Mod. HLA 150 linear amplifier

Schematic diagram
List of components

| C 1  | 8.2 pF | 50 V | NP0          |
| C 2  | 8.2 pF | 50 V | NP0          |
| C 3  | 15 pF  | 50 V | NP0          |
| C 4  | 100 nF | 50 V | NP0          |
| C 5  | 2.2 μF | 16 V |             |
| C 6  | 33 μF  | 16 V |             |
| C 7  | 10 nF  | 50 V |             |
| C 8  | 100 nF | 50 V |             |
| C 9  | 100 nF | 50 V |             |
| C 10 | 3 - 10 pF |     | 50 V | NP0          |
| C 11 | 100 nF | 50 V |             |
| C 12 | 10 nF  | 50 V |             |
| C 13 | 150 pF | 50 V |             |
| 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 |             |
| C 23 | 470 pF | 50 V | N750        |
| C 24 | 12 pF  | 500 V | NP0       |
| C 25 | 18 pF  | 500 V | NP0       |
| C 26 | 120 pF | 500 V | NP0       |
| C 27 | 56 pF  | 500 V | NP0       |
| C 28 | 56 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 | 22 μF  | 25 V  |
| C 67 | 470 μF | 25 V  |
| C 68 | 100 nF | 50 V  |
| C 69 | 470 nF | 63 V  | Polyester  |
| C 70 | 100 nF | 50 V  | Polyester  |
| C 71 | 100 nF | 50 V  |
| C 72 | 10 nF  | 50 V  |
| C 73 | 100 nF | 50 V  |
| C 74 | 100 nF | 50 V  |
| C 75 | 100 nF | 50 V  |
| C 76 | 10 μF  | 25 V  |
| C 77 | 10 μF  | 25 V  |
| C 78 | 10 μF  | 25 V  |
| C 79 | 10 μF  | 25 V  |
| C 80 | 10 μF  | 25 V  |
| C 81 | 10 μF  | 25 V  |
| C 82 | 10 μF  | 25 V  |
| C 83 | 10 μF  | 25 V  |
| C 84 | 10 μF  | 25 V  |
| C 85 | 10 μF  | 25 V  |
| C 86 | 10 μF  | 25 V  |
| C 87 | 10 μF  | 25 V  |
| C 88 | 10 μF  | 25 V  |
| C 89 | 10 μF  | 25 V  |
| C 90 | 10 μF  | 25 V  |
| C 91 | 10 μF  | 25 V  |
| C 92 | 10 μF  | 25 V  |
| C 93 | 10 μF  | 25 V  |
| C 94 | 10 μF  | 25 V  |
| C 95 | 10 μF  | 25 V  |
| C 96 | 10 μF  | 25 V  |
| C 97 | 10 μF  | 25 V  |
| C 98 | 10 μF  | 25 V  |
| C 99 | 10 μF  | 25 V  |
| C 100| 10 μF  | 25 V  |
| R 1  | 2,2 KΩ | ½W   |
| R 2  | 4,7 KΩ | ½W   |
| R 3  | 4,7 KΩ | ½W   |
| R 4  | 10 KΩ  | ½W   |
| R 5  | 2,2 KΩ | ½W   |
| R 6  | 1,0 KΩ | ½W   |
| R 7  | 2,2 KΩ | ¼W   |
| R 8  | 1,0 KΩ | 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 | 39 Ω   | 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 21 | 330 Ω  | 2W   |
| R 22 | 27 Ω   | ½W   |
| 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 ARIMB 12A12
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
R1 = 3022
R2 = 4152
R13 - R18 = 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 = 5 sp filo ø 1,0 su 3 L PFR 68
L 5 = 4 sp filo ø 1,0 su 3 L PFR 68
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
IC 1 = CQQA2/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

Board B

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