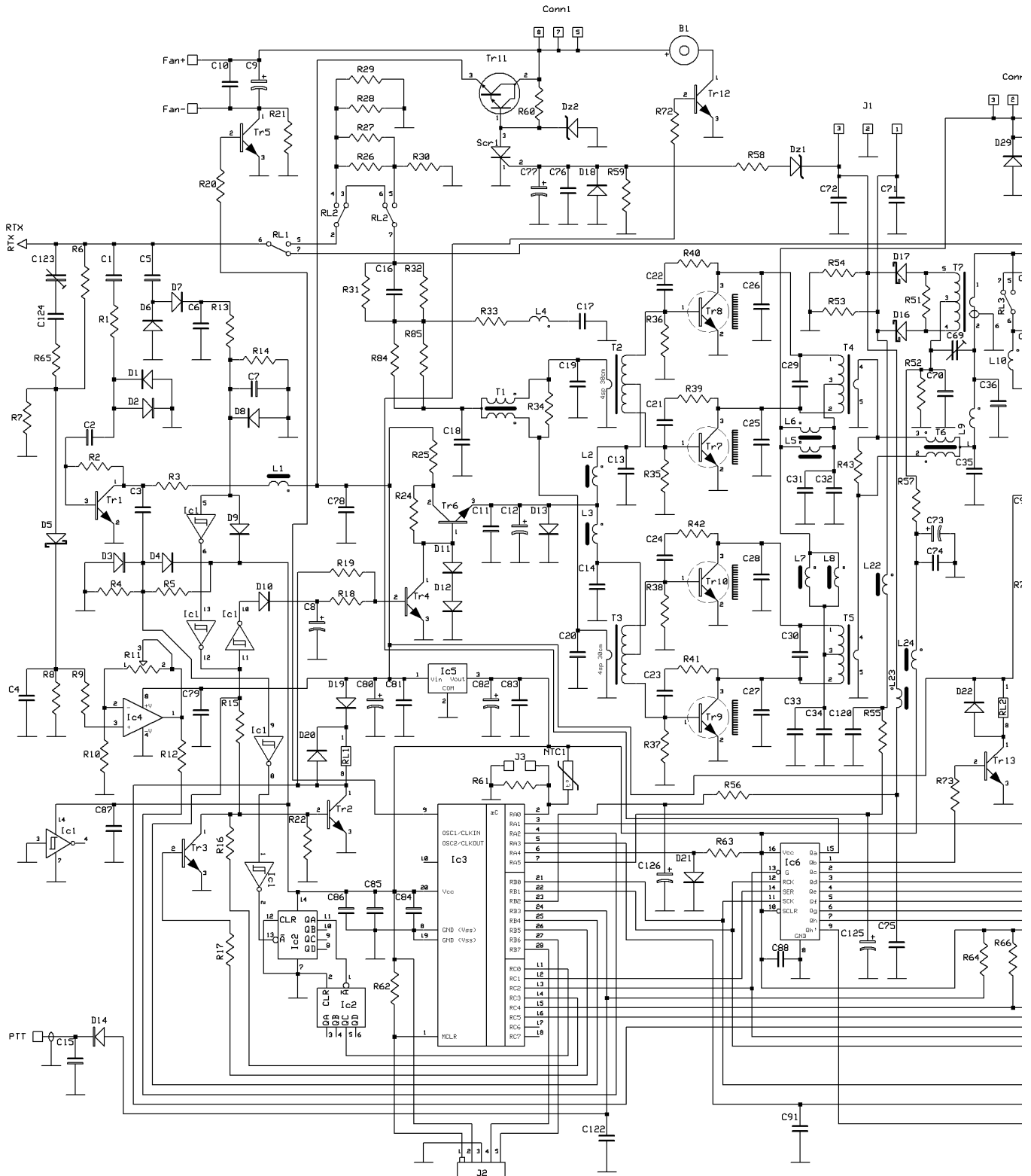
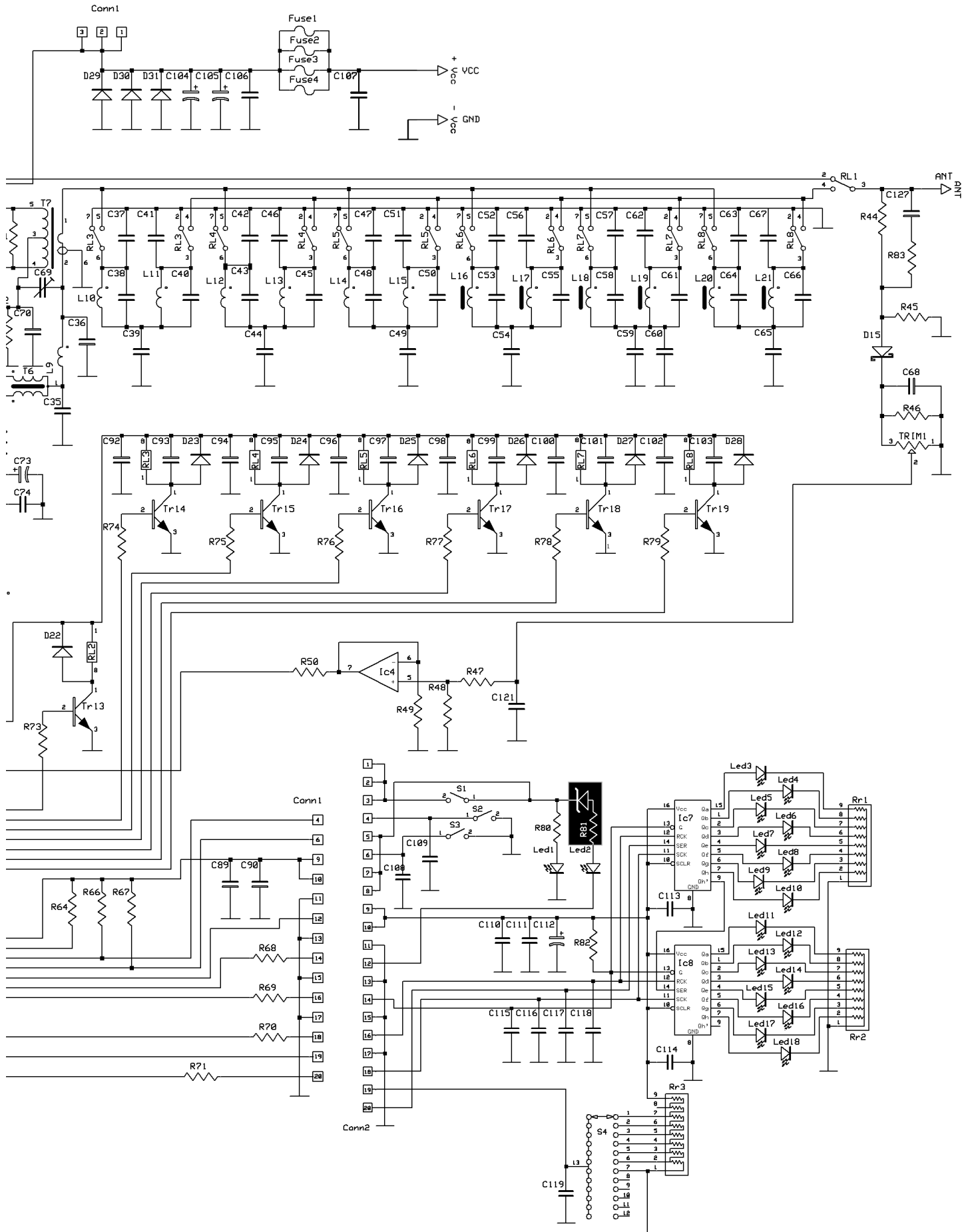


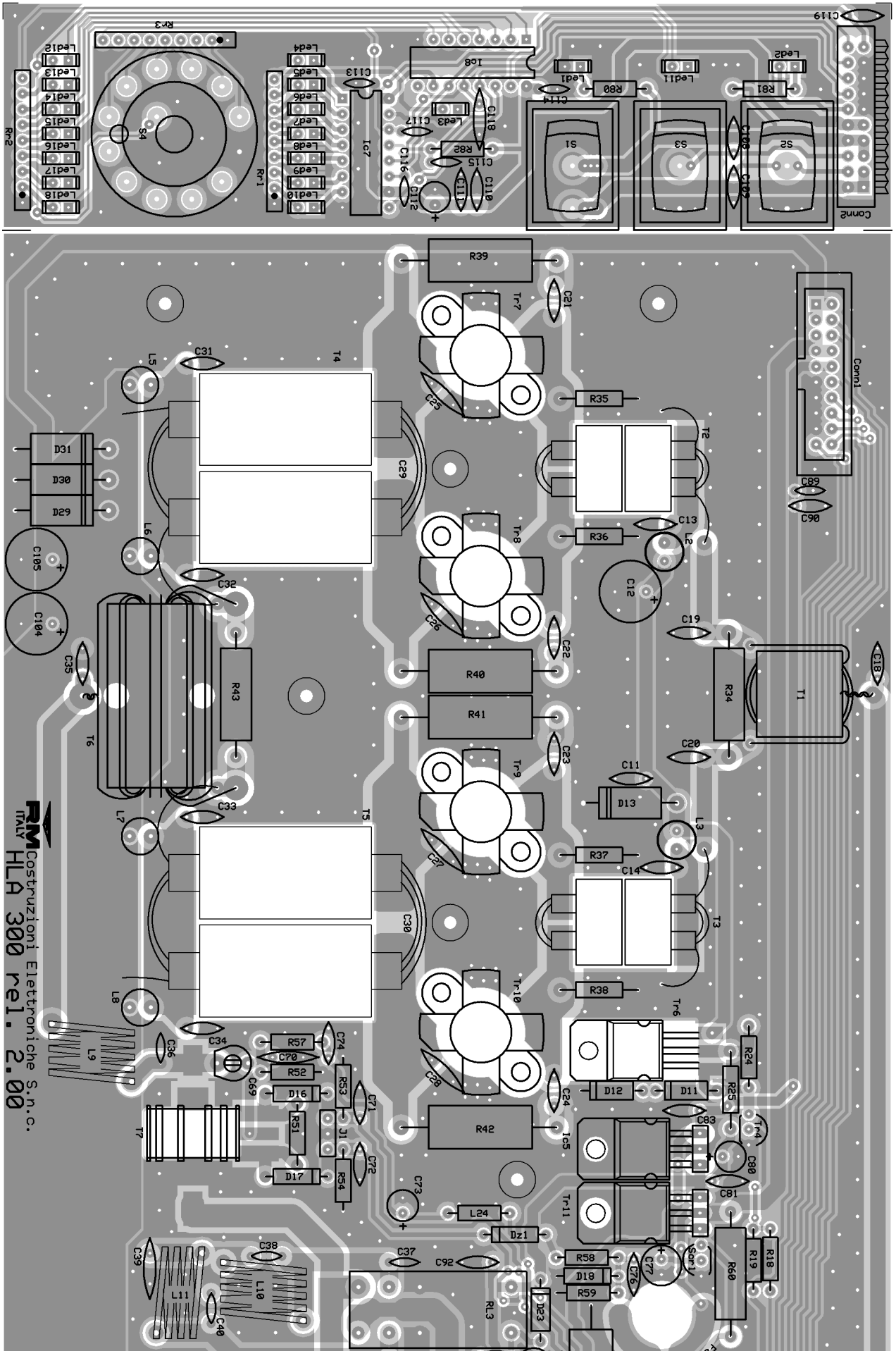
Mod. HLA 300V plus linear amplifier

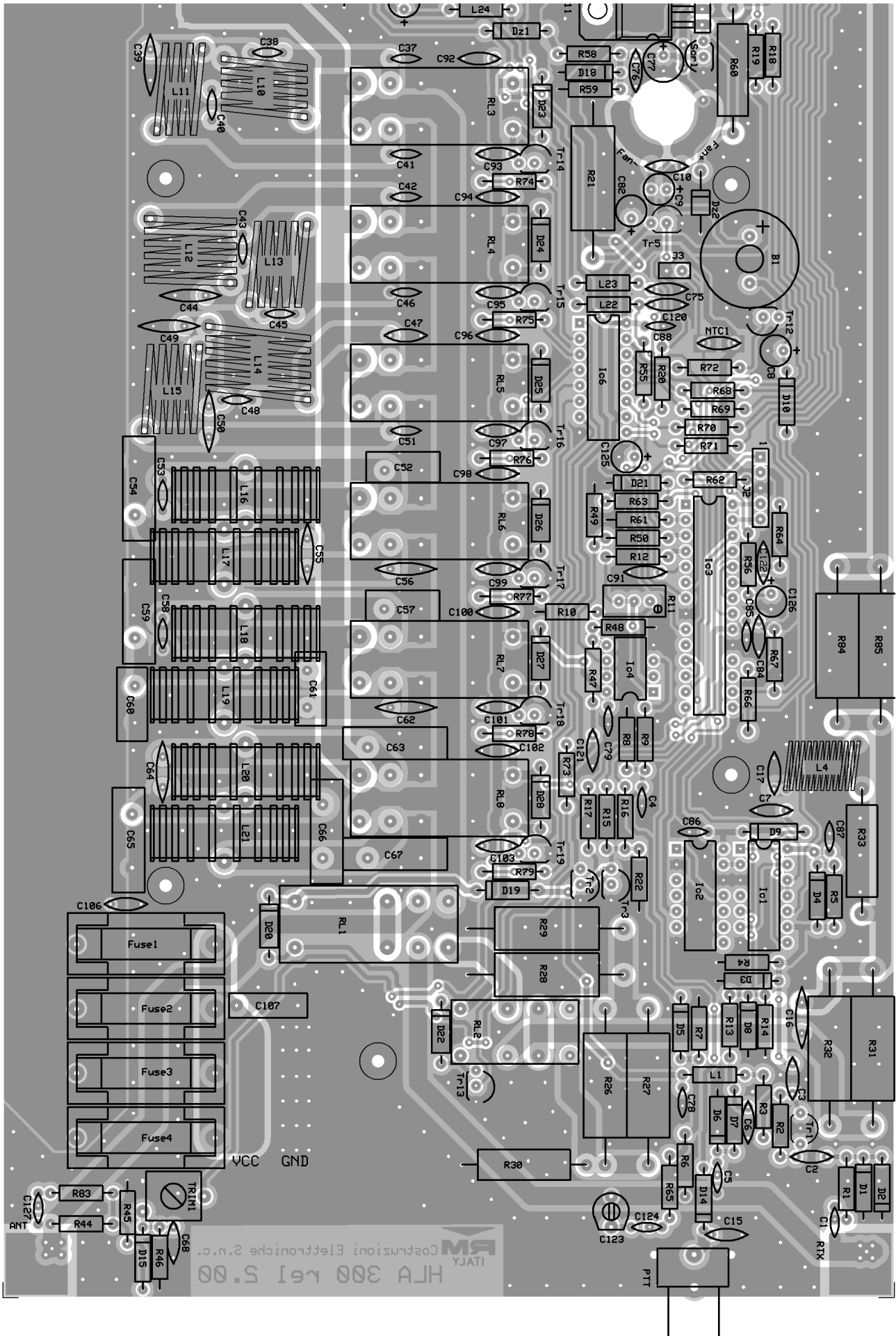
Schematic diagram

Version 2.00









List of components

C ₁	= 10 pF	50 V	NP0	C ₆₀	= 390 pF	500 V	Silvered mica
C ₂	= 100 nF	50 V		C ₆₁	= 330 pF	500 V	Silvered mica
C ₃	= 10 nF	50 V		C ₆₂	= 270 pF	500 V	N750
C ₄	= 1,0 µF	50 V	Multilayer	C ₆₃	= 560 pF	500 V	Silvered mica
C ₅	= 4,7 pF	50 V	NP0	C ₆₄	= 270 pF	500 V	N750
C ₆	= 100 nF	50 V		C ₆₅	= 1600 pF	500 V	Silvered mica
C ₇	= 10 nF	50 V		C ₆₆	= 620 pF	500 V	Silvered mica
C ₈	= 2,2 µF	25 V		C ₆₇	= 560 pF	500 V	Silvered mica
C ₉	= 22 µF	25 V		C ₆₈	= 10 nF	50 V	
C ₁₀	= 100 nF	50 V		C ₆₉	= HCU06C100	3-10 pF (White)	
C ₁₁	= 100 nF	50 V		C ₇₀	= 470 pF	50 V	N750
C ₁₂	= 470 µF	25 V		C ₇₁	= 100 nF	50 V	
C ₁₃	= 100 nF	50 V		C ₇₂	= 100 nF	50 V	
C ₁₄	= 100 nF	50 V		C ₇₃	= 22 µF	25 V	
C ₁₅	= 100 nF	50 V		C ₇₄	= 100 nF	50 V	
C ₁₆	= 220 pF	500 V	N750	C ₇₅	= 100 nF	50 V	
C ₁₇	= 10 nF	50 V		C ₇₆	= 100 nF	50 V	
C ₁₈	= not present			C ₇₇	= 47 µF	25 V	
C ₁₉	= 100 pF	50 V	NP0	C ₇₈	= 220 nF	50 V	Multilayer
C ₂₀	= 100 pF	50 V	NP0	C ₇₉	= 220 nF	50 V	Multilayer
C ₂₁	= 47 nF	50 V		C ₈₀	= 10 µF	25 V	
C ₂₂	= 47 nF	50 V		C ₈₁	= 100 nF	50 V	
C ₂₃	= 47 nF	50 V		C ₈₂	= 22 µF	25 V	
C ₂₄	= 47 nF	50 V		C ₈₃	= 100 nF	50 V	
C ₂₅	= 180 pF	500 V	N750	C ₈₄	= 100 nF	50 V	
C ₂₆	= 180 pF	500 V	N750	C ₈₅	= 220 nF	50 V	Multilayer
C ₂₇	= 180 pF	500 V	N750	C ₈₆	= 220 nF	50 V	Multilayer
C ₂₈	= 180 pF	500 V	N750	C ₈₇	= 220 nF	50 V	Multilayer
C ₂₉	= 560 + 390 pF	500 V	Silvered mica	C ₈₈	= 220 nF	50 V	Multilayer
C ₃₀	= 560 + 390 pF	500 V	Silvered mica	C ₈₉	= 220 nF	50 V	Multilayer
C ₃₁	= 100 nF	50 V		C ₉₀	= 100 nF	50 V	
C ₃₂	= 100 nF	50 V		C ₉₁	= 100 nF	50 V	
C ₃₃	= 100 nF	50 V		C ₉₂	= 100 nF	50 V	
C ₃₄	= 100 nF	50 V		C ₉₃	= 100 nF	50 V	
C ₃₅	= 100 pF	500 V	NP0	C ₉₄	= 100 nF	50 V	
C ₃₆	= 56 pF	500 V	NP0	C ₉₅	= 100 nF	50 V	
C ₃₇	= 47 pF	500 V	NP0	C ₉₆	= 100 nF	50 V	
C ₃₈	= 12 pF	500 V	NP0	C ₉₇	= 100 nF	50 V	
C ₃₉	= 150 pF	500 V	NP0	C ₉₈	= 100 nF	50 V	
C ₄₀	= 39 pF	500 V	NP0	C ₉₉	= 100 nF	50 V	
C ₄₁	= 39 pF	500 V	NP0	C ₁₀₀	= 100 nF	50 V	
C ₄₂	= 82 pF	500 V	NP0	C ₁₀₁	= 100 nF	50 V	
C ₄₃	= 18 pF	500 V	NP0	C ₁₀₂	= 100 nF	50 V	
C ₄₄	= 220 pF	500 V	N750	C ₁₀₃	= 100 nF	50 V	
C ₄₅	= 39 pF	500 V	NP0	C ₁₀₄	= 470 µF	25 V	
C ₄₆	= 68 pF	500 V	NP0	C ₁₀₅	= 470 µF	25 V	
C ₄₇	= 100 pF	500 V	NP0	C ₁₀₆	= 100 nF	50 V	
C ₄₈	= 56 pF	500 V	NP0	C ₁₀₇	= 470 nF	100 V	Polyester
C ₄₉	= 220 pF	500 V	N750	C ₁₀₈	= 100 nF	50 V	
C ₅₀	= 180 pF	500 V	N750	C ₁₀₉	= 100 nF	50 V	
C ₅₁	= 22 pF	500 V	NP0	C ₁₁₀	= 10 nF	50 V	
C ₅₂	= 390 pF	500 V	Silvered mica	C ₁₁₁	= 100 nF	50 V	
C ₅₃	= 56 pF	500 V	NP0	C ₁₁₂	= 22 µF	25 V	
C ₅₄	= 620 pF	500 V	Silvered mica	C ₁₁₃	= 220 nF	50 V	Multilayer
C ₅₅	= 180 pF	500 V	N750	C ₁₁₄	= 220 nF	50 V	Multilayer
C ₅₆	= 180 pF	500 V	N750	C ₁₁₅	= 1,0 nF	50 V	
C ₅₇	= 390 pF	500 V	Silvered mica	C ₁₁₆	= 1,0 nF	50 V	
C ₅₈	= 68 pF	500 V	NP0	C ₁₁₇	= 1,0 nF	50 V	
C ₅₉	= 560 pF	500 V	Silvered mica	C ₁₁₈	= 470 pF	50 V	N750
				C ₁₁₉	= 100 nF	50 V	

C 120 = 100 nF	50 V	R 54 = 22 K Ω	1/4W
C 121 = 100 nF	50 V	R 55 = 2,2 K Ω	1/4W
C 122 = 100 nF	50 V	R 56 = 2,2 K Ω	1/4W
C 123 = HCU06C100	1-5 pF (Blue)	R 57 = 22 K Ω	1/4W
C 124 = 1,0 pF	50 V	R 58 = 470 Ω	1/4W
C 125 = 22 μ F	25 V	R 59 = 10 K Ω	1/4W
C 126 = 22 μ F	25 V	R 60 = 330 Ω	2W
C 127 = 1,0 pF	50 V	R 61 = 4,7 K Ω	1/4W
R 1 = 22 K Ω	1/4W	R 62 = 4,7 K Ω	1/4W
R 2 = 47 K Ω	1/4W	R 63 = 4,7 K Ω	1/4W
R 3 = 1,0 K Ω	1/4W	R 64 = 4,7 K Ω	1/4W
R 4 = 100 K Ω	1/4W	R 65 = 2,2 K Ω	1/4W
R 5 = 100 K Ω	1/4W	R 66 = 4,7 K Ω	1/4W
R 6 = 22 K Ω	1/4W	R 67 = 4,7 K Ω	1/4W
R 7 = 4,7 K Ω	1/4W	R 68 = 47 Ω	1/4W
R 8 = 4,7 K Ω	1/4W	R 69 = 47 Ω	1/4W
R 9 = 10 K Ω	1/4W	R 70 = 47 Ω	1/4W
R 10 = 10 K Ω	1/4W	R 71 = 47 Ω	1/4W
R 11 = 10 K Ω	multi-turn trimmer	R 72 = 4,7 K Ω	1/4W
R 12 = 1,0 K Ω	1/4W	R 73 = 4,7 K Ω	1/4W
R 13 = 10 K Ω	1/4W	R 74 = 4,7 K Ω	1/4W
R 14 = 1,0 M Ω	1/4W	R 75 = 4,7 K Ω	1/4W
R 15 = 4,7 K Ω	1/4W	R 76 = 4,7 K Ω	1/4W
R 16 = 4,7 K Ω	1/4W	R 77 = 4,7 K Ω	1/4W
R 17 = 4,7 K Ω	1/4W	R 78 = 4,7 K Ω	1/4W
R 18 = 10 K Ω	1/4W	R 79 = 4,7 K Ω	1/4W
R 19 = 10 K Ω	1/4W	R 80 = 1,0 K Ω	1/4W
R 20 = 1,0 K Ω	1/4W	R 81 = 220 Ω	1/4W + Zener 5,1V 1/2W
R 21 = 33 Ω	5W	R 82 = 4,7 K Ω	1/4W
R 22 = 10 K Ω	1/4W	R 83 = 6,8 K Ω	1/4W
R 24 = 680 Ω	1/4W	R 84 = 33 Ω	5W
R 25 = 1,0 Ω	1/2W	R 85 = 33 Ω	5W
R 26 = 33 Ω	5W	Rr 1 = 8 x 270 Ω	1/8 W
R 27 = 33 Ω	5W	Rr 2 = 8 x 270 Ω	1/8 W
R 28 = 470 Ω	5W	Rr 3 = 8 x 470 Ω	1/8 W
R 29 = 470 Ω	5W	NTC 1 = 4,7 K Ω	
R 30 = 330 Ω	2W	Trim 1 = 220 K Ω PT10LV	
R 31 = 33 Ω	5W	B 1 = Buzzer 12V ARIMB12A12	
R 32 = 33 Ω	5W	D 1 to D 4 = 1N4148	
R 33 = 100 Ω	2W	D 5 = 1N5711	
R 34 = 100 Ω	2W	D 6 to D 10 = 1N4148	
R 35 = 10 Ω	1/2W	D 11 to D 12 = 1N4007	
R 36 = 10 Ω	1/2W	D 13 = 1N5400	
R 37 = 10 Ω	1/2W	D 14 = 1N4148	
R 38 = 10 Ω	1/2W	D 15 to D 17 = 1N5711	
R 39 = 68 Ω	5W	D 18 = 1N4148	
R 40 = 68 Ω	5W	D 19 to D 20 = 1N4007	
R 41 = 68 Ω	5W	D 21 = 1N4148	
R 42 = 68 Ω	5W	D 22 to D 28 = 1N4007	
R 43 = 100 Ω	2W	D 29 to D 31 = 1N5400	
R 44 = 100 K Ω	1/4W	DZ1 = Zener 5,1 V	1/2W
R 45 = 12 K Ω	1/4W	DZ2 = Zener 10 V	1W
R 46 = 47 K Ω	1/4W	Led 1 = green	
R 47 = 4,7 K Ω	1/4W	Led 2 to Led 3 = red	
R 48 = 10 K Ω	1/4W	Led 4 to Led 10 = green	
R 49 = 10 K Ω	1/4W	Led 11 = yellow	
R 50 = 1,0 K Ω	1/4W	Led 12 to Led 17 = green	
R 51 = 47 Ω	1/4W	Led 18 = yellow	
R 52 = 1,0 K Ω	1/4W	Fuse 1 to Fuse 4 = 10 A Fast	
R 53 = 22 K Ω	1/4W	Ic 1 = 74HC14	

Ic 2 = 74HC393
Ic 3 = Micro RM20
Ic 4 = LM358
Ic 5 = LM 7805
Ic 6 = 74HC595
Ic 7 = 74HC595
Ic 8 = 74HC595
Tr 1 = BF199
Tr 2 to Tr 4 = BC 547 B
Tr 5 = BC 337-25
Tr 6 = BD241BFP
Tr 7 - Tr 10 = SD 1446
Tr 11 = BDX53BFP
Tr 12 - Tr 19 = BC 547 B
Scr 1 = P0102
Rl 1 = 4152.9.012
Rl 2 = 3022.9.012
Rl 3 to Rl 8 = 4152.9.012
T 1 = Input Decoupler Transformer
T 2 and T 3 = Input Transformers
T 4 and T 5 = Output Transformers
T 6 = Output Coupler Transformer
T 7 = ANRA 700/12
L 1 = 10 μ H
L 2 and L 3 = FH002100
L 4 = ANRA883
L 5 to L 8 = FH002110
L 9 = ANRA 856/1
L 10 = ANRA 856/1
L 11 = ANRA 856
L 12 = ANRA 856/2
L 13 = ANRA 856/1
L 14 = ANRA 856/4
L 15 = ANRA 856/3
L 16 = ANRA 725/5
L 17 = ANRA 725/4
L 18 = ANRA 725/7
L 19 = ANRA 725/6
L 20 = ANRA 725/9
L 21 = ANRA 725/8
L 22 = 10 μ H
L 23 = 10 μ H
L 24 = 10 μ H
PTT = GP305522
S 1 = JS606A 10A
S 2 = JS606A 10A
S 3 = JS606A 10A
S 4 = BL200012