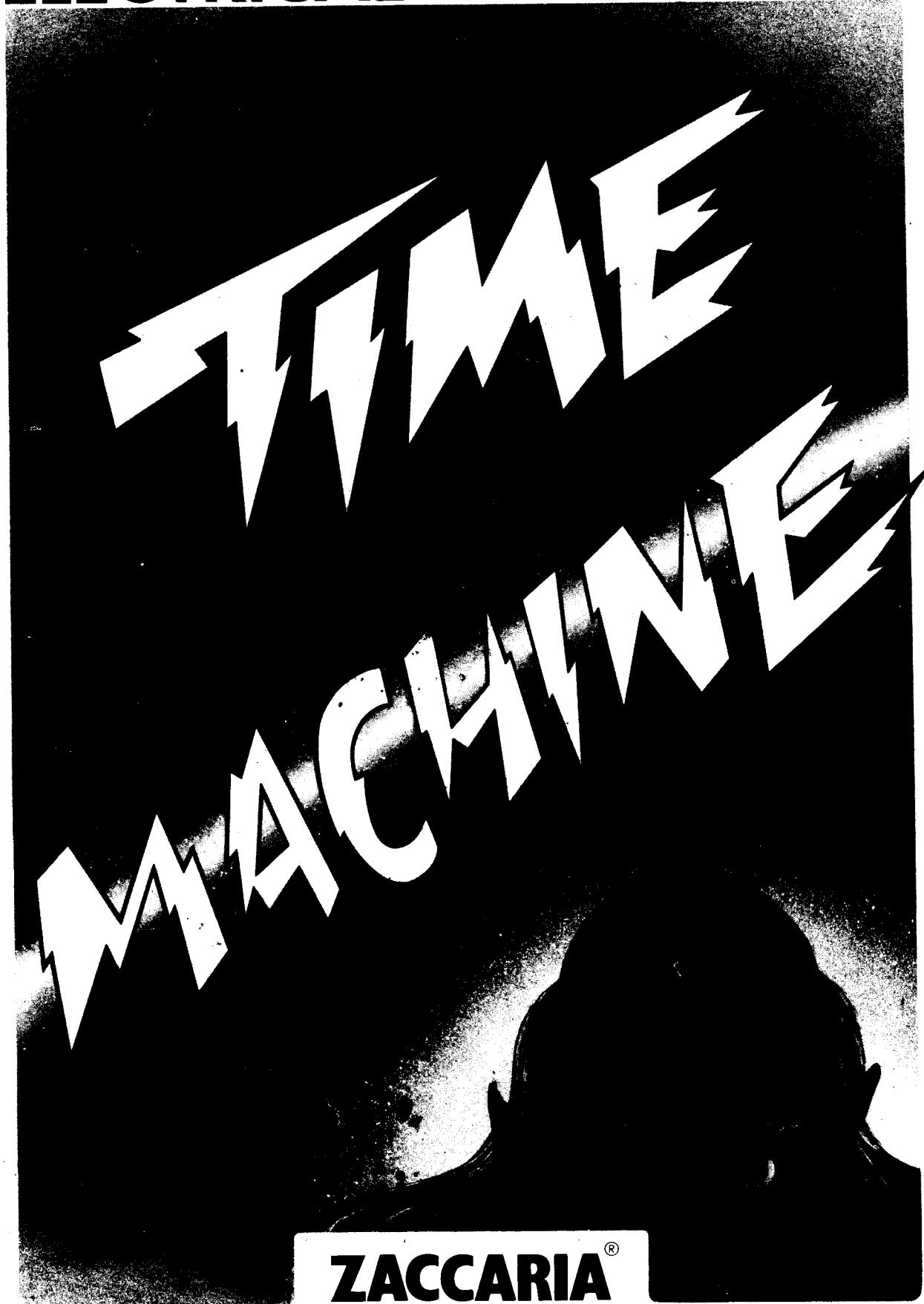


ELECTRICAL DIAGRAMS



LIST OF ILLUSTRATIONS

Block diagram	
Assembly drawing	
Power wiring	
Layout Diagram	} C.P.U.
Diagram	
Layout Diagram	} Interface
Diagram	
Layout Diagram	} Power
Diagram	
Layout Diagram	} Display driver
Diagram	
Layout Diagram	} Sound & Speech
Diagram	
Playfield contacts wiring	
Coils wiring	
Playfield & head lamps wiring	
Cabinet & front door wiring	
Power supply	

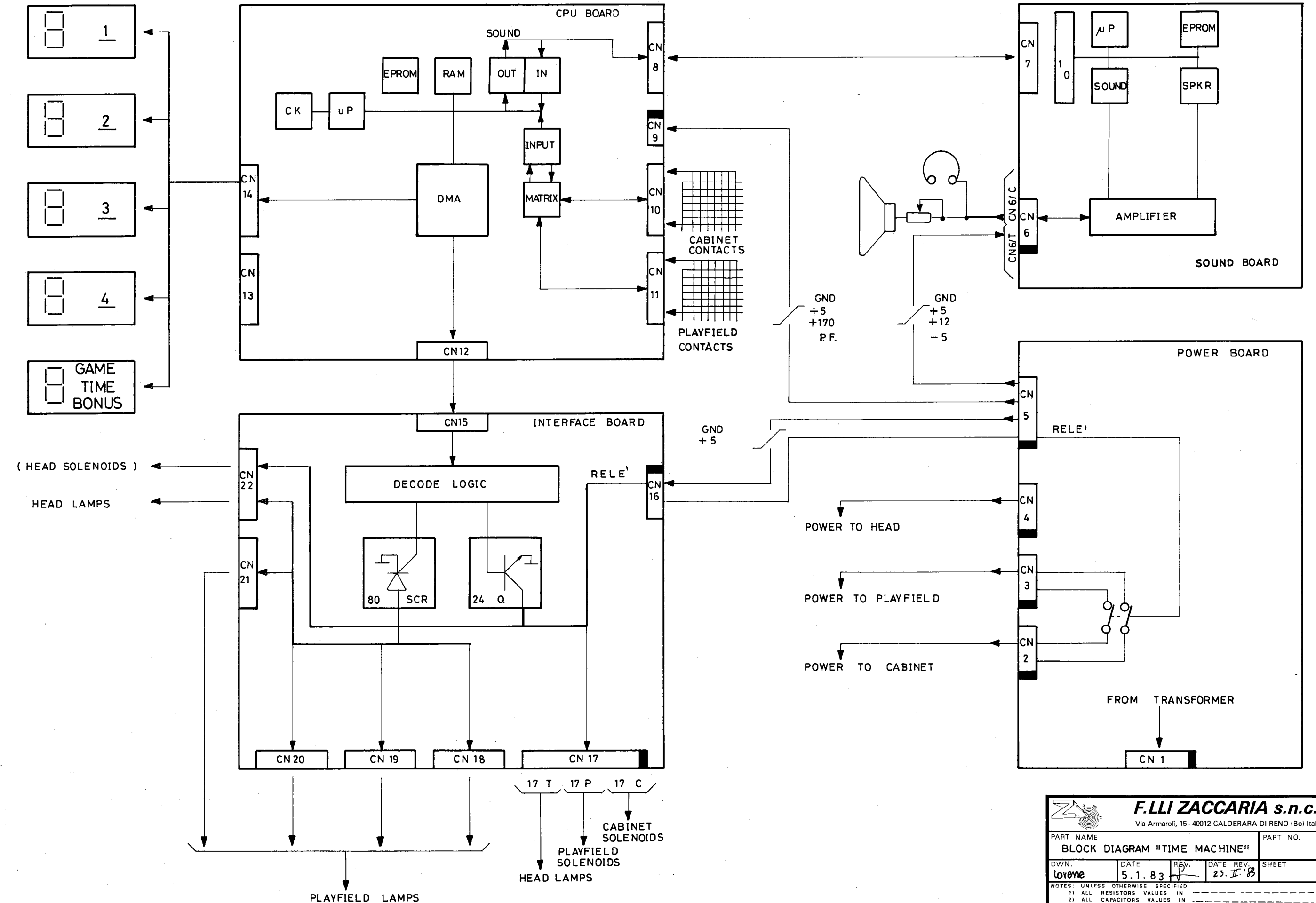
COLOR CODE

Black	0
Brown	1
Red	2
Orange	3
Yellow	4
Green	5
Blue	6
Violet	7
Grey	8
White	9
Pink	11
Light blue	12

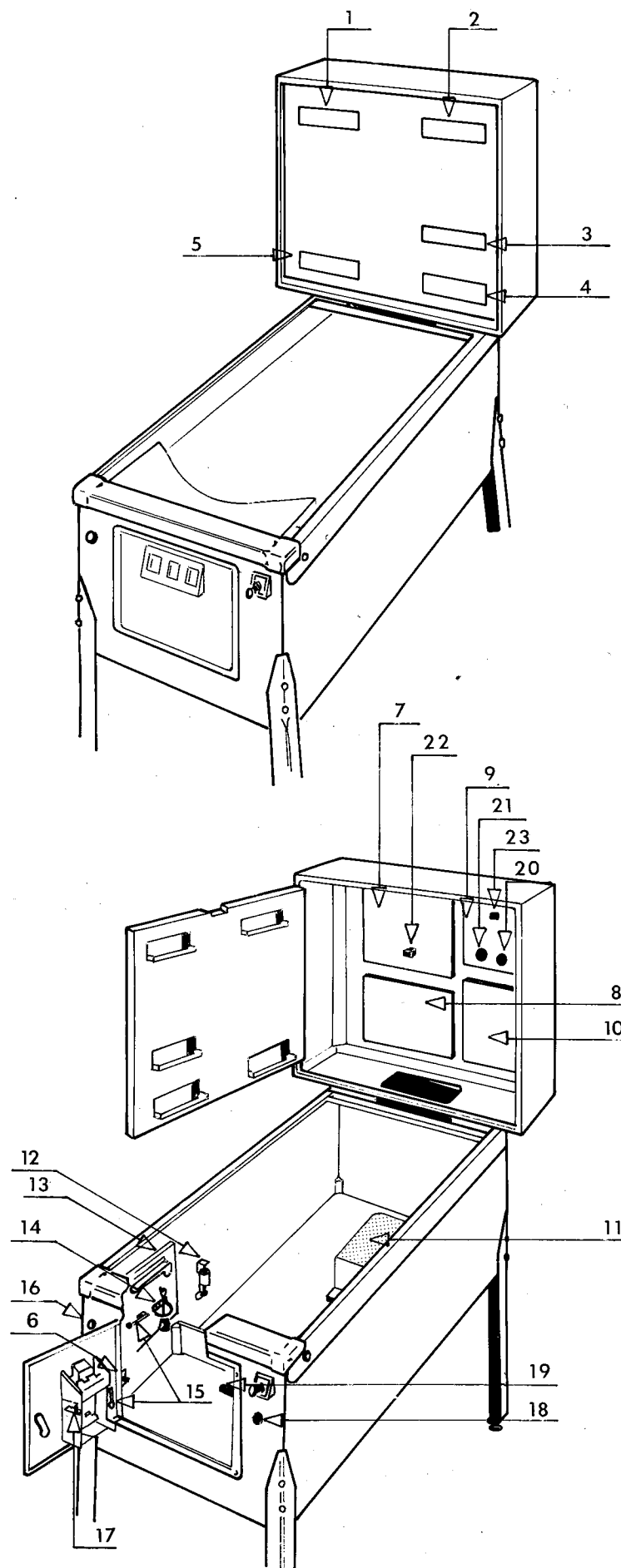
WIRES CUTAWAY VIEW LIST

mm ² 0,22	/1
mm ² 0,35	/2
mm ² 0,5	/3
mm ² 0,9	/4
mm ² 1,5	/5

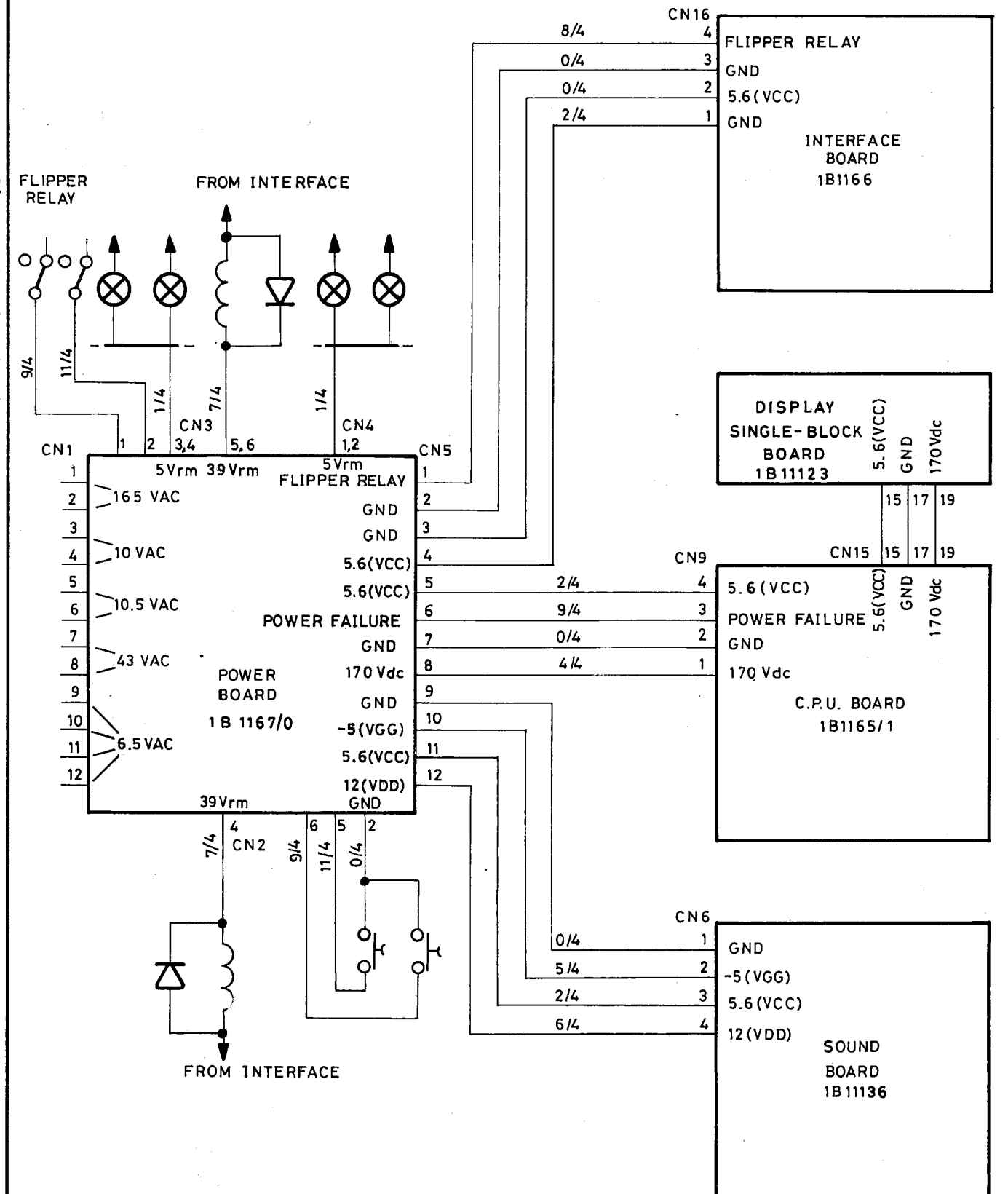
DRIVER DISPLAY BOARDS



ASSEMBLY DRAWING



- 1 - 1st player display
Highest score display
- 2 - 2nd player display
- 3 - Credit display
Display ball to play
Match
Game time bonus
- 4 - 4th player display
- 5 - 3rd player display
- 6 - Service button
- 7 - C.P.U. board
- 8 - Interface board
- 9 - Sound board
- 10 - Power board
- 11 - Transformer
- 12 - Knocker
- 13 - Roll ball tilt
- 14 - Bob tilt
- 15 - Antichoc tilt
- 16 - Credit button
- 17 - Advance & Return test
- 18 - Head phone jack
- 19 - General vol.
- 20 - Maximum speech vol.
- 21 - Maximum sound vol.
- 22 - Dip SWS
- 23 - Sound self-test button

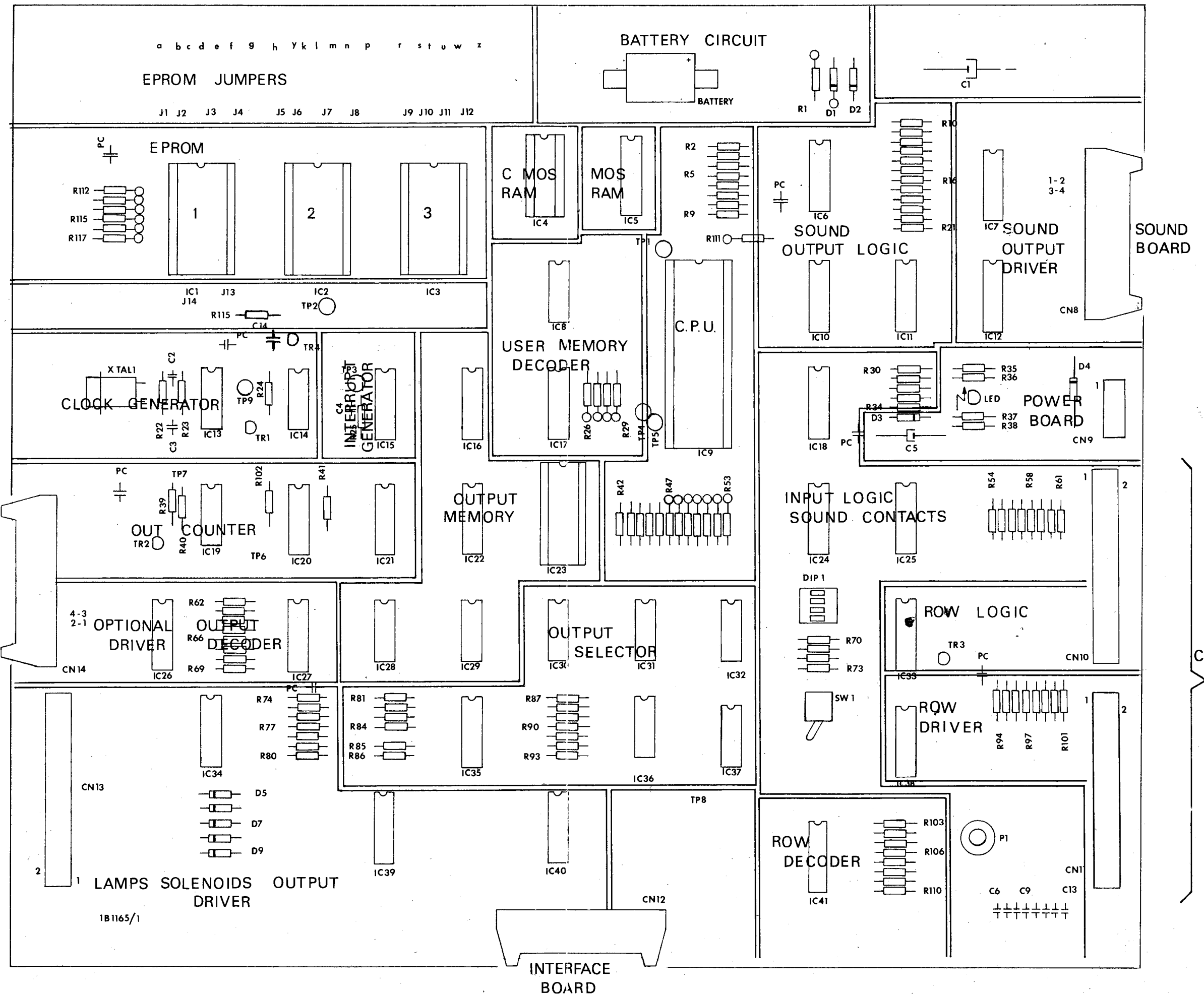


F.LLI ZACCARIA s.n.c. Via Armadori, 15 - 40012 CALDERARA DI RENO (Bo) Italy		PART NO.	
PART NAME Electrical diagram power wiring			
DWN. 	DATE 3/9/82	REV. 	DATE REV. 13/1/84
SHEET			
NOTES: UNLESS OTHERWISE SPECIFIED			
1) ALL RESISTORS VALUES IN			
2) ALL CAPACITORS VALUES IN			

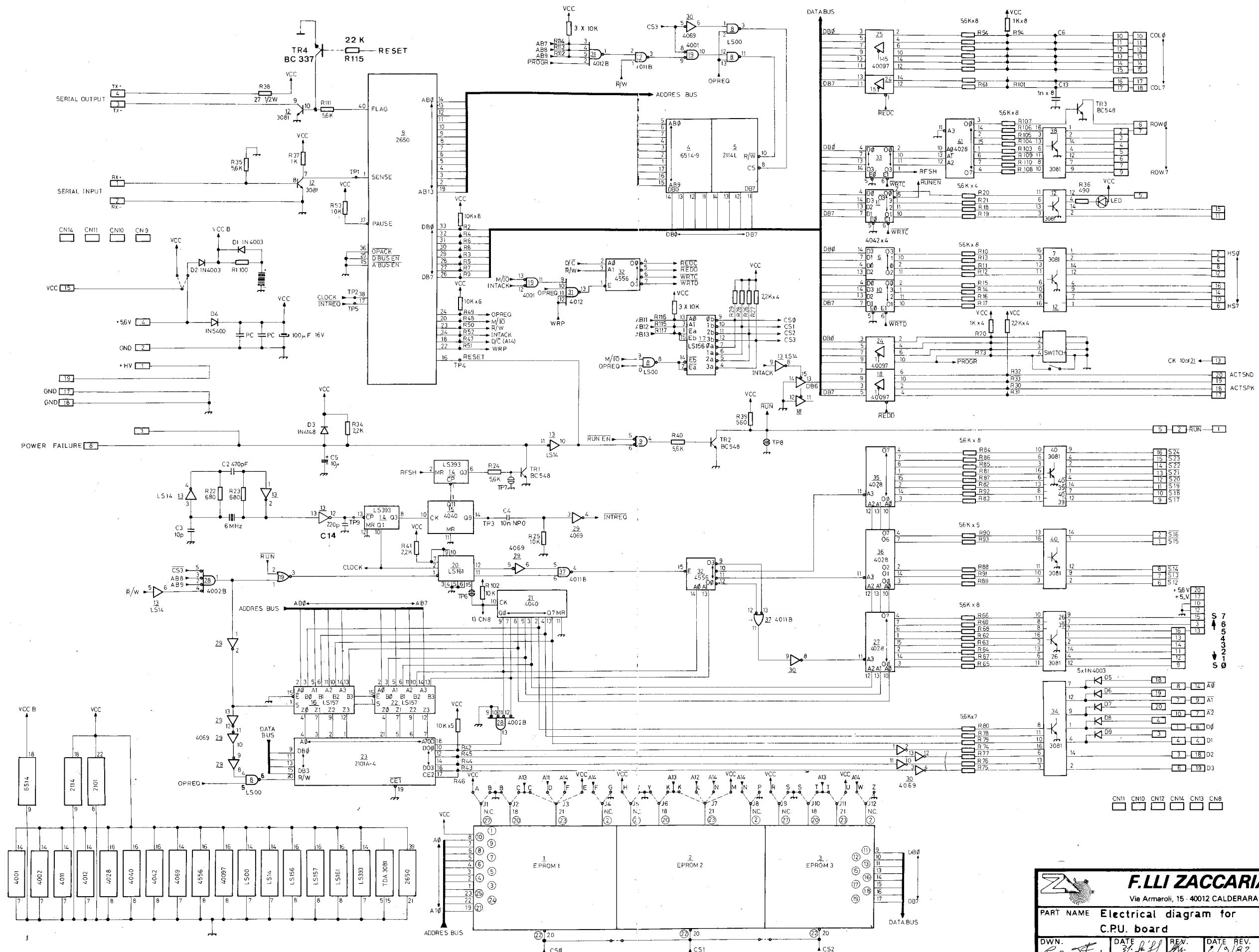
C.P.U. board

P.C.1 B 1165/1

DISPLAY
BOARD



CONTACTS

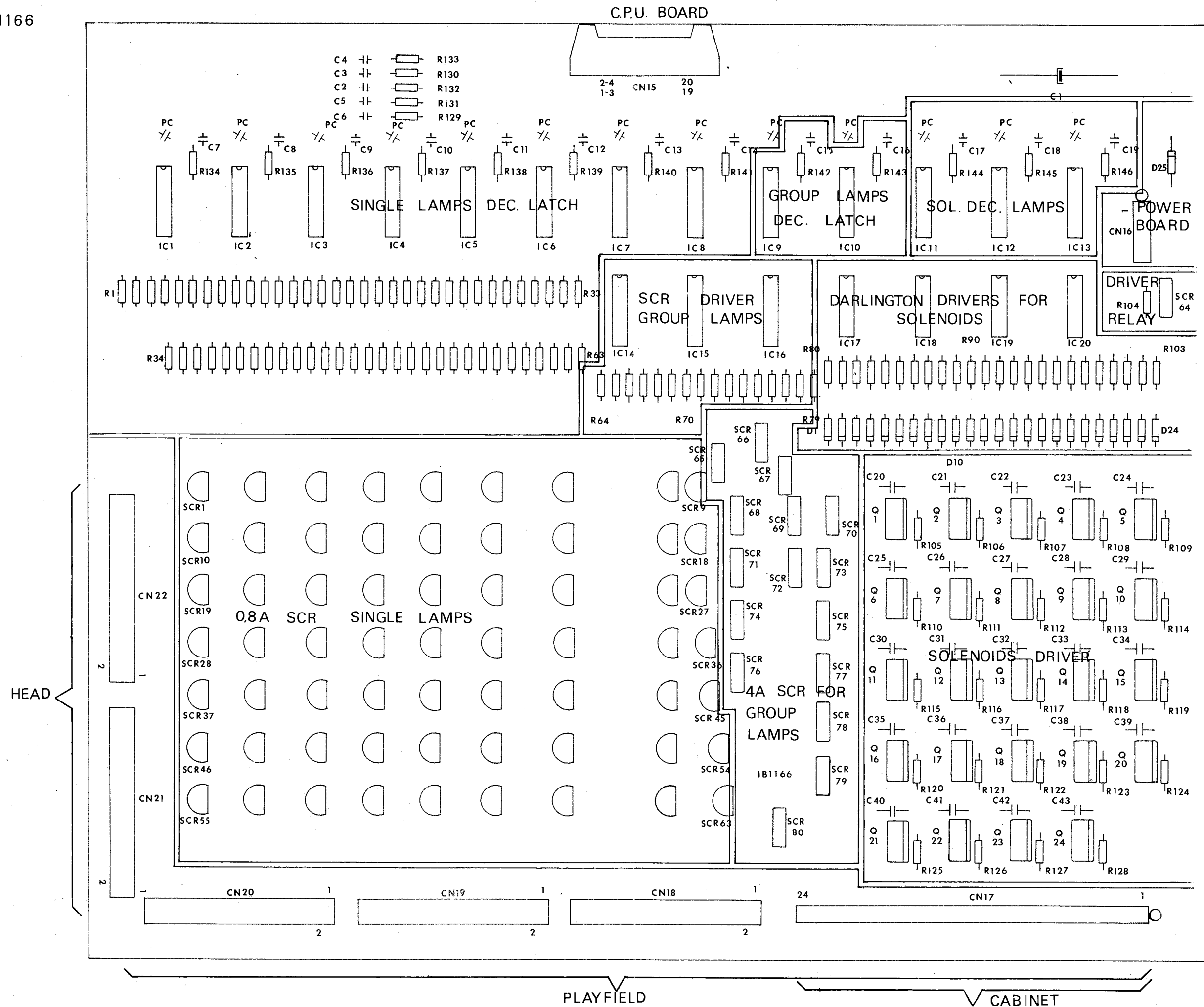


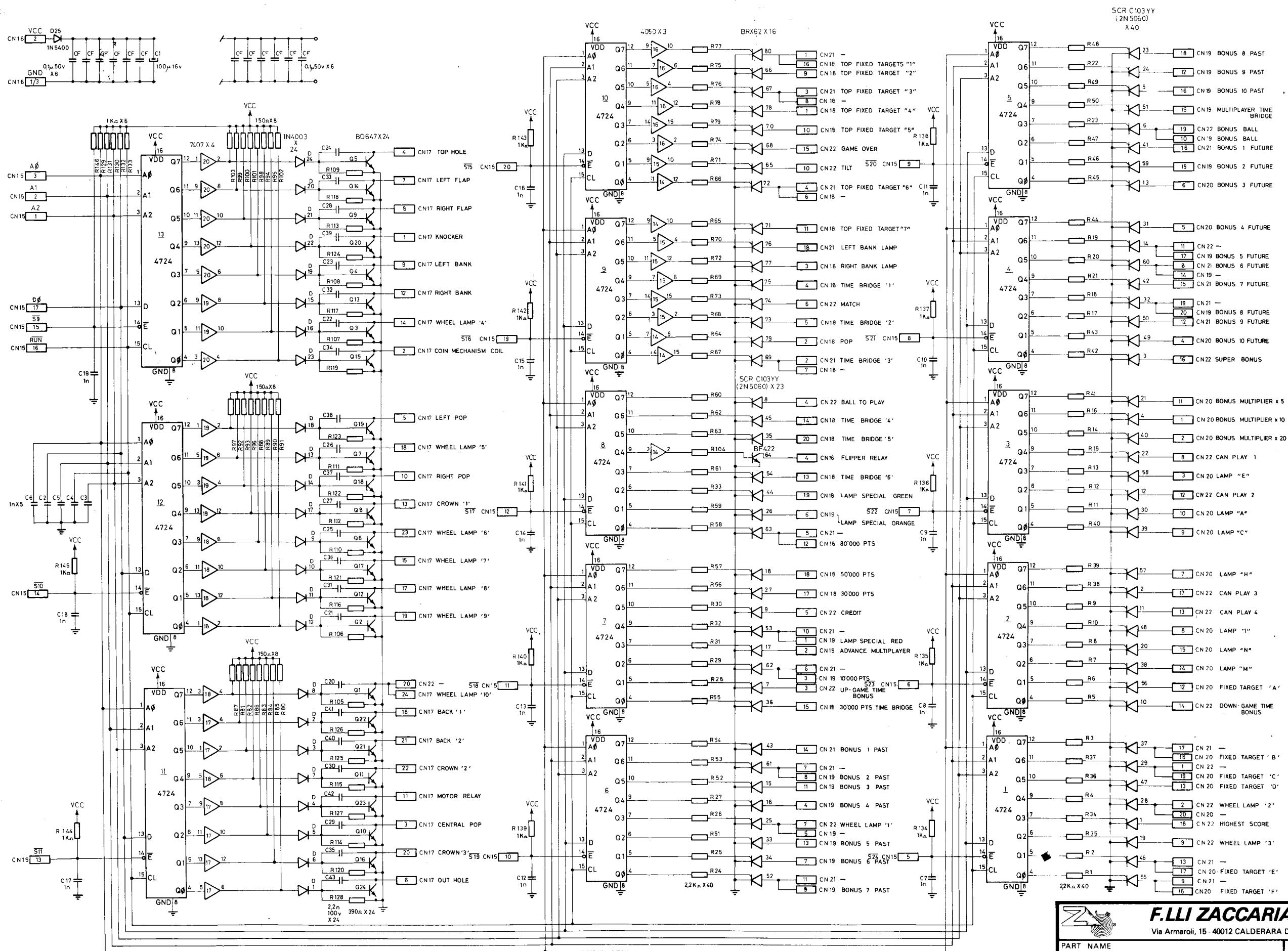
F.LLI ZACCARIA s.n.c.
Via Armadori, 15 - 40012 CALDERARA DI RENO (Bo) Italy

PART NAME Electrical diagram for		PART NO.	
C.P.U. board		1B 13 65/1	
OWN. <i>Rest</i>	DATE <i>3/1/82</i>	REV. <i>Rev.</i>	DATE REV. <i>2/3/82</i>
SHEET		SHEET	

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

P.C. 1B1166

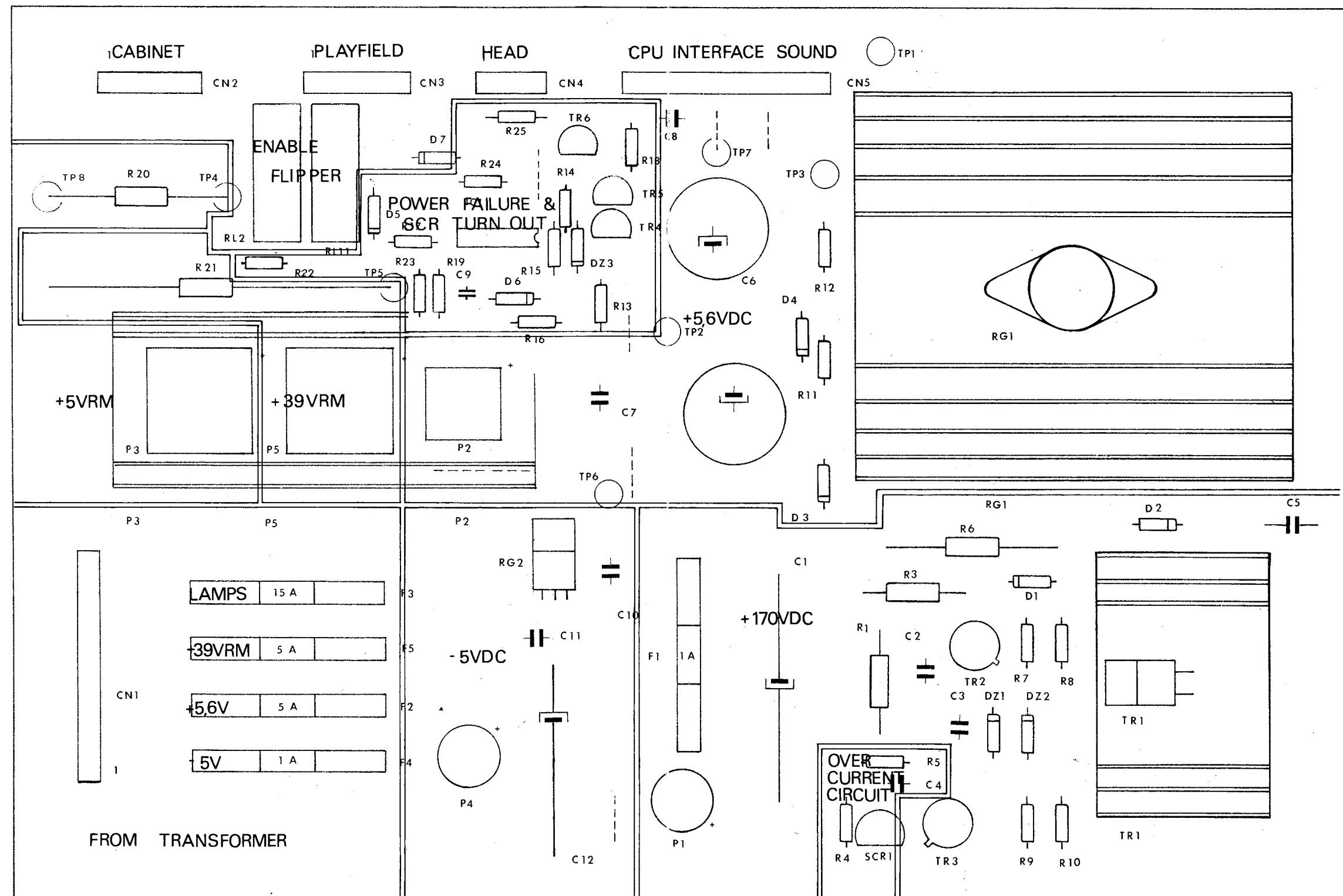


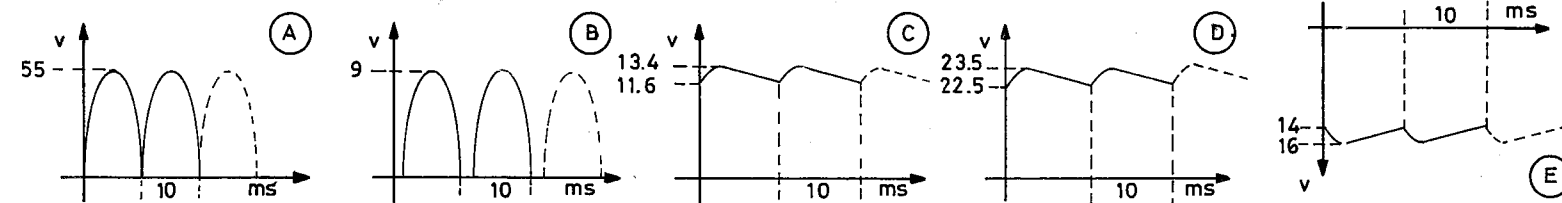
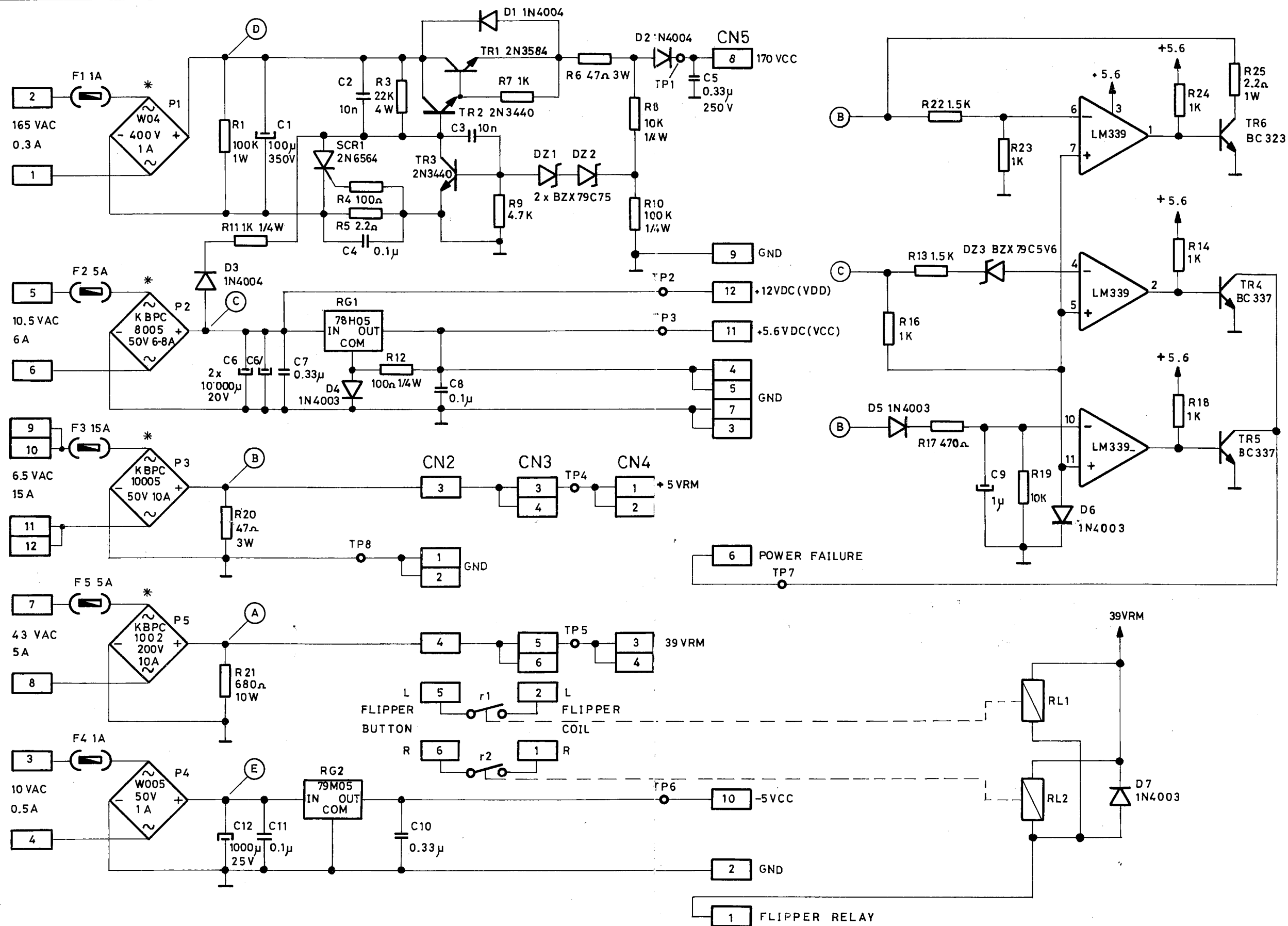


 F.LI ZACCARIA s.n.c. Via Armeroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy		PART NO. 1B 1366
PART NAME Interface "TIME MACHINE"		SHEET 1
DWN. <i>[Signature]</i>	DATE 25-11-88	REV. 1
NOTES: UNLESS OTHERWISE SPECIFIED 1) ALL RESISTORS VALUES IN 2) ALL CAPACITORS VALUES IN		

POWER board

P.C. 1B1167/0



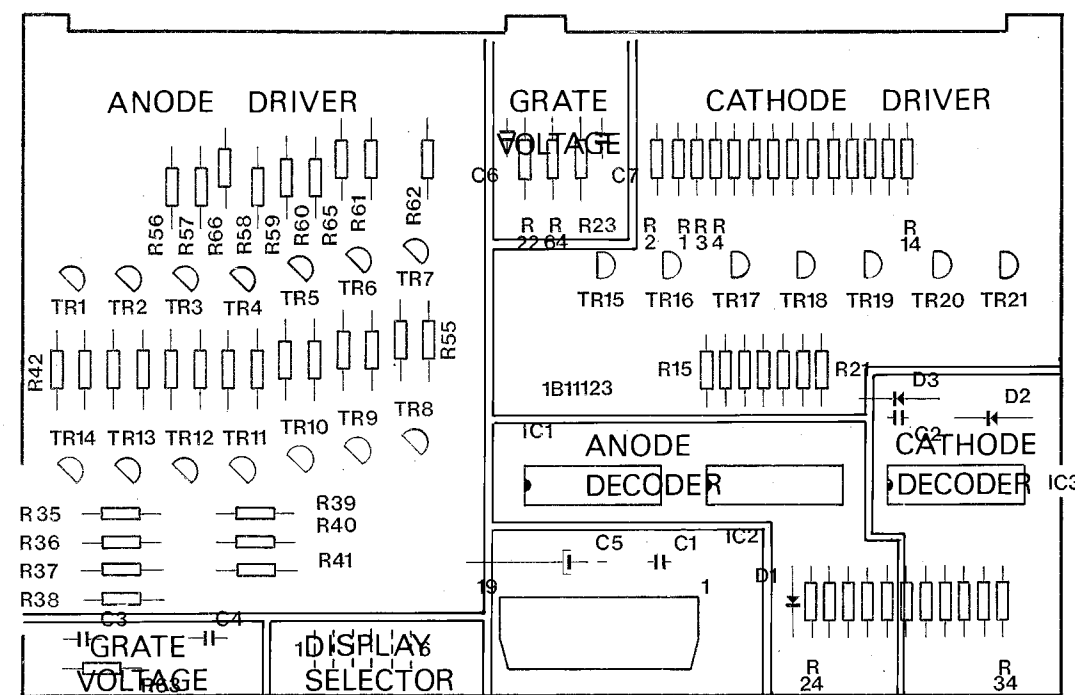


* WITH HEAT SINK

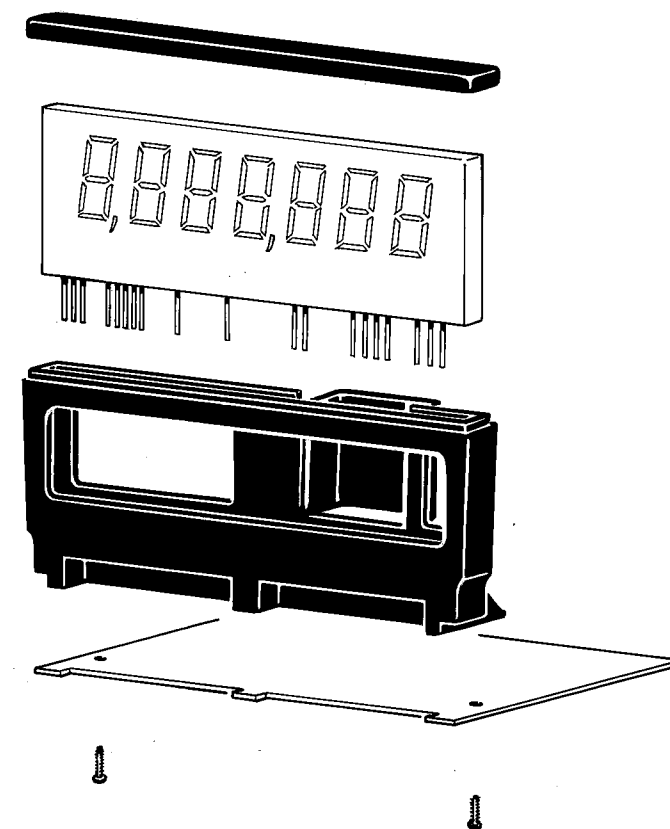
F.LLI ZACCARIA s.n.c.		Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy	
PART NAME Electrical diagram for POWER BOARD		PART NO. 1B1367/0	
DWN Reob	DATE 26/7/82	REV. 1	SHEET 2
NOTES: UNLESS OTHERWISE SPECIFIED			
1) ALL RESISTORS VALUES IN			
2) ALL CAPACITORS VALUES IN			

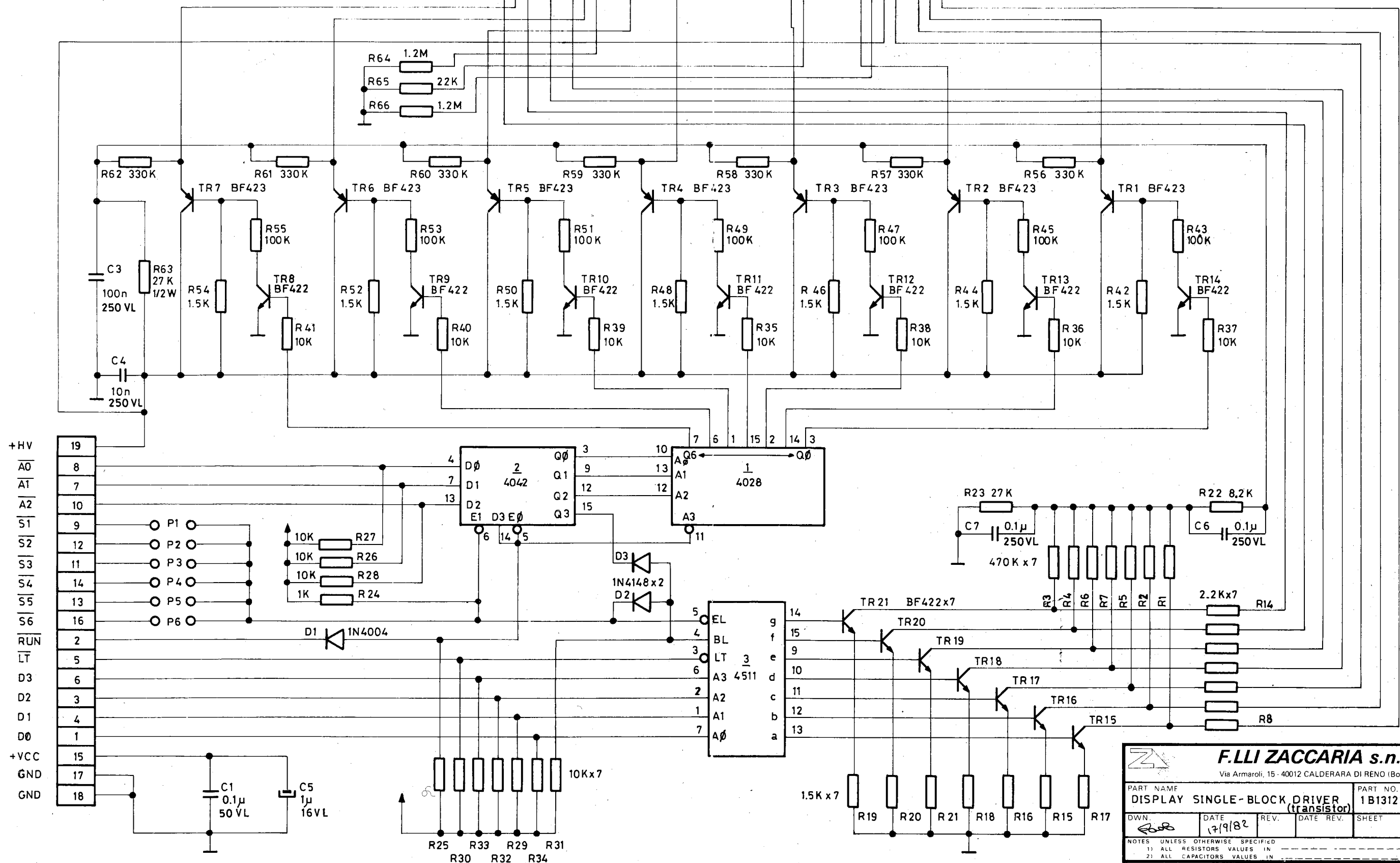
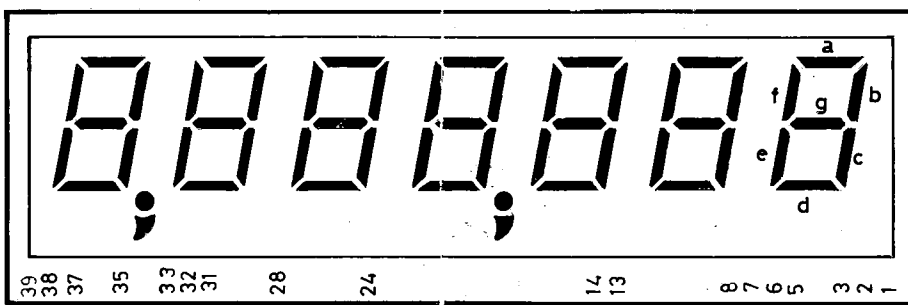
DRIVER DISPLAY board

P.C. 1B11123



C.P.U. BOARD

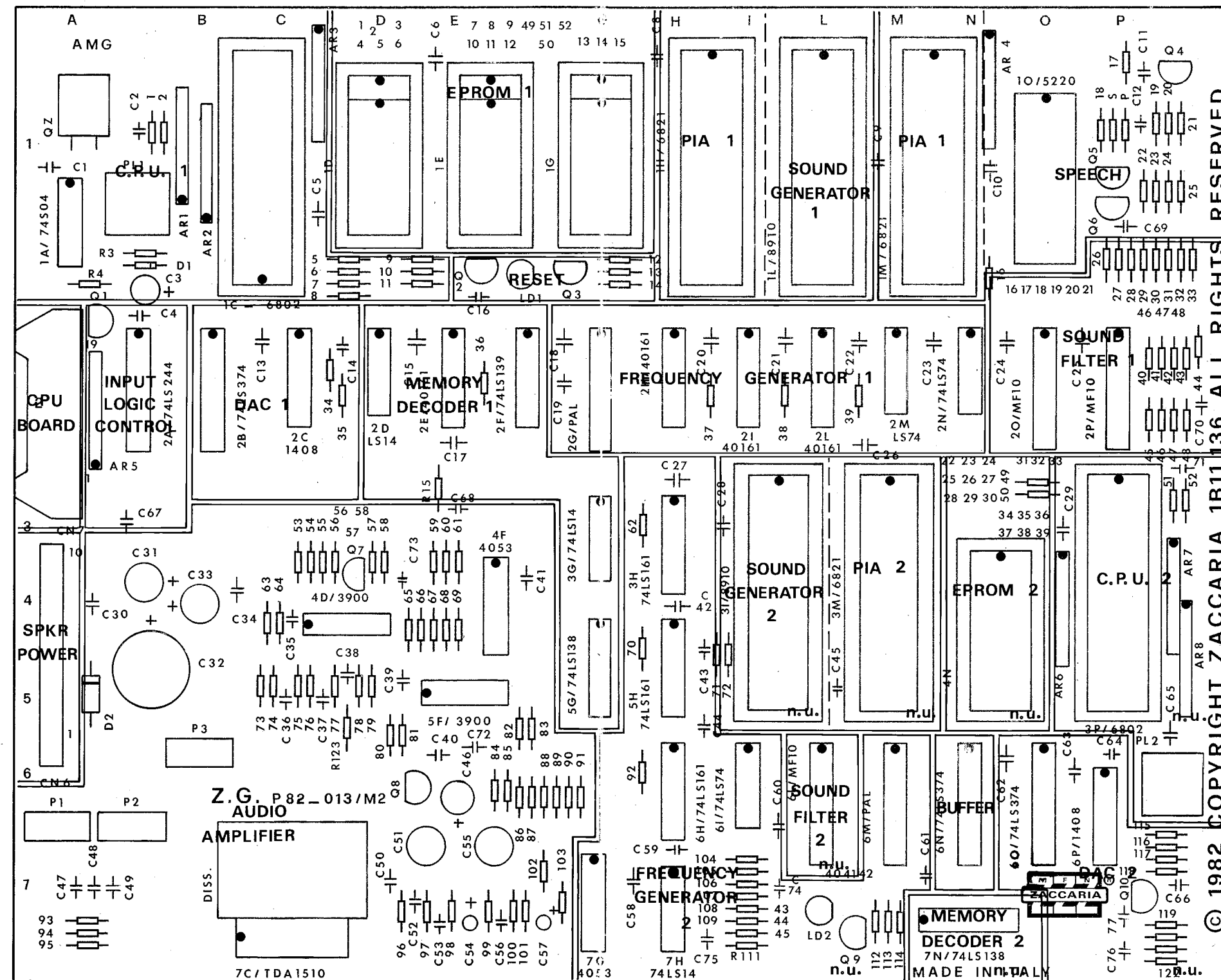




F.LLI ZACCARIA s.n.c.
 Via Armadori, 15 - 40012 CALDERARA DI RENO (Bo) Italy

PART NAME		PART NO.	
DISPLAY SINGLE-BLOCK DRIVER (transistor)		1B13123	
DWN.	DATE	REV.	DATE REV.
	7/9/82		
NOTES: UNLESS OTHERWISE SPECIFIED			
1) ALL RESISTORS VALUES IN			
2) ALL CAPACITORS VALUES IN			

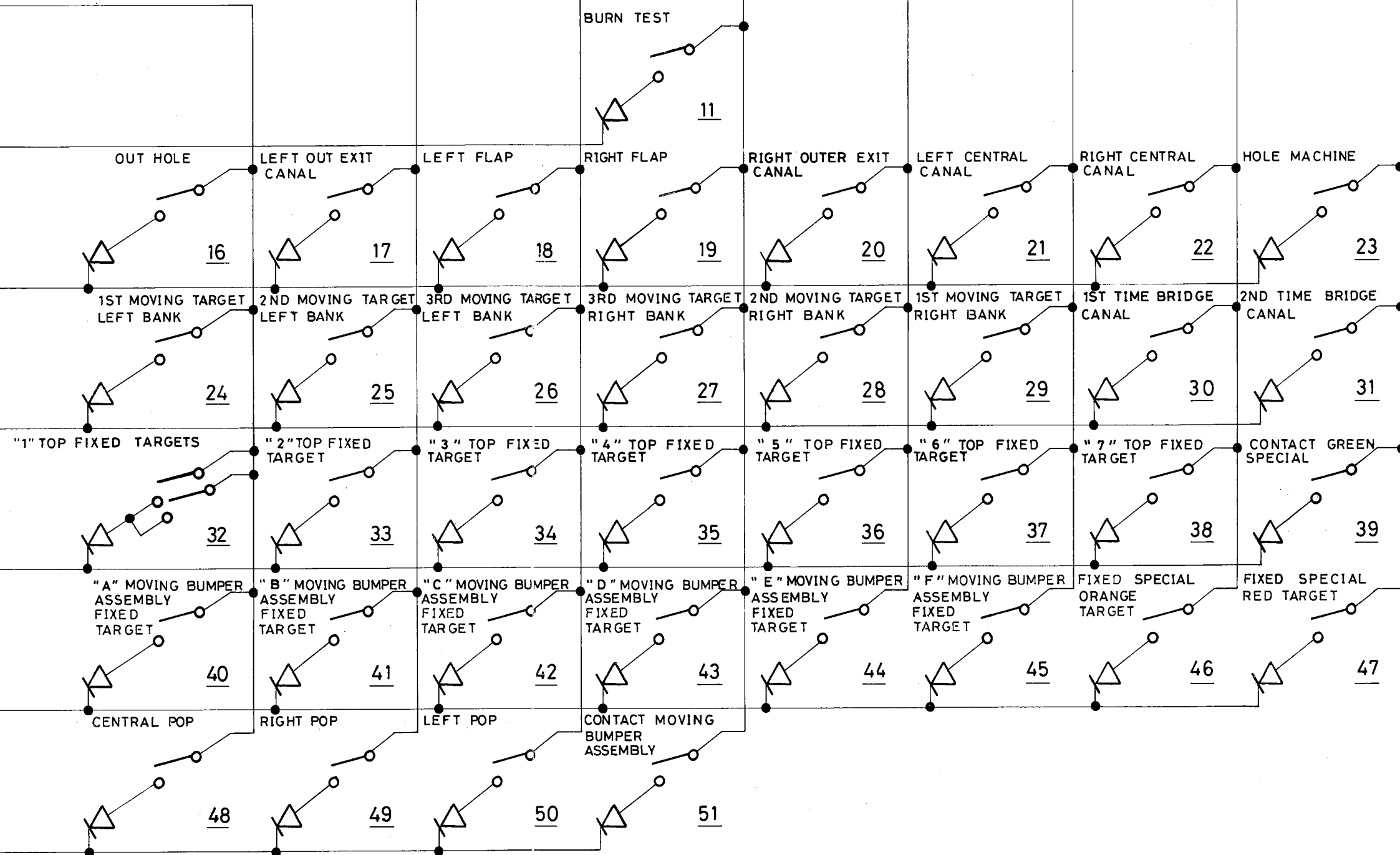
P.C. 1B1136



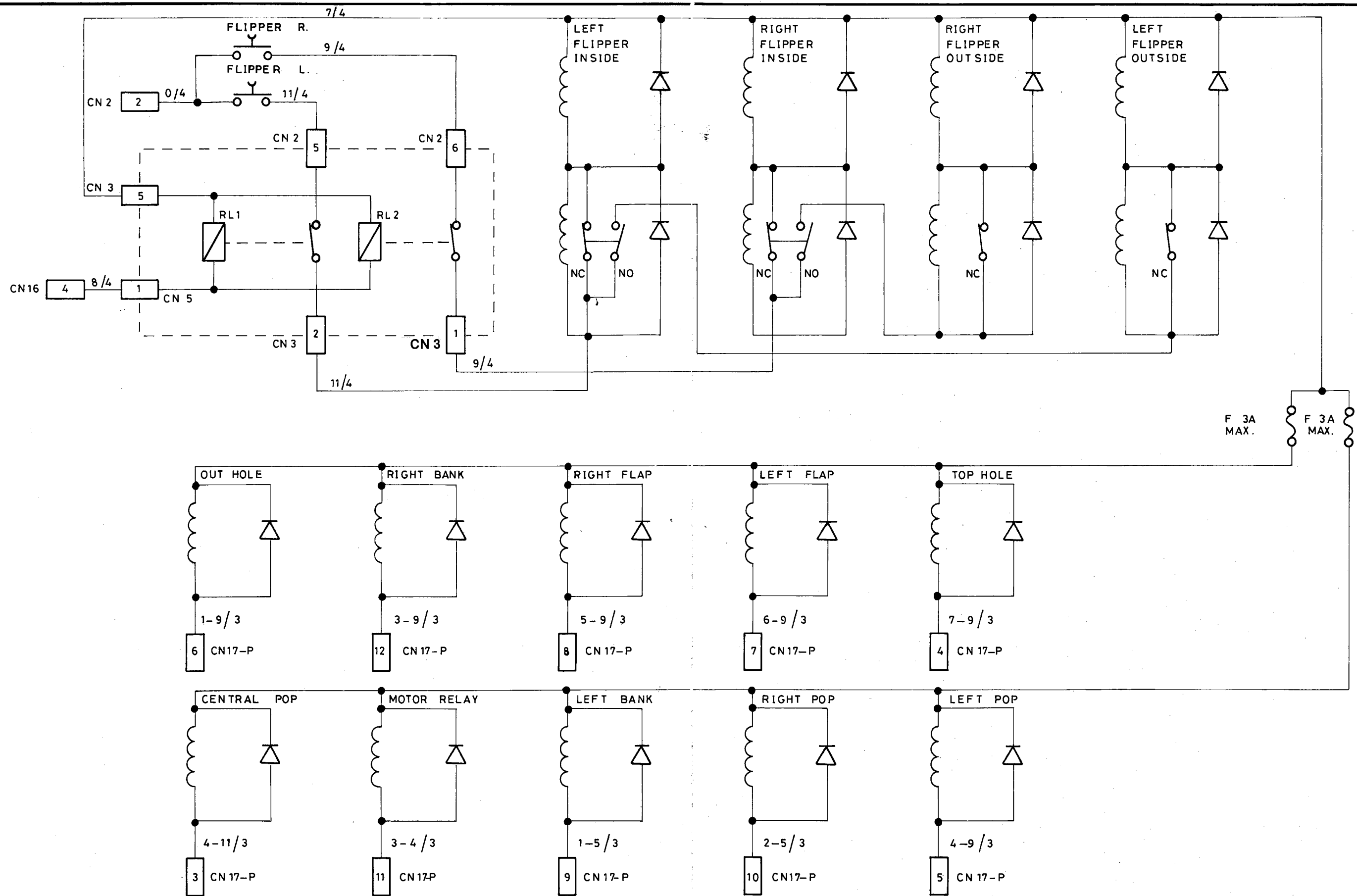
4-7/1	1-7/1	2-4/1	0-3/1	0-4/1	2-5/1	0-9/1	8-9/1	8/1	2/1	4/1	0/1	5/1	6/1
17	16	15	14	13	12	11	10	2	3	4	5	6	7

CN 11

ALL DIODES ARE 1N4148



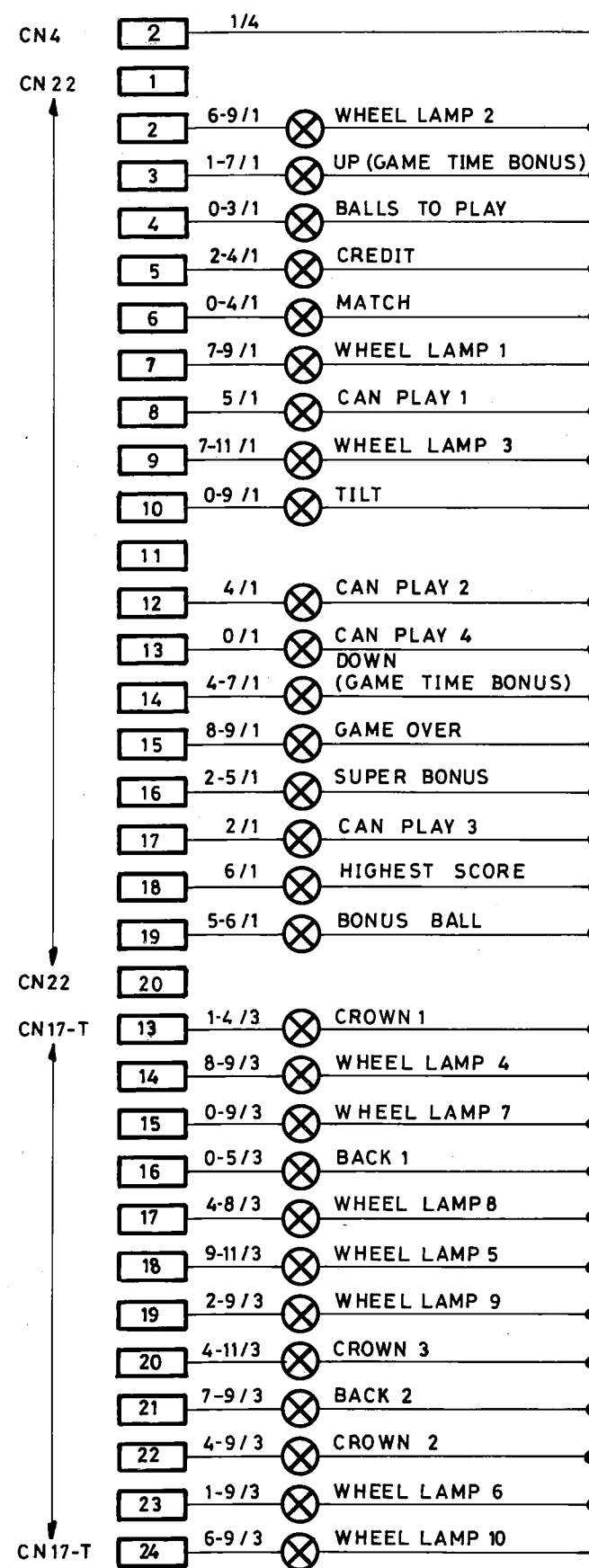
		F.LLI ZACCARIA s.n.c.	
Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy			
PART NAME DIAGRAM FOR PLAYFIELD CONTACTS WIRING "TIME MACHINE"			PART NO.
DWN. <i>lorenz</i>	DATE 23.12.82	REV. <i>1</i>	DATE REV. 23.12.82
NOTES: UNLESS OTHERWISE SPECIFIED			SHEET
1) ALL RESISTORS VALUES IN			
2) ALL CAPACITORS VALUES IN			



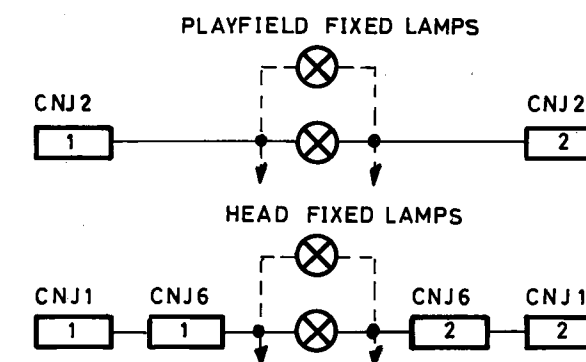
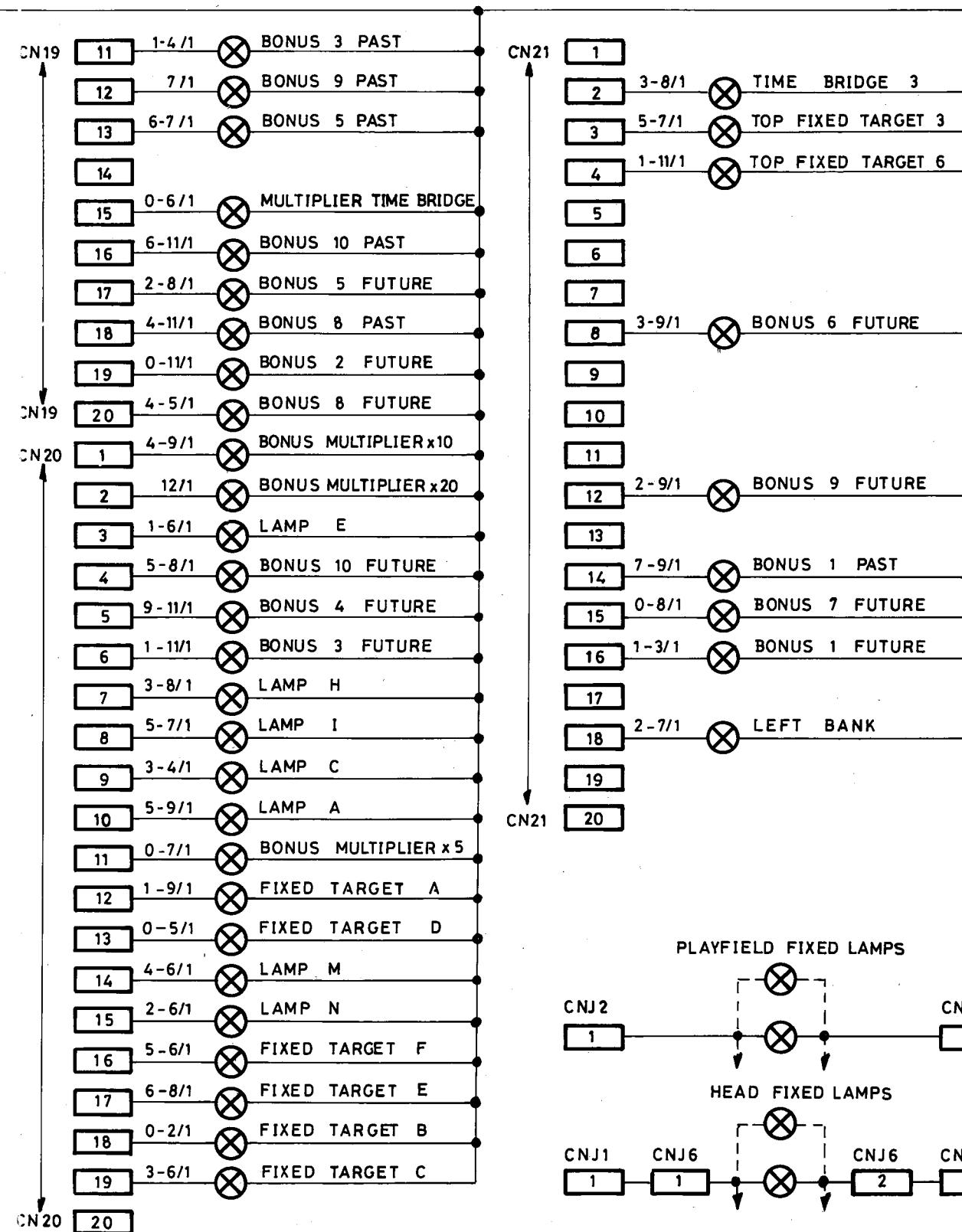
ALL DIODES ARE 1N4004

F.LI ZACCARIA s.n.c. Via Armadori, 15 - 40012 CALDERARA DI RENO (Bo) Italy			
PART NAME		PART NO.	
COIL WIRING "TIME MACHINE"			
DWN.	DATE	REV.	DATE REV.
LOWE	5.1.83	P	23.11.83
NOTES: UNLESS OTHERWISE SPECIFIED		SHEET	
1) ALL RESISTORS VALUES IN			
2) ALL CAPACITORS VALUES IN			

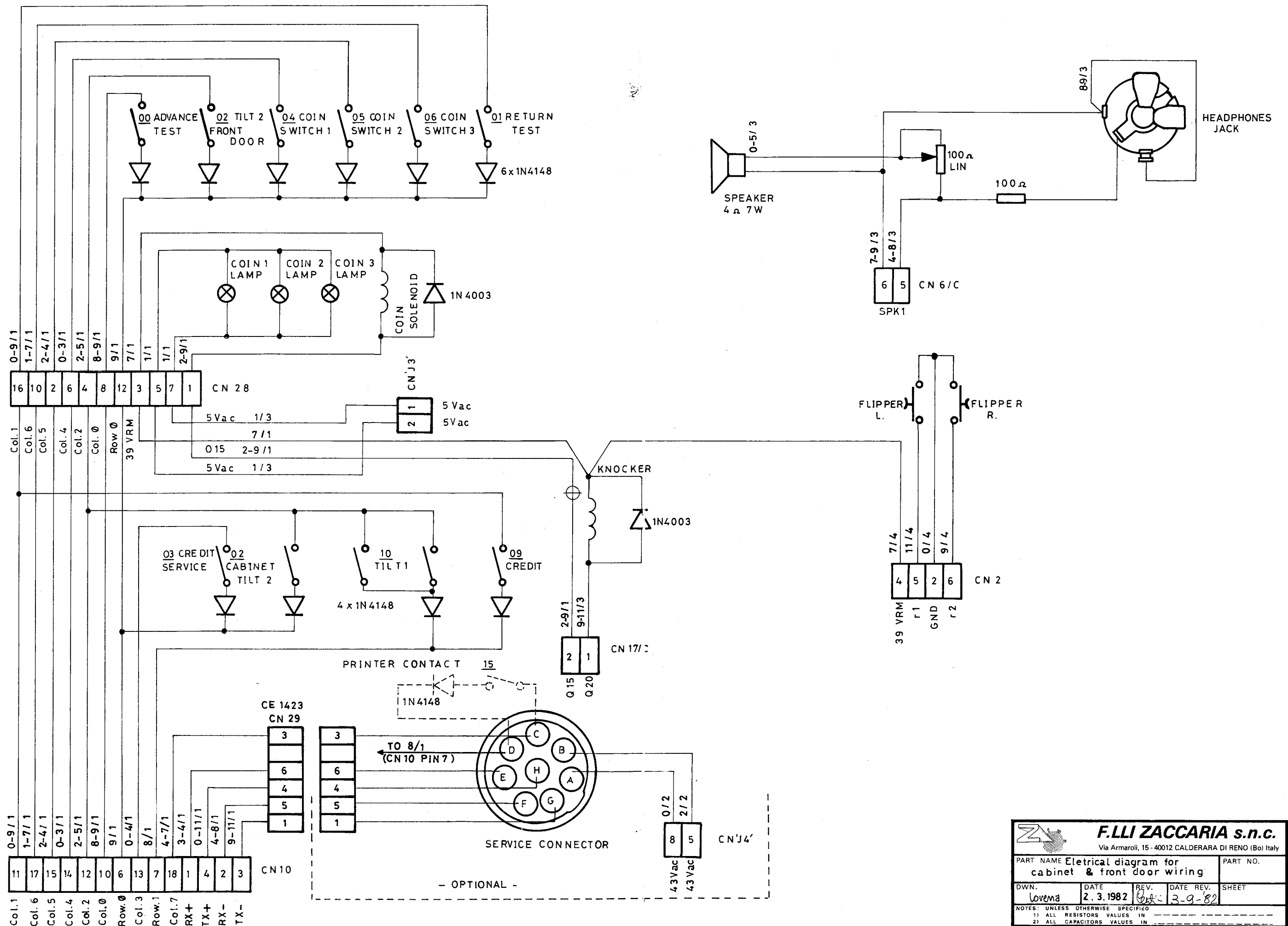
HEAD LAMPS

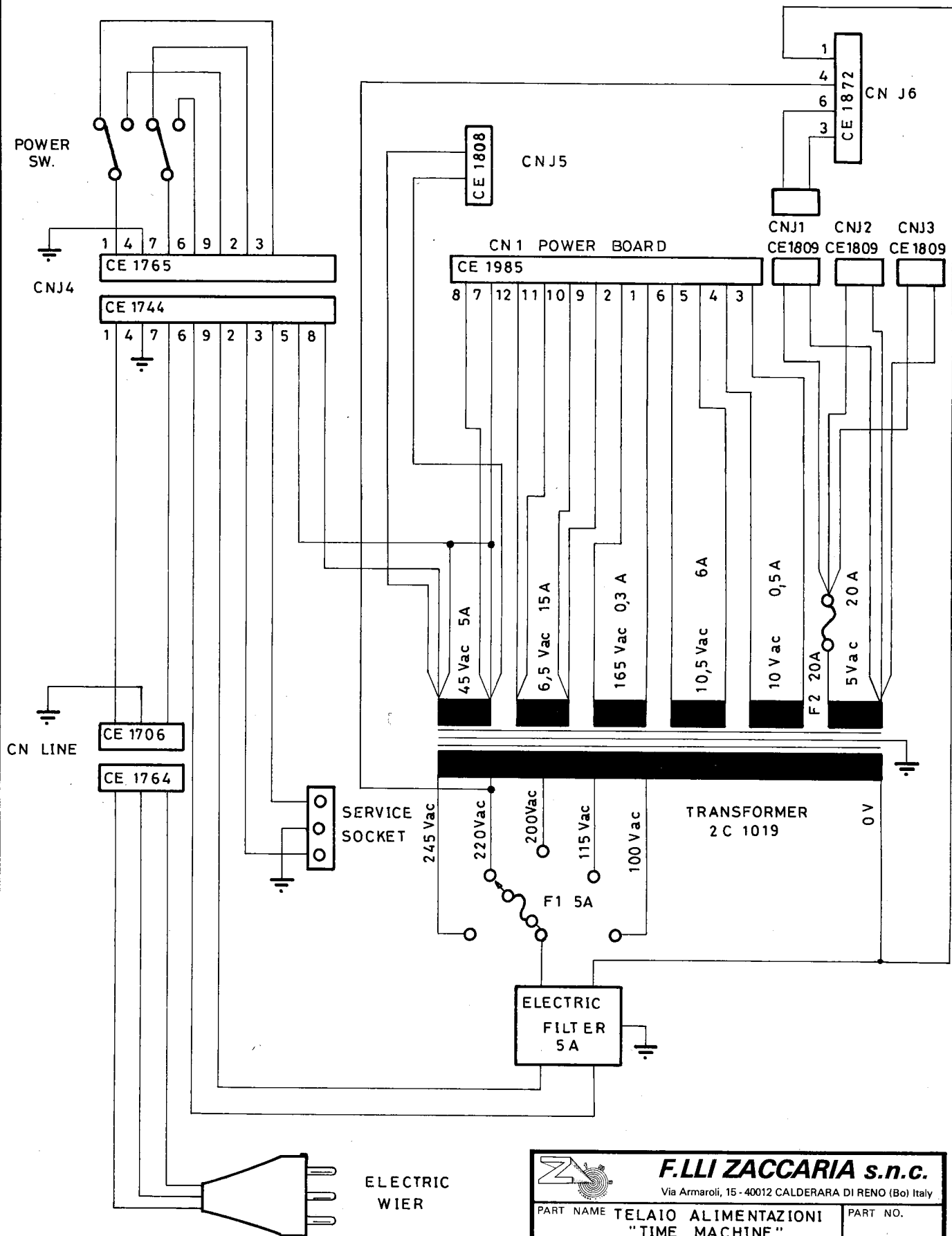


PLAYFIELD LAMPS



 F.LI ZACCARIA s.n.c. Via Armaroli, 15 - 40012 CALDERARA DI RENO (Bo) Italy				
PART NAME Electrical diagram for PLAYFIELD & HEAD LAMPS				PART NO.
DWN. <i>Rob</i>	DATE 23/2/83	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 Armadori, 15 - 40012 CALDERARA DI RENO (Bo) Italy			
PART NAME TELAIO ALIMENTAZIONI "TIME MACHINE"			PART NO.
DWN. Lorena	DATE 4. 1. 83	REV. 23. 4. 83	SHEET
NOTES: UNLESS OTHERWISE SPECIFIED 1) ALL RESISTORS VALUES IN _____ 2) ALL CAPACITORS VALUES IN _____			

