RM Costruzioni Elettroniche
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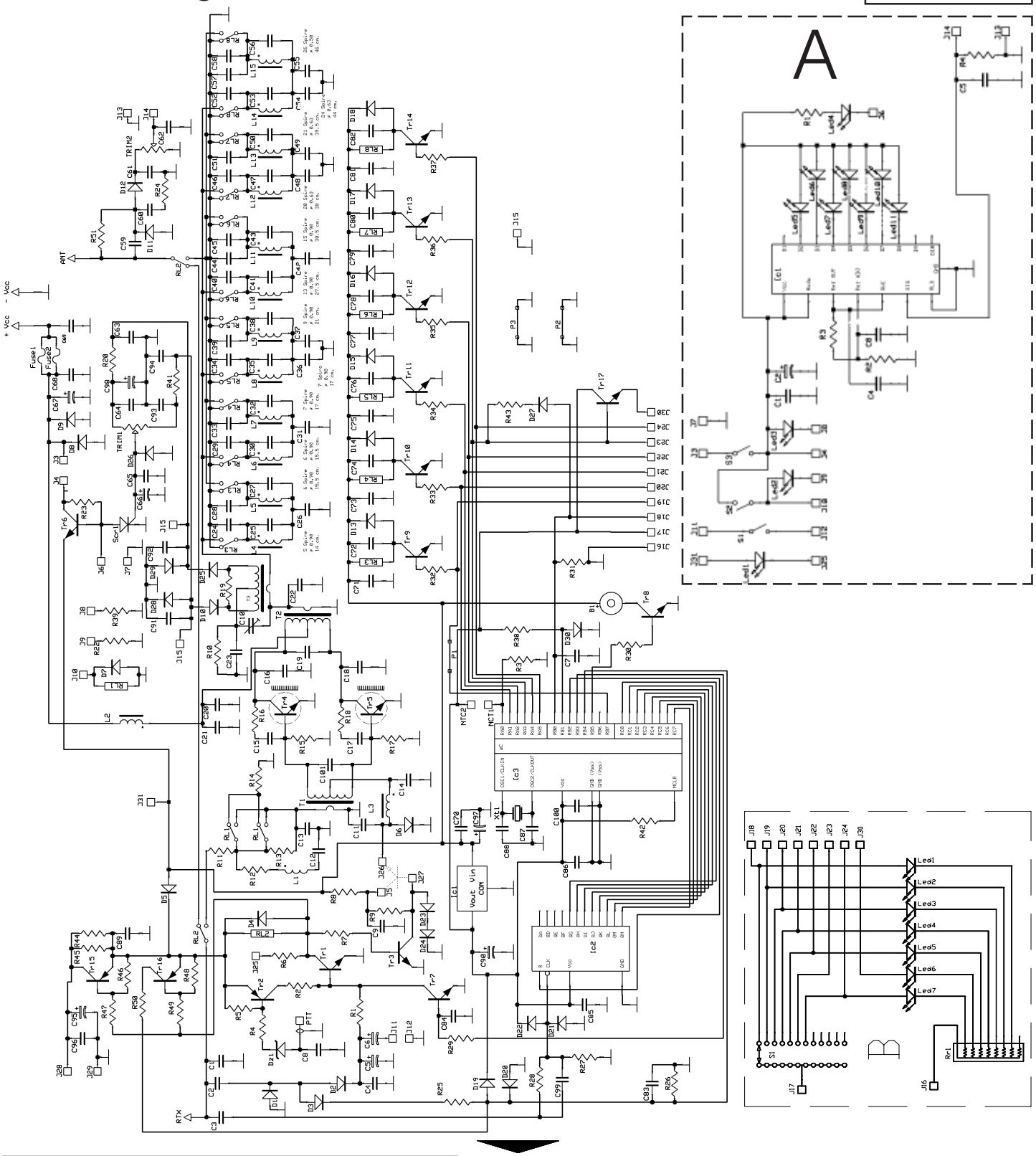
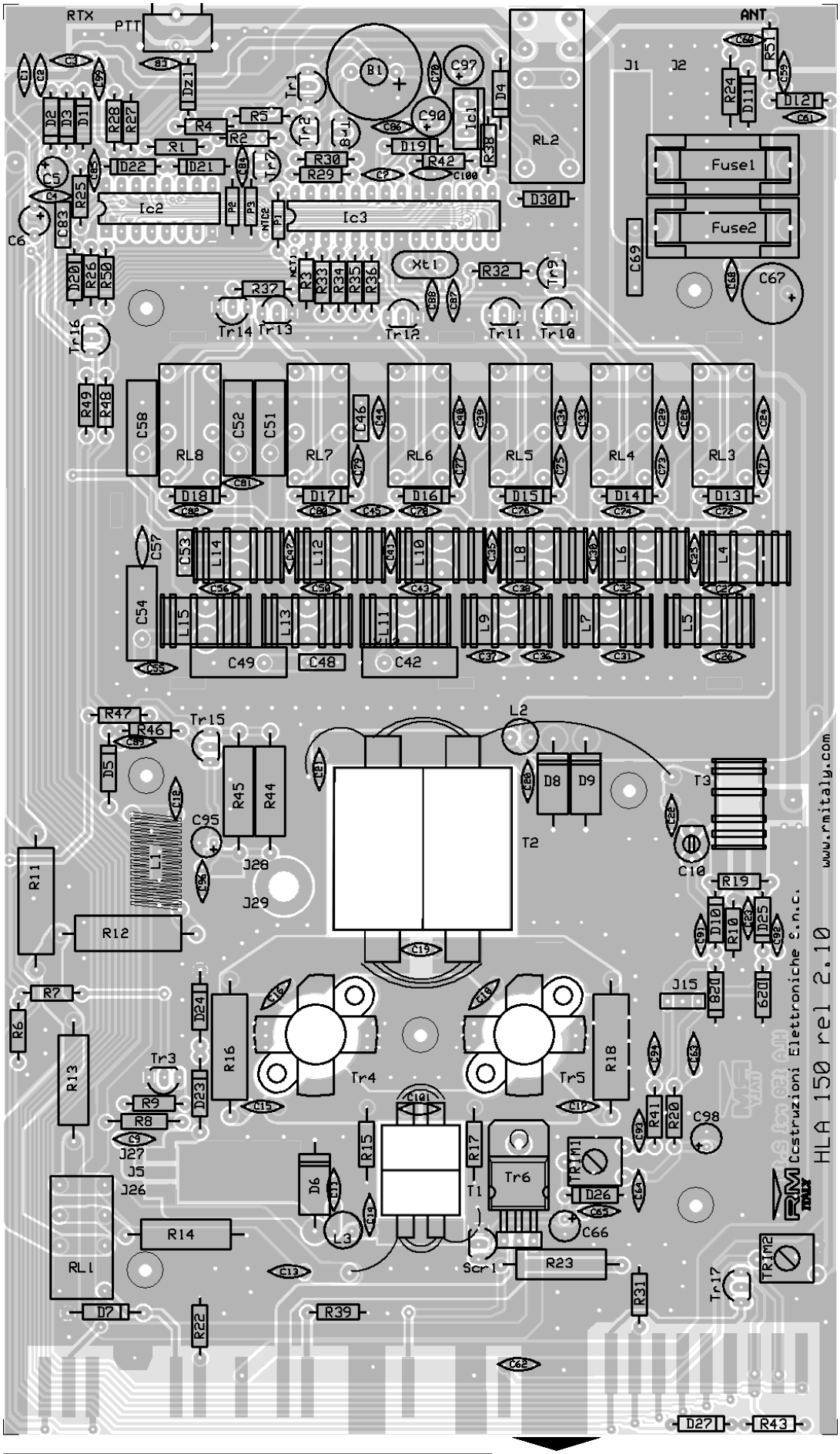
Mod. HLA 150 linear amplifier

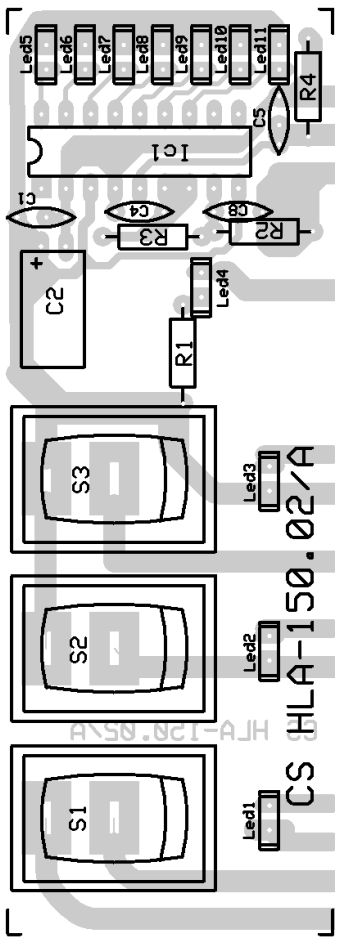
Schematic diagram

Version 2.10

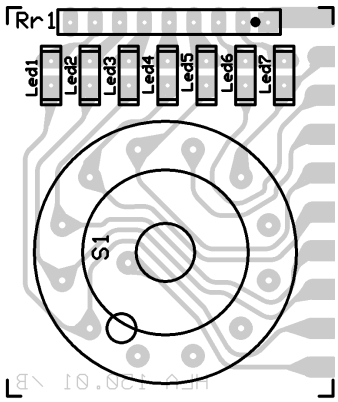




Board A



Board B



List of components

C 1	=			
C 2	= 8,2 pF	50 V	NP0	
C 3	= 15 pF	50 V	NP0	
C 4	= 100 nF	50 V		
C 5	= 2,2 µF	16 V		
C 6	= 33 µF	16 V		
C 8	= 10 nF	50 V		
C 9	= 100 nF	50 V		
C 10	= 3 - 10 pF	Trimmer	50 V	NP0
C 11	= 100 nF	50 V		
C 12	= 10 nF	50 V		
C 13	= 150 pF	50 V	NP0	
C 14	= 100 nF	50 V		
C 15	= 47 nF	50 V		
C 16	= 220 pF	500 V	NP0	
C 17	= 47 nF	50 V		
C 18	= 220 pF	500 V	NP0	
C 19	= 1300 pF	500 V	Silveredmica	
C 20	= 100 nF	50 V		
C 21	= 100 nF	50 V		
C 22	= 47 pF	1 KV	NP0	
C 23	= 470 pF	50 V	N750	
C 24	= 22 pF	500 V	NP0	
C 25	= 33 pF	500 V	NP0	
C 26	= 150 pF	500 V	NP0	
C 27	= 12 pF	500 V	NP0	
C 28	= 100 pF	500 V	NP0	
C 29	= 47 pF	500 V	NP0	
C 30	= 33 pF	500 V	NP0	
C 31	= 220 pF	500 V	NP0	
C 32	= 15 pF	500 V	NP0	
C 33	= 100 pF	500 V	NP0	
C 34	= 82 pF	500 V	NP0	
C 35	= 82 pF	500 V	NP0	
C 36	= 100 pF	500 V	NP0	
C 37	= 220 pF	500 V	NP0	
C 38	= 56 pF	500 V	NP0	
C 39	= 150 pF	500 V	NP0	
C 40	= 220 pF	500 V	NP0	
C 41	= 100 pF	500 V	NP0	
C 42	= 620 pF	500 V	Silveredmica	
C 43	= 33 pF	500 V	NP0	
C 44	= 220 pF	500 V	NP0	
C 45	= 100 pF	500 V	NP0	
C 46	= 390 pF	500 V	Silveredmica	
C 47	= 150 pF	500 V	NP0	
C 48	= 390 pF	500 V	Silveredmica	
C 49	= 620 pF	500 V	Silveredmica	
C 50	= 82 pF	500 V	NP0	
C 51	= 620 pF	500 V	Silveredmica	
C 52	= 620 pF	500 V	Silveredmica	
C 53	= 390 pF	500 V	Silveredmica	
C 54	= 1600 pF	500 V	Silveredmica	
C 55	= 270 pF	500 V	NP0	
C 56	= 150 pF	500 V	NP0	
C 57	= 150 pF	500 V	NP0	
C 58	= 620 pF	500 V	Silveredmica	
C 59	= 2,2 pF	50 V	NP0	
C 60	= 33 pF	50 V	NP0	
C 61	= 100 nF	50 V		
C 62	= 10 nF	50 V		
C 63	= 100 nF	50 V		
C 64	= 100 nF	50 V		
C 65	= 100 nF	50 V		
C 66	= 10 µF	25 V		
C 67	= 470 µF	25 V		
C 68	= 100 nF	50 V		
C 69	= 470 nF	63 V	Polyester	
C 70 to C 82	= 100 nF	50 V		
C 83	= 10 nF	63 V	Polyester	
C 84	= 10 nF	50 V		
C 85	= 100 nF	50 V		
C 86	= 100 nF	50 V		
C 87	= 27 pF	50 V	NP0	
C 88	= 27 pF	50 V	NP0	
C 89	= 100 nF	50 V		
C 90	= 22 µF	25 V		
C 91	= 100 nF	50 V		
C 92	= 100 nF	50 V		
C 93	= 100 nF	50 V		
C 94	= 100 nF	50 V		
C 95	= 22 µF	25 V		
C 96	= 100 nF	50 V		
C 97	= 10 µF	25 V		
C 98	= 33 µF	16 V		
C 99	= 4,7 pF	50 V	NP0	
C 100	= 220 nF	50 V	Multilayer	
C 101	= 2 x 470 pF	50 V	N750	
R 1	= 2,2 KΩ	¼W		
R 2	= 4,7 KΩ	¼W		
R 3	= 4,7 KΩ	¼W		
R 4	= 10 KΩ	¼W		
R 5	= 2,2 KΩ	¼W		
R 6	= 1,0 KΩ	¼W		
R 7	= 2,2 KΩ	¼W		
R 8	= 1,0 Ω	½W		
R 9	= 1,2 KΩ	¼W		
R 10	= 1,0 KΩ	¼W		
R 11	= 33 Ω	5W		
R 12	= 33 Ω	5W		
R 13	= 39Ω	2W		
R 14	= 150 Ω	2W		
R 15	= 10 Ω	½W		
R 16	= 68 Ω	5W		
R 17	= 10 Ω	½W		
R 18	= 68 Ω	5W		
R 19	= 47 Ω	¼W		
R 20	= 1,0 KΩ	¼W		
R 22	= 1,0 KΩ	¼W		
R 23	= 330 Ω	2W		
R 24	= 27 Ω	½W		
R 25	= 10 KΩ	¼W		

R 26 = 1,0 MΩ ¼W
R 27 = 47 KΩ ¼W
R 28 = 4,7 KΩ ¼W
R 29 = 1,0 KΩ ¼W
R 30 = 4,7 KΩ ¼W
R 31 = 10 KΩ ¼W
R 32 = 4,7 KΩ ¼W
R 33 = 4,7 KΩ ¼W
R 34 = 4,7 KΩ ¼W
R 35 = 4,7 KΩ ¼W
R 36 = 4,7 KΩ ¼W
R 37 = 4,7 KΩ ¼W
R 38 = 4,7 KΩ ¼W
R 39 = 1,0 KΩ ¼W
R 41 = 10 KΩ ¼W
R 42 = 1,0 KΩ ¼W
R 43 = 220 Ω ¼W
R 44 = 68 Ω 2W
R 45 = 68 Ω 2W
R 46 = 470 Ω ¼W
R 47 = 2,2 KΩ ¼W
R 48 =
R 49 =
R 50 =
R 51 = 10 KΩ ¼W
P 1 = P 2 = P 3 = Ponte 0 Ω ¼W
B 1 = Buzzer 12V ARIMB12A12
Trim 1 = Timmer PT10 10 KΩ
Trim 2 = Timmer PT10 10 KΩ
D 1 = 1N4148
D 2 = 1N4148
D 3 = 1N4148
D 4 = 1N4007
D 5 = 1N4007
D 6 = 1N5400
D 7 = 1N4007
D 8 = 1N5400
D 9 = 1N5400
D 10 - D 22 = 1N4148
D 23 = 1N4007
D 24 = 1N4007
D 25 - D 30 = 1N4148
Dz 1 = Zener 7,5 V ½W
Fuse 1 = 12 A Fast
Fuse 2 = 12 A Fast
Ic 1 = LM 7805
Ic 2 = 74HC4020
Ic 3 = Micro RM3
Tr 1 = BC 547 B
Tr 2 = BC 557 B
Tr 3 = BC 547 B
Tr 4 - Tr 5 = SD 1446
Tr 6 = BD 241
Tr 7 - Tr 14 = BC 547 B
Tr 15 = BC 327
Tr 16 =
Tr 17 = BC 547 B
Tr 18 = BD 241 BFP
Xt 1 = Xtal 11.059 MHz
Scr 1 = P0102
Rl 1 = 3022
Rl 2 = 4152
Rl 3 - Rl 8 = 3022
T 1 = Input Transformer
T 2 = Output Transformer
T 3 = ANRA 700/12
L 1 = ANRA 455
L 2 = FH002110
L 3 = FH002100
L 4 = ANRA 700
L 5 = ANRA 700/1
L 6 = ANRA 700/1
L 7 = ANRA 700/2
L 8 = ANRA 700/2
L 9 = ANRA 700/3
L 10 = ANRA 700/5
L 11 = ANRA 700/6
L 12 = ANRA 700/7
L 13 = ANRA 700/8
L 14 = ANRA 700/9
L 15 = ANRA 700/10
Conn 1 = CQQ/A2/6,3
NTC 1 = 4,7 KΩ ø 5mm

Board A

C 1 = 10 nF 50 V
C 2 = 10 µF 16 V
C 4 = 10 nF 50 V
C 5 = 10 nF 50 V
C 8 = 10 nF 50 V
R 1 = 1,0 KΩ ¼W
R 2 = 8,2 KΩ ¼W
R 3 = 1,0 KΩ ¼W
R 4 = 4,7 KΩ ¼W
Ic 1 = LM 3915
Led 1 - Led 11 = LED

Boar B

S 1 = Switch 1 way 7 positions
Rr 1 = Resistor networks 7 x 220 Ω
Led 1 - Led 7 = LED