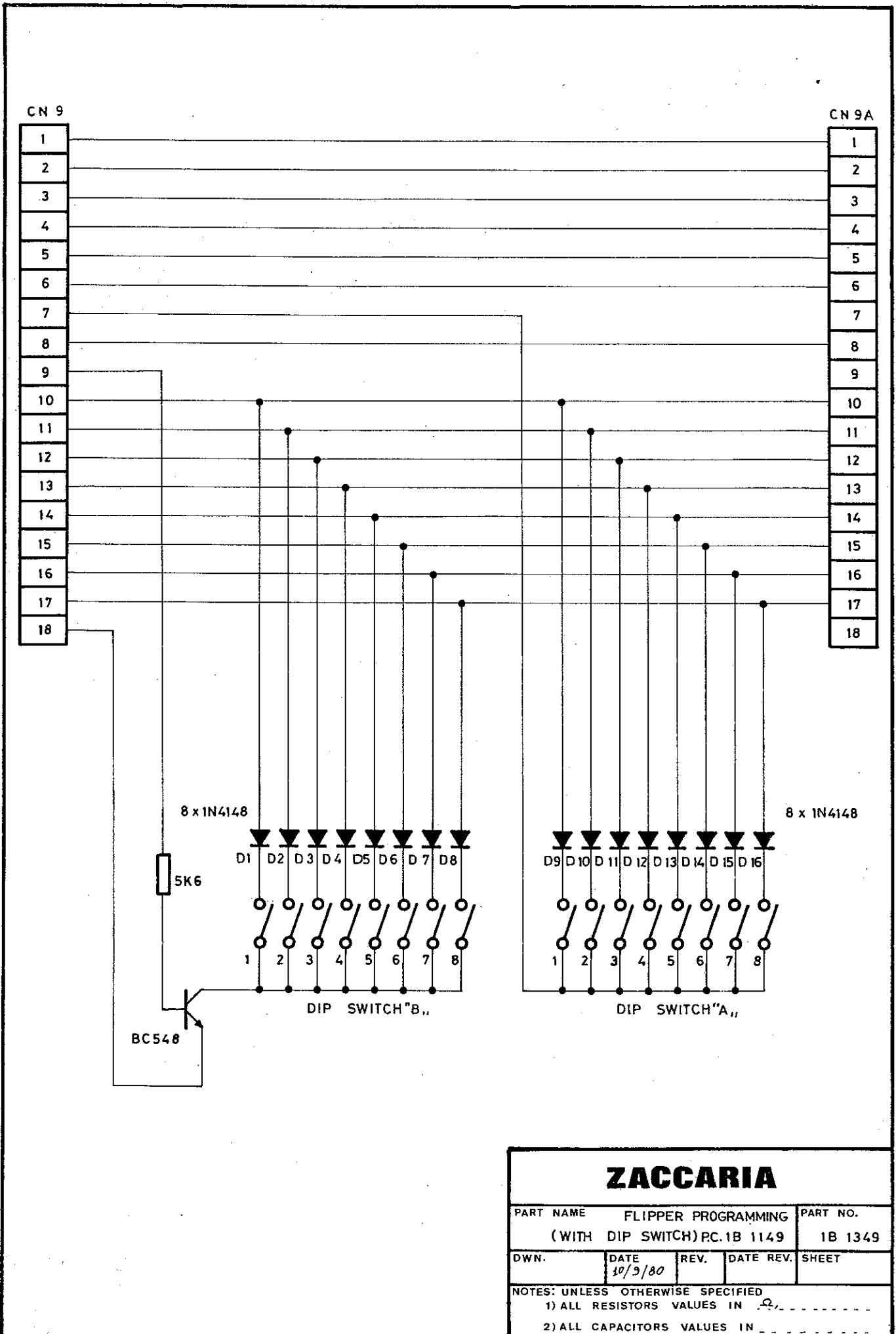
FLIPPER PROGRAMMING board



P.C. 1 B 1149

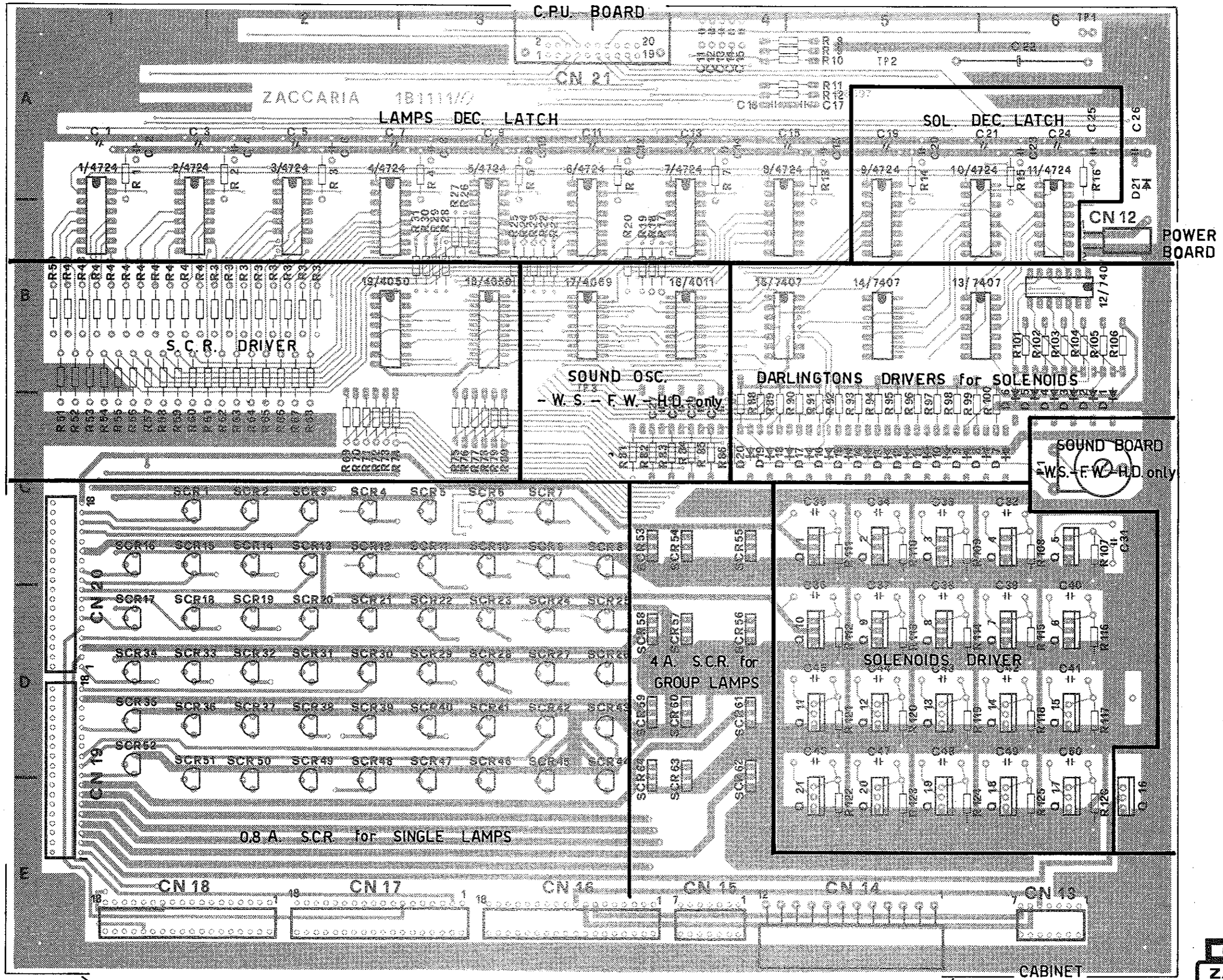


FLIPPER PROGRAMMING board



ZACCARIA				
PART NAME			PART NO.	
FLIPPER PROGRAMMING (WITH DIP SWITCH) PC.1B 1149			1B 1349	
DWN.	DATE	REV.	DATE REV.	SHEET
	10/9/80			
NOTES: UNLESS OTHERWISE SPECIFIED				
1) ALL RESISTORS VALUES IN Ω				
2) ALL CAPACITORS VALUES IN				

INTERFACE board

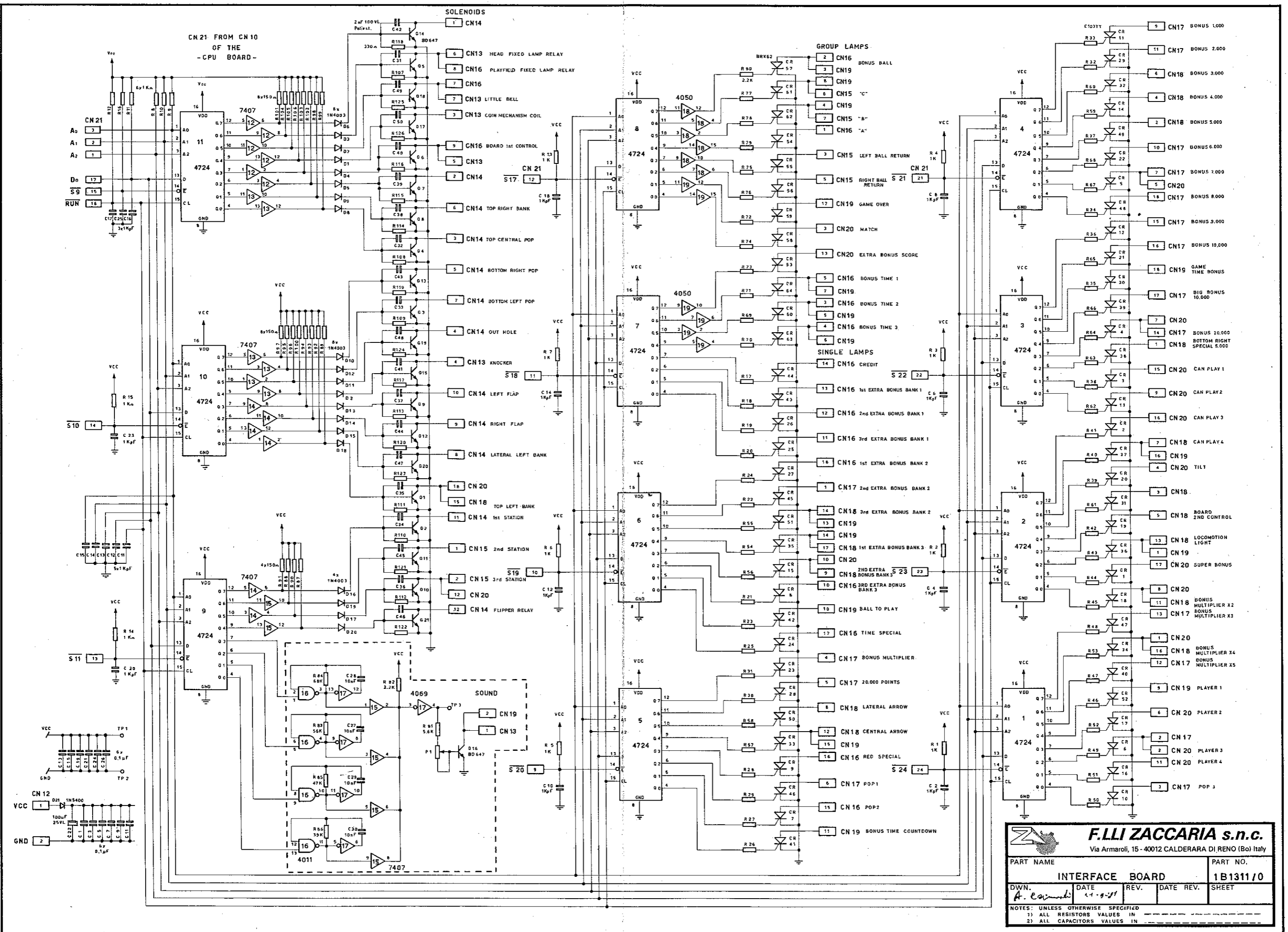


HEAT



PLAYFIELD

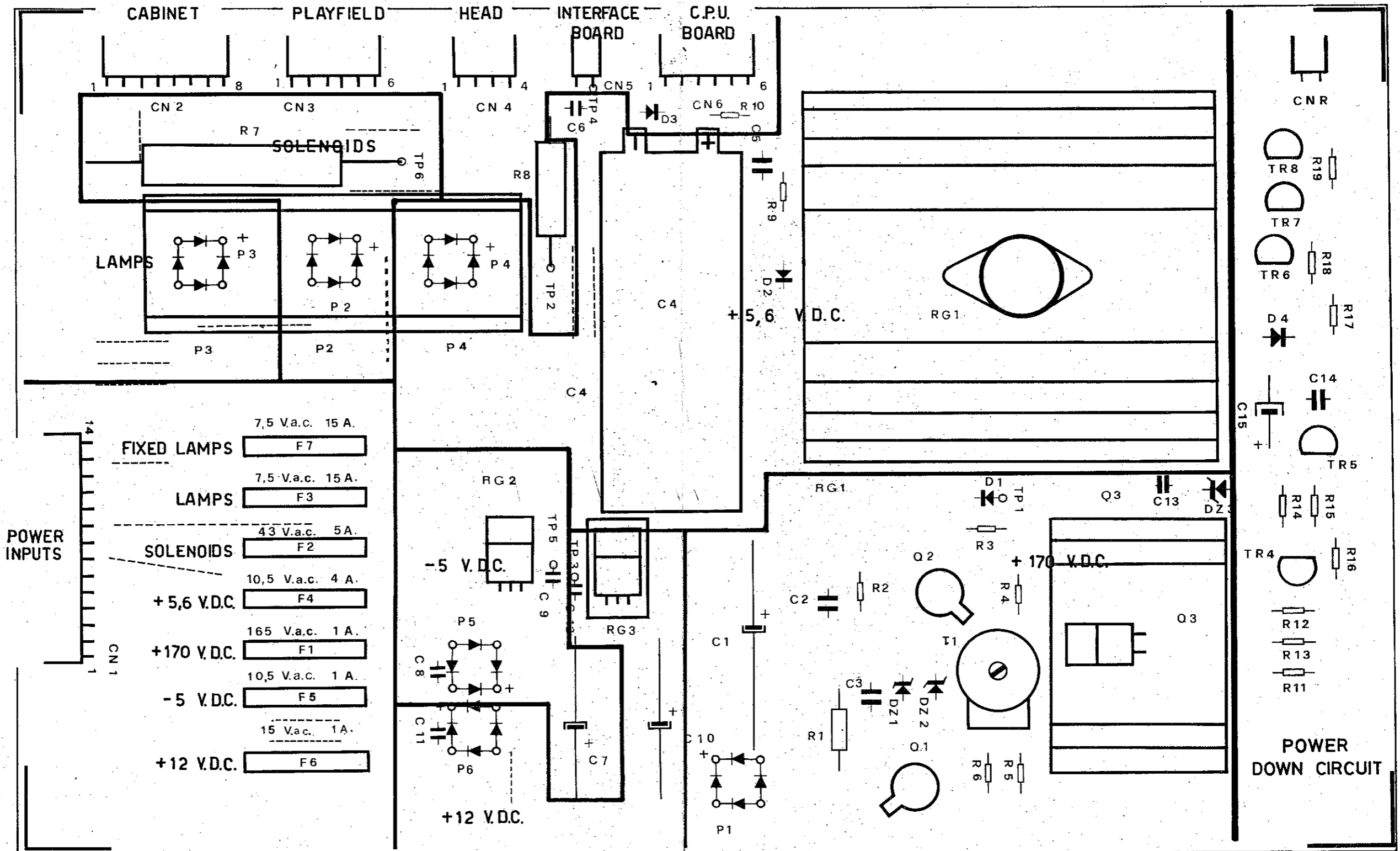
P.C. 1 B 1111/0



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PART NAME		PART NO.	
INTERFACE BOARD		1B1311/0	
DWN. <i>A. Casarini</i>	DATE <i>11-9-81</i>	REV.	DATE REV.
NOTES: UNLESS OTHERWISE SPECIFIED 1) ALL RESISTORS VALUES IN 2) ALL CAPACITORS VALUES IN			

POWER board

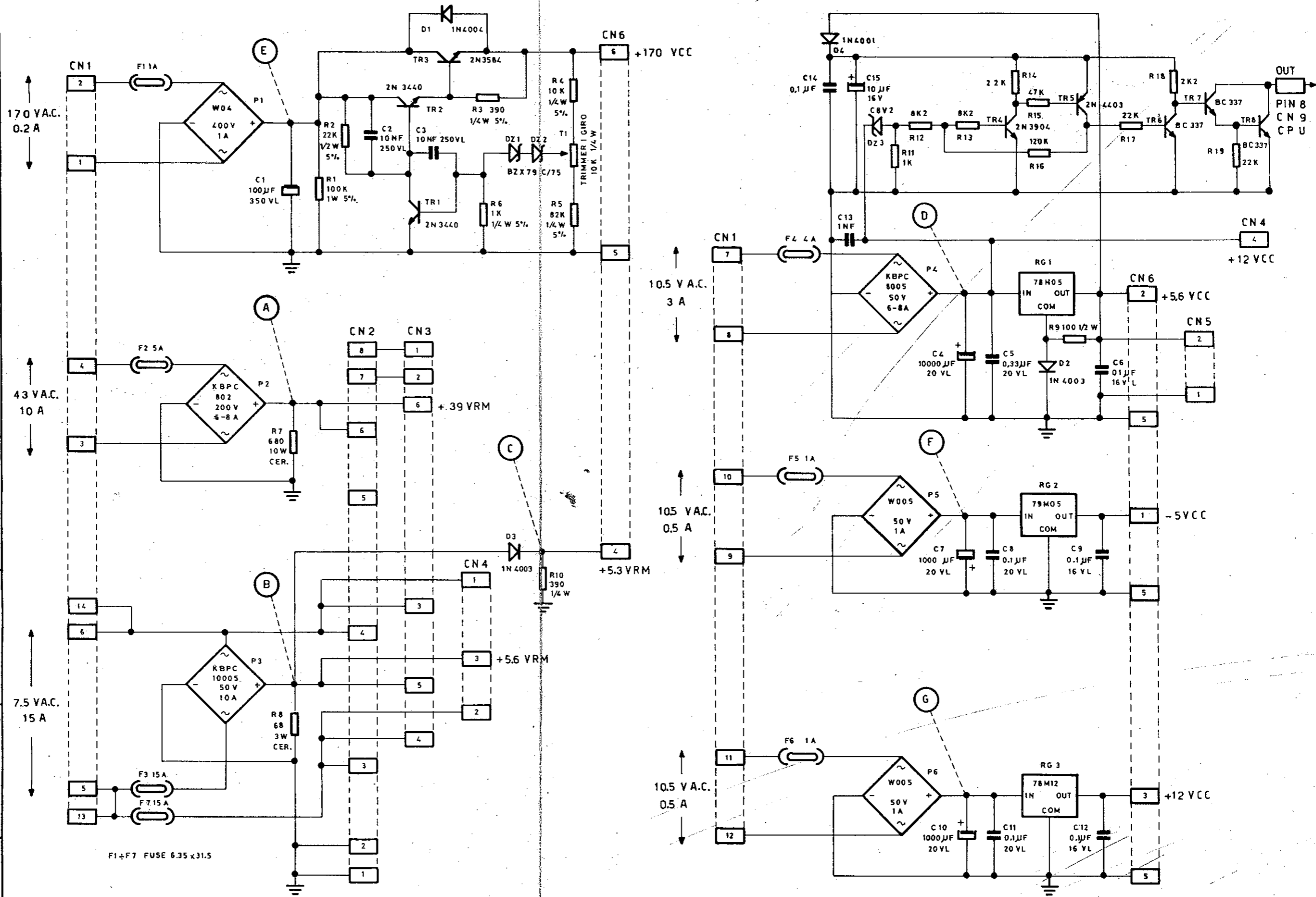
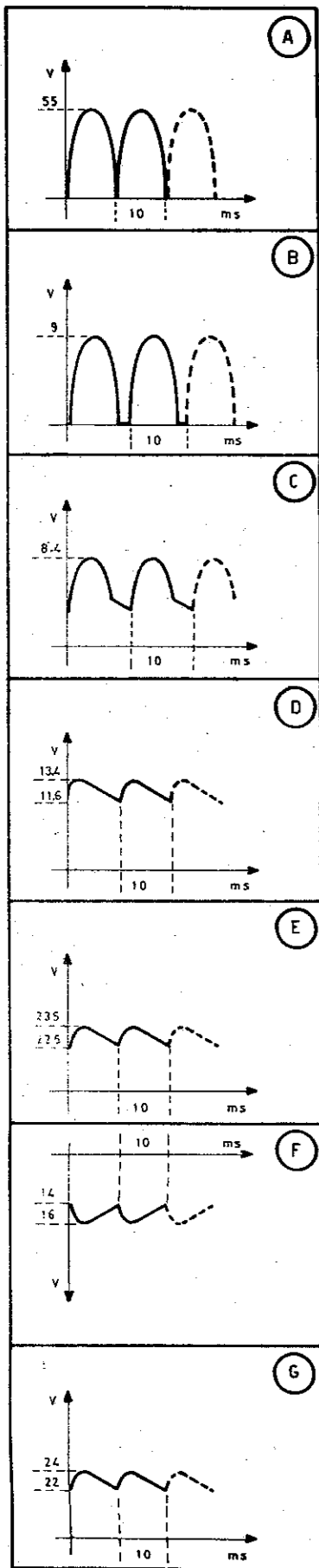


P.C. 1 B 1109/4



POWER board

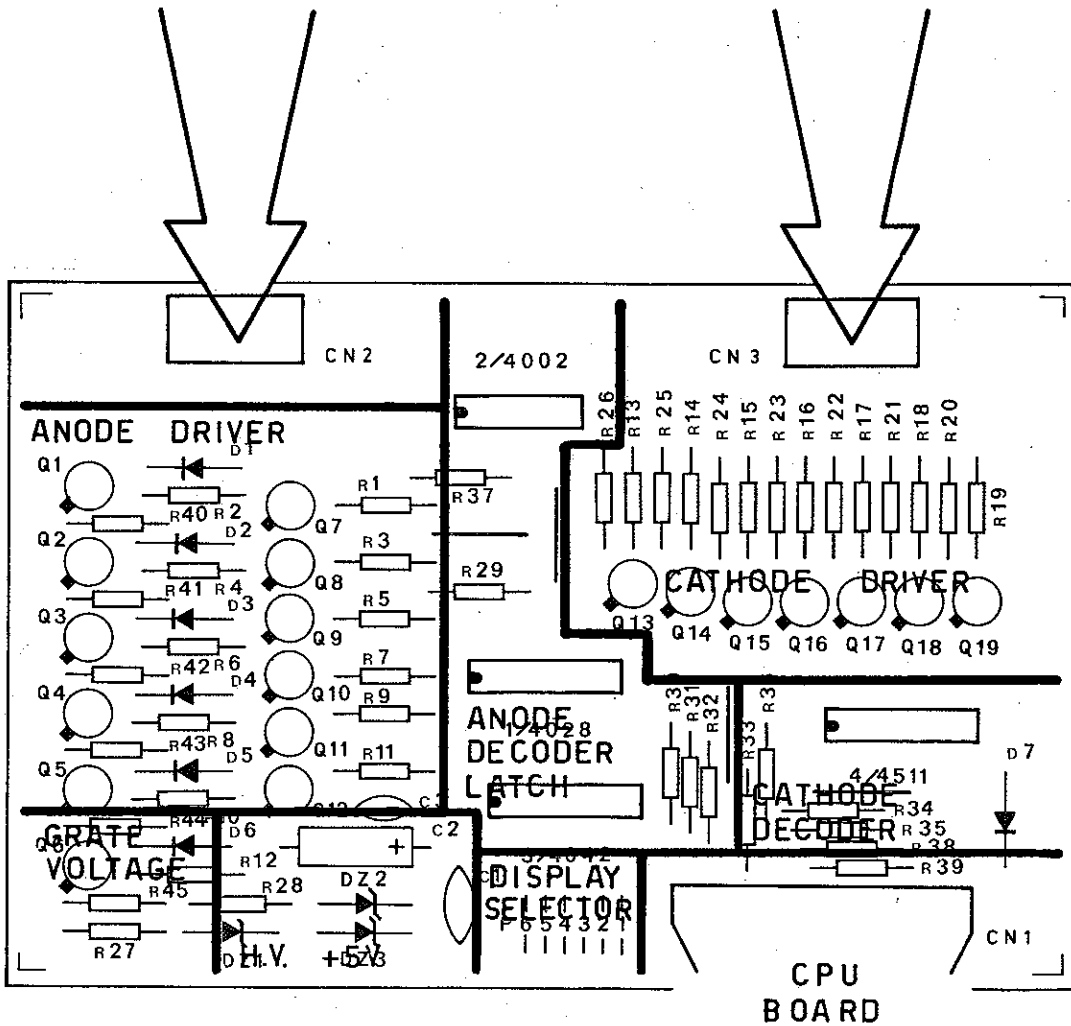
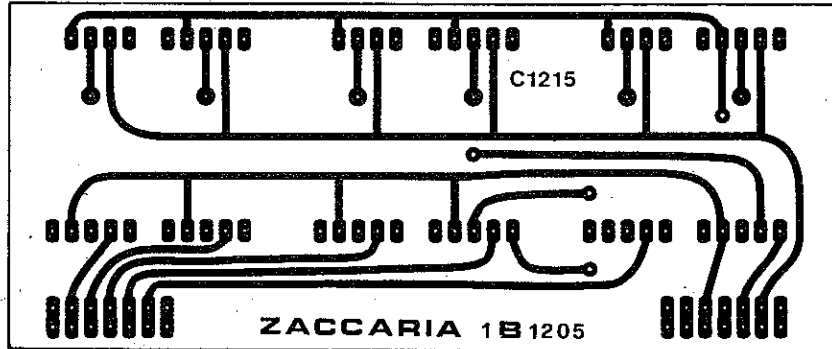
OSCILLOSCOPE
DEFINABLE CURVES



ZACCARIA

COD 181309/4 ELECTRICAL DIAGRAM For
POWER BOARD 181109/4

DISPLAY boards



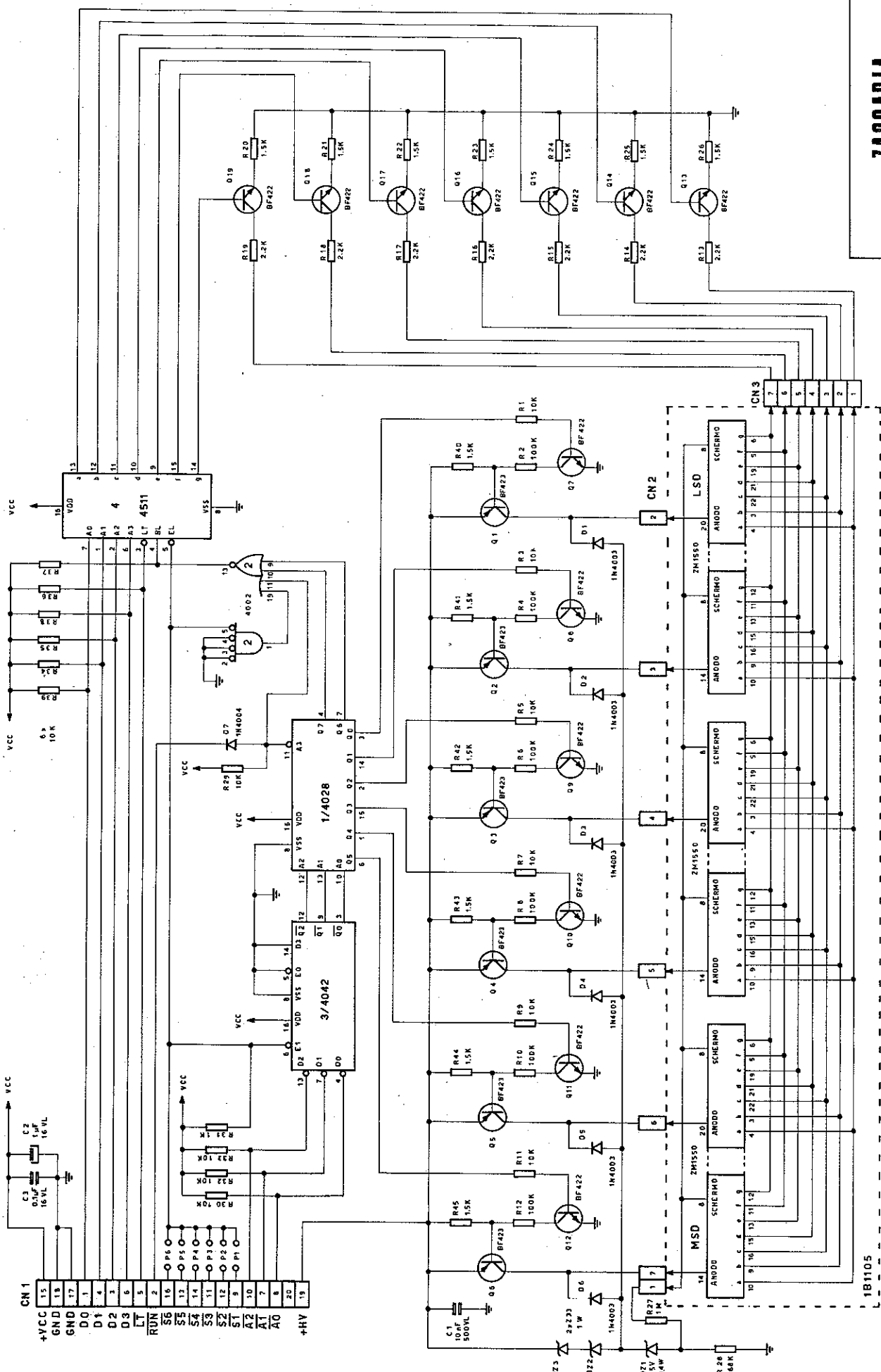
P.C. 1 B 1104/0



DISPLAY boards

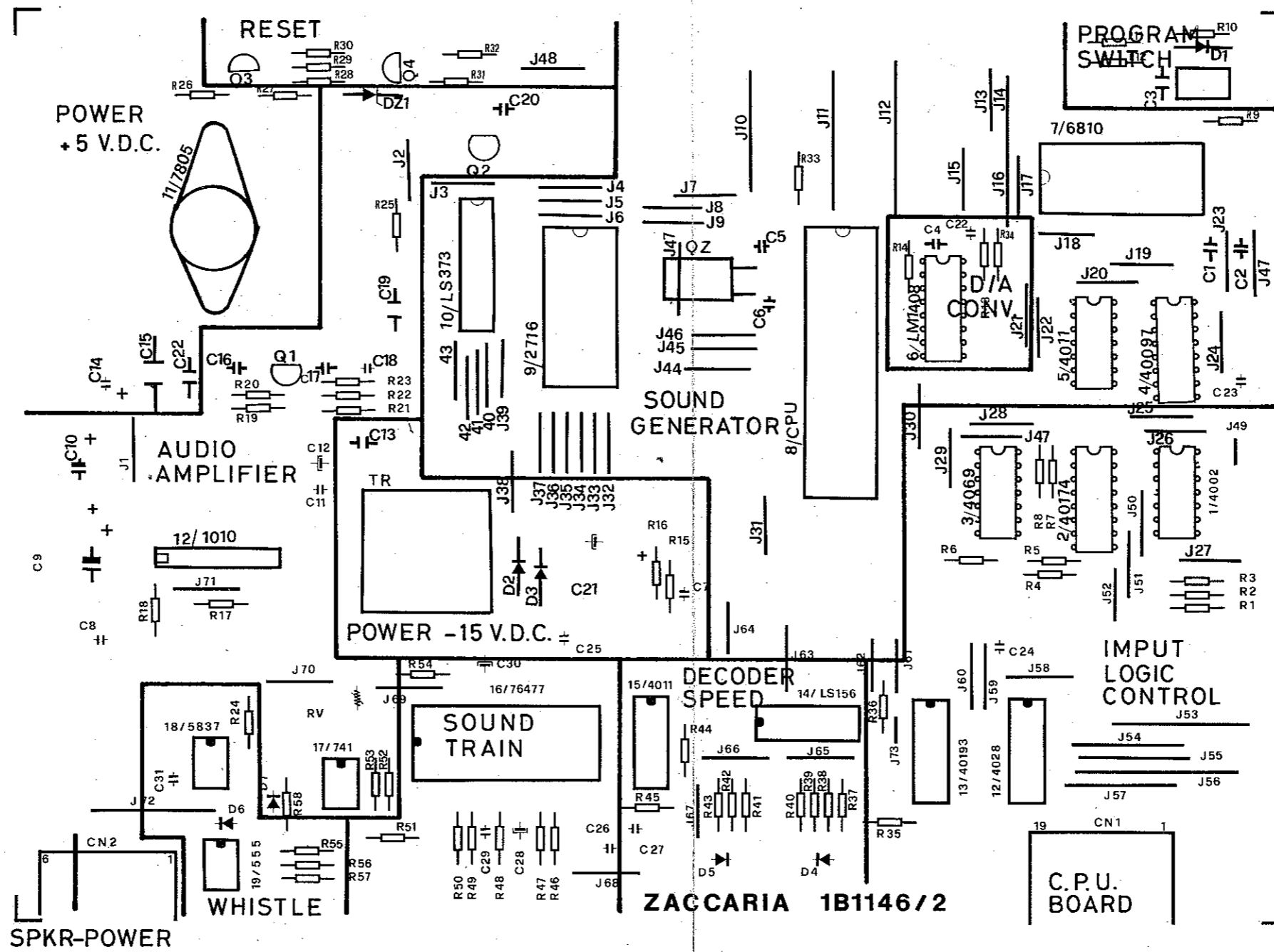
ZACCARIA

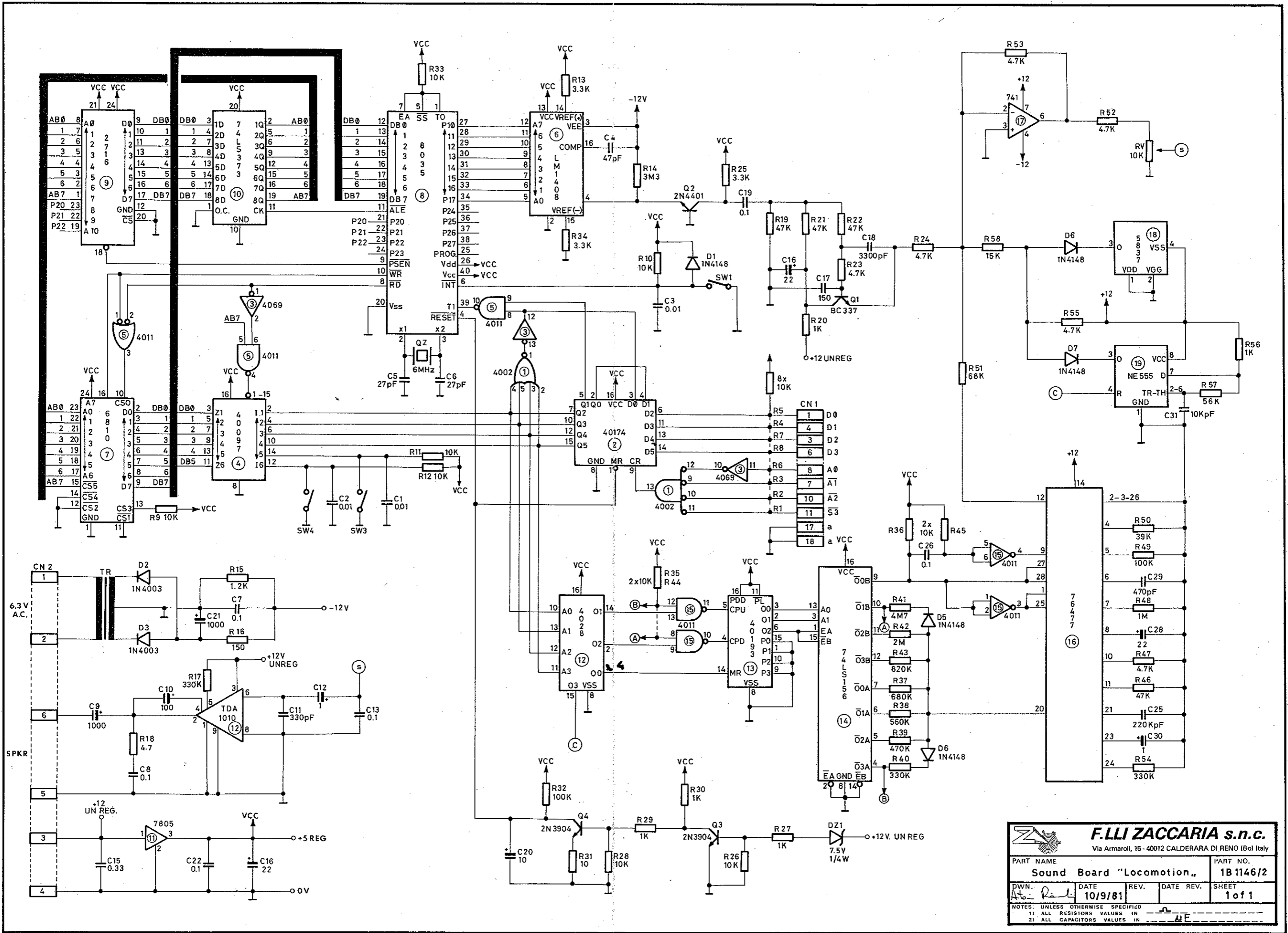
COD. 1B1304/0
1B1104/0
ELECTRICAL DIAGRAM for
DRIVER DISPLAY BOARD



1B1105

SOUND board





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PART NAME		PART NO.	
Sound Board "Locomotion."		1B 1146/2	
DWN.	DATE	REV.	DATE REV.
Ator R...	10/9/81		
SHEET		1 of 1	

NOTES: UNLESS OTHERWISE SPECIFIED
1) ALL RESISTORS VALUES IN Ω
2) ALL CAPACITORS VALUES IN μF

VIOLET-YELLOW

VIOLET-BROWN

RED-YELLOW

BLACK-ORANGE

BLACK-YELLOW

RED-GREEN

BLACK-WHITE

GREY-WHITE

GREY

RED

YELLOW

BLACK

GREEN

08 RAM RESET
TP19-TP 20
CPU BOARD

09

10

11

12

13

14 SET CABINET
CONTACT WIRING

15 BURN TEST
PIN 2-17 CN 9
CPU BOARD

16 OUTHOLE

17 LEFT FLAP
CONTACTS

18 RIGHT FLAP
CONTACTS

19 RIGHT INNER
CANAL

20 RIGHT CENTRAL
CANAL

21 RIGHT OUTER
EXIT CANAL

22 LEFT OUTER
EXIT CANAL

23 CONTROL SWITCH
BACKGROUND
SOUND

24 CONTACTS

25 SPECIAL
SPINNING
CONTACT

26 1ST. MOVING
TARGET BOTTOM
LEFT BANK

27 2 ND. MOVING
TARGET BOTTOM
LEFT BANK

28 3 RD. MOVING
TARGET BOTTOM
LEFT BANK

29 4 TH. MOVING
TARGET BOTTOM
LEFT BANK

30 BOTTOM LEFT
POP CONTACT

31 TOP CENTRAL
POP CONTACT

32 INNER LEFT
CANAL AND FIXED
C TARGET

33 3RD. STATION
BUTTON

34 FIXED B TARGET

35 2 ND. STATION
BUTTON

36 FIXED A
TARGET

37 1 ST. STATION
BUTTON

38 BOTTOM RIGHT
POP CONTACT

39 TOP YELLOW
RIGHT BUTTON

40 TOP CENTRAL
ROLLOVER

41 TOP YELLOW
LEFT BUTTON

42 3 RD. MOVING
TARGET TOP
RIGHT BANK

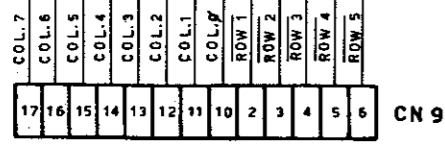
43 2 ND. MOVING
TARGET TOP
RIGHT BANK

44 1ST. MOVING
TARGET TOP
RIGHT BANK

45 3RD. MOVING
TARGET TOP
LEFT BANK

46 2 ND. MOVING
TARGET TOP
LEFT BANK

47 1ST. MOVING
TARGET TOP
LEFT BANK



ALL DIODES ARE
1N4148 OR 1N4001

LOCOMOTION

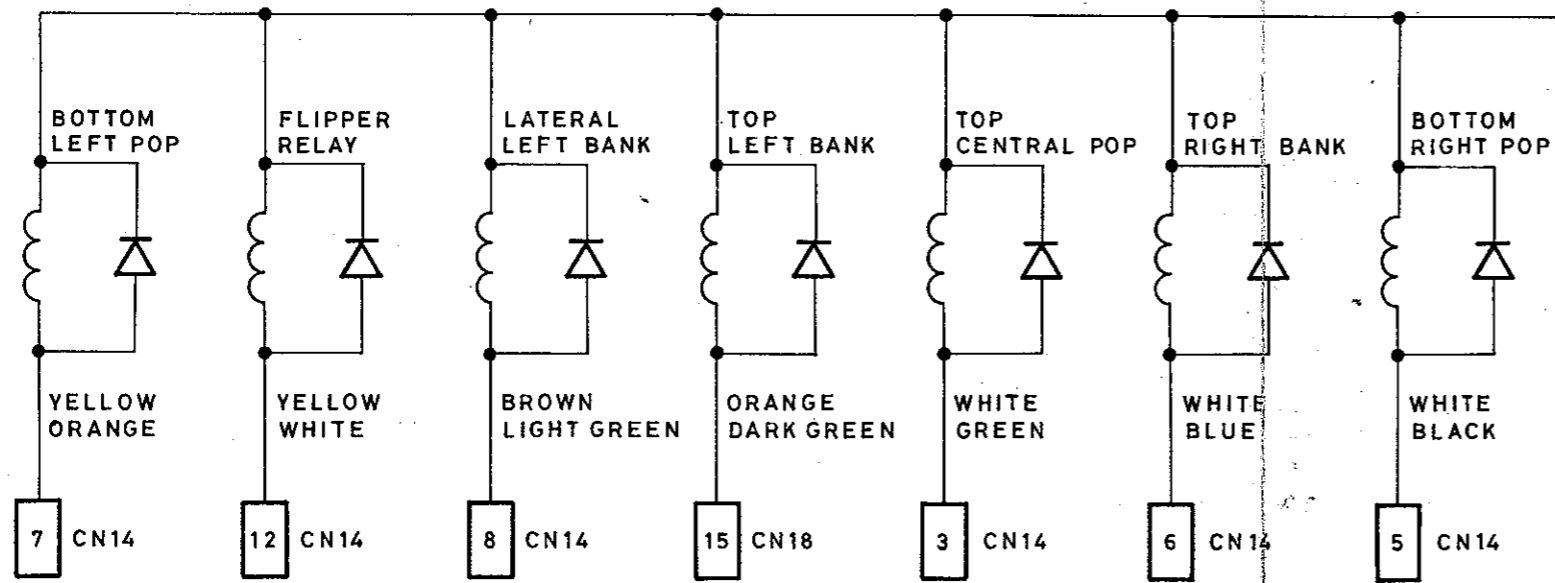
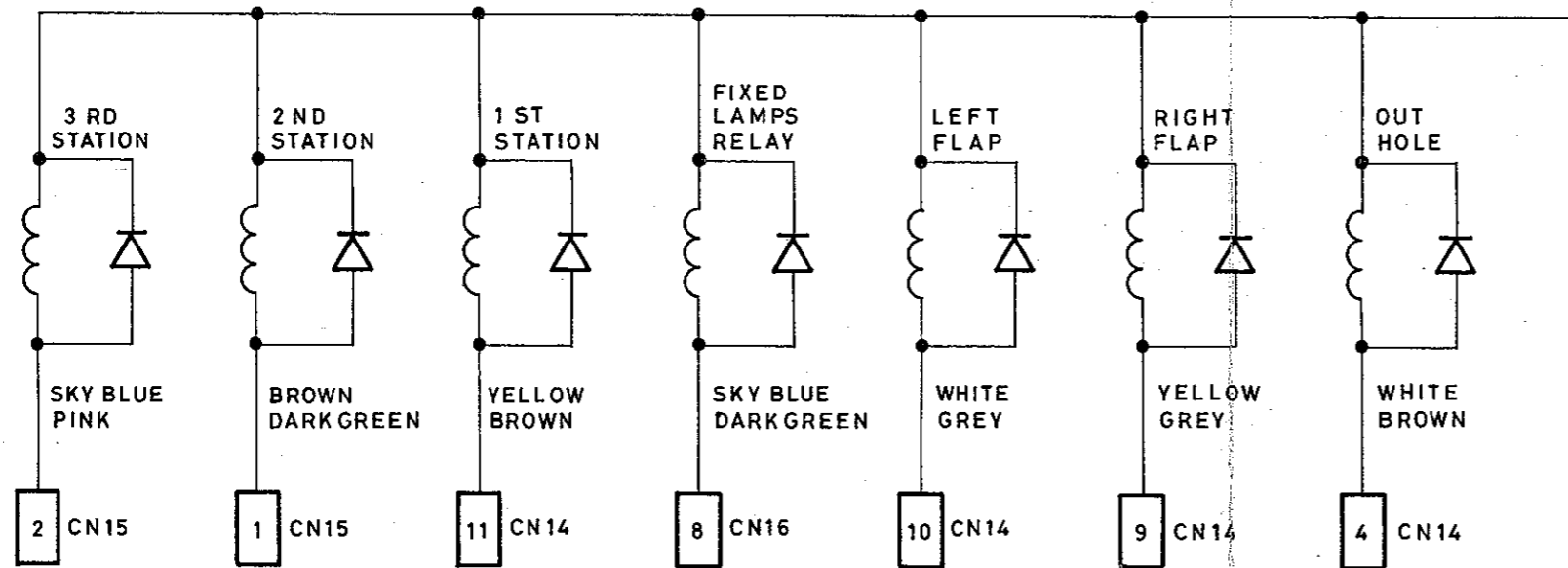
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PART NAME **Diagram for Playfield contacts wiring** PART NO. _____

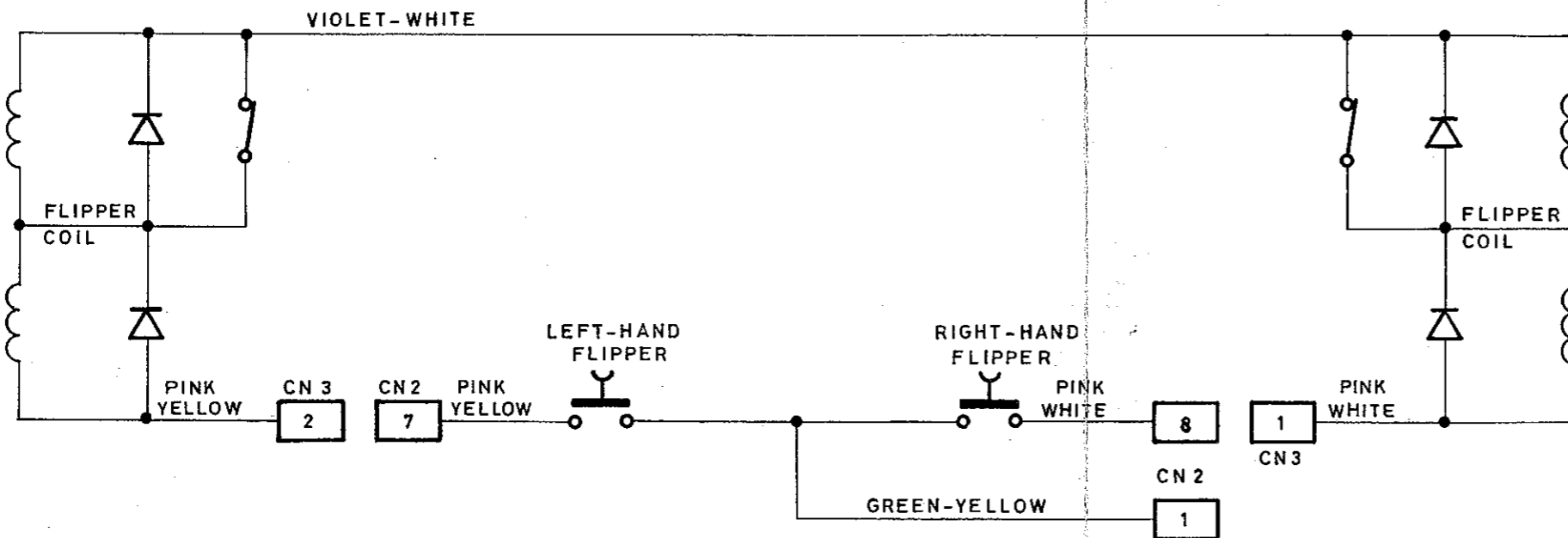
DWN. *A. Zaccaria* DATE **10/9/81** REV. _____ DATE REV. _____ SHEET **1**

NOTES: UNLESS OTHERWISE SPECIFIED
1) ALL RESISTORS VALUES IN _____
2) ALL CAPACITORS VALUES IN _____

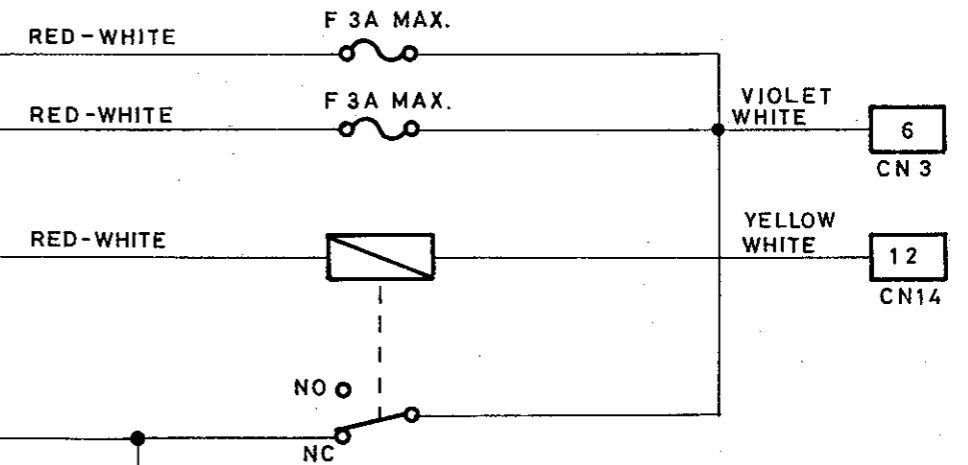
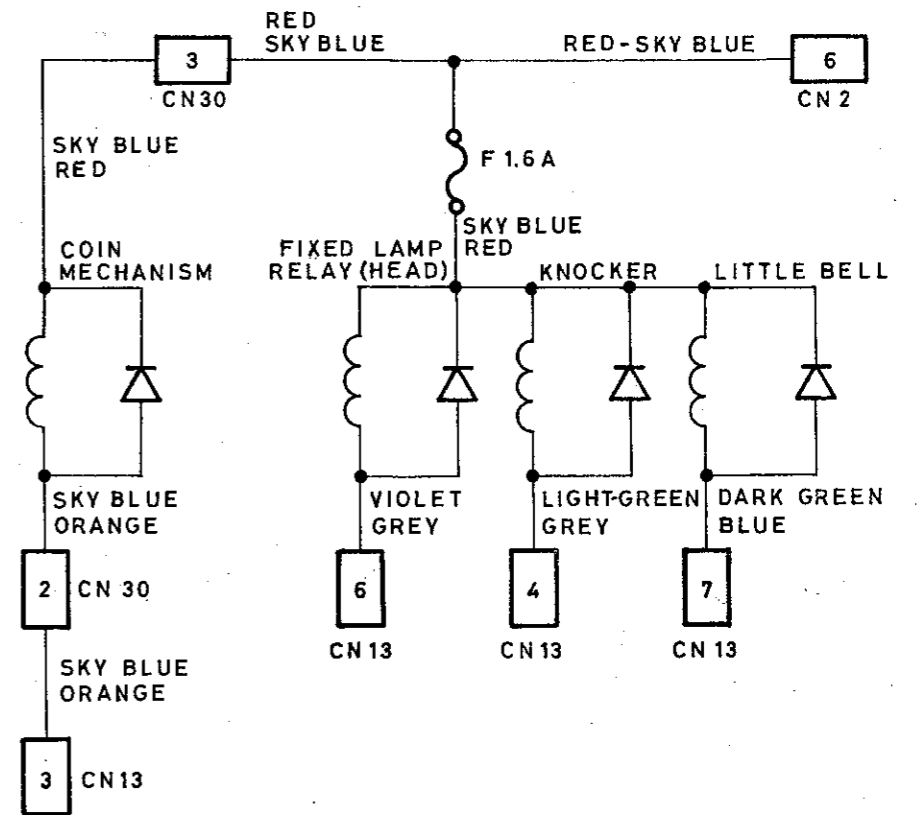
PLAYFIELD COILS



FLIPPERS



CABINET COILS

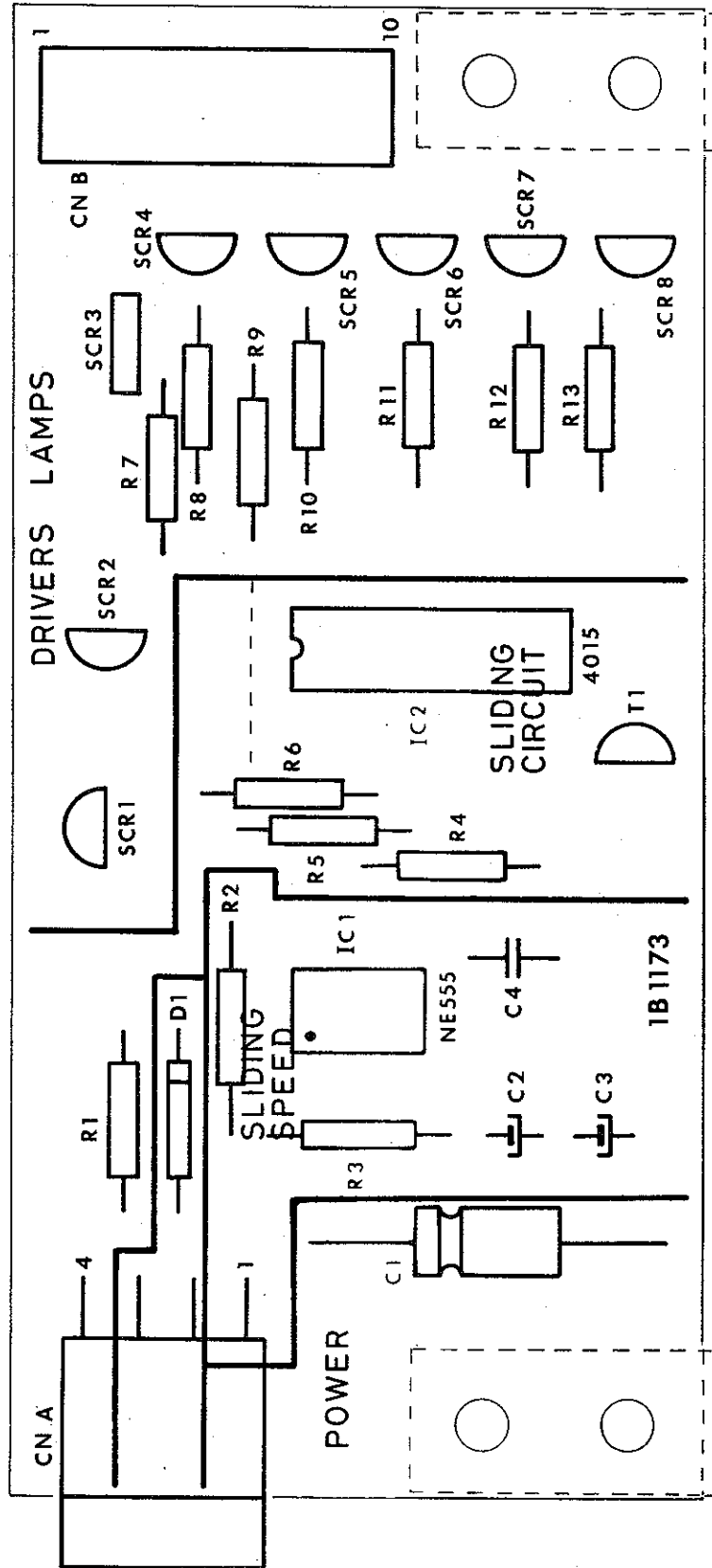


LOCOMOTION


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Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy

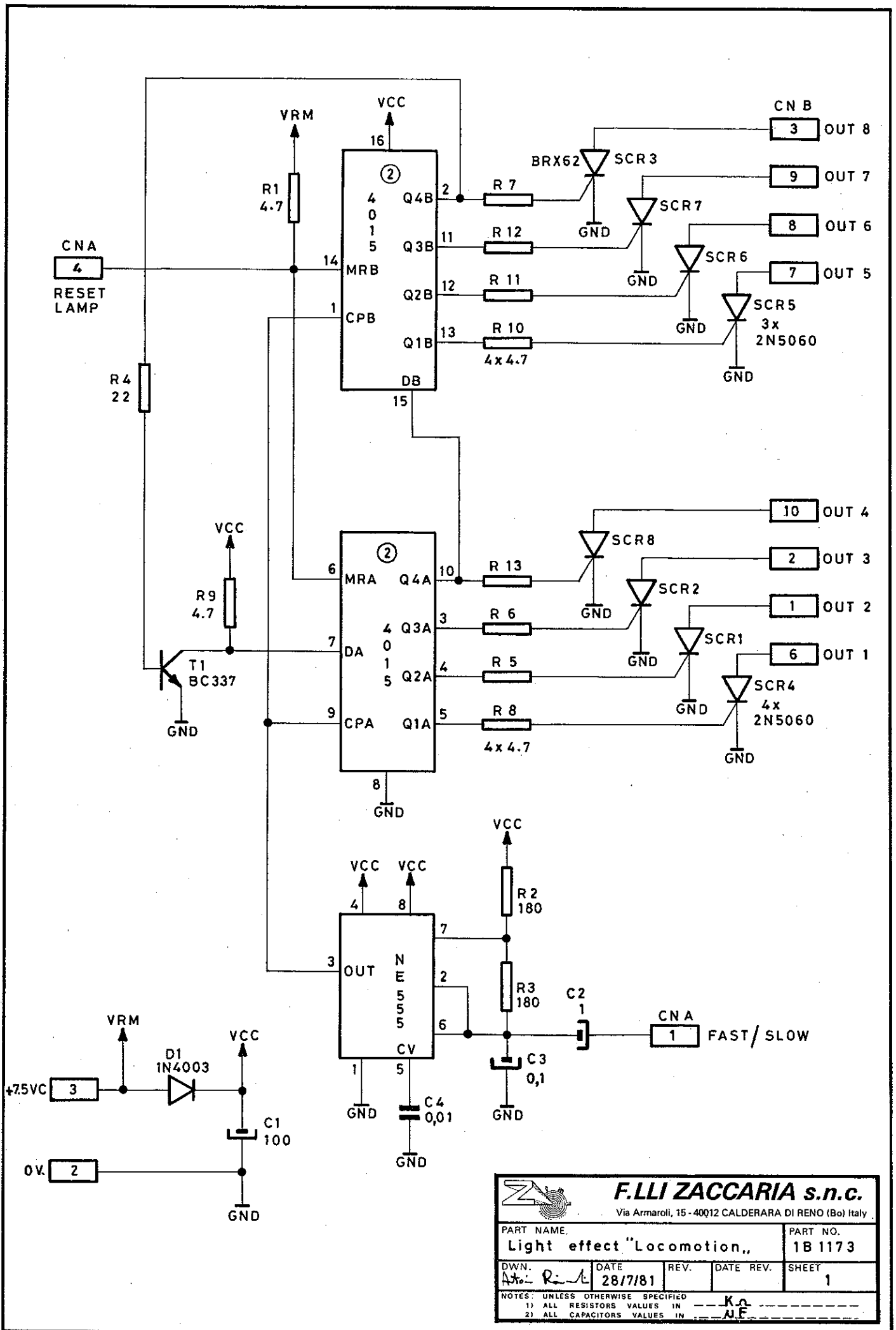
PART NAME	Electrical diagram for coil wiring	PART NO.	
DWN.	DATE	REV.	DATE REV.
11/9/81			
NOTES UNLESS OTHERWISE SPECIFIED			
1) ALL RESISTORS VALUES IN			
2) ALL CAPACITORS VALUES IN			

LIGHT EFFECT board



SCALE 2:1

 F.LLI ZACCARIA s.n.c. Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy				
PART NAME			PART NO.	
Layout components for			1B 1173	
light effect "Locomotion,,				
DWN.	DATE	REV.	DATE REV.	SHEET
Ato. R. A.	29/7/81			1
NOTES: UNLESS OTHERWISE SPECIFIED 1) ALL RESISTORS VALUES IN 2) ALL CAPACITORS VALUES IN				

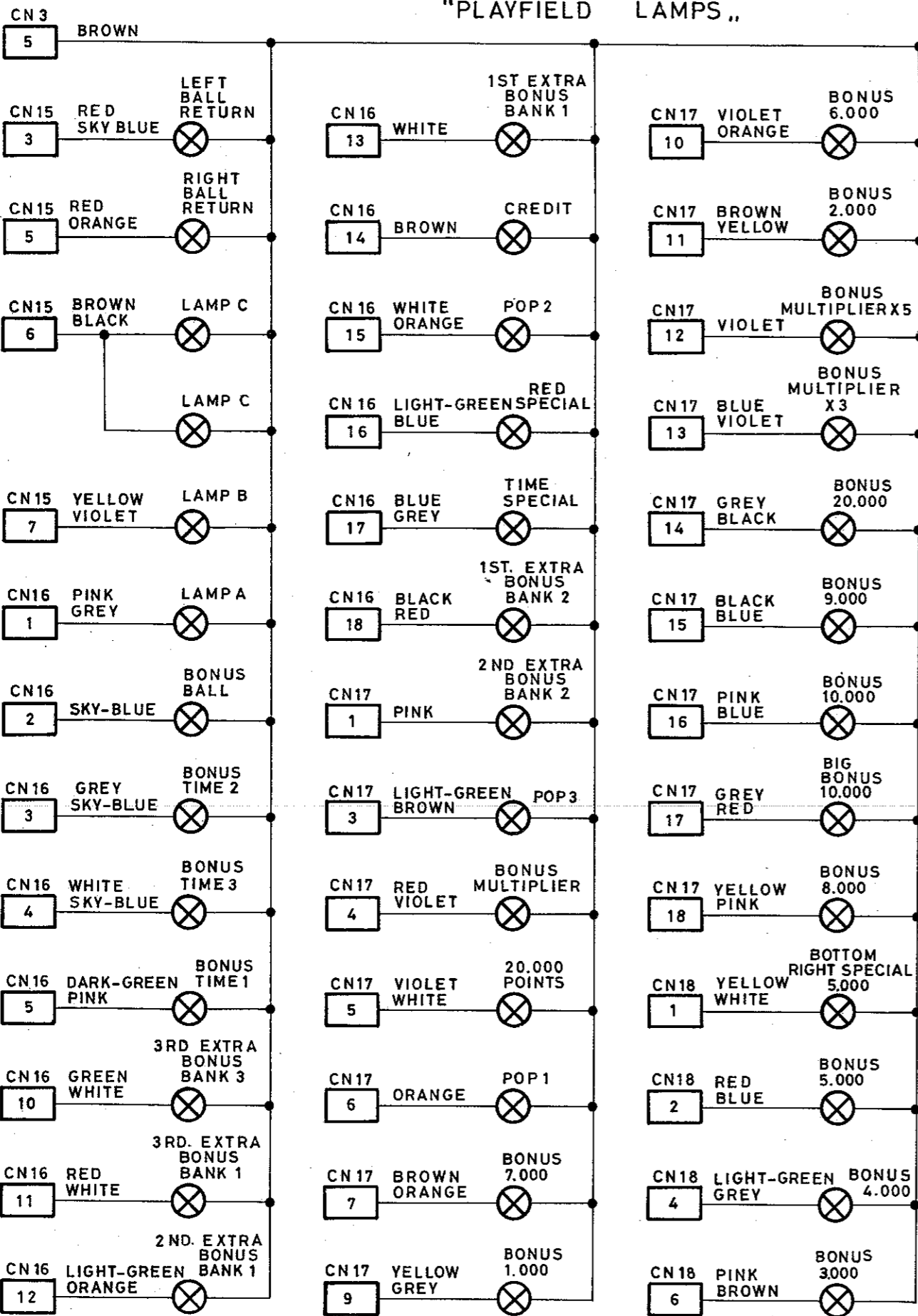


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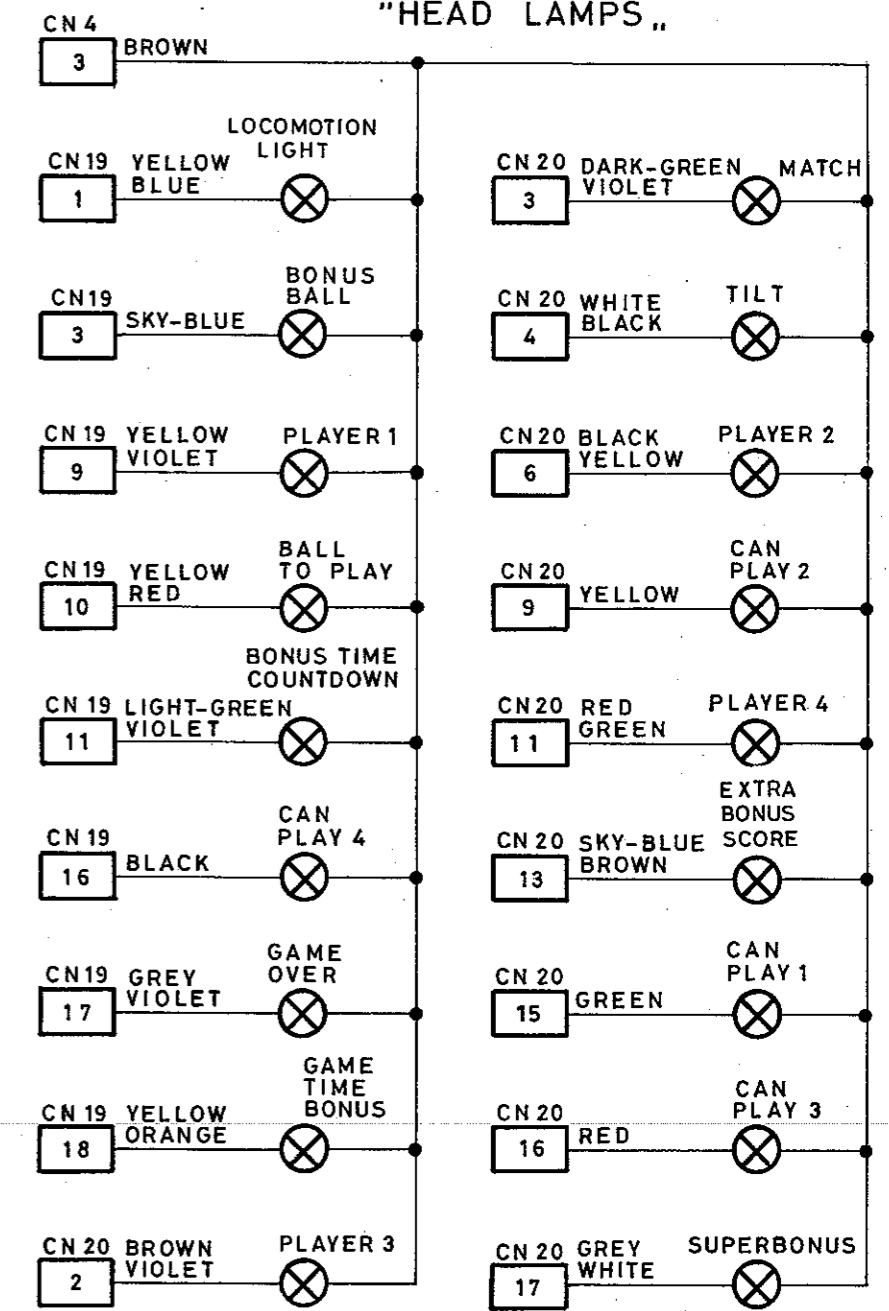
PART NAME		PART NO.	
Light effect "Locomotion,,		1B 1173	
DWN.	DATE	REV.	DATE REV.
Rev. R. A.	28/7/81		
NOTES: UNLESS OTHERWISE SPECIFIED		KΩ	
1) ALL RESISTORS VALUES IN		μF	
2) ALL CAPACITORS VALUES IN			

SHEET 1

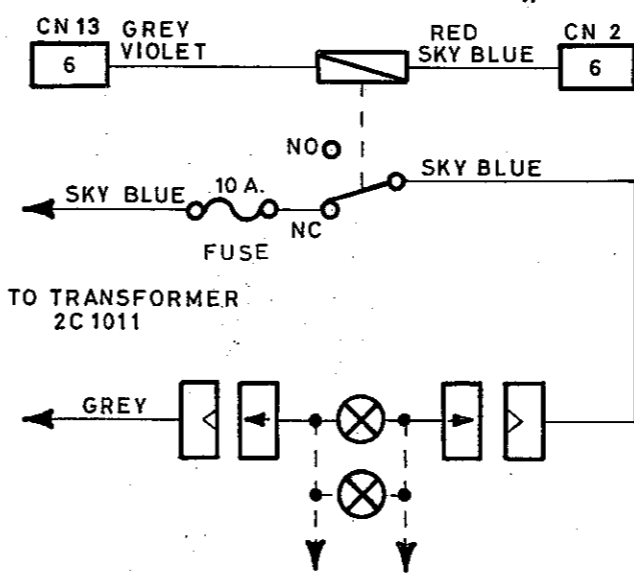
"PLAYFIELD LAMPS,"



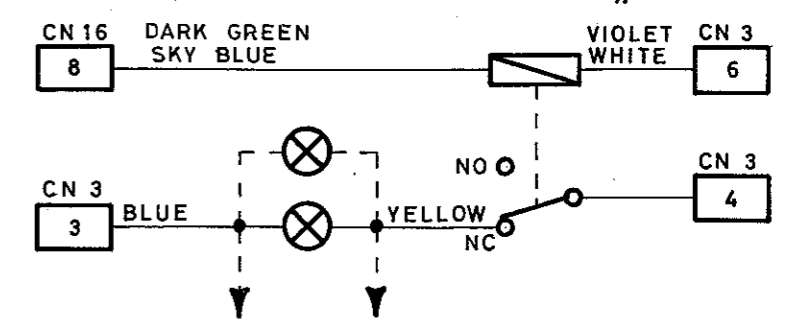
"HEAD LAMPS,"



"HEAD FIXED LAMPS,"



"PLAYFIELD FIXED LAMPS,"



LOCOMOTION

F.LI ZACCARIA s.n.c.
Via Armadori, 15 - 40012 CALDERARA DI RENO (Bo) Italy

PART NAME: Electrical diagram for lamps wiring		PART NO.	
DWN. 10/9/81	DATE 10/9/81	REV.	DATE REV.
SHEET 1			

NOTES: UNLESS OTHERWISE SPECIFIED
1) ALL RESISTORS VALUES IN
2) ALL CAPACITORS VALUES IN

