RM Costruzioni Elettroniche
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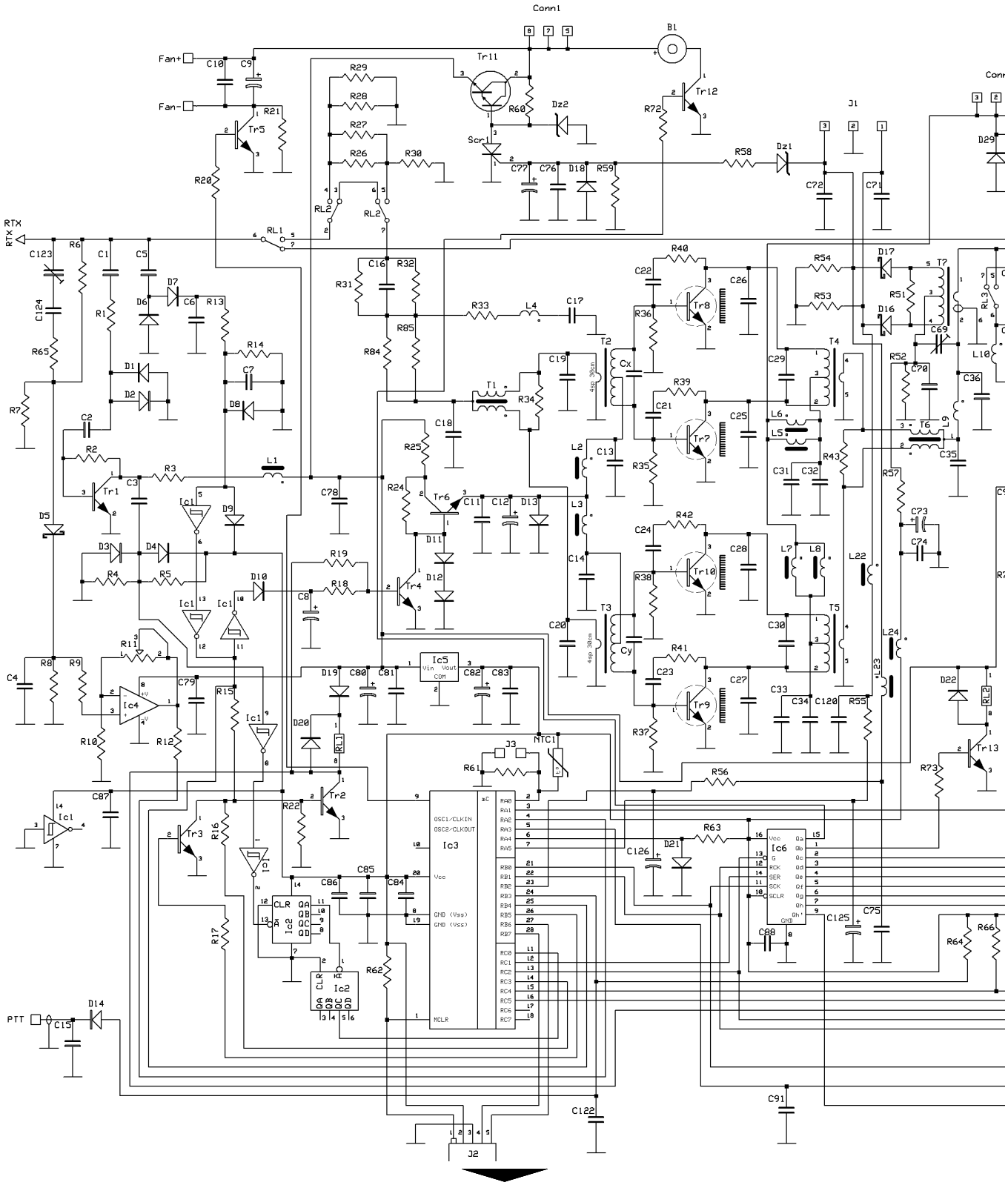
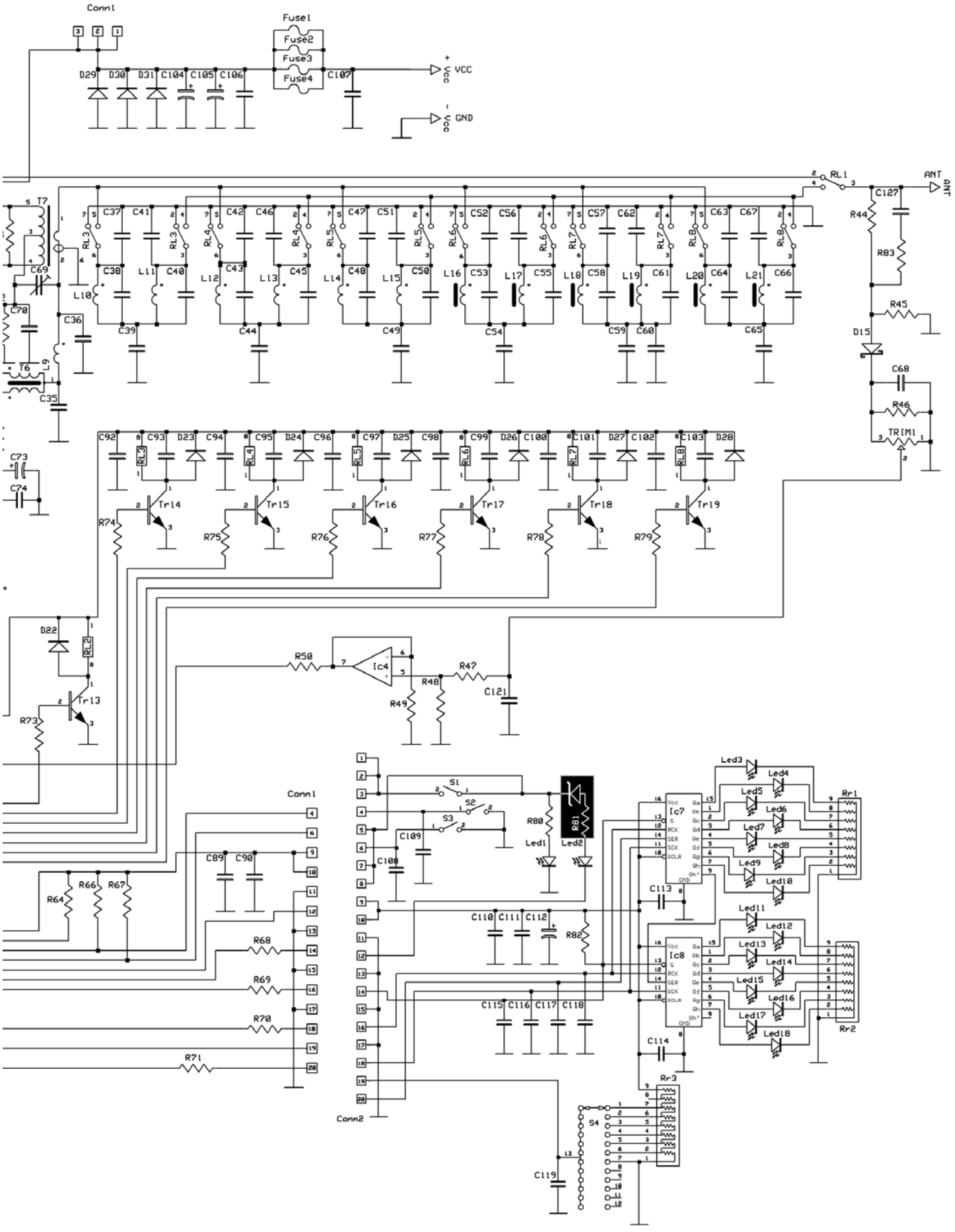
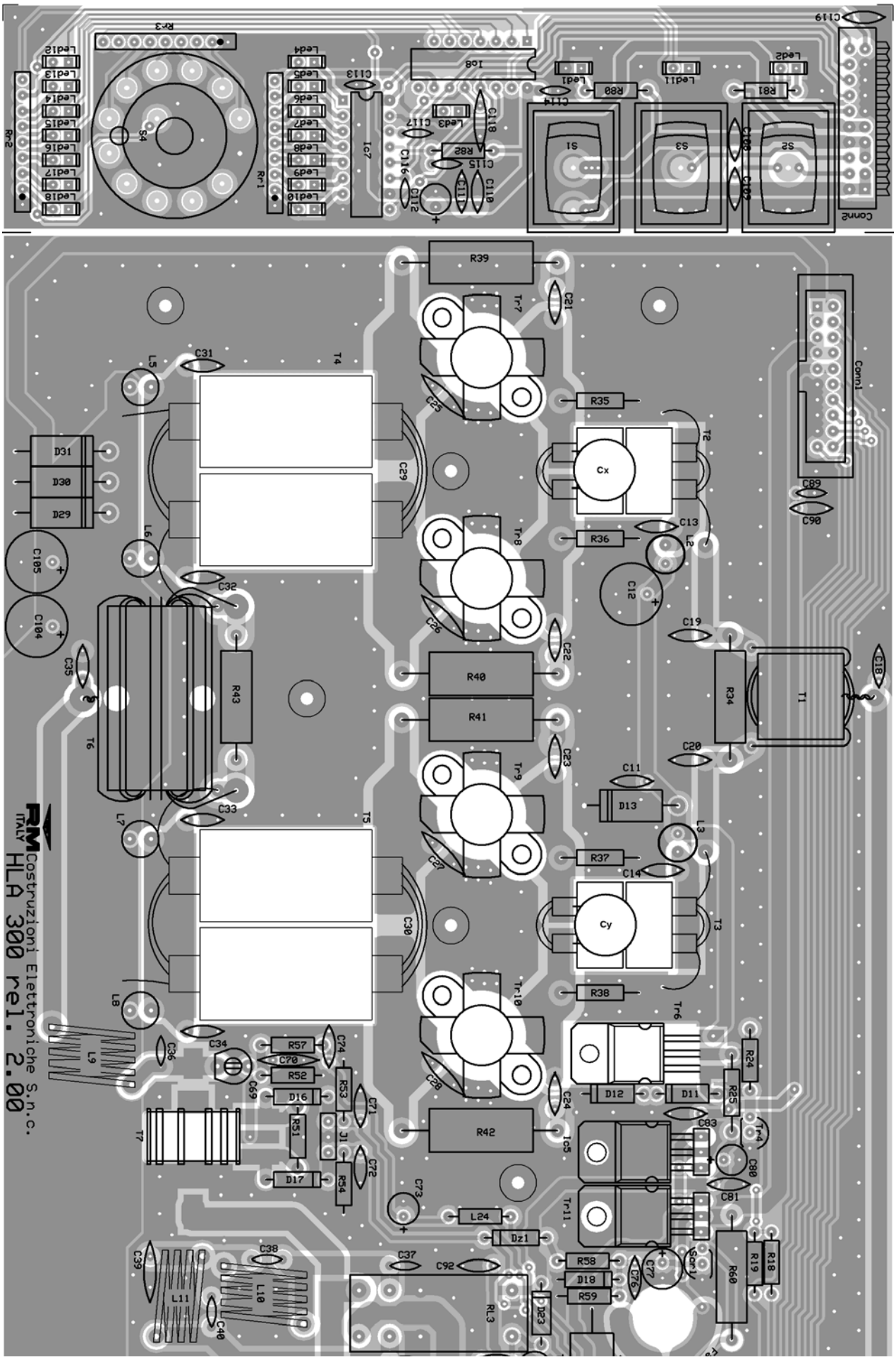
Mod. HLA 300V plus linear amplifier

Schematic diagram

Version 2.01




Conn1
Fuse1
Fuse2
Fuse3
Fuse4
D29 D30 D31 C104 C105 C106 C107
+ Vcc VCC
- Vcc GND
T7 C69 C70 C36 T6 L9 C35
RL1 ANT C127 R44 R83 R45 D15 C68 R46 TRIM1
RL3 C37 C41 C38 L11 C40 C39
RL4 C42 C46 L12 C43 L13 C45 C44
RL5 C47 C51 L14 C48 L15 C50 C49
RL6 C52 C56 L16 C53 L17 C55 C54
RL7 C57 C62 L18 C58 L19 C61 C59 C60
RL8 C63 C67 L20 C64 L21 C66 C65
L10
C92 C93 D23 C94 C95 D24 C96 C97 D25 C98 C99 D26 C100 C101 D27 C102 C103 D28
C73 C74
Tr14 Tr15 Tr16 Tr17 Tr18 Tr19
R74 R75 R76 R77 R78 R79
D22 RL2 Tr13 R73
R50 Ic4 R47 R48 R49 C121
Conn1
S1 S2 S3
C109 C108
R80 R81 Led1 Led2
C89 C90
R64 R66 R67
R68 R69 R70 R71
C110 C111 C112 R82
C115 C116 C117 C118
Ic7 Ic8
Led3 Led4 Led5 Led6 Led7 Led8 Led9 Led10 Led11 Led12 Led13 Led14 Led15 Led16 Led17 Led18
Rr1 Rr2 Rr3
C113 C114
Conn2
S4
C119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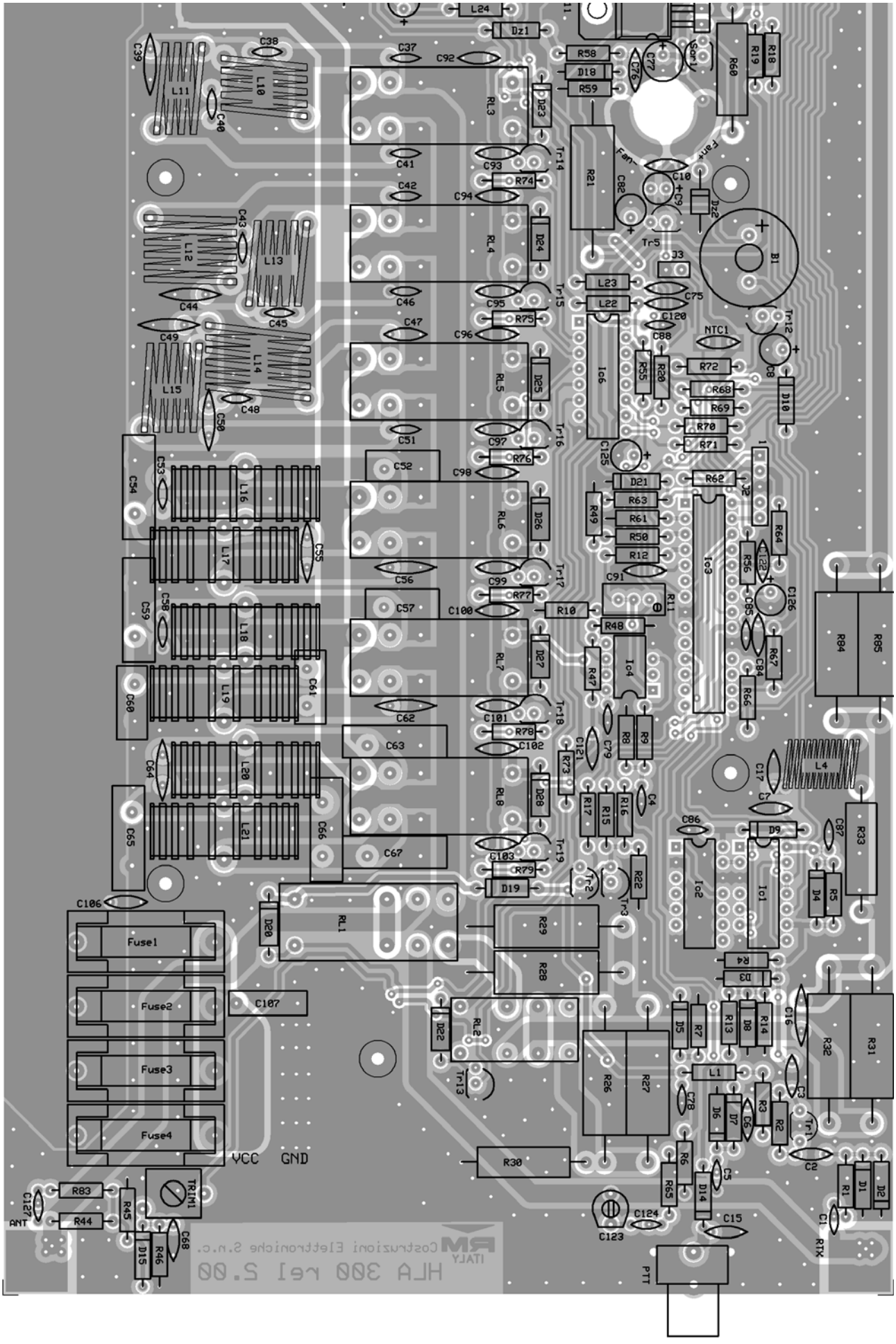
ITALY
HLA 300 rel. 2.00


L24
Dz1
C37
C92
R58
D18
R59
C77
C76
Fan-
R60
R19
R18
C38
C39
L11
L10
C40
RL3
D23
Tr14
C41
C93
R74
C42
C94
RL4
D24
Fan+
R21
C82
C10
C9
Dz2
B1
Tr5
J3
C43
L12
L13
C44
C45
L23
L22
C75
C120
Tr15
C46
C95
R75
C47
C96
RL5
D25
Ic6
C88
NTC1
R55
R20
R72
R68
R69
R70
R71
Tr12
C8
D10
C49
L14
L15
C48
C50
C51
C97
R76
Tr16
C125
C52
C98
D21
R62
J2
C53
C54
L16
L17
C55
RL6
D26
R49
R63
R61
R50
R12
R64
C122
R36
C85
C126
C56
C99
R77
Tr17
C91
R11
C57
C100
R10
R48
Ic3
R84
R85
C58
C59
L18
L19
C61
C60
RL7
D27
R47
Ic4
R67
C84
R66
C62
C101
R78
Tr18
C121
C79
R8
R9
C63
C102
R73
C64
L20
L21
C66
C65
RL8
D28
R17
R15
R16
C4
C17
C7
L4
C86
D9
C87
R33
C67
C103
R79
Tr19
Tr2
Tr3
R22
D4
R5
Ic2
Ic1
C106
Fuse1
RL1
D20
R29
R28
R4
R3
Fuse2
C107
D22
RL2
D5
R7
R13
D8
R14
C16
R32
R31
Fuse3
Tr13
L1
C78
C3
D6
D7
D6
R3
R2
Tr1
Fuse4
VCC
GND
R26
R27
R30
R6
R65
D14
C5
C2
R1
D1
D2
TRIM1
R83
C127
ANT
R44
R45
R46
D15
C68
C123
C124
C15
C1
RTX
PTT

List of components

C 1	= 10 pF	50 V	NP0
C 2	= 100 nF	50 V	
C 3	= 10 nF	50 V	
C 4	= 1,0 µF	50 V	Multilayer
C 5	= 4,7 pF	50 V	NP0
C 6	= 100 nF	50 V	
C 7	= 10 nF	50 V	
C 8	= 2,2 µF	25 V	
C 9	= 22 µF	25 V	
C 10	= 100 nF	50 V	
C 11	= 100 nF	50 V	
C 12	= 470 µF	25 V	
C 13	= 100 nF	50 V	
C 14	= 100 nF	50 V	
C 15	= 100 nF	50 V	
C 16	= 330 pF	500 V	Silveredmica
C 17	= 10 nF	50 V	
C 18	= not present		
C 19	= 100 pF	50 V	NP0
C 20	= 100 pF	50 V	NP0
C 21	= 47 nF	50 V	
C 22	= 47 nF	50 V	
C 23	= 47 nF	50 V	
C 24	= 47 nF	50 V	
C 25	= 180 pF	500 V	N750
C 26	= 180 pF	500 V	N750
C 27	= 180 pF	500 V	N750
C 28	= 180 pF	500 V	N750
C 29	= 560 + 390 pF	500 V	Silveredmica
C 30	= 560 + 390 pF	500 V	Silveredmica
C 31	= 100 nF	50 V	
C 32	= 100 nF	50 V	
C 33	= 100 nF	50 V	
C 34	= 100 nF	50 V	
C 35	= 120 pF	500 V	NP0
C 36	= 56 pF	500 V	NP0
C 37	= 47 pF	500 V	NP0
C 38	= 12 pF	500 V	NP0
C 39	= 150 pF	500 V	NP0
C 40	= 39 pF	500 V	NP0
C 41	= 39 pF	500 V	NP0
C 42	= 82 pF	500 V	NP0
C 43	= 18 pF	500 V	NP0
C 44	= 220 pF	500 V	N750
C 45	= 39 pF	500 V	NP0
C 46	= 68 pF	500 V	NP0
C 47	= 100 pF	500 V	NP0
C 48	= 56 pF	500 V	NP0
C 49	= 220 pF	500 V	N750
C 50	= 180 pF	500 V	N750
C 51	= 22 pF	500 V	NP0
C 52	= 390 pF	500 V	Silveredmica
C 53	= 56 pF	500 V	NP0
C 54	= 620 pF	500 V	Silveredmica
C 55	= 180 pF	500 V	N750
C 56	= 180 pF	500 V	N750
C 57	= 390 pF	500 V	Silveredmica
C 58	= 68 pF	500 V	NP0
C 59	= 560 pF	500 V	Silveredmica
C 60	= 390 pF	500 V	Silveredmica
C 61	= 330 pF	500 V	Silveredmica
C 62	= 270 pF	500 V	N750
C 63	= 560 pF	500 V	Silveredmica
C 64	= 270 pF	500 V	N750
C 65	= 1600 pF	500 V	Silveredmica
C 66	= 620 pF	500 V	Silveredmica
C 67	= 560 pF	500 V	Silveredmica
C 68	= 10 nF	50 V	
C 69	= HCU06C100 3-10 pF (White)		
C 70	= 470 pF	50 V	N750
C 71	= 100 nF	50 V	
C 72	= 100 nF	50 V	
C 73	= 22 µF	25 V	
C 74	= 100 nF	50 V	
C 75	= 100 nF	50 V	
C 76	= 100 nF	50 V	
C 77	= 47 µF	25 V	
C 78	= 220 nF	50 V	Multilayer
C 79	= 220 nF	50 V	Multilayer
C 80	= 10 µF	25 V	
C 81	= 100 nF	50 V	
C 82	= 22 µF	25 V	
C 83	= 100 nF	50 V	
C 84	= 100 nF	50 V	
C 85	= 220 nF	50 V	Multilayer
C 86	= 220 nF	50 V	Multilayer
C 87	= 220 nF	50 V	Multilayer
C 88	= 220 nF	50 V	Multilayer
C 89	= 220 nF	50 V	Multilayer
C 90	= 100 nF	50 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	= 100 nF	50 V	
C 96	= 100 nF	50 V	
C 97	= 100 nF	50 V	
C 98	= 100 nF	50 V	
C 99	= 100 nF	50 V	
C 100	= 100 nF	50 V	
C 101	= 100 nF	50 V	
C 102	= 100 nF	50 V	
C 103	= 100 nF	50 V	
C 104	= 470 µF	25 V	
C 105	= 470 µF	25 V	
C 106	= 100 nF	50 V	
C 107	= 470 nF	100 V	Polyester
C 108	= 100 nF	50 V	
C 109	= 100 nF	50 V	
C 110	= 10 nF	50 V	
C 111	= 100 nF	50 V	
C 112	= 22 µF	25 V	
C 113	= 220 nF	50 V	Multilayer
C 114	= 220 nF	50 V	Multilayer
C 115	= 1,0 nF	50 V	
C 116	= not present		
C 117	= 1,0 nF	50 V	
C 118	= 470 pF	50 V	N750
C 119	= 100 nF	50 V	

C 120 = 100 nF 50 V
C 121 = 100 nF 50 V
C 122 = 100 nF 50 V
C 123 = HCU06C100 1-5 pF (Blue)
C 124 = 1,0 pF 50 V
C 125 = 22 µF 25 V
C 126 = 22 µF 25 V
C 127 = 1,0 pF 50 V
Cx = 470 pF 50 V
Cy = 470 pF 50V
R 1 = 22 KΩ ¼W
R 2 = 47 KΩ ¼W
R 3 = 1,0 KΩ ¼W
R 4 = 100 KΩ ¼W
R 5 = 100 KΩ ¼W
R 6 = 22 KΩ ¼W
R 7 = 4,7 KΩ ¼W
R 8 = 4,7 KΩ ¼W
R 9 = 10 KΩ ¼W
R 10 = 10 KΩ ¼W
R 11 = 10 KΩ multi-turn trimmer
R 12 = 1,0 KΩ ¼W
R 13 = 10 KΩ ¼W
R 14 = 1,0 MΩ ¼W
R 15 = 4,7 KΩ ¼W
R 16 = 4,7 KΩ ¼W
R 17 = 4,7 KΩ ¼W
R 18 = 10 KΩ ¼W
R 19 = 10 KΩ ¼W
R 20 = 1,0 KΩ ¼W
R 21 = 33 Ω 5W
R 22 = 10 KΩ ¼W
R 24 = 820Ω ¼W
R 25 = 1,0 Ω ½W
R 26 = 33 Ω 5W
R 27 = 33 Ω 5W
R 28 = 470 Ω 5W
R 29 = 470 Ω 5W
R 30 = 330 Ω 2W
R 31 = 33 Ω 5W
R 32 = 33 Ω 5W
R 33 = 100 Ω 2W
R 34 = 100 Ω 2W
R 35 = 10 Ω ½W
R 36 = 10 Ω ½W
R 37 = 10 Ω ½W
R 38 = 10 Ω ½W
R 39 = 68 Ω 5W
R 40 = 68 Ω 5W
R 41 = 68 Ω 5W
R 42 = 68 Ω 5W
R 43 = 100 Ω 2W
R 44 = 100 KΩ ¼W
R 45 = 12 KΩ ¼W
R 46 = 47 KΩ ¼W
R 47 = 4,7 KΩ ¼W
R 48 = 10 KΩ ¼W
R 49 = 10 KΩ ¼W
R 50 = 1,0 KΩ ¼W
R 51 = 47 Ω ¼W
R 52 = 1,0 KΩ ¼W
R 53 = 22 KΩ ¼W
R 54 = 22 KΩ ¼W
R 55 = 2,2 KΩ ¼W
R 56 = 2,2 KΩ ¼W
R 57 = 22 KΩ ¼W
R 58 = 470 Ω ¼W
R 59 = 10 KΩ ¼W
R 60 = 330 Ω 2W
R 61 = 4,7 KΩ ¼W
R 62 = 4,7 KΩ ¼W
R 63 = 4,7 KΩ ¼W
R 64 = 4,7 KΩ ¼W
R 65 = 2,2 KΩ ¼W
R 66 = 4,7 KΩ ¼W
R 67 = 4,7 KΩ ¼W
R 68 = 47 Ω ¼W
R 69 = 47 Ω ¼W
R 70 = 47 Ω ¼W
R 71 = 47 Ω ¼W
R 72 = 4,7 KΩ ¼W
R 73 = 4,7 KΩ ¼W
R 74 = 4,7 KΩ ¼W
R 75 = 4,7 KΩ ¼W
R 76 = 4,7 KΩ ¼W
R 77 = 4,7 KΩ ¼W
R 78 = 4,7 KΩ ¼W
R 79 = 4,7 KΩ ¼W
R 80 = 1,0 KΩ ¼W
R 81 = 220 Ω ¼W + Zener 5,1V ½W
R 82 = 4,7 KΩ ¼W
R 83 = 6,8 KΩ ¼W
R 84 = 33 Ω 5W
R 85 = 33 Ω 5W
Rr 1 = 8 x 270 Ω 1/8 W
Rr 2 = 8 x 270 Ω 1/8 W
Rr 3 = 8 x 470 Ω 1/8 W
NTC 1= 4,7 KΩ
Trim 1 = 220 KΩ PT10LV
B 1 = Buzzer 12V ARIMB12A12
D 1 to D 4 = 1N4148
D 5 = 1N5711
D 6 to D 10 = 1N4148
D 11 to D 12 = 1N4007
D 13 = 1N5400
D 14 = 1N4148
D 15 to D 17 = 1N5711
D 18 = 1N4148
D 19 to D 20 = 1N4007
D 21 = not present
D 22 to D 28 = 1N4007
D 29 to D 31 = 1N5400
Dz 1 = Zener 5,1 V ½W
Dz 2 = Not present
Led 1 = green
Led 2 to Led 3 = red
Led 4 to Led 10 = green
Led 11 = yellow
Led 12 to Led 17 = green
Led 18 = yellow

Fuse 1 to Fuse 4 = 10 A Fast
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 µH
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 µH
L 23 = 10 µH
L 24 = 10 µH
PTT = GP305522

S 1 = JS606A 10A
S 2 = JS606A 10A
S 3 = JS606A 10A
S 4 = BL200012