

**ZACCARIA®**

# PINBALL CHAMP '82

**ELETRICAL  
DIAGRAMS**



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[piero@tilt.it](mailto:piero@tilt.it)

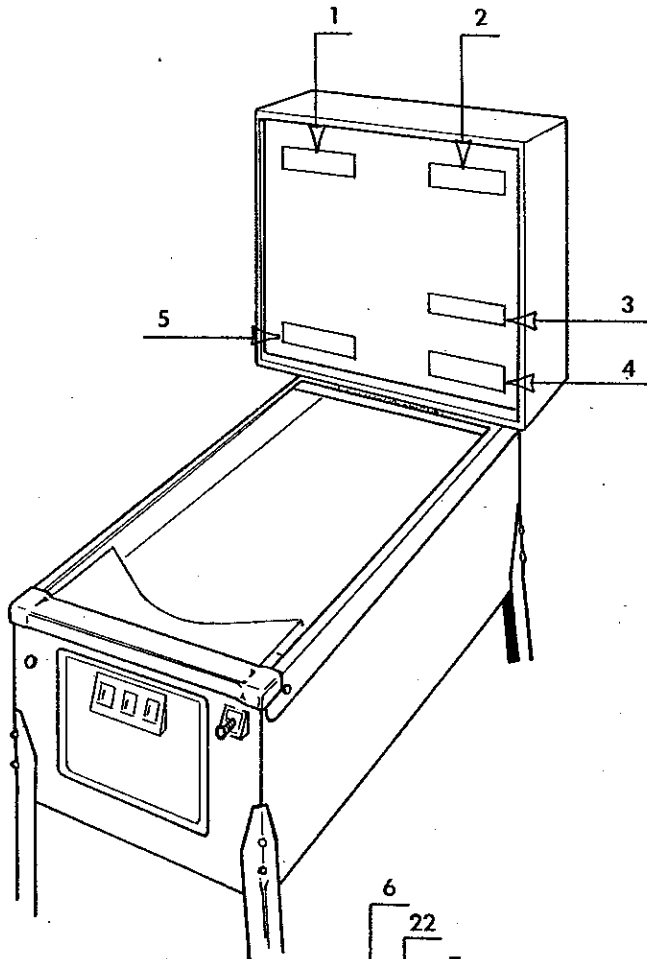
**Scans done by:**

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

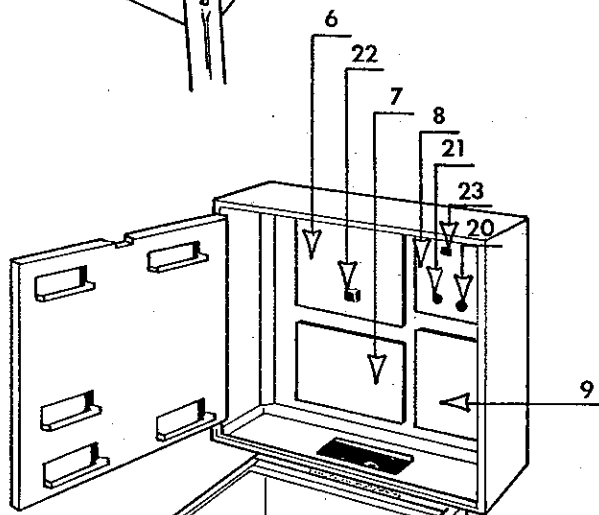
**E-mail:** [thomas@langaas.org](mailto:thomas@langaas.org)

## LIST OF ILLUSTRATIONS

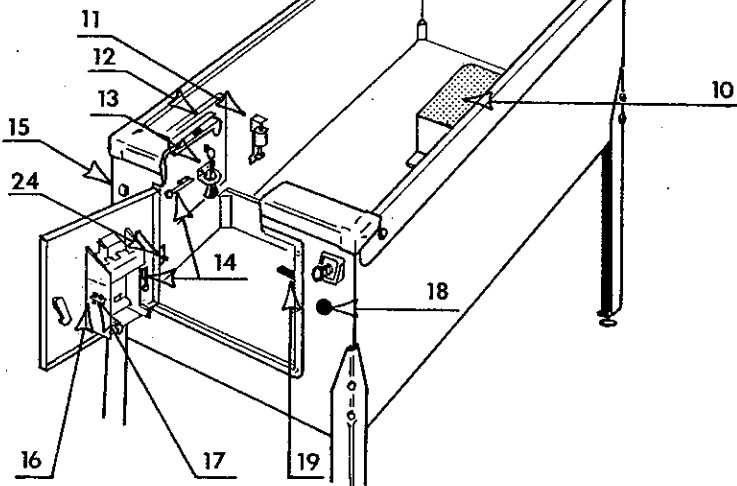
- Block diagram
- Assembly drawing
- Layout Diagram } for C.P.U. board
- Layout Diagram } for Interface board
- Layout Diagram } for Power board
- Layout Diagram } for Driver & Display boards
- Layout Diagram } for Sound & Speech board
- Diagram for Playfield contacts
- Diagram for Coils
- Diagram for Lamps
- Diagram for Cabinet  
& Front door wiring
- Diagram for Power Supply



- 1 1<sup>st</sup> player display  
Highest score display
- 2 2<sup>nd</sup> player
- 3 Credit display  
Display ball to play  
Match  
Game time bonus
- 4 4<sup>th</sup> player display
- 5 3 player display

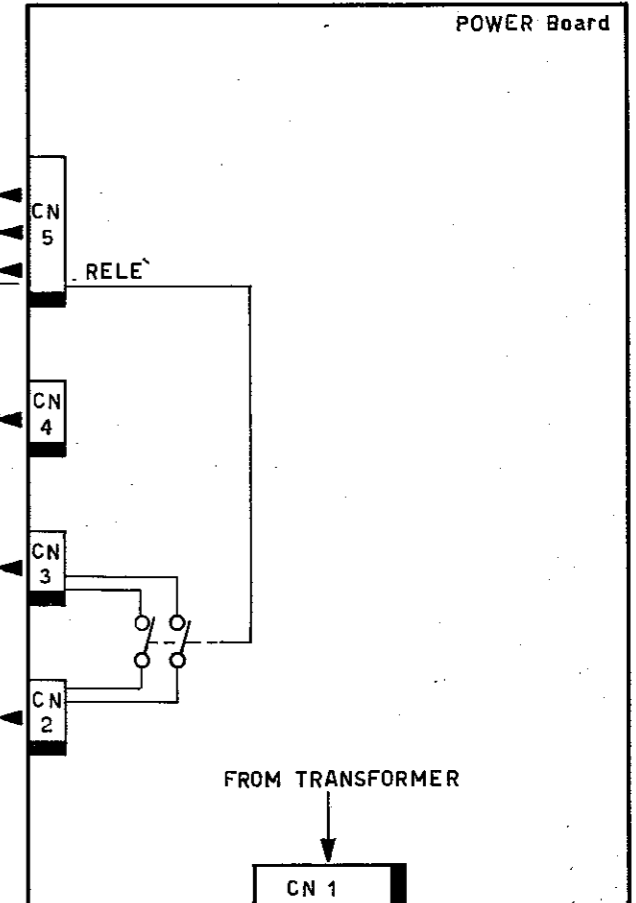
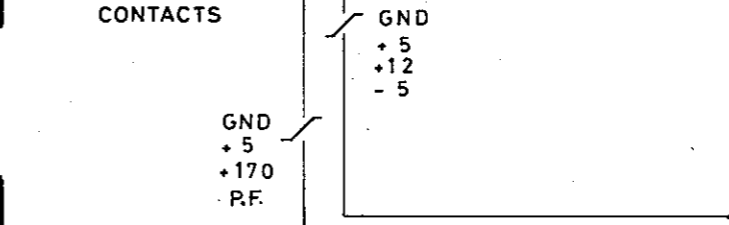
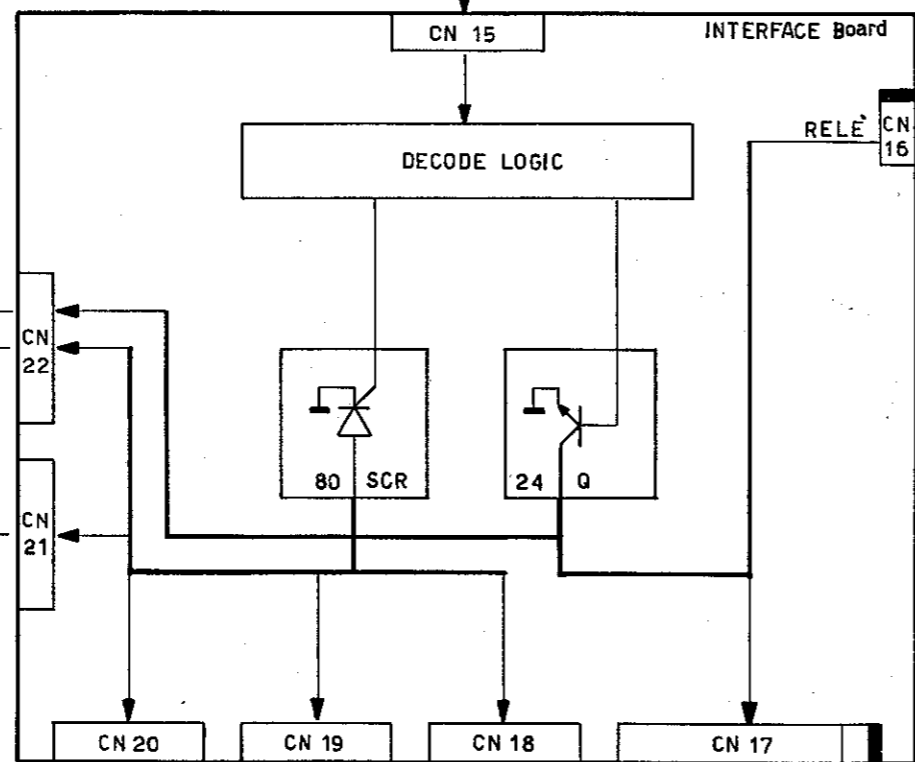
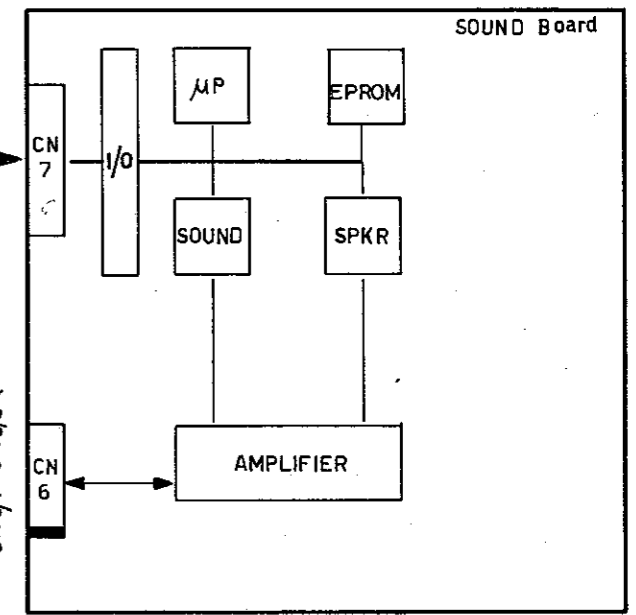
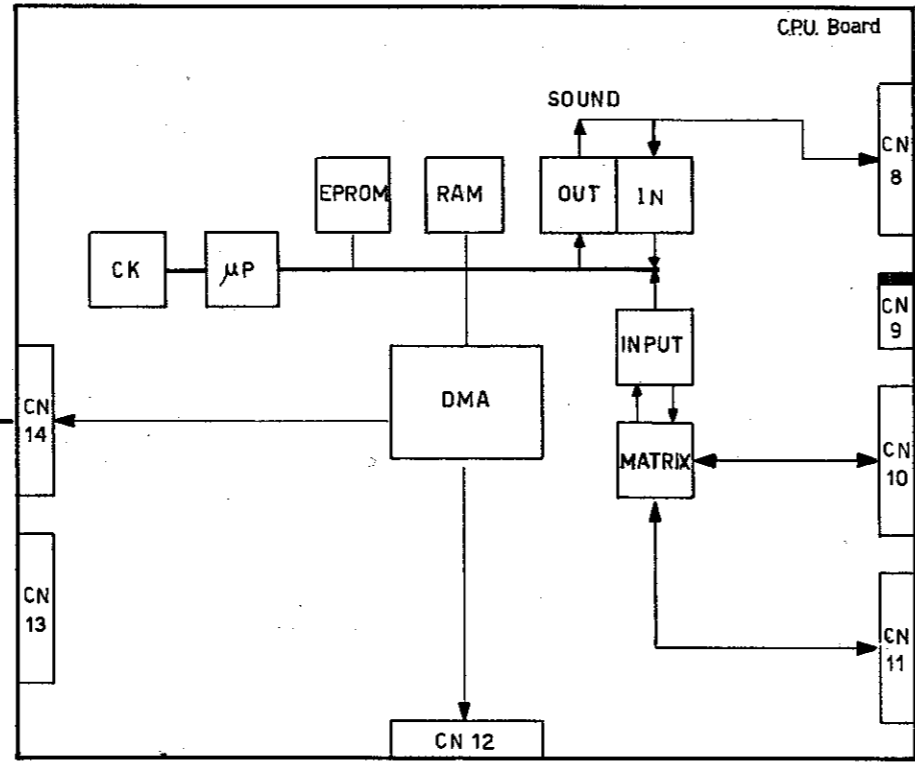
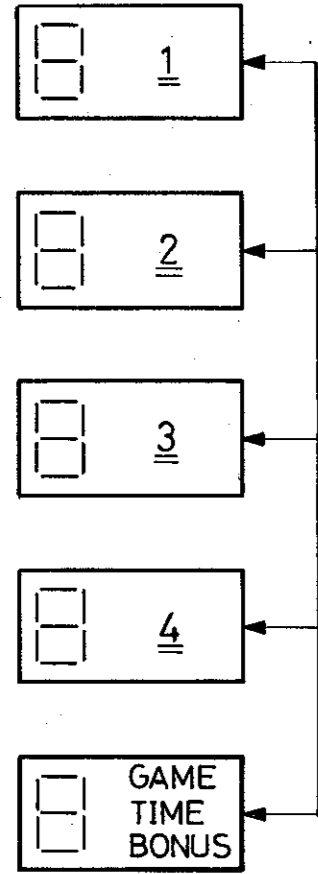


- 6 C.P.U. board
- 7 Interface board
- 8 Sound board
- 9 Power board



- 10 Transformer
- 11 Knocker
- 12 Roll ball tilt
- 13 Bob tilt
- 14 Antichoc tilt
- 15 Credit button
- 16 High score reset
- 17 Self test button
- 18 Head phone jack
- 19 General vol.
- 20 Maximum speak vol.
- 21 Maximum sound vol.
- 22 Dip SWS
- 23 Sound self-test button
- 24 Service button

DRIVER DISPLAY Boards



(HEAD SOLENOIDS)  
HEAD LAMPS

CABINET SOLENOIDS  
PLAYFIELD SOLENOIDS

PLAYFIELD LAMPS

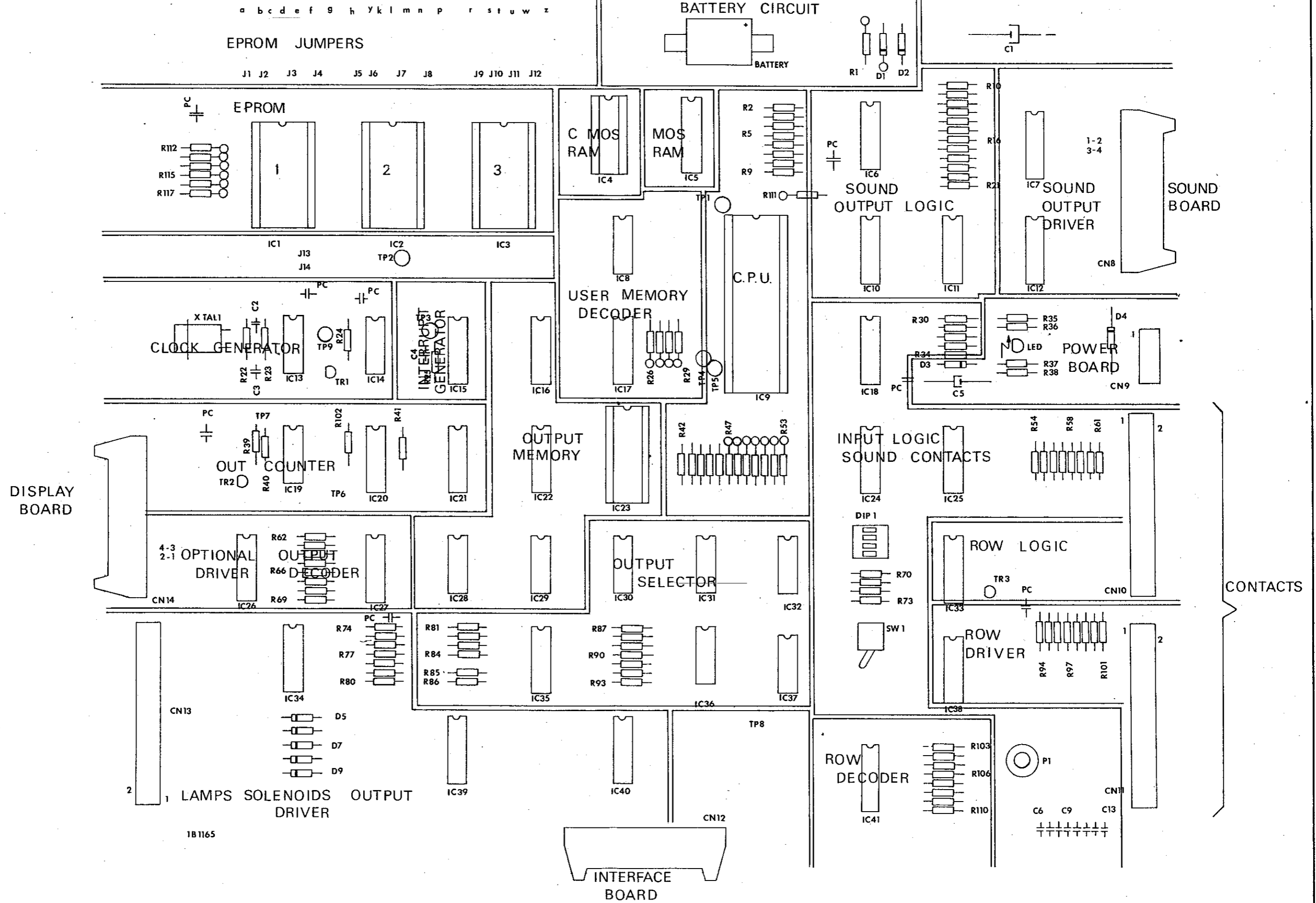
**F.LLI ZACCARIA s.n.c.**  
Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy

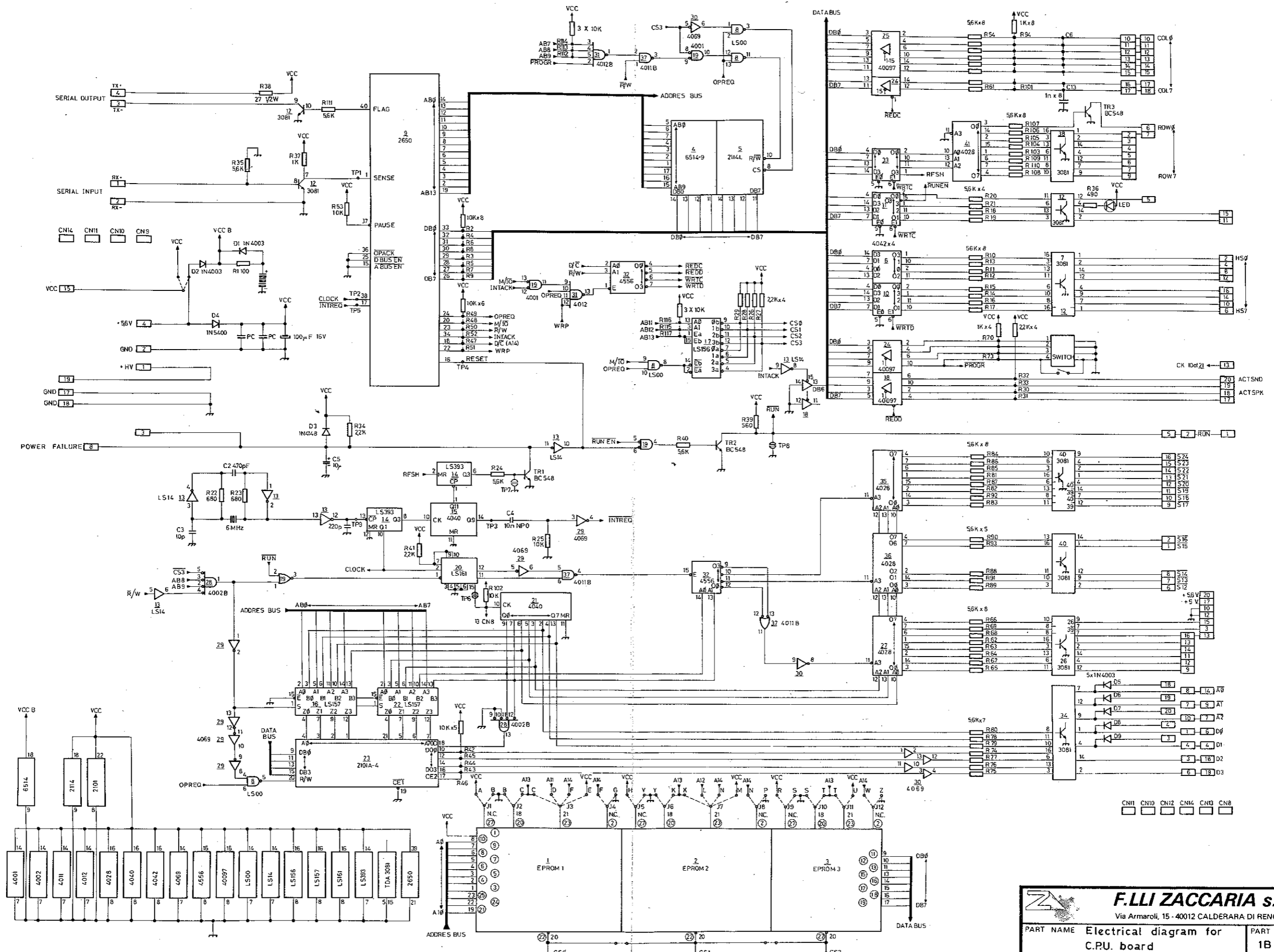
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DWN	DATE	REV.	DATE REV.	SHEET
<i>2006</i>	<i>20/1/82</i>	<i>R</i>	<i>18/1/82</i>	

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

# C.P.U. board

P.C.1 B 1165





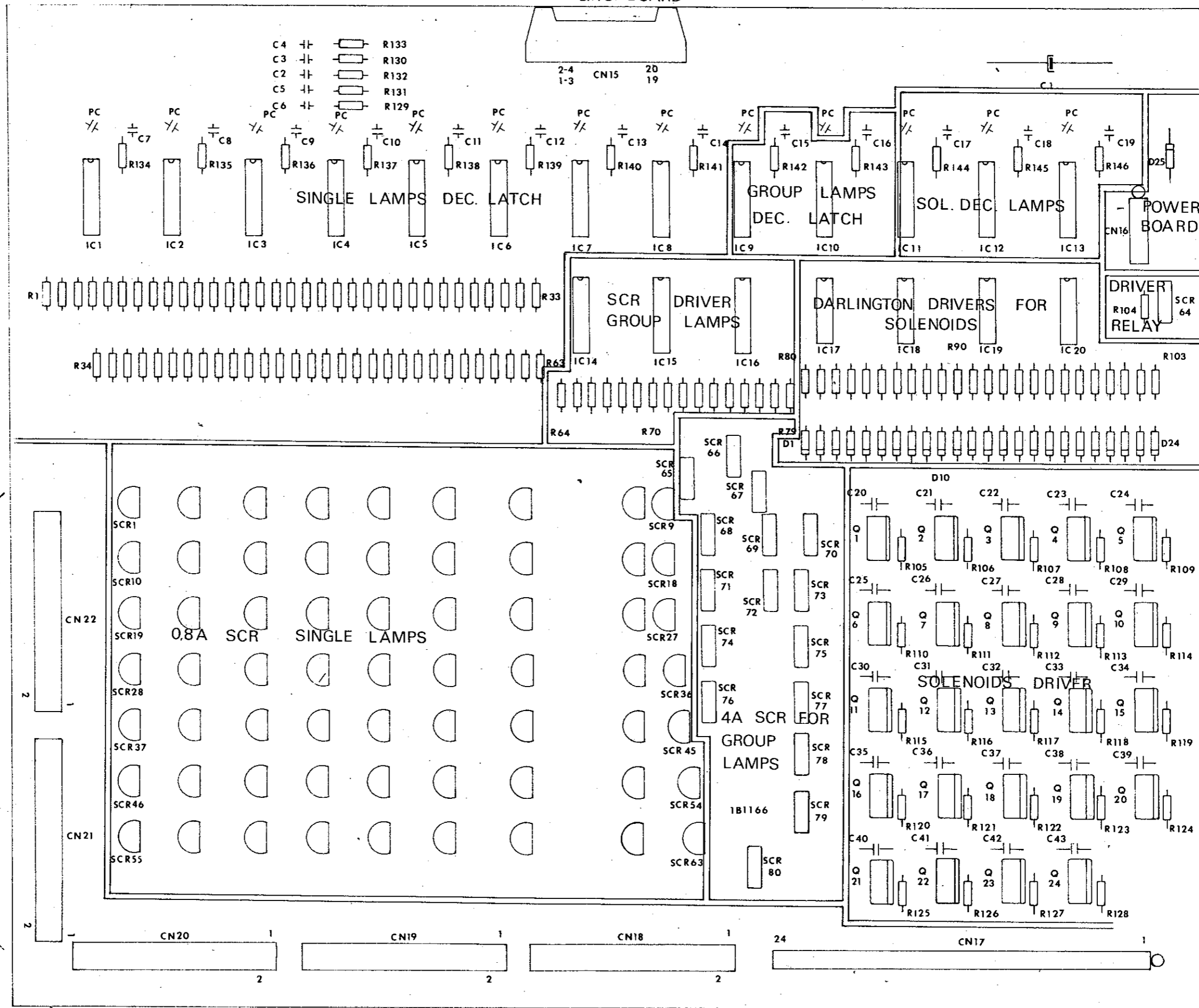
**F.LLI ZACCARIA s.n.c.**  
Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy

PART NAME <b>Electrical diagram for</b>		PART NO.	
<b>C.P.U. board</b>		<b>1B 1365</b>	
DWN.	DATE	REV.	DATE REV.
NOTES: UNLESS OTHERWISE SPECIFIED			
1) ALL RESISTORS VALUES IN			
2) ALL CAPACITORS VALUES IN			

# INTERFACE board

P.C. 1B1166

C.P.U. BOARD

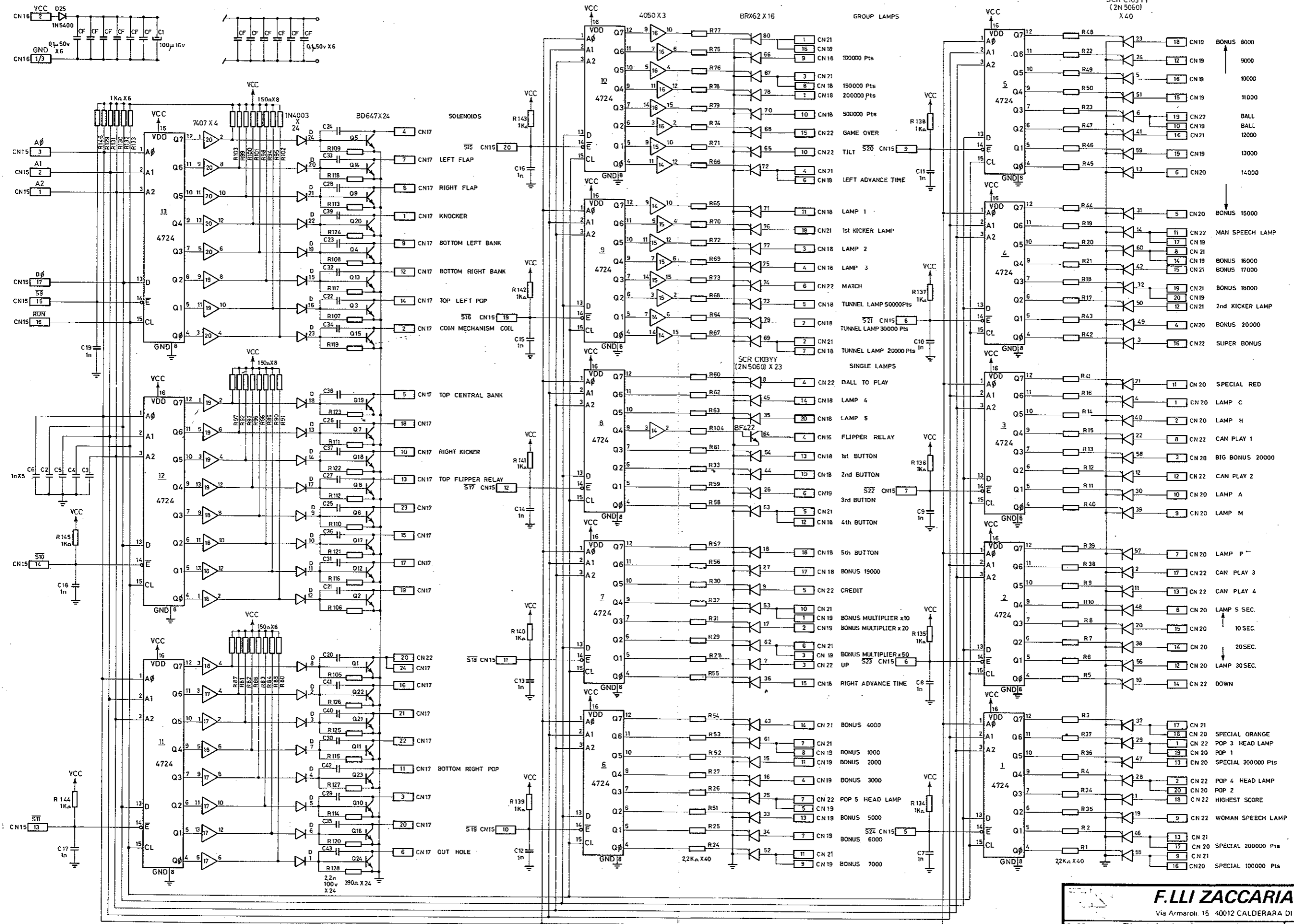


HEAD

PLAYFIELD

CABINET





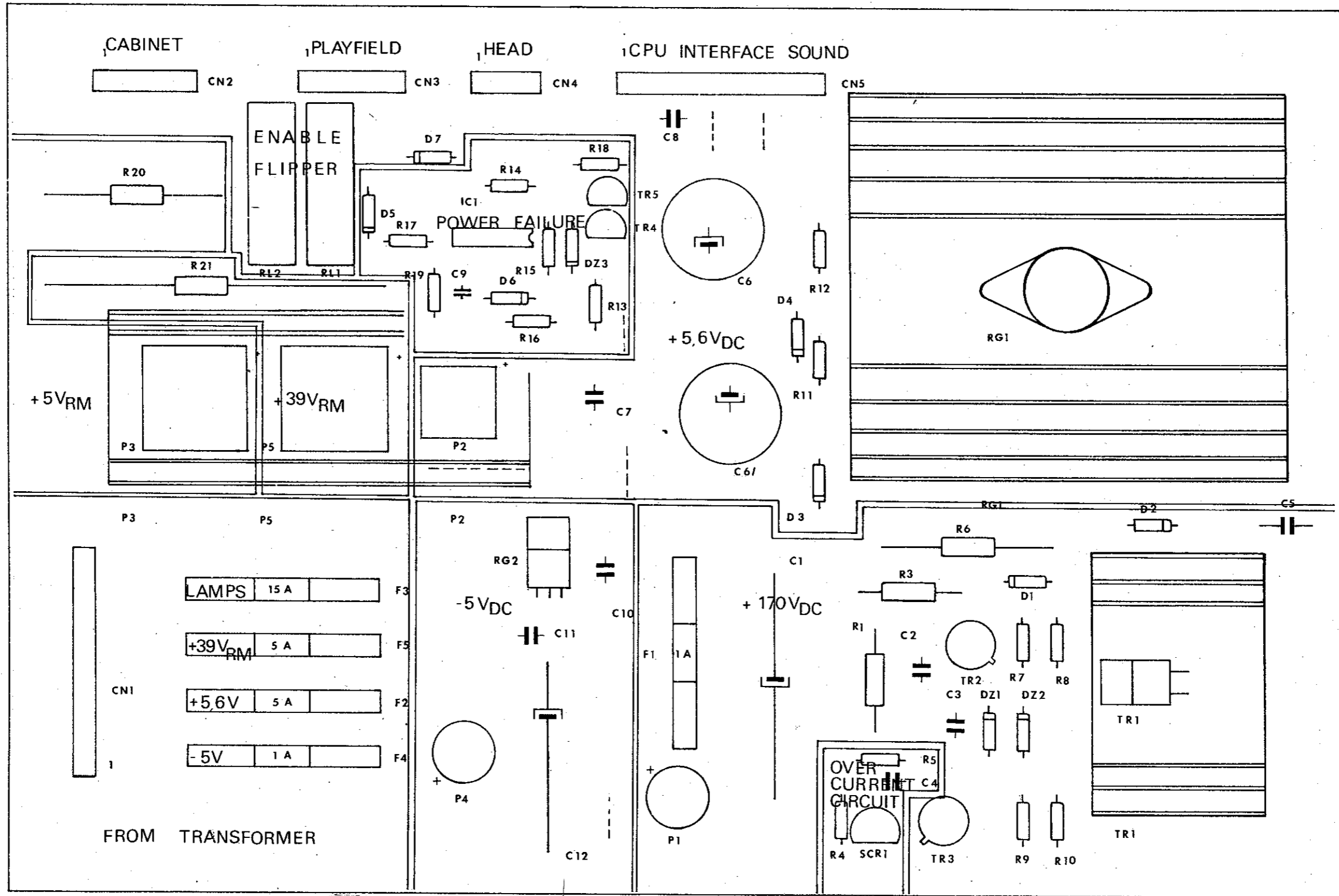
**F.LI ZACCARIA s.n.c.**  
Via Armadori, 15 40012 CALDERARA DI RENO (Bo) Italy

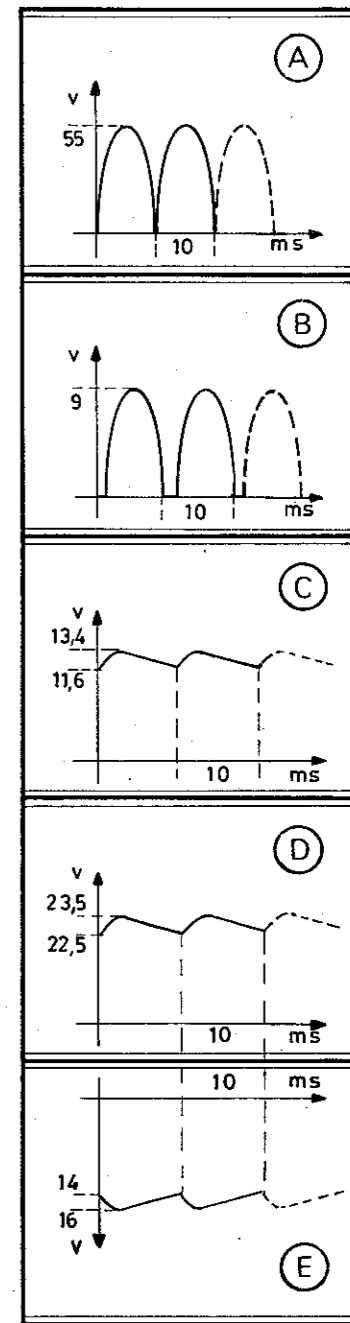
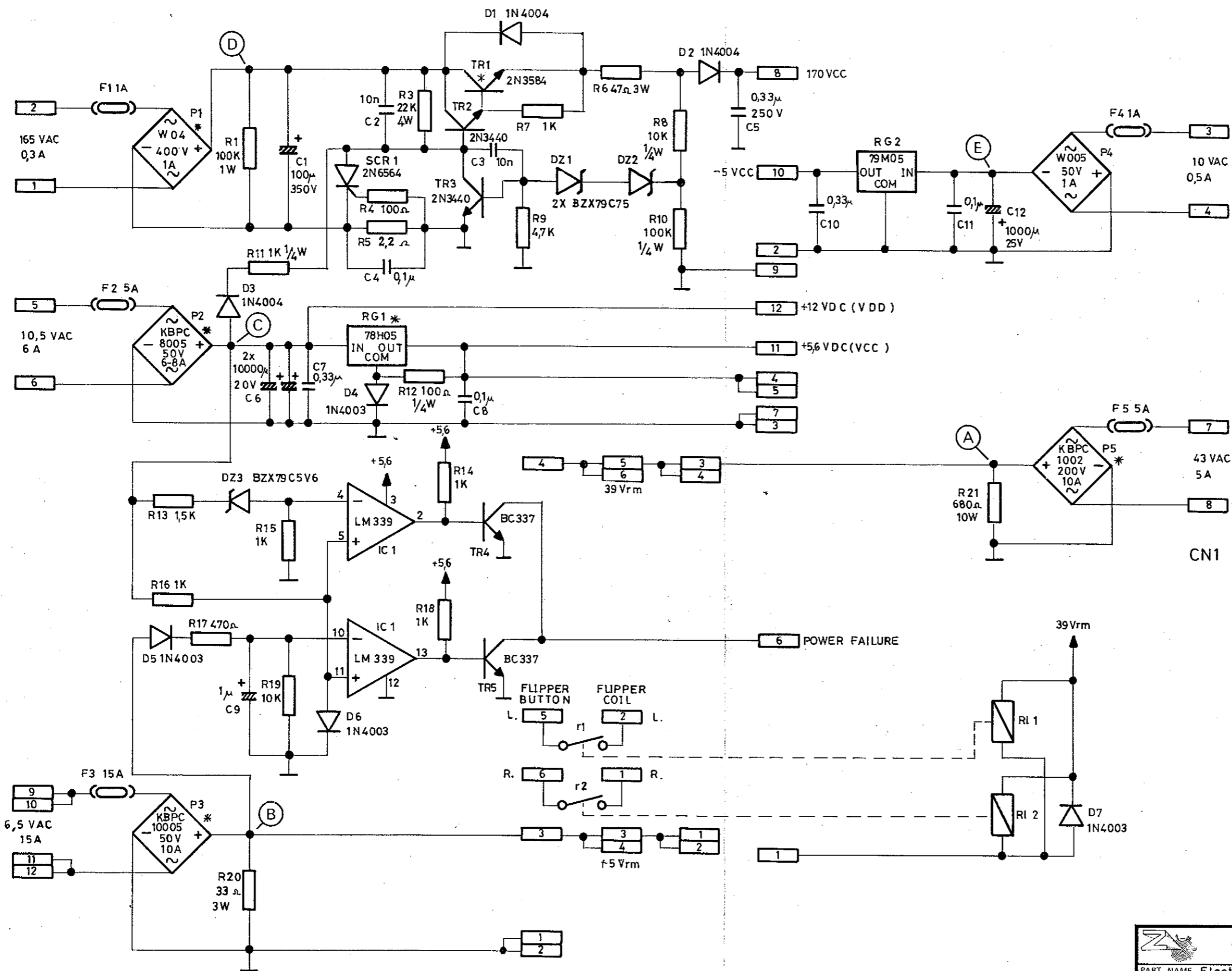
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Interface board		1B 13 66	
DOWN	DATE	REV.	DATE REV.

NOTES: UNLESS OTHERWISE SPECIFIED  
 \* ALL RESISTORS VALUES IN Ω  
 \* ALL CAPACITORS VALUES IN μF

# POWER board

PC.1B1167





CN1

CN2

CN3

CN4

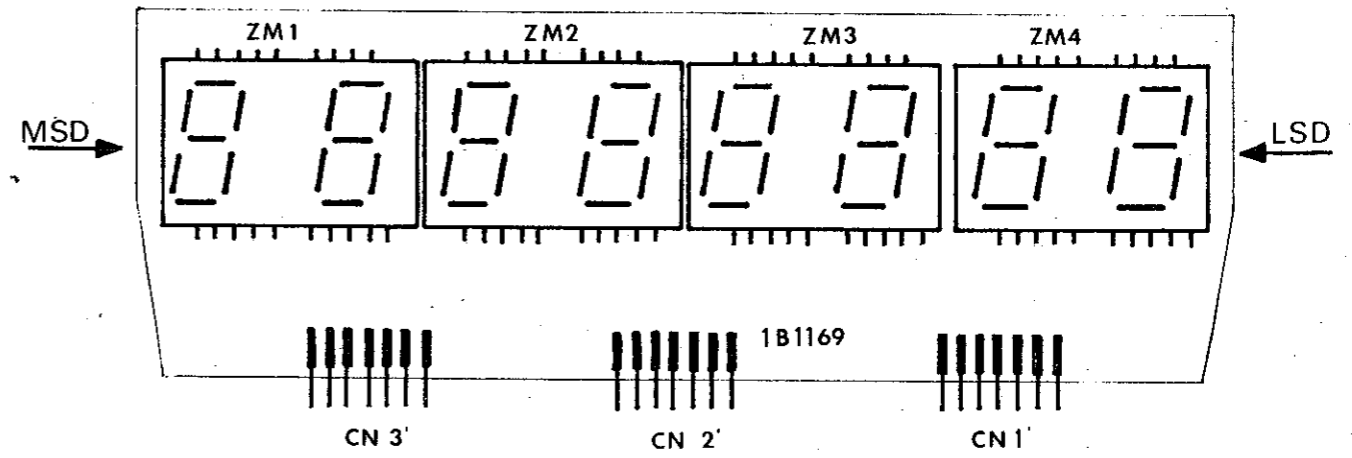
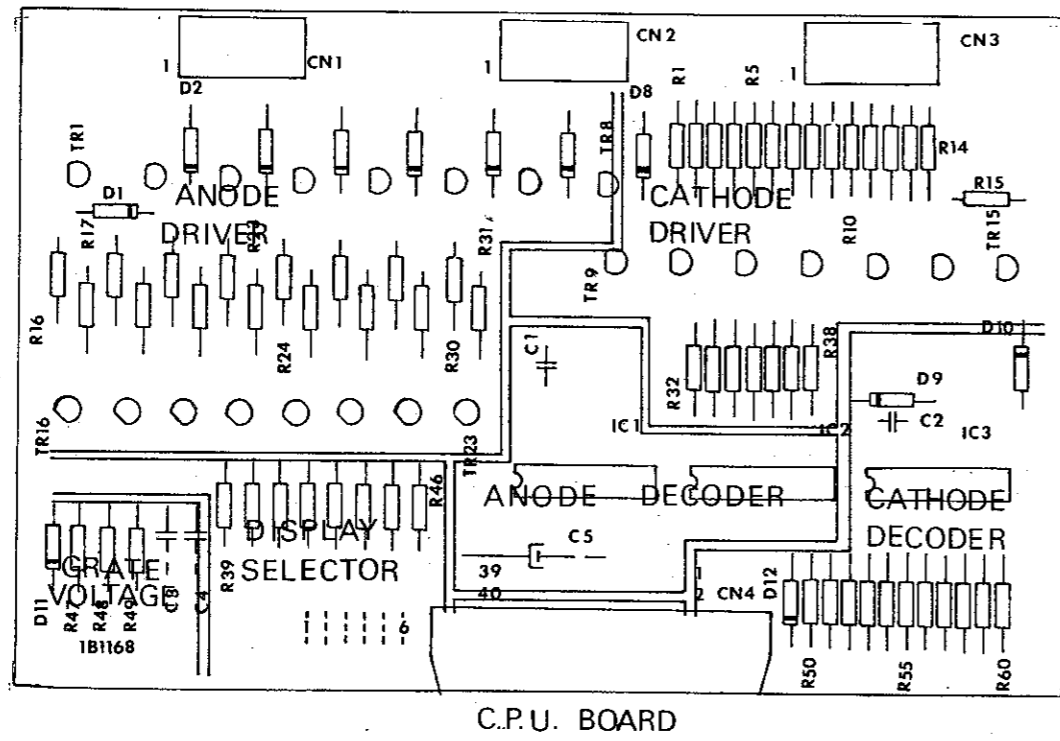
CN5

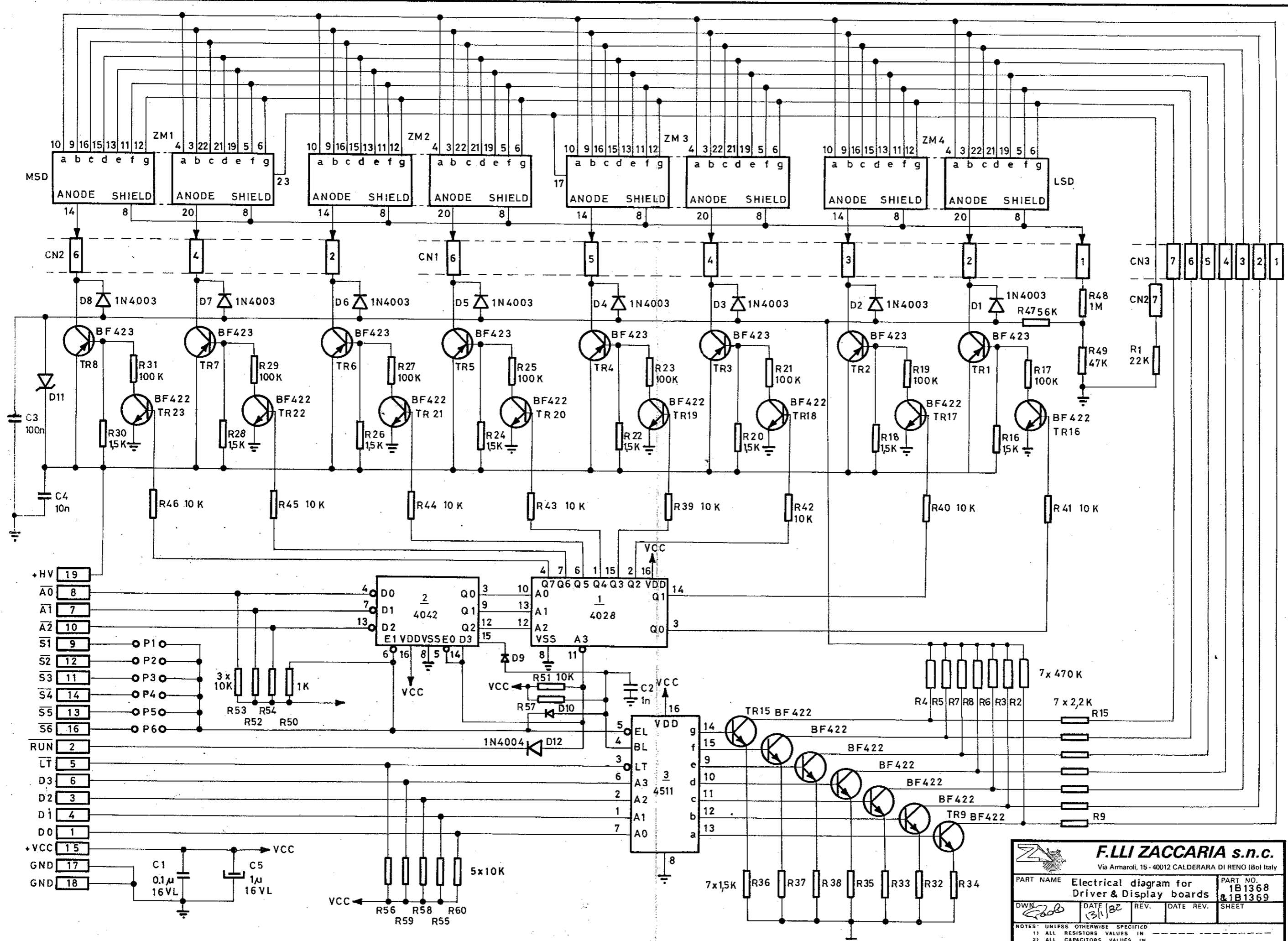
\* WITH HEAT SINK

<b>F.LI ZACCARIA s.n.c.</b>	
<small>Via Armadori, 15 - 40012 CALDERARA DI RENO (Bo) Italy</small>	
PART NAME <b>Electrical diagram for Power board</b>	PART NO. <b>1B1367</b>
DWN. <i>Scob</i>	DATE 12-11-81
REV. <i>1/1</i>	DATE REV. 12-11-81
NOTES: UNLESS OTHERWISE SPECIFIED 1) ALL RESISTORS VALUES IN 2) ALL CAPACITORS VALUES IN	

# DRIVER & DISPLAY boards

PC.1B1168 & PC.1B1169





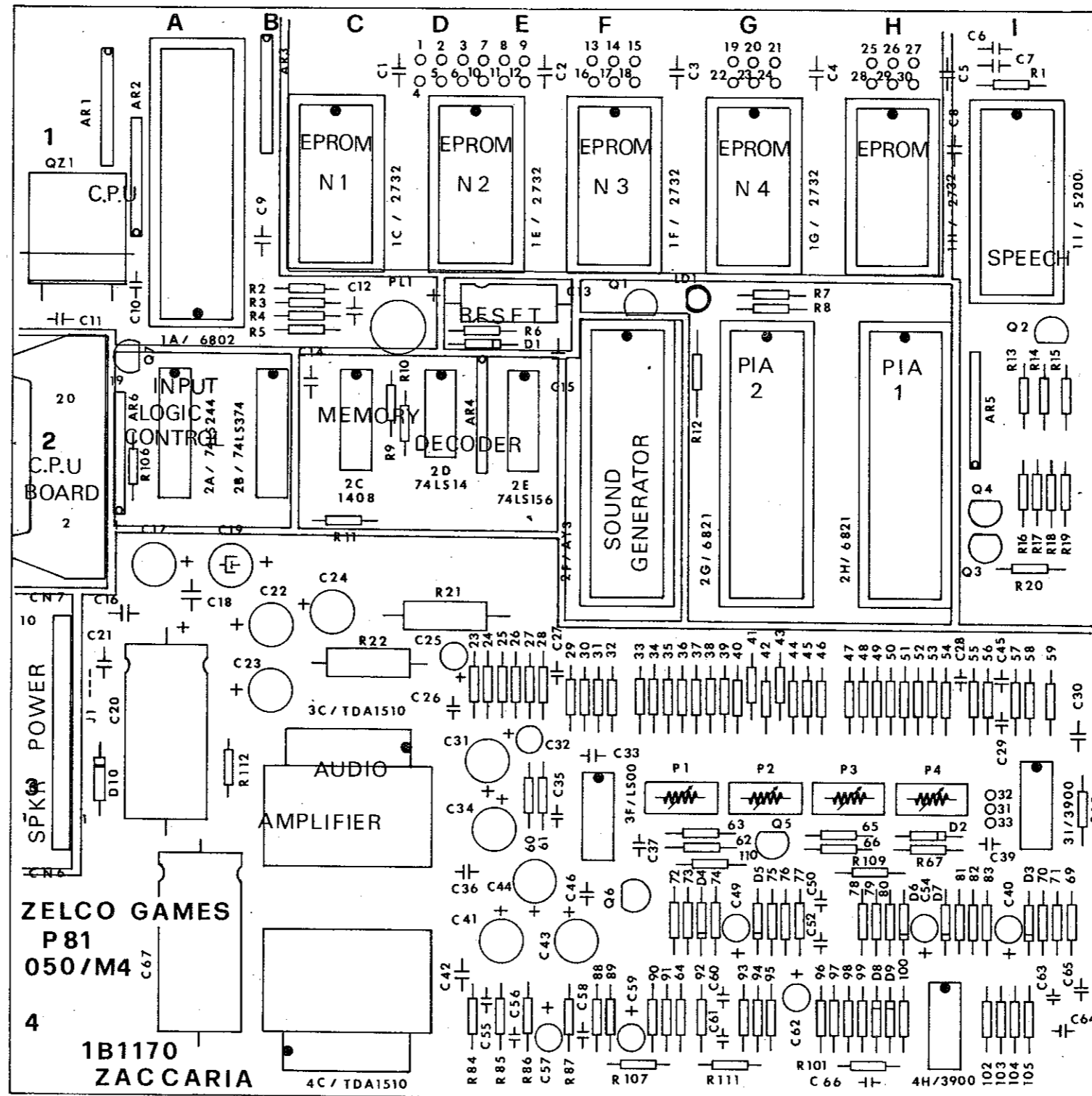
**F.LI ZACCARIA s.n.c.**  
Via Armadori, 15 - 40012 CALDERARA DI RENO (Bo) Italy

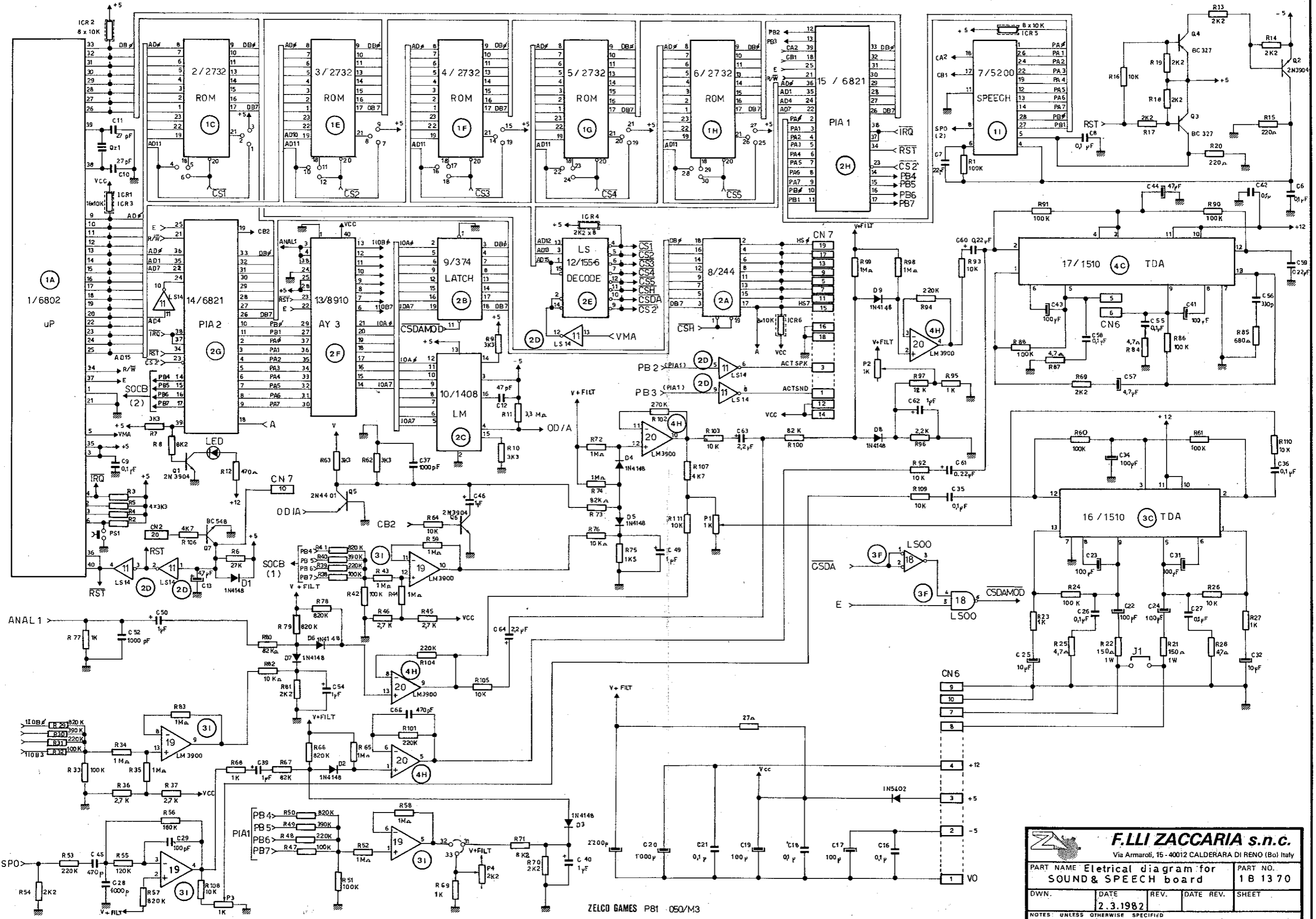
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		Driver & Display boards		1B1368	
		& 1B1369			
DWN	DATE	REV.	DATE	REV.	SHEET
	3/1/82				

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

# SOUND & SPEECH board

PC.1 B1170





ZELCO GAMES PB1 050/M3

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

PART NAME Elettrical diagram for		PART NO.	
SOUND & SPEECH board		1B 1370	
DWN.	DATE	REV.	DATE REV.
	2.3.1982		
NOTES: UNLESS OTHERWISE SPECIFIED			
1) ALL RESISTORS VALUES IN			
2) ALL CAPACITORS VALUES IN			

VIOLET-YELLOW

VIOLET-BROWN

RED-YELLOW

BLACK-ORANGE

BLACK-YELLOW

RED-GREEN

BLACK-WHITE

GREY-WHITE

GREY

RED

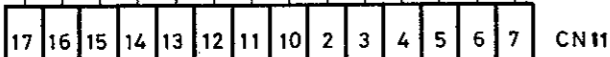
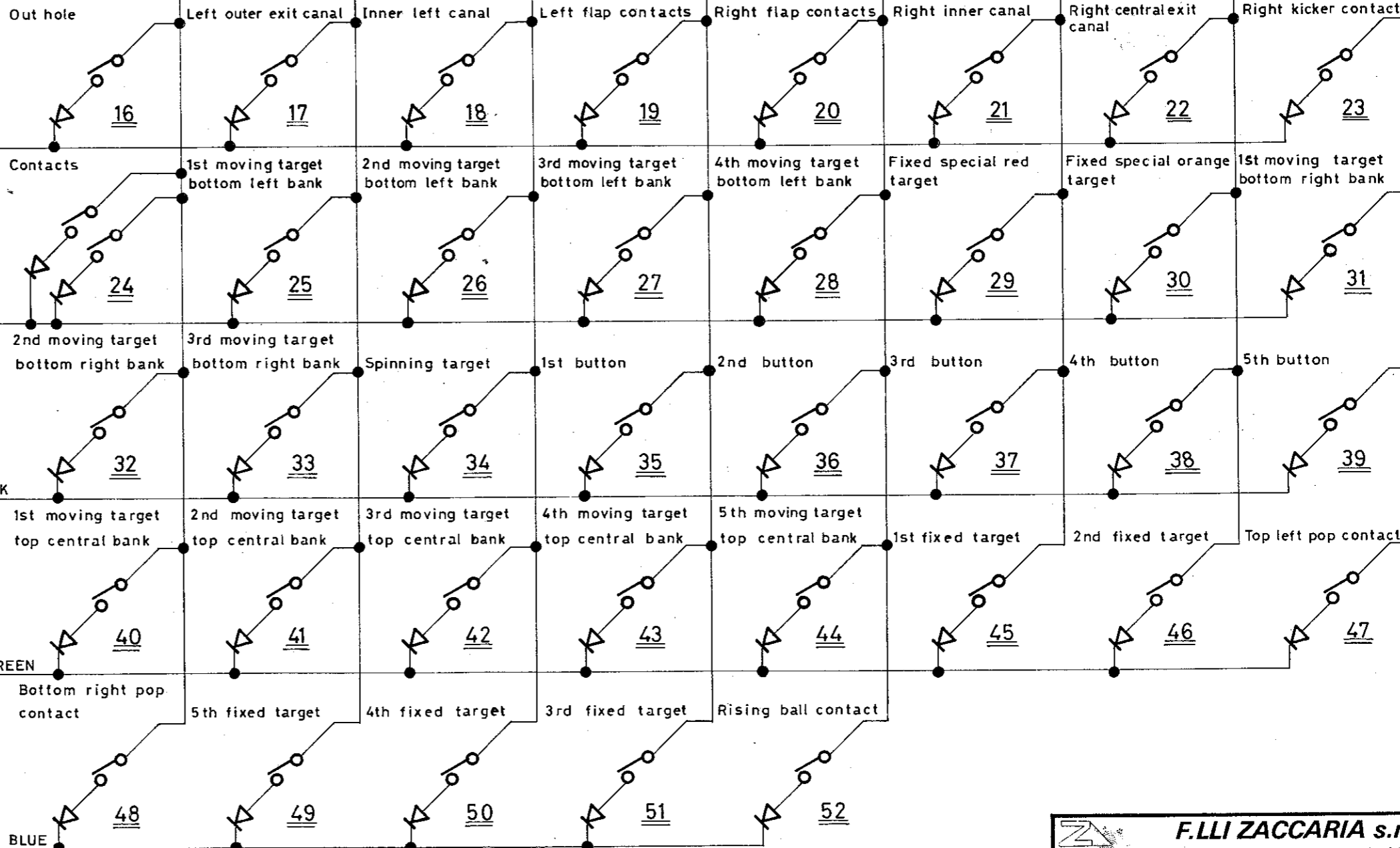
YELLOW

BLACK

GREEN


BLUE

Burn test  
2-13 CNII  
CPU BOARD

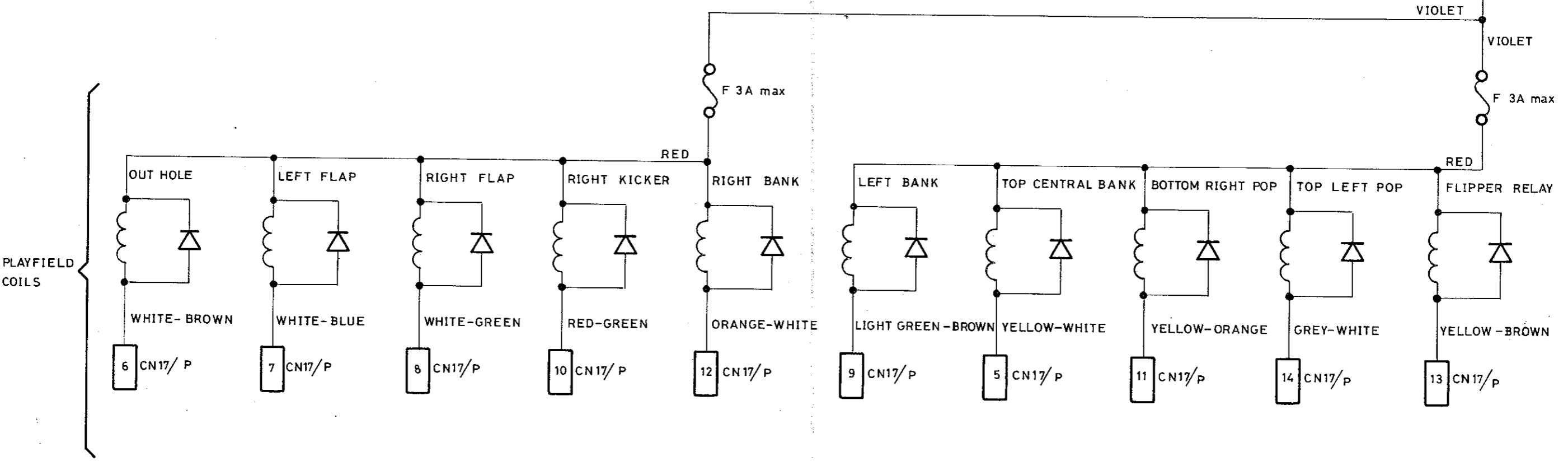
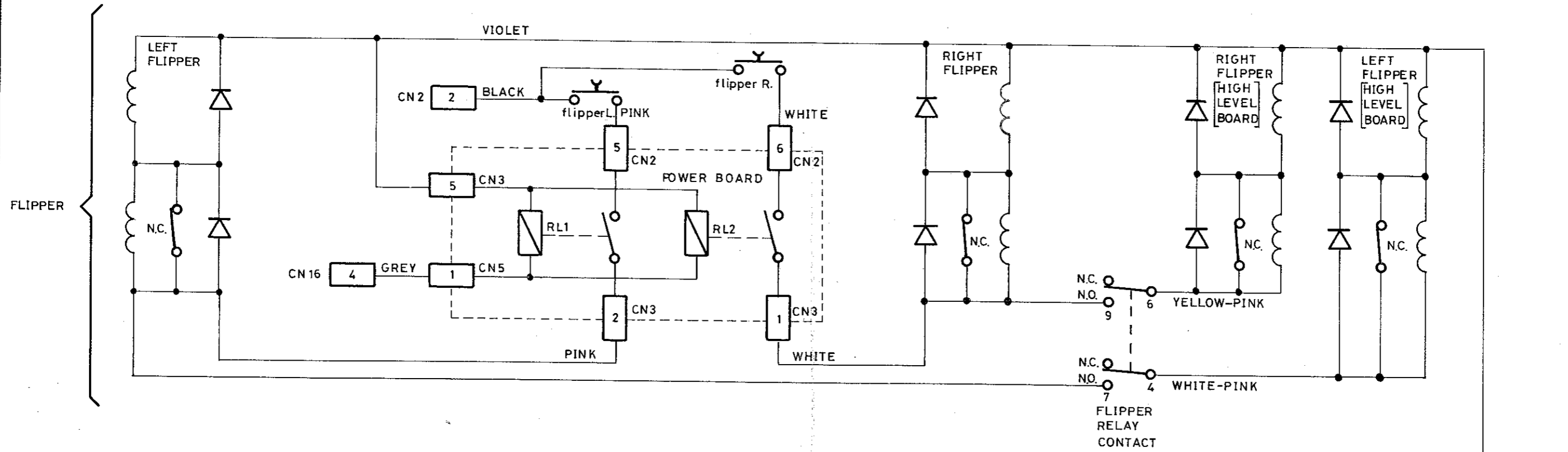


col. 7  
row 6  
col. row 1

ALL DIODES ARE 1N 4148

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





ALL DIODES ARE 1N4004

<b>F.LLI ZACCARIA s.n.c.</b>	
<small>Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy</small>	
PART NAME	
<b>COIL WIRING</b>	
PART NO.	
DWN.	DATE
<i>Paolo</i>	15/2/82
REV.	DATE REV.
SHEET	
NOTES: UNLESS OTHERWISE SPECIFIED	
11 ALL RESISTORS VALUES IN -----	
21 ALL CAPACITORS VALUES IN -----	

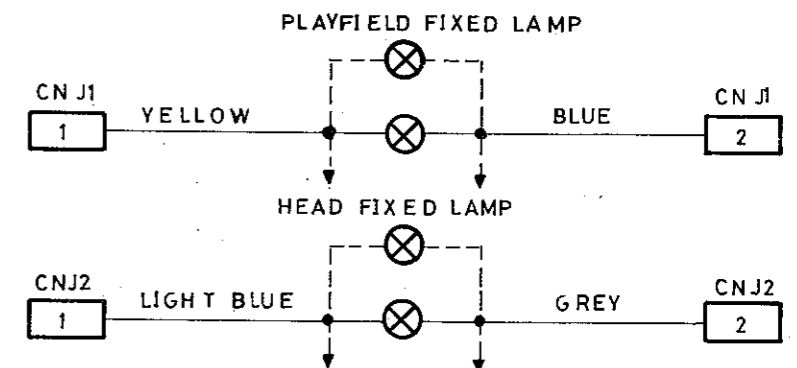
## PLAYFIELD LAMPS

## HEAD LAMPS

CN 3	5	BROWN	
CN18	1	YELLOW WHITE	⊗ 200'000 Pts
	2	LIGHT BLUE	⊗ TUNNEL LAMP 30'000 Pts
	3	BLUE-YELLOW	⊗ LAMP 2
	4	LIGHT GREEN-GREY	⊗ LAMP 3
	5	WHITE-PINK	⊗ TUNNEL LAMP 50'000 Pts
	9	YELLOW-ORANGE	⊗ 100'000 Pts
	10	WHITE-GREEN	⊗ 500'000 Pts
	11	RED-WHITE	⊗ LAMP 1
	12	LIGHT GREEN-ORANGE	⊗ 4th BUTTON
	13	WHITE	⊗ 1st BUTTON
	14	BROWN	⊗ LAMP 4
	15	BLUE-RED	⊗ RIGHT ADVANCE TIME
	17	BLUE-GREY	⊗ BONUS 19'000 Pts
	18	RED-BLACK	⊗ 5th BUTTON
	19	BLUE-ORANGE	⊗ 2nd BUTTON
CN18	20	BLUE-WHITE	⊗ LAMP 5
CN19	1	PINK	⊗ BONUS MULTIPLIER x10
	2	WHITE-ORANGE	⊗ BONUS MULTIPLIER x20
	3	LIGHT GREEN-BROWN	⊗ BONUS MULTIPLIER x50
	4	VIOLET-RED	⊗ BONUS 3'000 Pts
	6	ORANGE	⊗ 3rd BUTTON
	7	BROWN-ORANGE	⊗ BONUS 6'000 Pts
	8	PINK-VIOLET	⊗ BONUS 1'000 Pts
	9	YELLOW-GREY	⊗ BONUS 7'000 Pts
	10	GREEN-BLUE	⊗ BONUS BALL
	11	YELLOW-BROWN	⊗ BONUS 2'000 Pts
	12	VIOLET	⊗ BONUS 9'000 Pts
	13	VIOLET-BLUE	⊗ BONUS 5'000 Pts
	15	BLACK-BLUE	⊗ BONUS 11'000 Pts
	16	PINK-BLUE	⊗ BONUS 10'000 Pts
CN19	18	PINK-YELLOW	⊗ BONUS 8'000 Pts

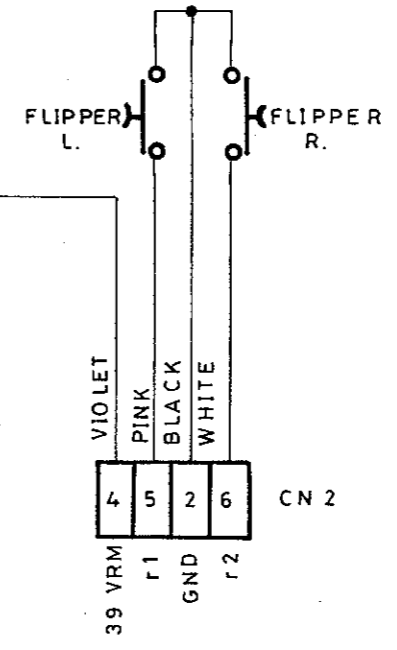
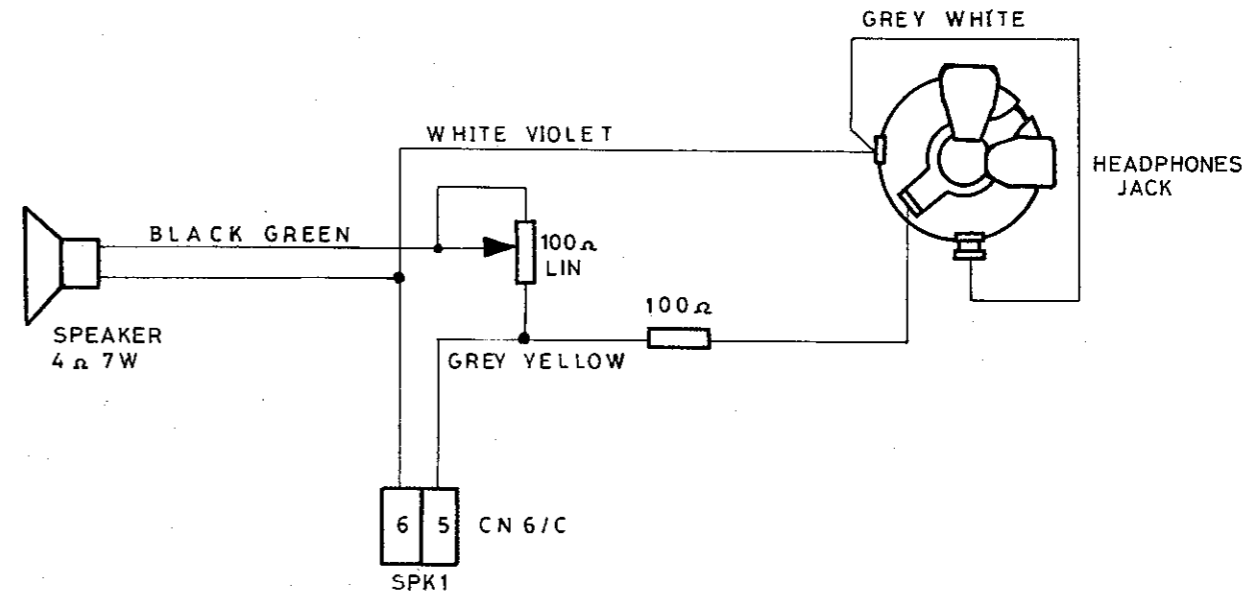
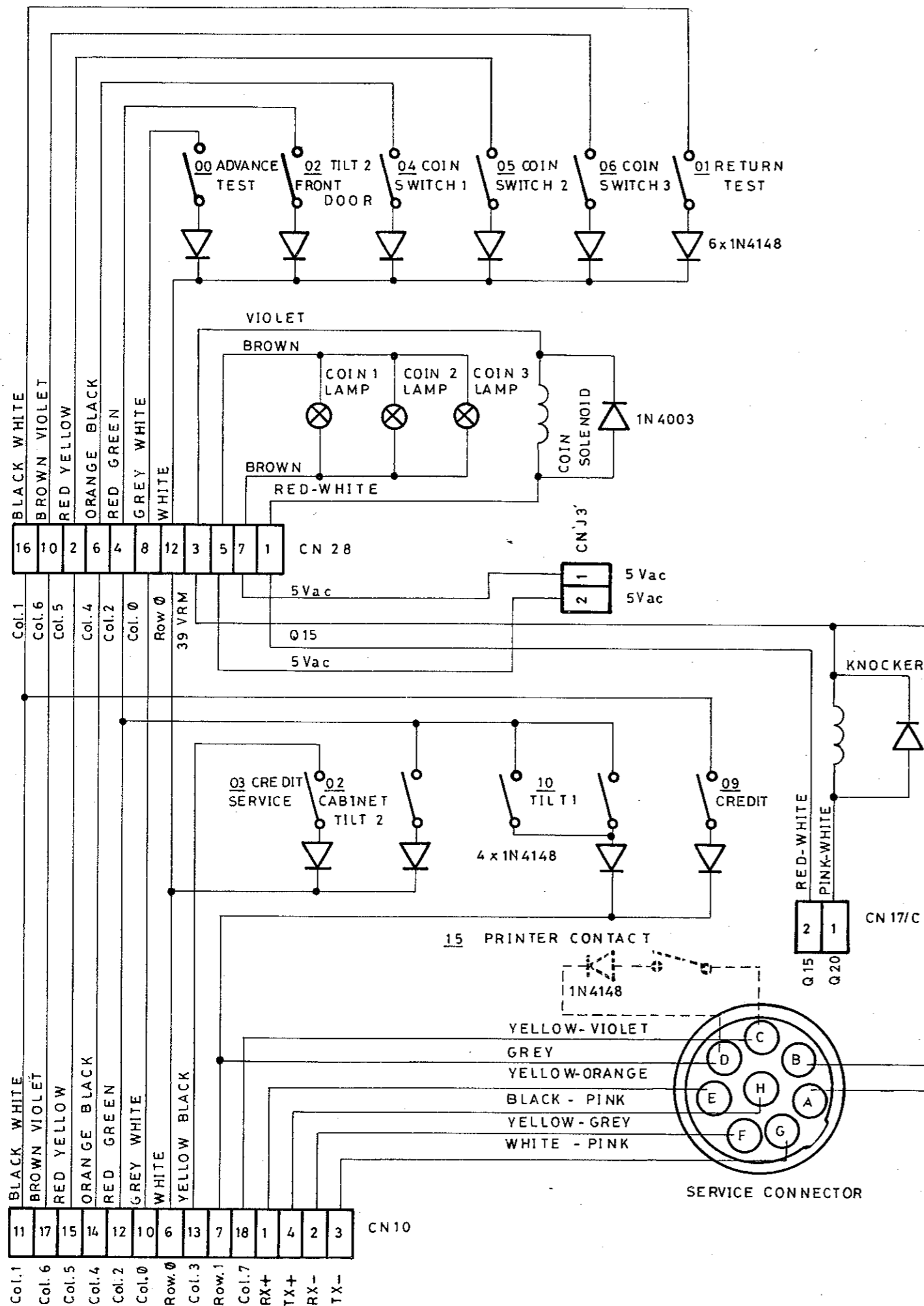
CN19	19	PINK-BLACK	⊗ BONUS 13'000 Pts
CN19	20	GREEN-YELLOW	⊗ BONUS 18'000 Pts
CN20	1	YELLOW-WHITE	⊗ LAMP C
	2	LIGHT BLUE	⊗ LAMP H
	3	YELLOW-BLUE	⊗ BIG BONUS 20'000 Pts
	4	LIGHT GREEN-GREY	⊗ BONUS 20'000 Pts
	5	PINK-WHITE	⊗ BONUS 15'000 Pts
	6	PINK-BROWN	⊗ BONUS 14'000 Pts
	7	ORANGE-GREY	⊗ LAMP P
	8	LIGHT GREEN-VIOLET	⊗ LAMP 5 sec
	9	YELLOW-ORANGE	⊗ LAMP M
	10	GREEN-WHITE	⊗ LAMP A
	11	BLACK-VIOLET	⊗ SPECIAL RED
	12	WHITE-BROWN	⊗ LAMP 30 sec
	13	BLACK-GREEN	⊗ SPECIAL 300'000 Pts
	14	BLUE-BROWN	⊗ LAMP 20sec
	15	BLUE-RED	⊗ LAMP 10 sec
	16	GREEN-BLUE	⊗ SPECIAL 100'000 Pts
	17	GREY-BLUE	⊗ SPECIAL 200'000 Pts
	18	BLACK-RED	⊗ SPECIAL ORANGE
	19	BLUE-ORANGE	⊗ POP 1
CN20	20	WHITE-BLUE	⊗ POP 2
CN21	2	ORANGE-GREY	⊗ TUNNEL LAMP 20'000 Pts
	3	LIGHT GREEN-VIOLET	⊗ 15'000 Pts
	4	PINK-BROWN	⊗ LEFT ADVANCE TIME
	8	ORANGE-WHITE	⊗ BONUS 16'000 Pts
	12	WHITE-RED	⊗ 2nd KICHER LAMP
	14	WHITE-VIOLET	⊗ BONUS 4'000 Pts
	15	BLACK-GREY	⊗ BONUS 17'000 Pts
	16	ORANGE-BROWN	⊗ BONUS 12'000 Pts
CN21	18	RED-VIOLET	⊗ 1st KICKER LAMP

CN 4	3	BROWN	
CN 22	1	ORANGE-BROWN	⊗ POP 3
	2	PINK-VIOLET	⊗ POP 4
	3	VIOLET-BROWN	⊗ UP (GAME TIME BONUS)
	4	ORANGE-BLACK	⊗ BALLS TO PLAY
	5	YELLOW-RED	⊗ CREDIT
	6	YELLOW-BLACK	⊗ MATCH
	7	PINK BROWN	⊗ POP 5
	8	GREEN	⊗ CAN PLAY 1
	9	RED-VIOLET	⊗ WOMAN SPEECH LAMP
	10	WHITE-BLACK	⊗ TILT
	11	WHITE-ORANGE	⊗ MAN SPEECH LAMP
	12	YELLOW	⊗ CAN PLAY 2
	13	BLACK	⊗ CAN PLAY 4
	14	VIOLET-YELLOW	⊗ DOWN (GAME TIME BONUS)
	15	WHITE-GREY	⊗ GAME OVER
	16	GREEN-RED	⊗ SUPER BONUS
	17	RED	⊗ CAN PLAY 3
	18	BLUE	⊗ HIGHEST SCORE
CN 22	19	GREEN-BLUE	⊗ BONUS BALL



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

PART NAME Electrical diagram for "PLAYFIELD & HEAD LAMPS"		PART NO.	
DWN. <i>LOWE</i>	DATE 10/2/82	REV.	DATE REV. SHEET
NOTES UNLESS OTHERWISE SPECIFIED 1) ALL RESISTORS VALUES IN 2) ALL CAPACITORS VALUES IN			

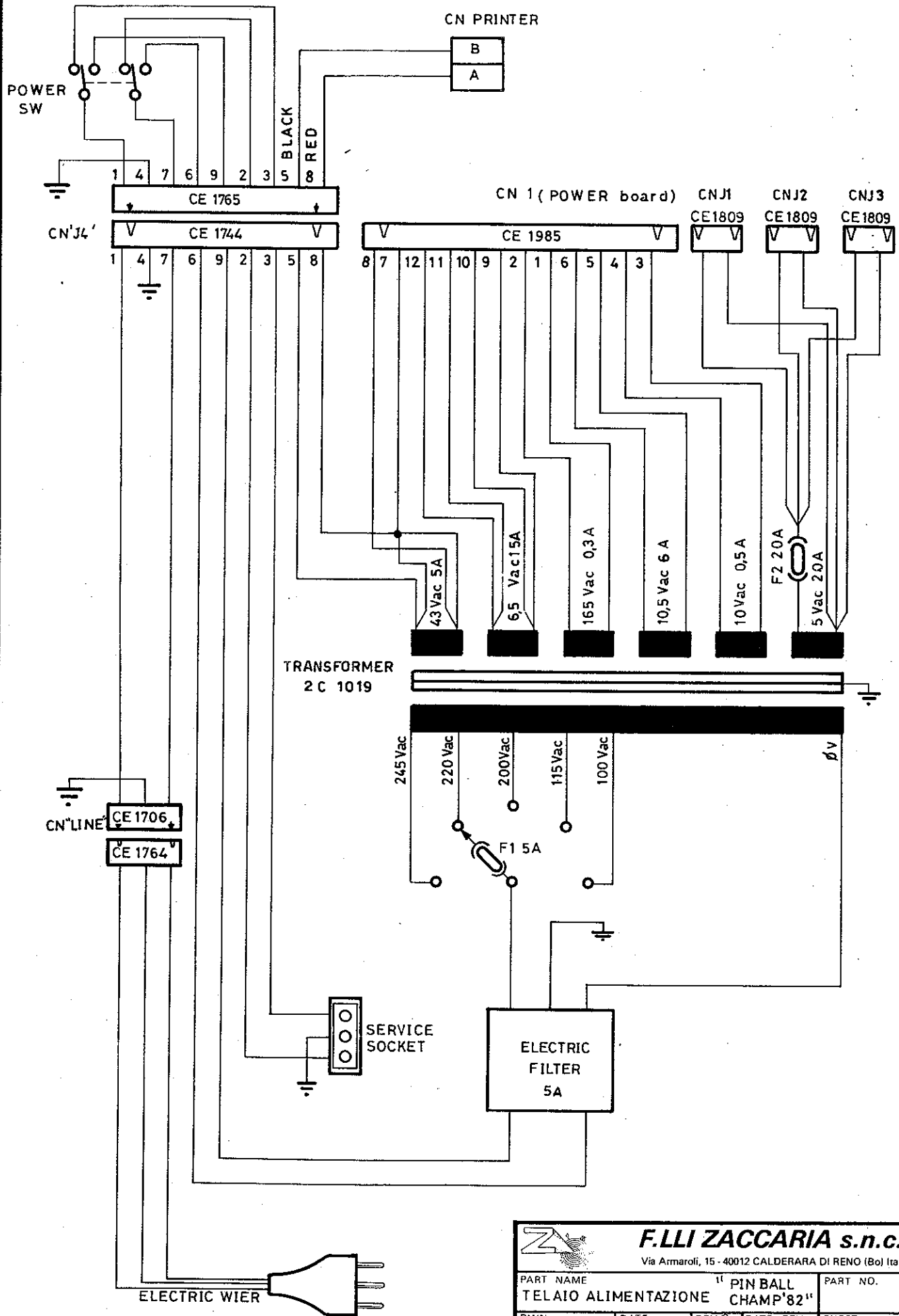


**F.LLI ZACCARIA s.n.c.**  
Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Ita

PART NAME Elettrical diagram for cabinet & front door wiring PART NO.

DWN. Lovemà	DATE 2.3.1982	REV.	DATE REV.	SHEET
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NOTES - UNLESS OTHERWISE SPECIFIED  
11 ALL RESISTORS VALUES IN  
21 ALL CAPACITORS VALUES IN



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

PART NAME TELAIO ALIMENTAZIONE "PIN BALL CHAMP'82"		PART NO.	
DATE 8/1/82	REV 2	DATE REV 23/2/82	SHEET

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