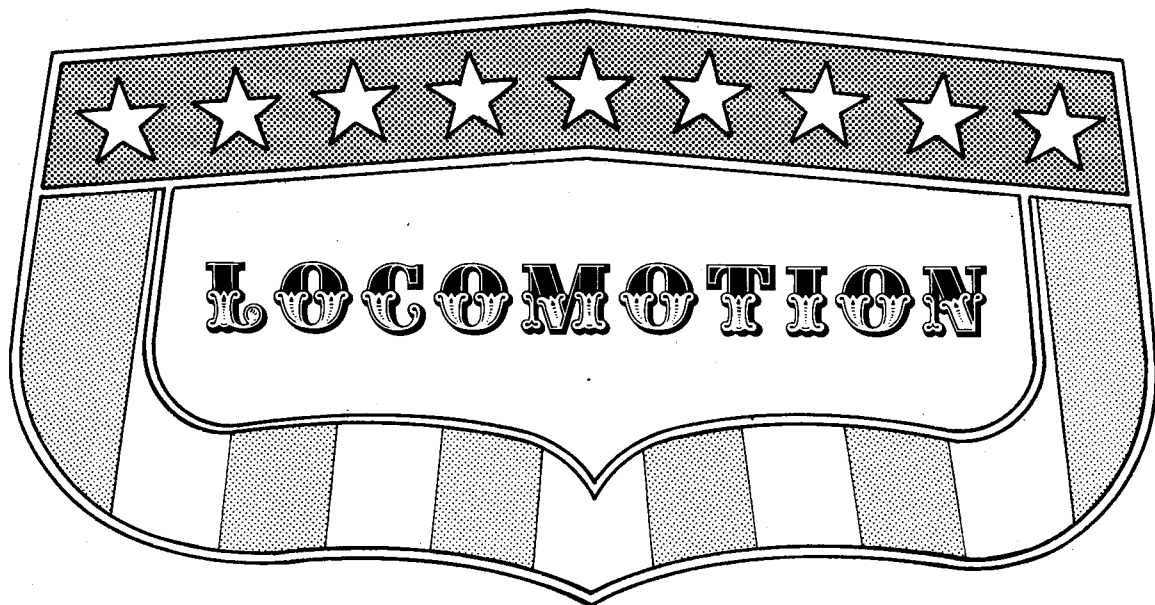




F.LLI ZACCARIA S.n.c.

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



LIST OF ILLUSTRATIONS

Assembly drawing

Layout for C.P.U. board

Diagram for C.P.U. board

Layout for FLIPPER PROGRAMMING board

Diagram for FLIPPER PROGRAMMING board

Layout for INTERFACE board

Diagram for INTERFACE board

Layout for POWER board

Diagram for POWER board

Layout for DISPLAY board

Diagram for DISPLAY board

Layout for SOUND board

Diagram for SOUND board

Layout for LIGHT EFFECT board

Diagram for LIGHT EFFECT board

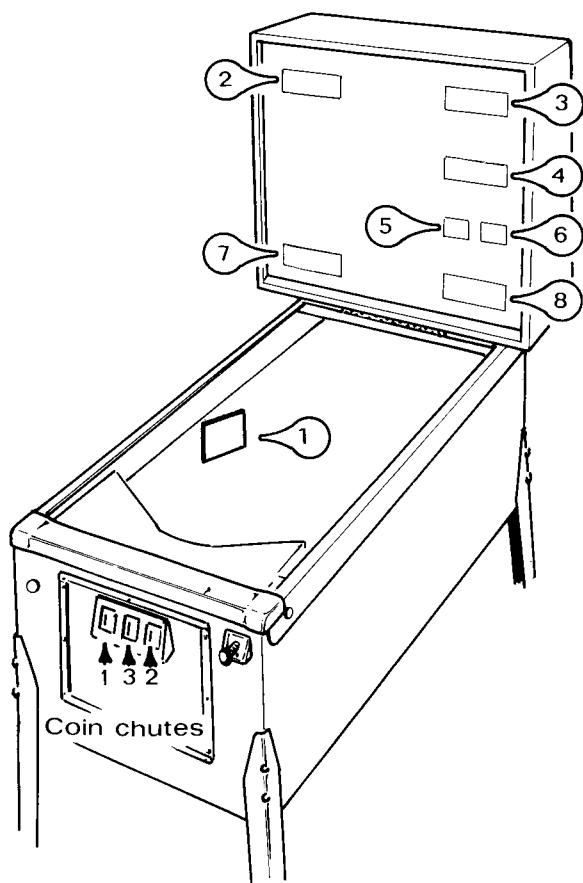
Diagram for PLAYFIELD CONTACTS _ (wiring)

Diagram for COILS _ _ _ _ _ (wiring)

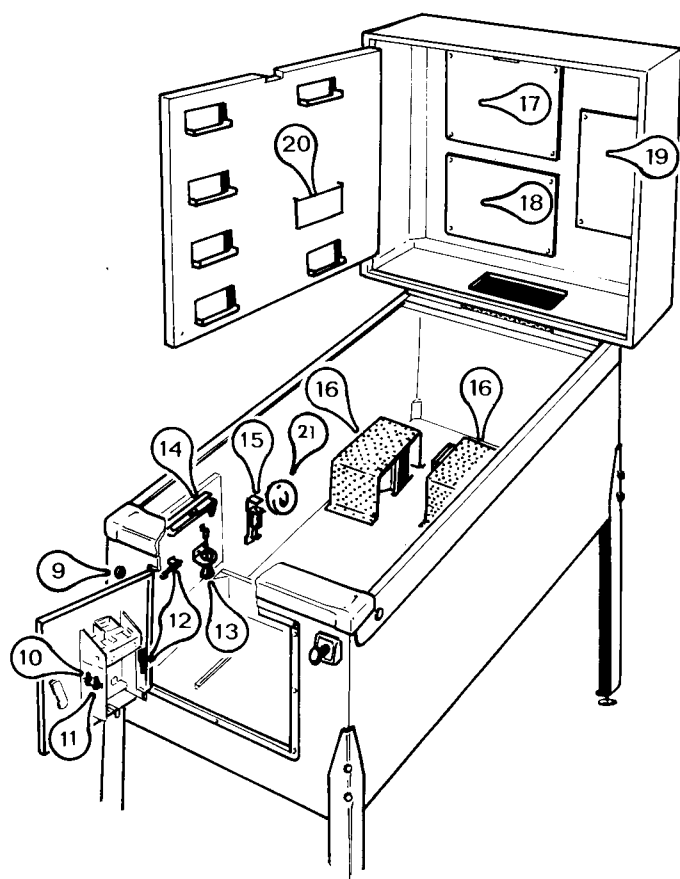
Diagram for LAMPS _ _ _ _ _ (wiring)

Diagram for CABINET CONTACTS _ _ (wiring)

Diagram for FRONT DOOR _ _ _ _ _ (wiring)

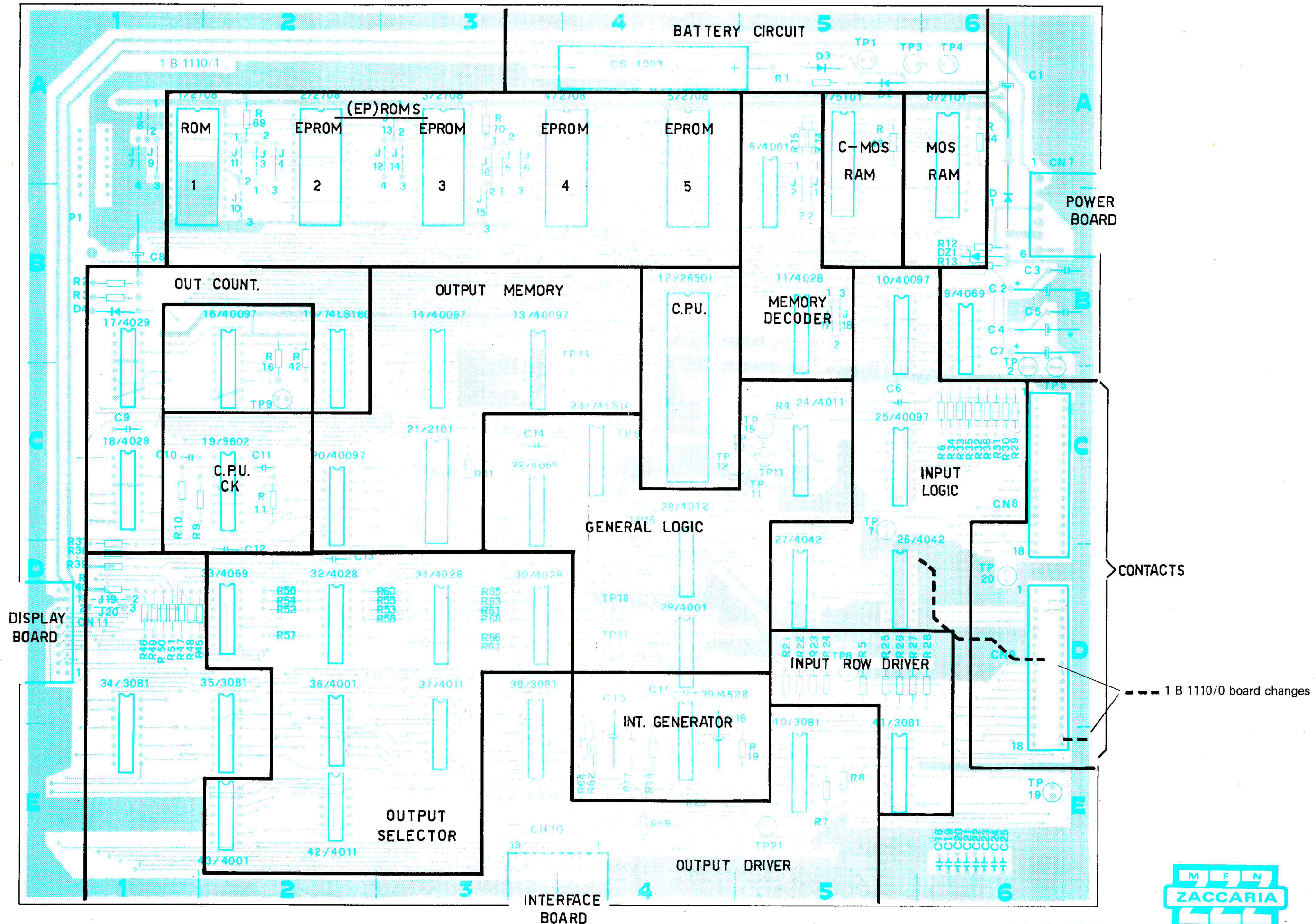


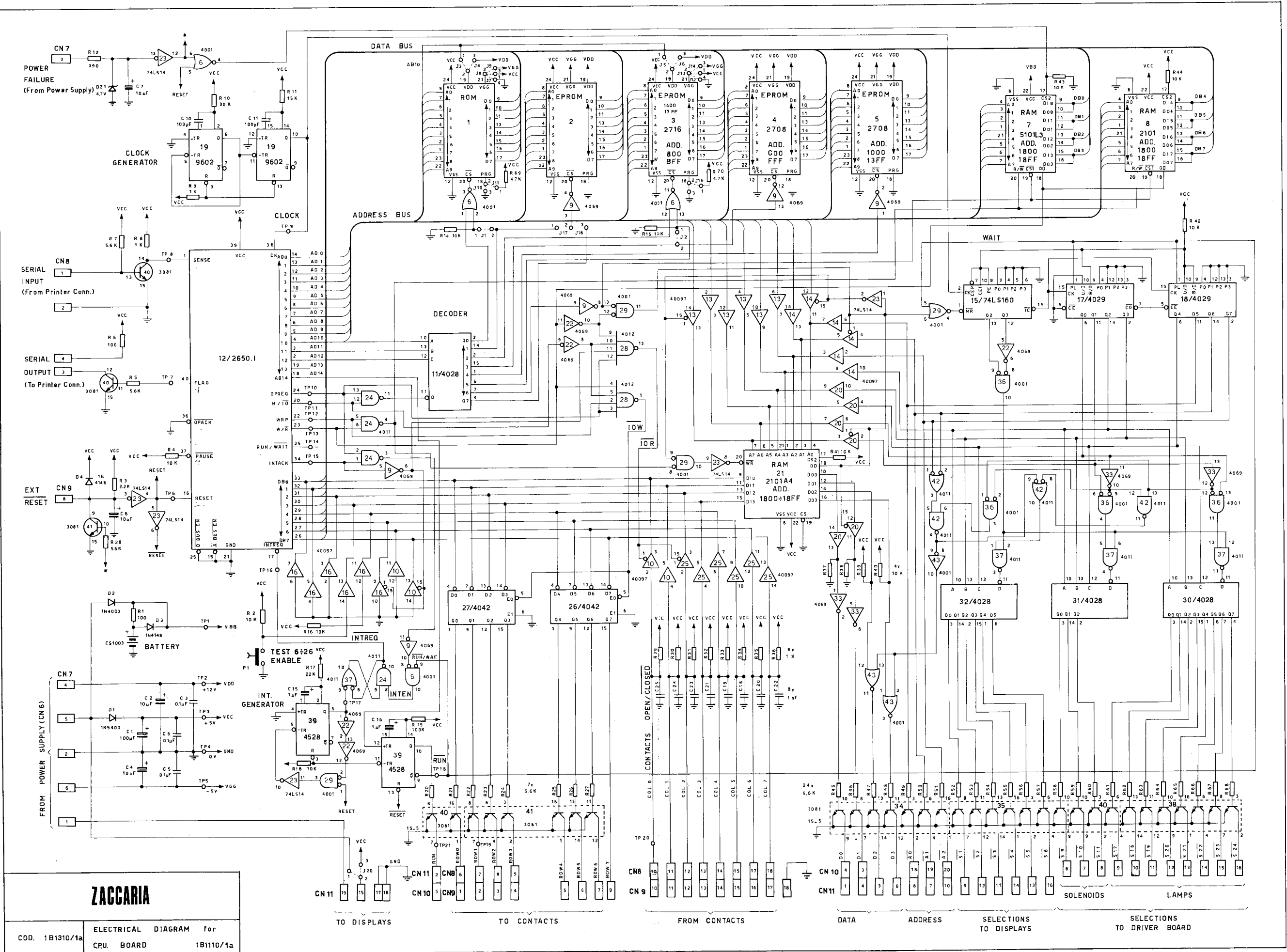
- 1 LIGHT EFFECTS
- 2 1st Player display
- 3 2nd Player display
- 4 Highest score display
- 5 Credit display
- 6 Display balls to play-match-game time bonus-bonus time countdown.
- 7 3rd Player display
- 8 4th Player display



- 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

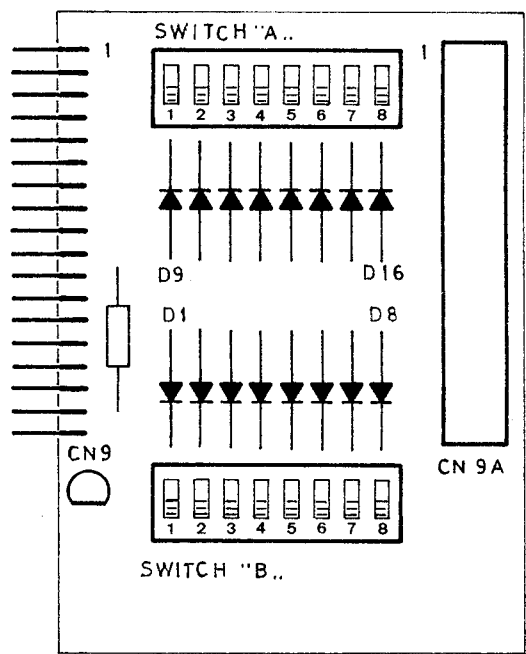




ZACCARIA

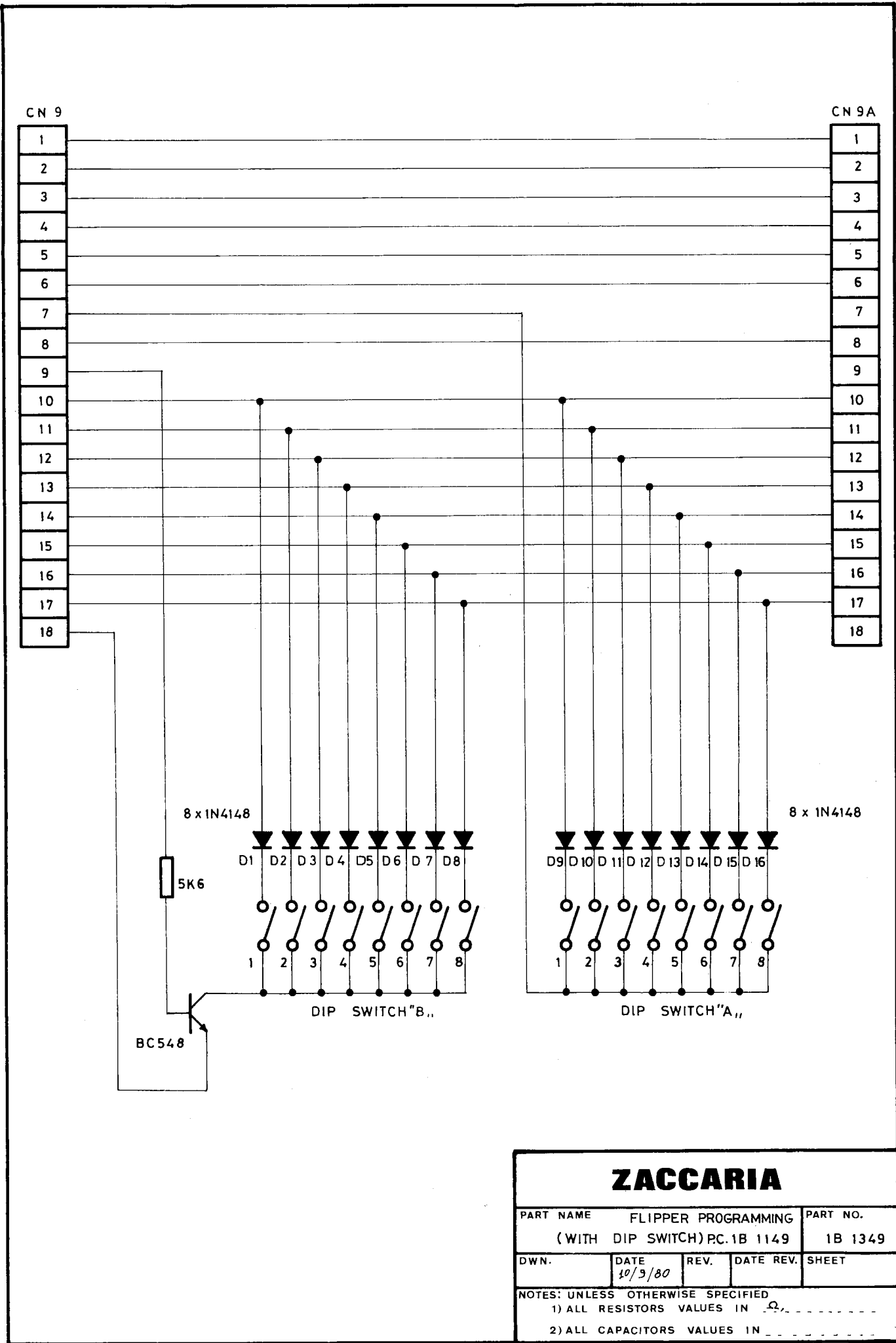
COD. 1B1310/1a
ELECTRICAL DIAGRAM for
CPU. BOARD 1B1110/1a

FLIPPER PROGRAMMING board



P.C. 1 B 1149

FLIPPER PROGRAMMING board



ZACCARIA

PART NAME				PART NO.
FLIPPER PROGRAMMING				1B 1349
(WITH DIP SWITCH) PC.1B 1149				
DWN.	DATE	REV.	DATE REV.	SHEET
	10/3/80			

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

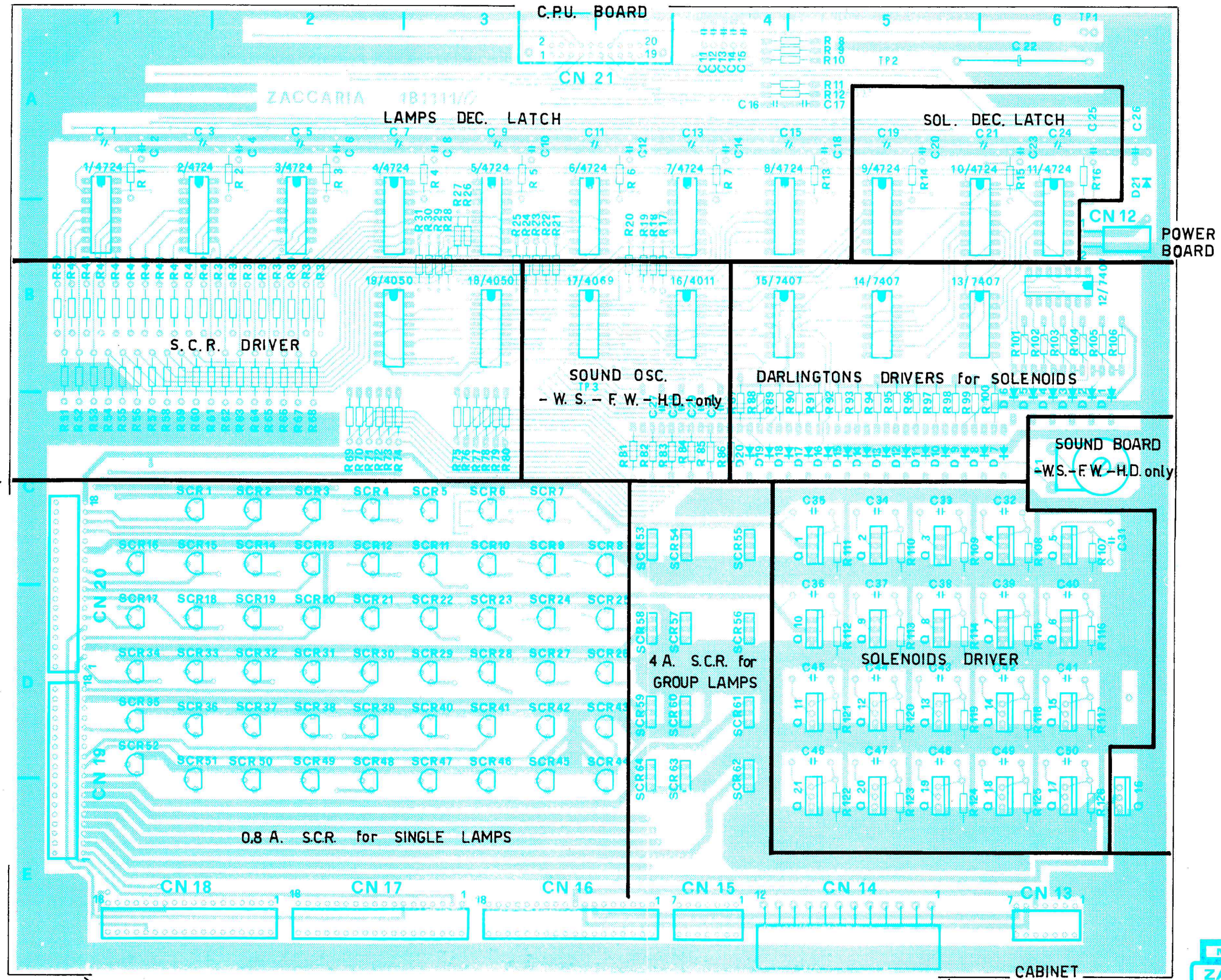
INTERFACE board

CN 9A

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

8 x 1N4148

HEAT

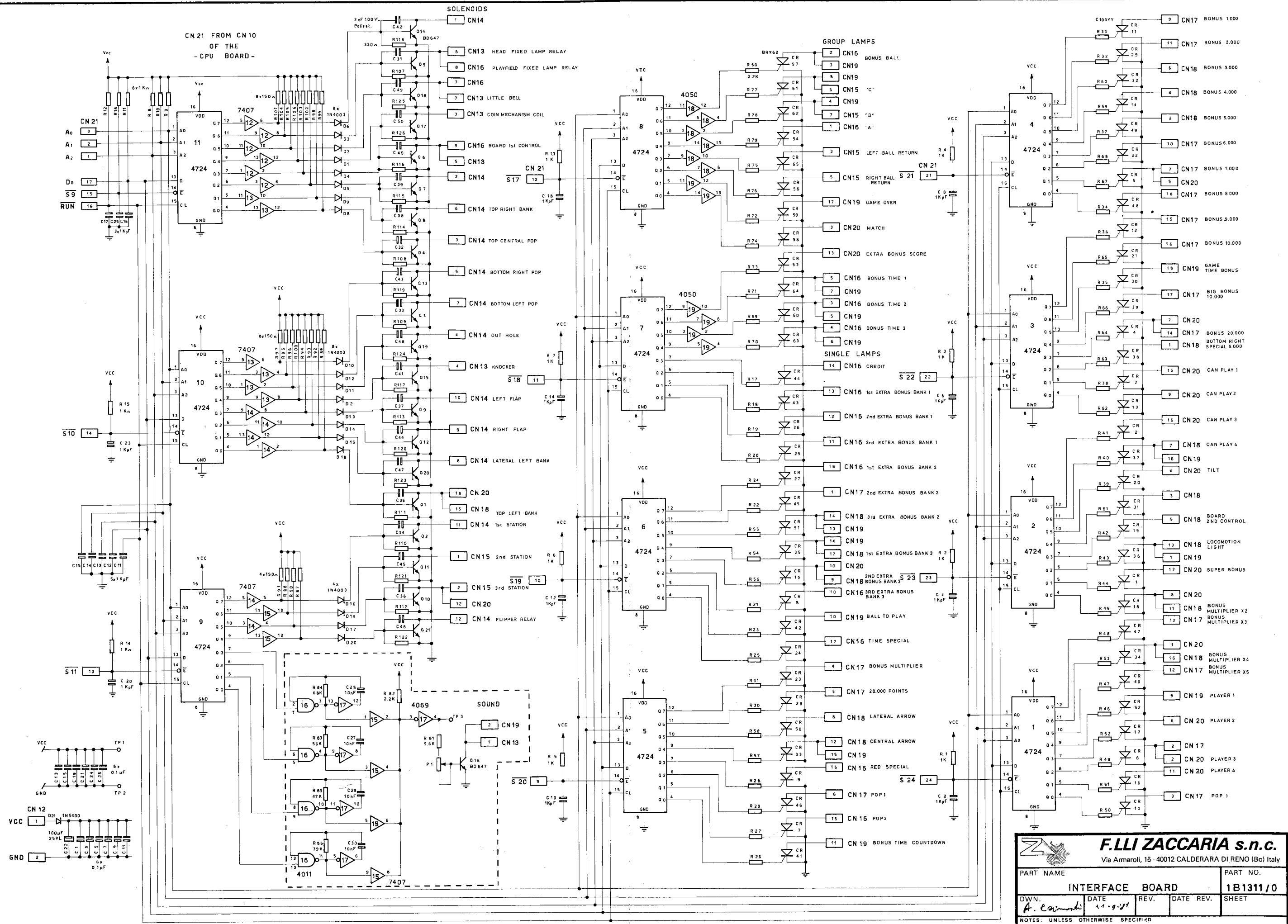


PLAYFIELD

P.C. 1 B 1111/0



ING PART NO.
49 1B 1349
REV. SHEET

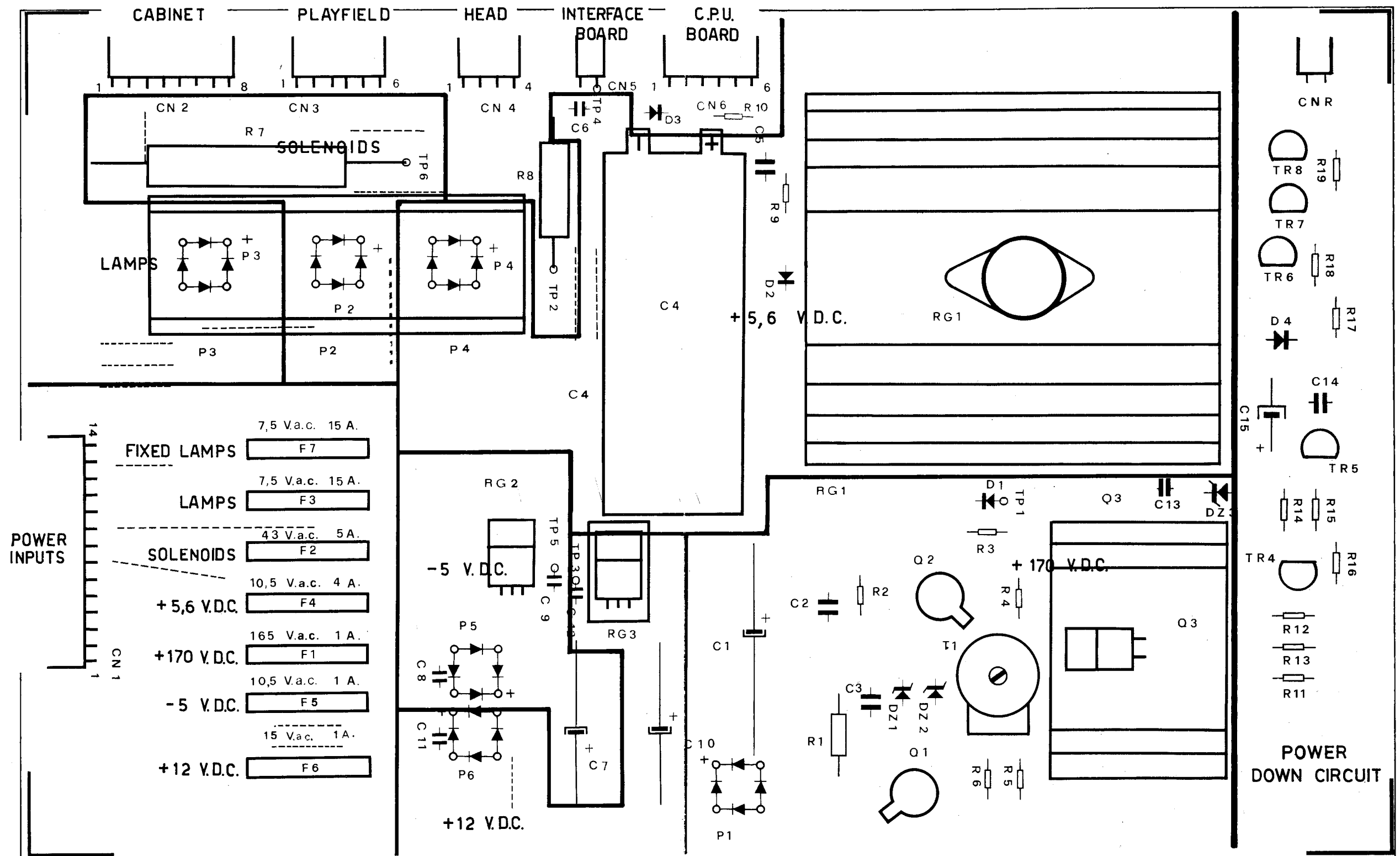


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PART NAME		PART NO.	
INTERFACE BOARD		1B1311/0	
DWN. <i>A. Cammelli</i>	DATE 11-9-81	REV.	DATE REV.
SHEET			

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

POWER board



P.C. 1 B 1109/4

**OSCILLOSCOPE
DEFINABLE CURVES**

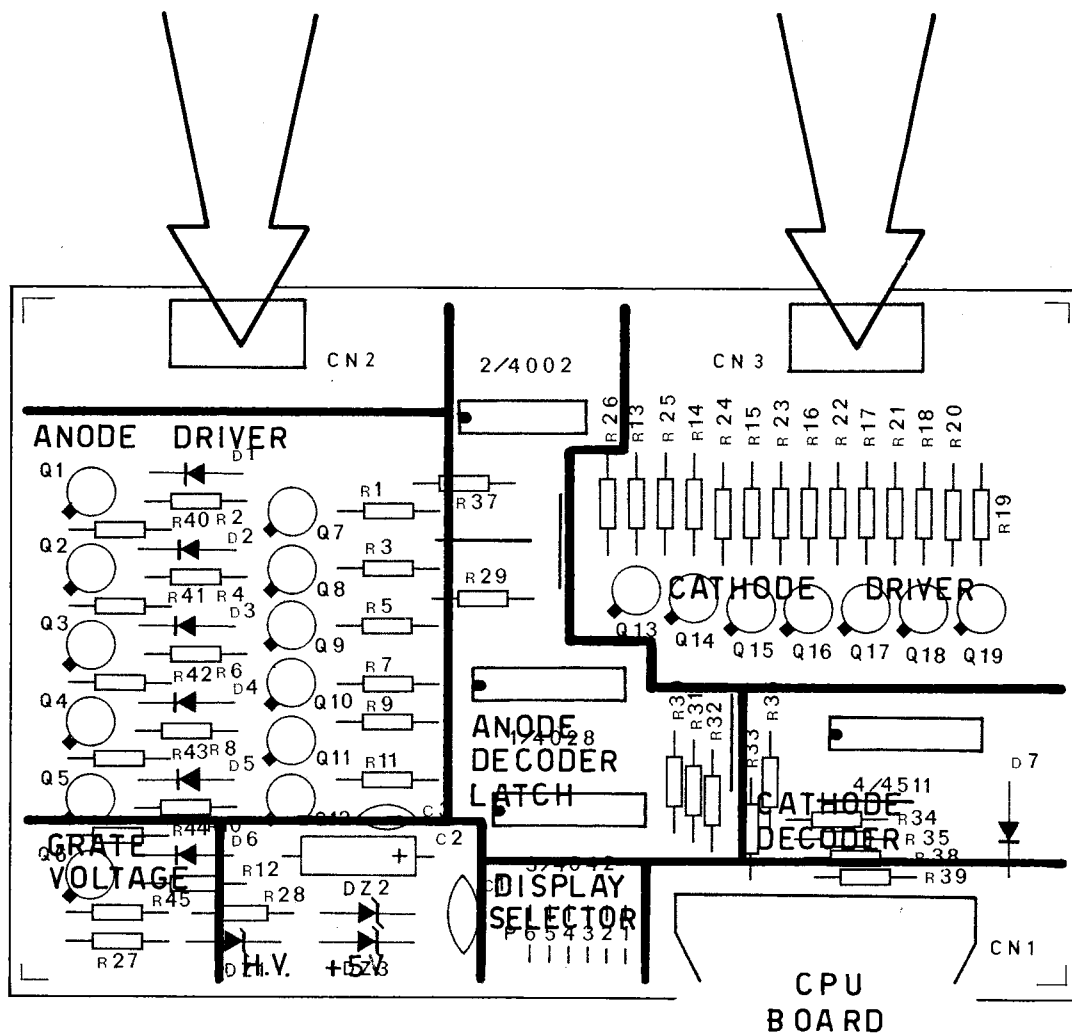
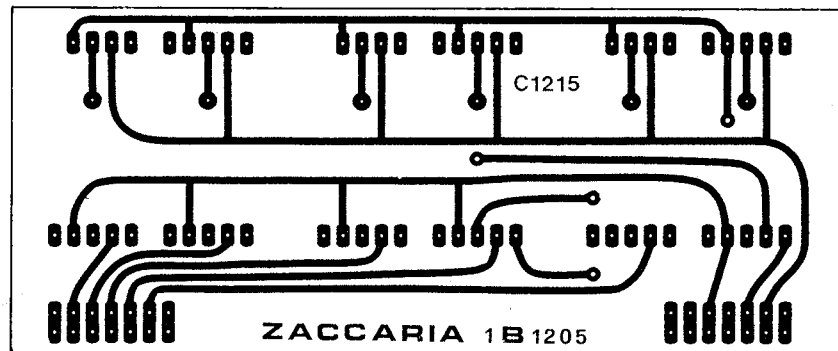
The schematic diagram illustrates the power supply architecture, starting with a 170 VAC, 0.2 A input at CN1. This feeds a bridge rectifier P1 (W04) and a filter capacitor C1 (100µF, 350V). The resulting +170 VDC is connected to CN6. A subsequent stage uses a 43 VAC, 10 A input at CN2, passing through a 5A fuse F2 and a bridge rectifier P2 (KBPC 802) to produce +39 VRM at CN3. A third stage takes a 7.5 VAC, 15 A input at CN4, through a 15A fuse F3 and a bridge rectifier P3 (KBPC 10005), yielding +5.6 VRM. A fourth stage uses a 10.5 VAC, 0.5 A input at CN12, through a 1A fuse F6 and a bridge rectifier P6 (W005), to produce +12 VCC at CN5. The output section (CN9) features a multi-stage transistor amplifier (TR1-TR8) with various resistors (R1-R19) and capacitors (C1-C15) to drive the CPU (PIN 8, CN 9).

ZACCARIA

COD 1B1309/4 ELECTRICAL DIAGRAM for
POWER BOARD 1B1109/4

COD 1B1309/4	ELECTRICAL DIAGRAM for POWER BOARD 1B1109/4
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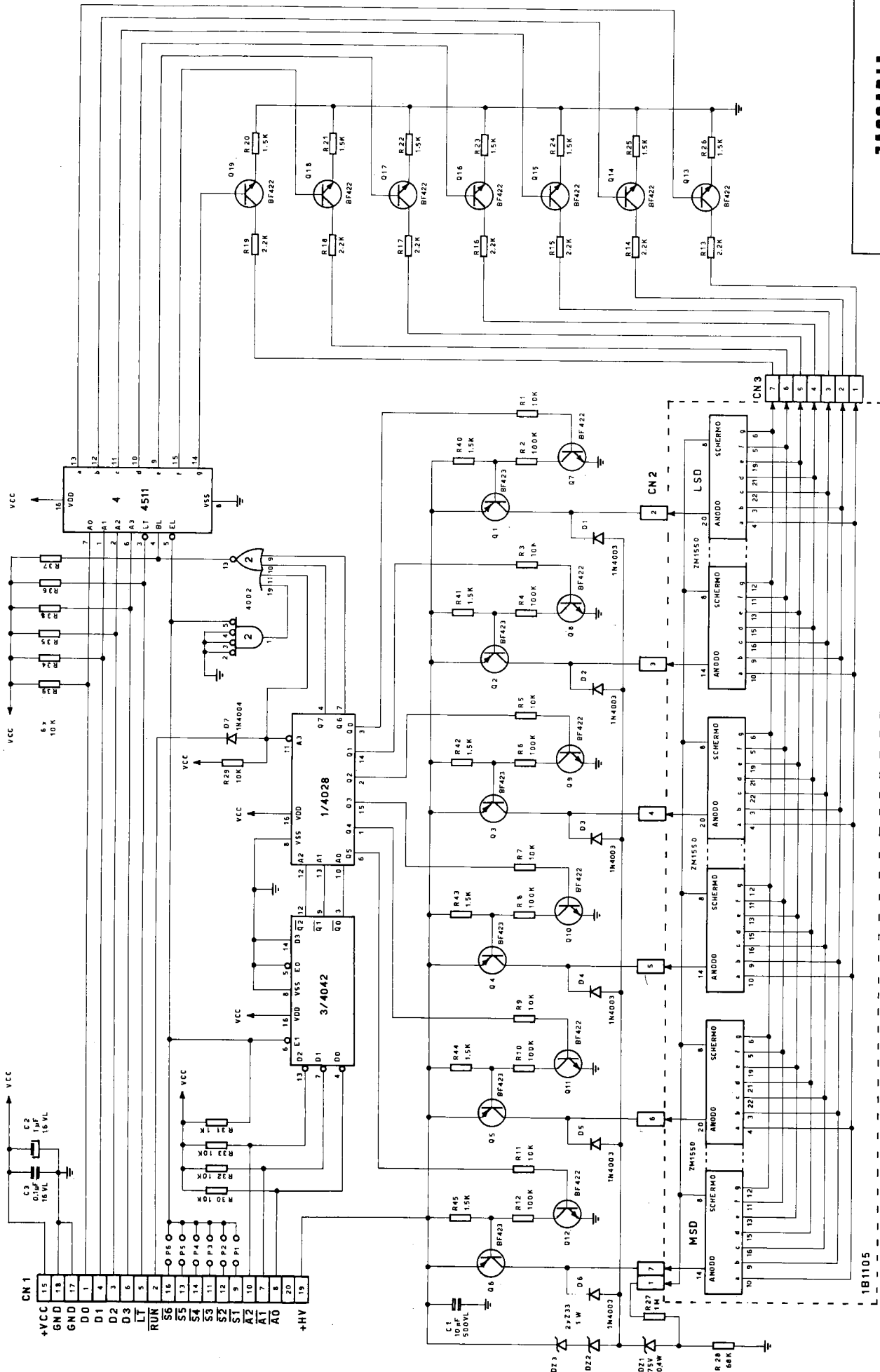
DISPLAY boards



P.C. 1 B 1104/0



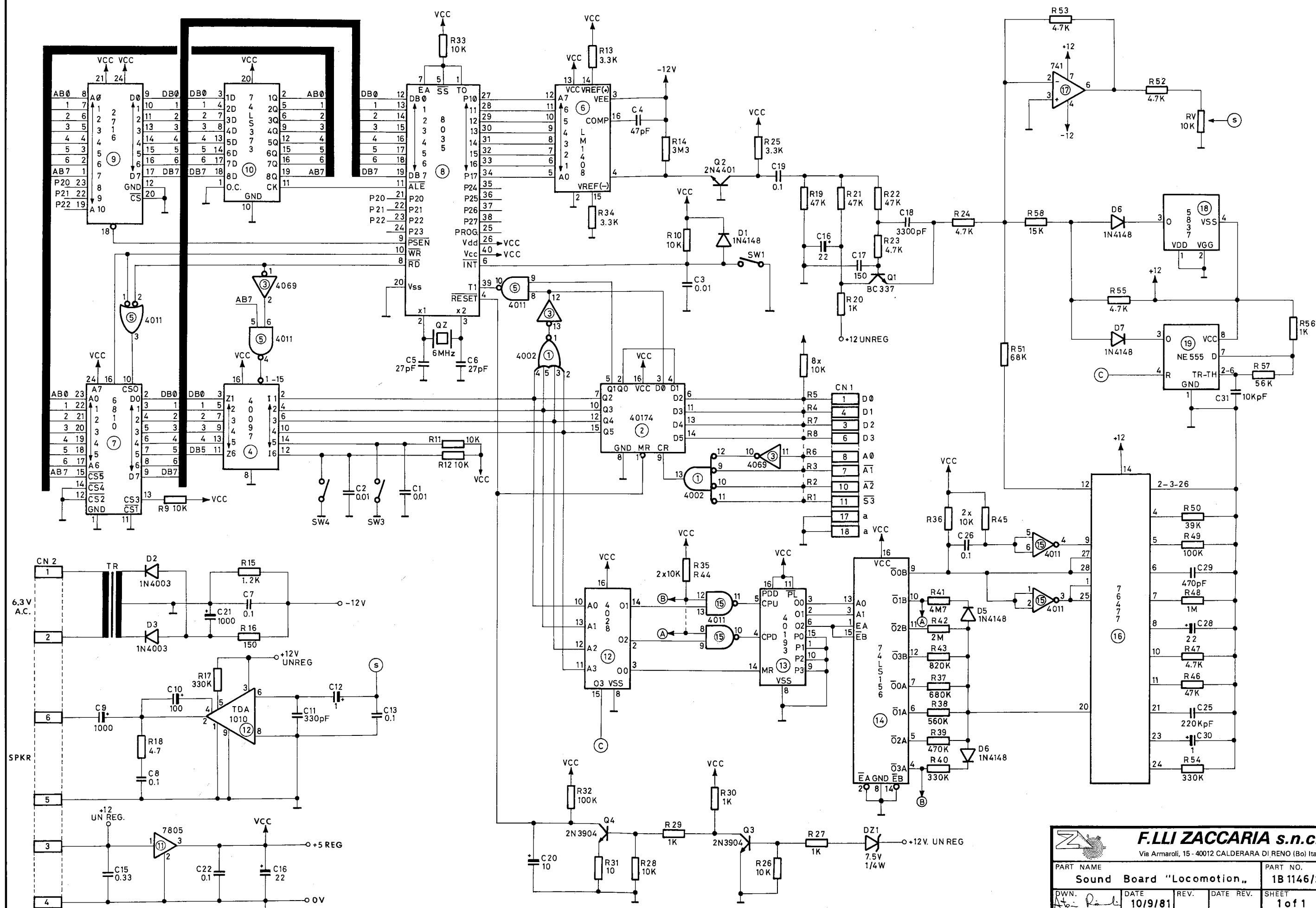
DISPLAY boards



ZACCARIA

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

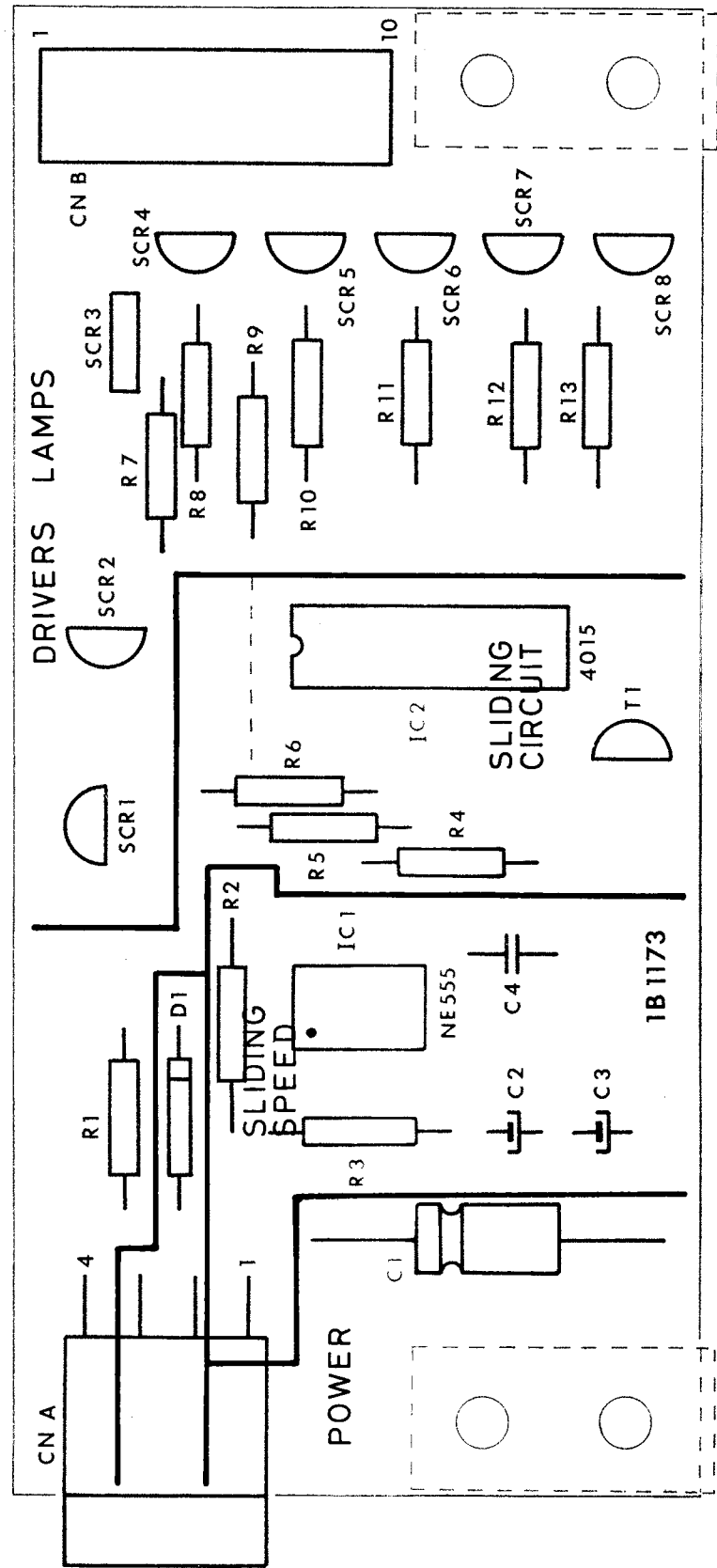





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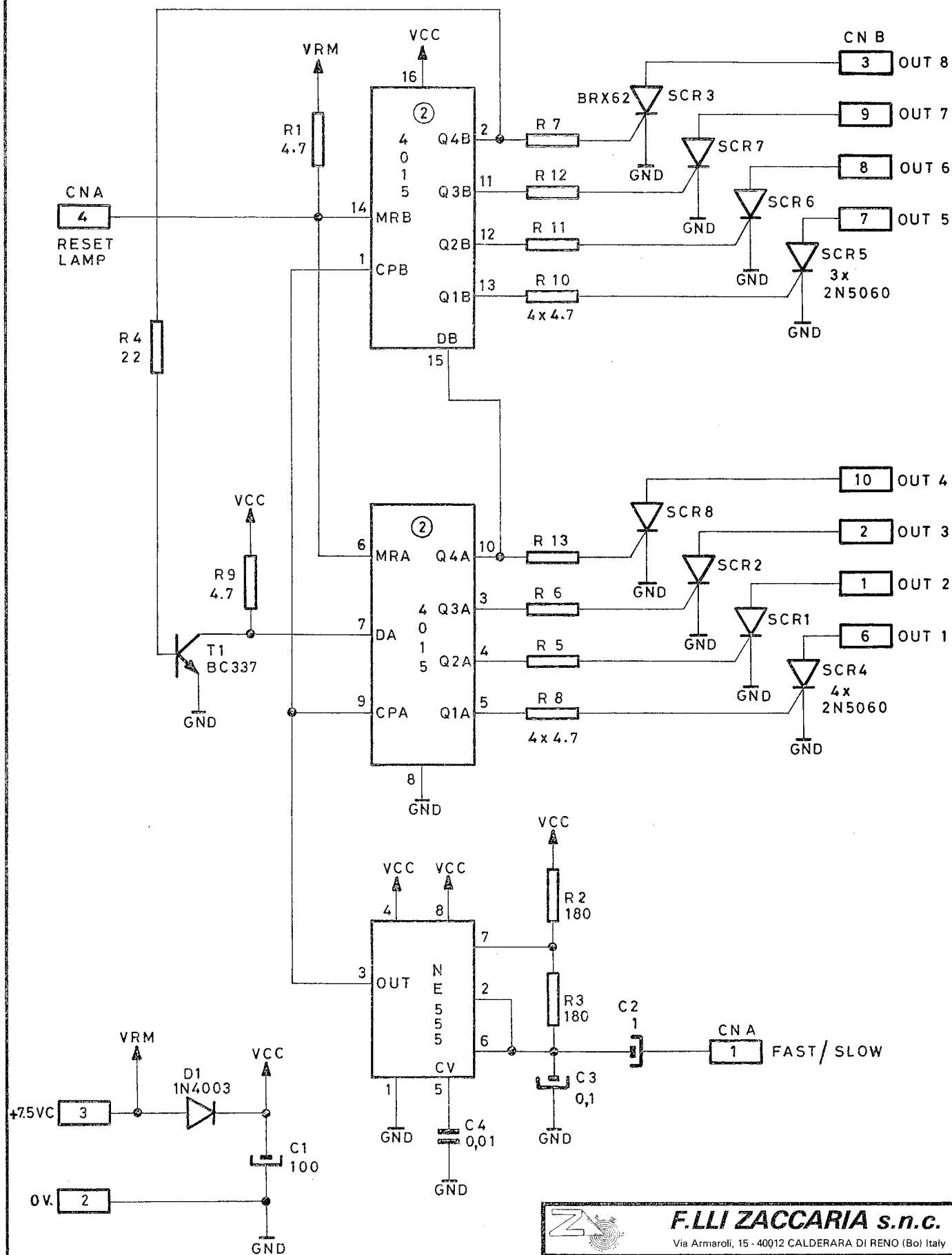
PART NAME		PART NO.	
Sound Board "Locomotion.."		1B 1146/2	
DWN.	DATE	REV.	DATE REV.
At. P. L.	10/9/81		
NOTES: UNLESS OTHERWISE SPECIFIED		SHEET	
1) ALL RESISTORS VALUES IN Ω		1 of 1	
2) ALL CAPACITORS VALUES IN μF			

LIGHT EFFECT board

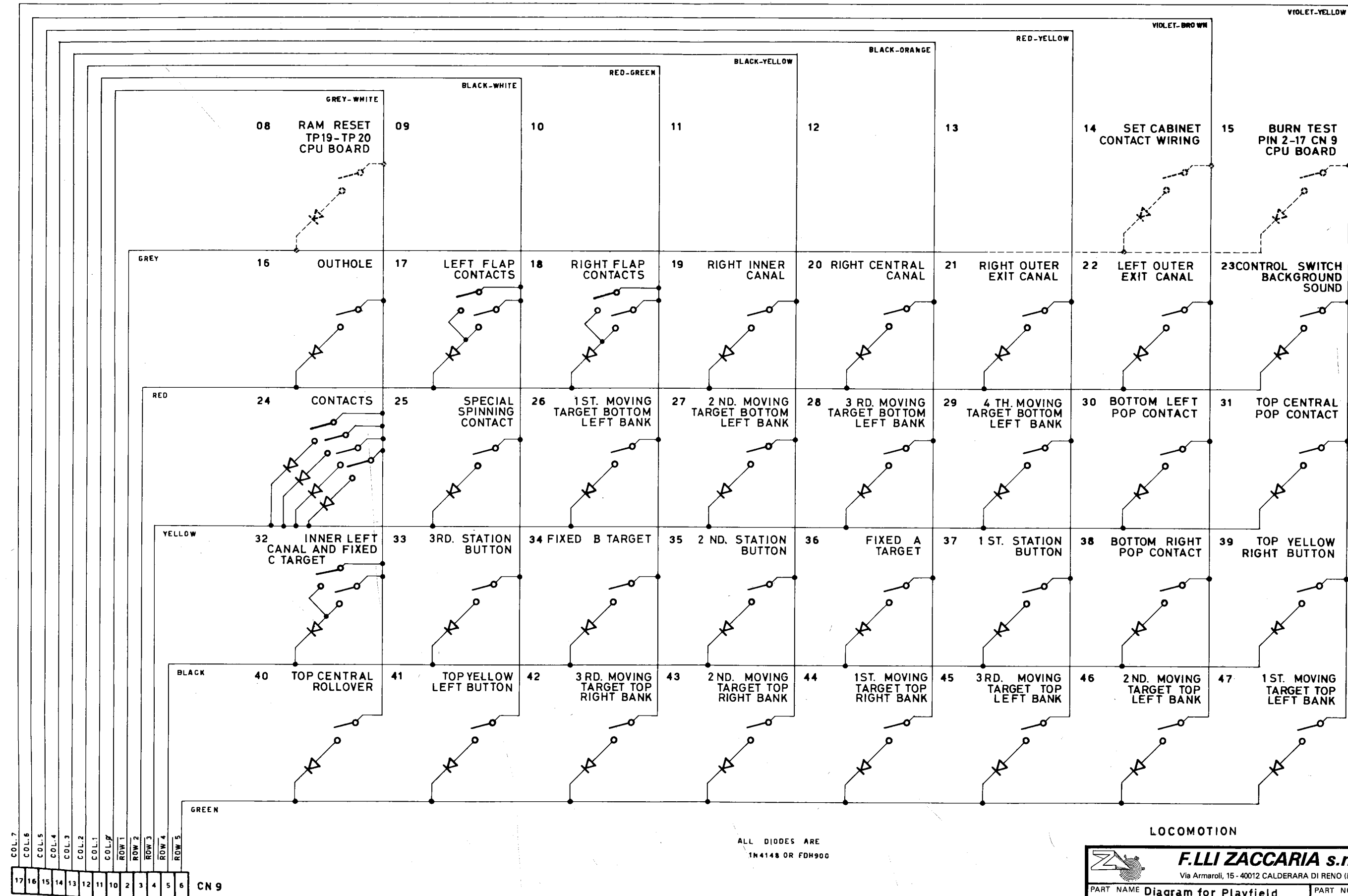


SCALE 2:1

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

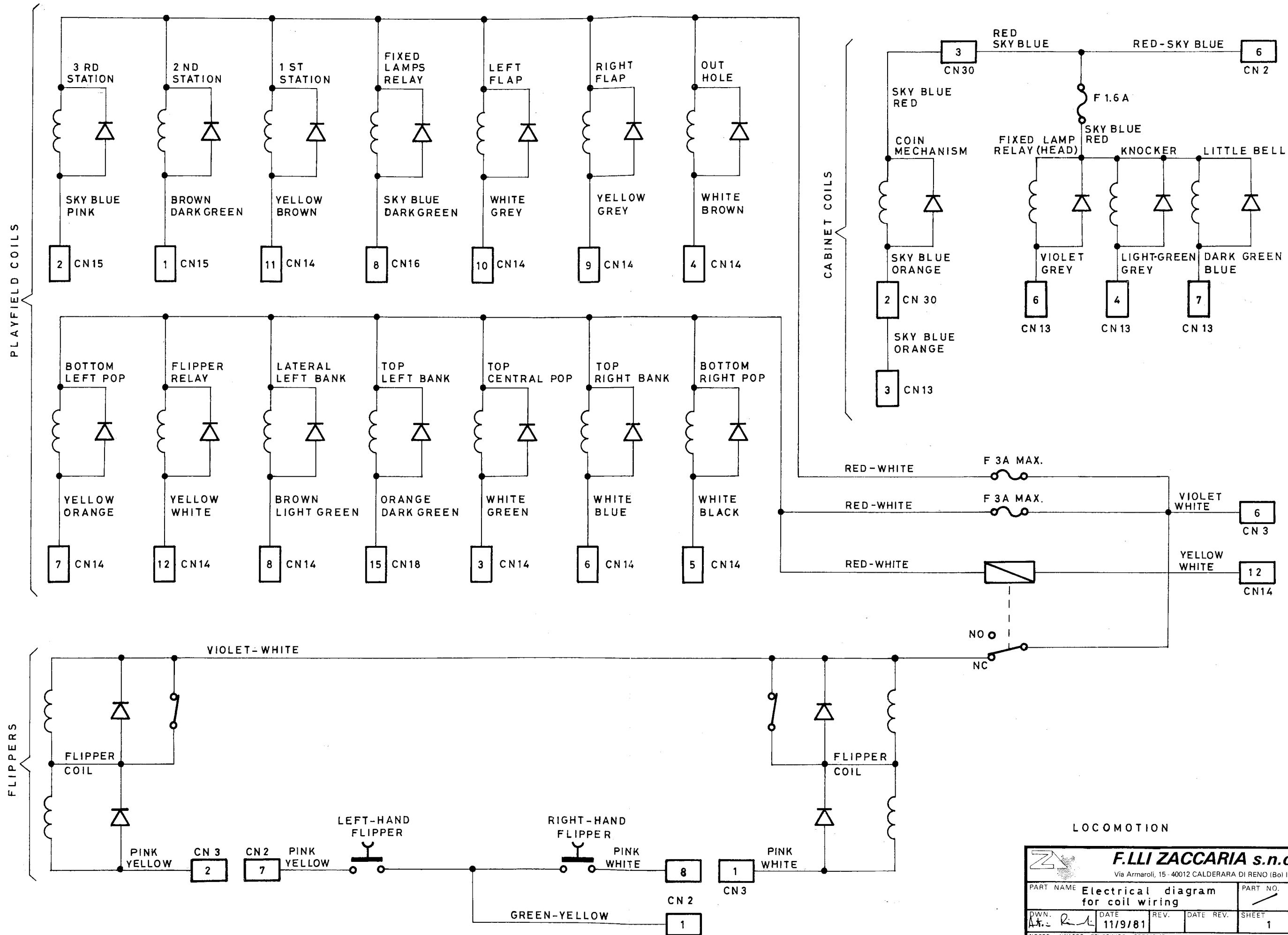


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PART NAME		PART NO.	
Light effect "Locomotion,,		1B 1173	
DWN.	DATE	REV.	DATE REV.
At. R. A.	28/7/81		
NOTES: UNLESS OTHERWISE SPECIFIED		SHEET	
1) ALL RESISTORS VALUES IN		1	
2) ALL CAPACITORS VALUES IN		KΩ	
		μF	



LOCOMOTION

F.LLI ZACCARIA s.n.c. Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy	
PART NAME Diagram for Playfield contacts wiring	
PART NO. _____	
DWN. <i>At. R.</i>	DATE 10/9/81
REV. _____	DATE REV. _____
SHEET 1	
NOTES: UNLESS OTHERWISE SPECIFIED 1) ALL RESISTORS VALUES IN _____ 2) ALL CAPACITORS VALUES IN _____	

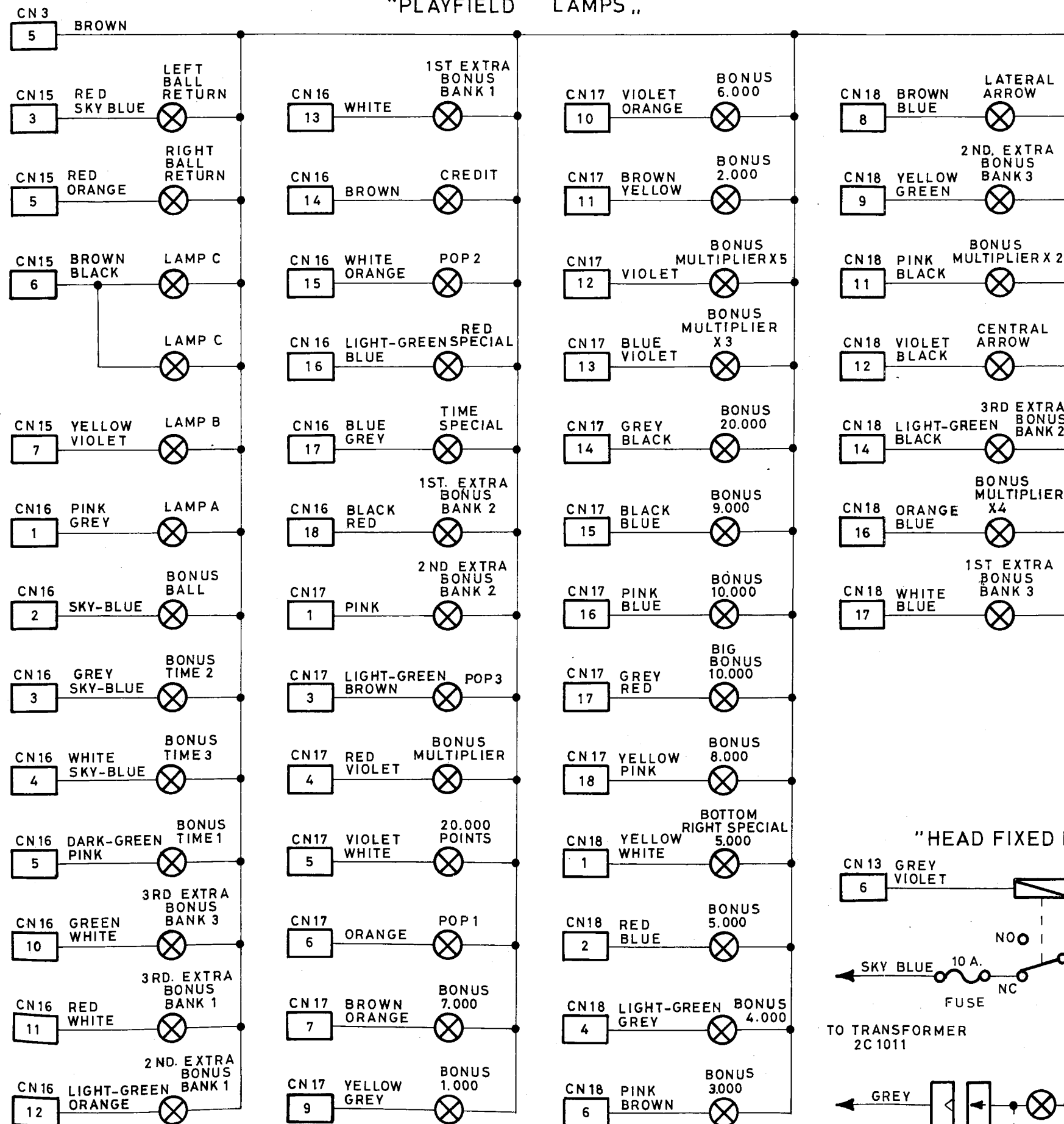


LOCOMOTION

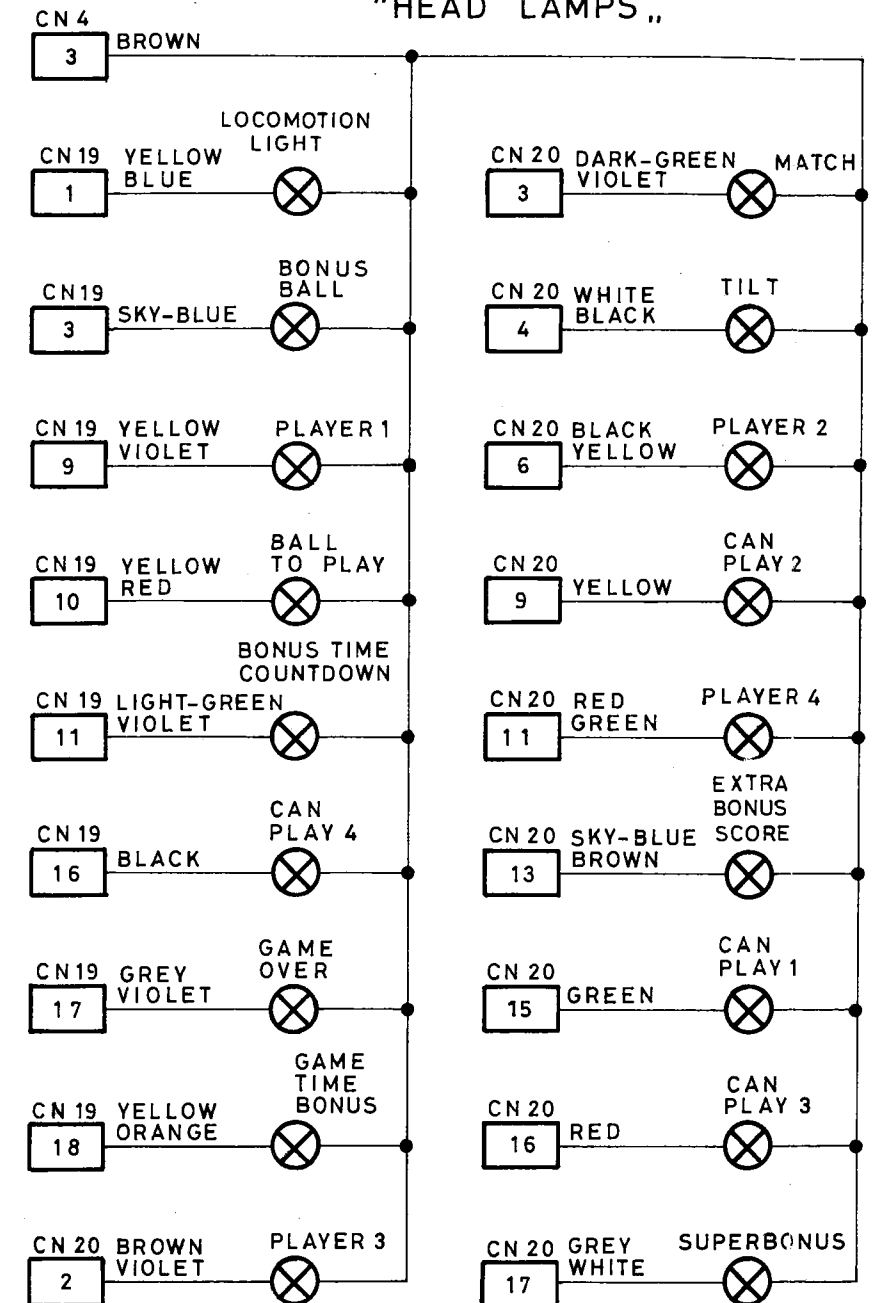
F.LLI ZACCARIA s.n.c.
 Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy

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

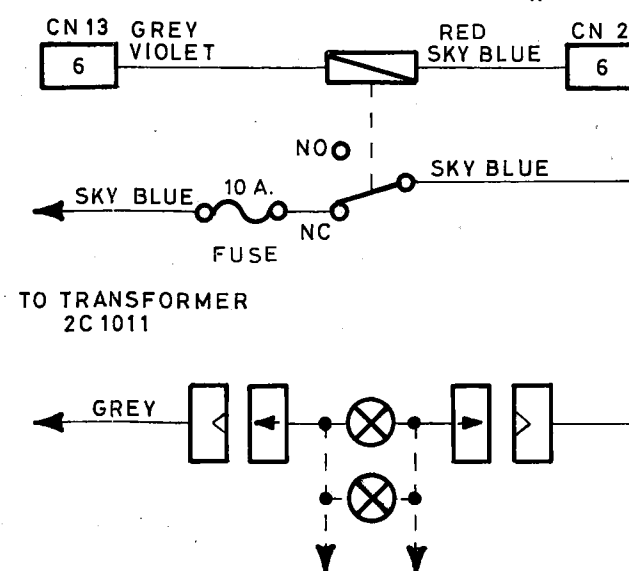
"PLAYFIELD LAMPS.."



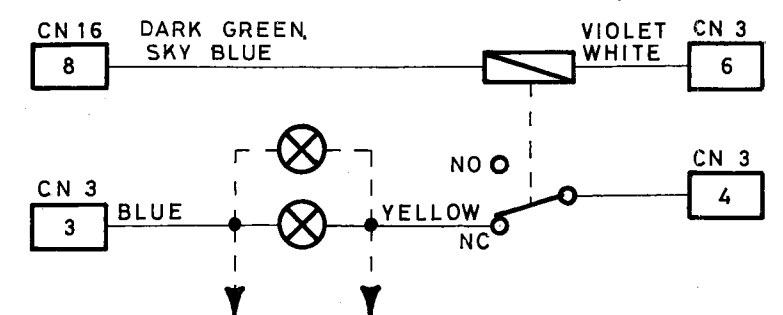
"HEAD LAMPS.."



"HEAD FIXED LAMPS.."



"PLAYFIELD FIXED LAMPS.."



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PART NAME		PART NO.	
Electrical diagram for lamps wiring			
DWN.	DATE	REV.	SHEET
Atto- Rina	10/9/81		1
NOTES: UNLESS OTHERWISE SPECIFIED 1) ALL RESISTORS VALUES IN 2) ALL CAPACITORS VALUES IN			

