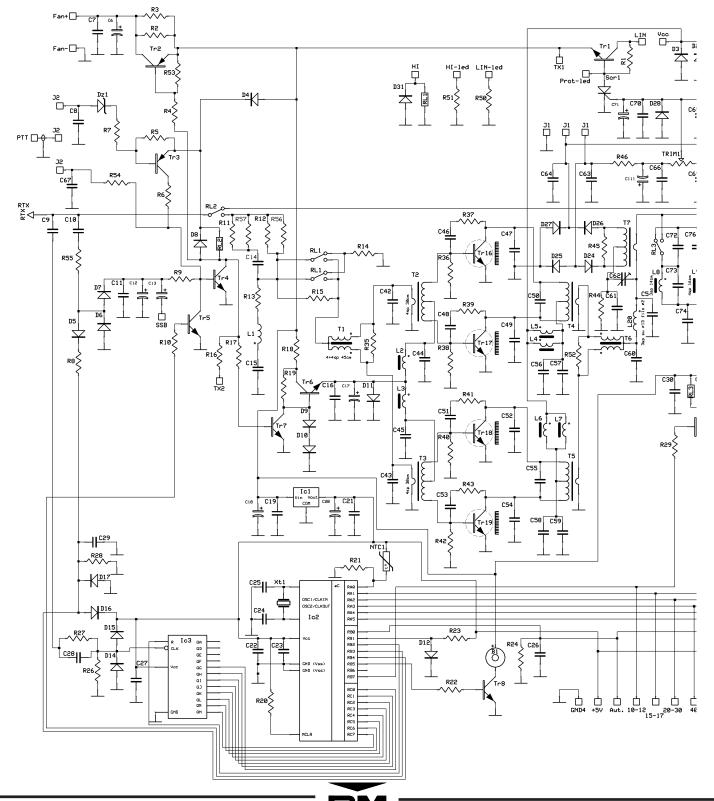
Via IV Novembre 215/5 Casella postale N° 33 40045 Ponte della Venturina (BO) ITALY

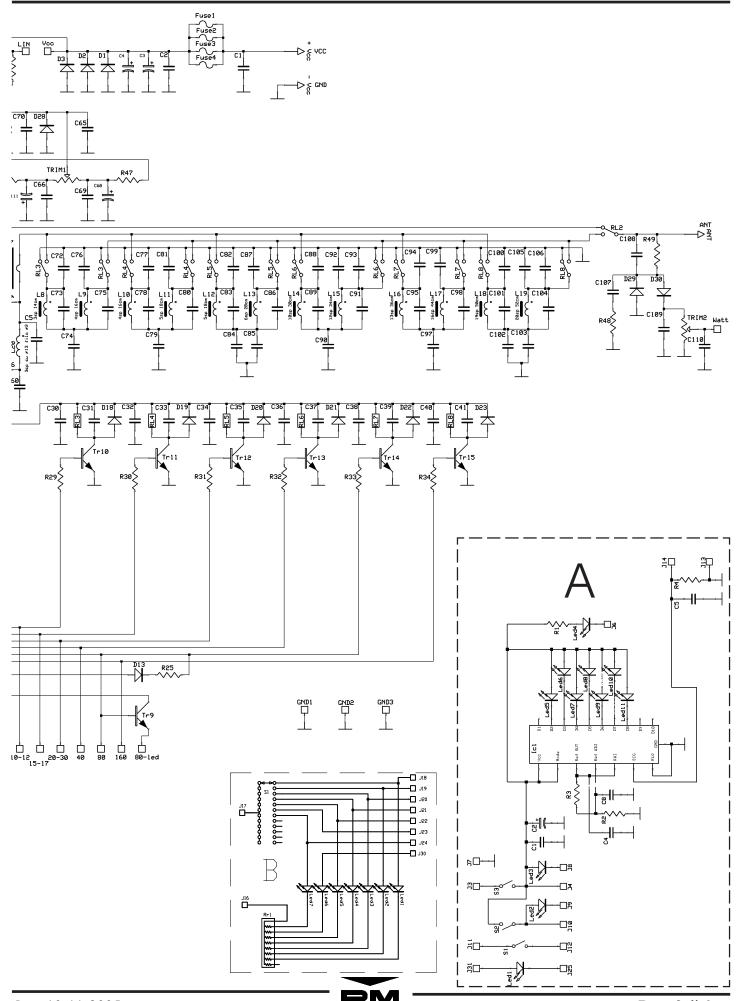
Tel +39 0534 60460 Fax +39 0534 60463 E-MAIL ufftec@rmitaly.com http://www.rmitaly.com

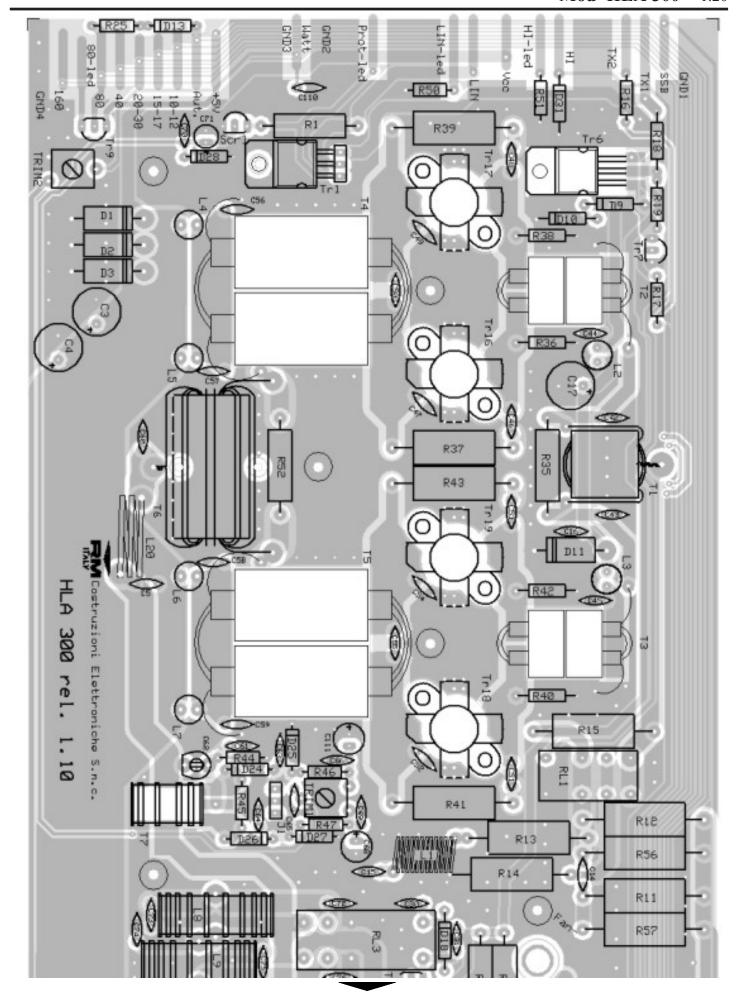
Mod. HLA 300 linear amplifier

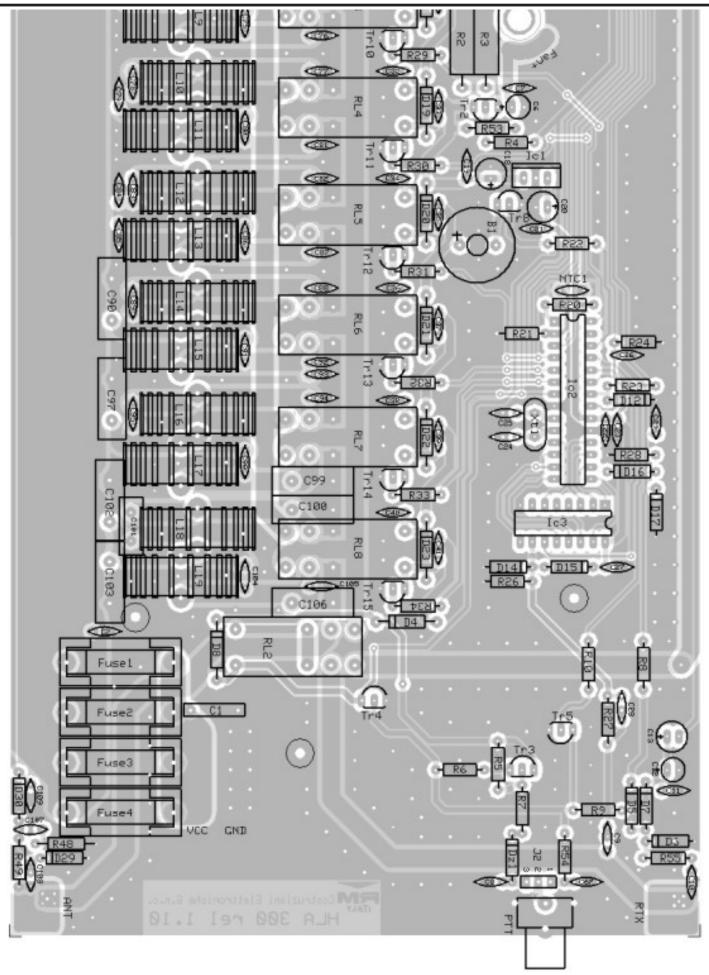
Schematic diagram

Version 1.20







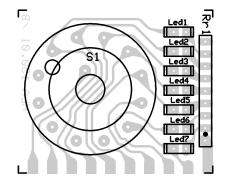




Board A

C5 S3 -150. R4

Board B



List of components

C 1	= 470 nF	100 V	Polyester
C_2	= 100 nF	50 V	1 Oly CSICI
C_3	$=470 \mu F$	25 V	
C 4	$=470 \mu F$	25 V	
C 5	=22 pF	500 V	NP0
C 6	$=22 \mu F$	25 V	1110
C 7	= 100 nF	50 V	
C 8	= 100 nF	50 V	
C 9	= 15 pF	50 V	NP0
C 10	= 2.2 nF	50V	1110
C 11	= 100 nF	50 V	
C 12	$= 2.2 \mu\text{F}$	25 V	
C 13	$= 33 \mu F$	25 V	
C 14	$=68 \mathrm{pF}$	500 V	NP0
C 15	= 10 nF	50 V	1110
C 16	= 100 nF	50 V	
C 17	$=470 \mu F$	25 V	
C 18	$=10 \mu\text{F}$	25 V	
C 19	= 100 nF	50 V	
C 20	$=22 \mu F$	25 V	
C 21	= 100 nF	50 V	
C 22	= 220 nF	50 V	Multilayer
C 23	= 100 nF	50 V	J
C 24	=27 pF	50 V	NP0
C 25	= 27 pF	50 V	NP0
C 26	= 100 nF	50 V	
C 27	= 100 nF	50 V	
C 28	= 4.7 pF	50 V	NP0
C 29	=10 nF	50 V	
	to C $_{41} = 100$		
C 42	= 100 pF	50 V	NP0
C 43	= 100 pF	50 V	NP0
C 44	= 100 nF	50 V	
C 45	= 100 nF	50 V	
C 46	=47 nF	50 V	
C 47	= 180 pF	500 V	NP0
C 48	$=47 \mathrm{nF}$	50 V	
C 49	= 180 pF	500 V	NP0
C 50		500V Silve	redmica
C 51		50 V	
C 52	= 180 pF	500 V	NP0
C 53	$=47 \mathrm{nF}$	50 V	
C 54	= 180 pF	500 V	NP0
C 55	= 620 pF	500V Silve	
C 56	to C $_{59} =$	100 nF	50 V
C 60	=82 pF	500 V	NP0

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C_{61} = 470 \text{ pF}
                       50 V
                                      N750
C_{62} = HCU06C100 \ 3-10 \ pF \ (Bianco)
C_{63 \text{ to } C_{67}} = 100 \text{ nF}
                              50 V
                       25 V
C_{68} = 33 \, \mu F
C_{69} = 100 \, \text{nF}
                       50 V
C_{70} = 100 \text{ nF}
                       50 V
C_{71} = 10 \mu F
                       25 V
C_{72} = 8.2 \text{ pF}
                                      NP0
                       500 V
C_{73} = 33 \text{ pF}
                       500 V
                                      NP0
C_{74} = 150 \text{ pF}
                       500 V
                                      NP0
C
  75 = 12 \text{ pF}
                       500 V
                                      NP0
C
  _{76} = 100 \text{ pF}
                       500 V
                                      NP0
C_{77} = 47 \text{ pF}
                       500 V
                                      NP0
C_{78} = 33 \text{ pF}
                       500 V
                                      NP0
C_{79} = 220 \text{ pF}
                       500 V
                                      NP0
C_{80} = 15 \, p\bar{F}
                       500 V
                                      NP<sub>0</sub>
C_{81} = 100 \text{ pF}
                       500 V
                                      NP0
C_{82} = 82 \, p\bar{F}
                       500 V
                                      NP0
C_{83} = 82 \text{ pF}
                       500 V
                                      NP0
C_{84} = 100 \text{ pF}
                       500 V
                                      NP0
                       500 V
C_{85} = 220 \text{ pF}
                                      NP0
C_{86} = 56 \text{ pF}
                       500 V
                                      NP0
C_{87} = 150 \text{ pF}
                       500 V
                                      NP0
C_{88} = 180 \text{ pF}
                       500 V
                                      NP0
C_{89} = 100 \, pF
                       500 V
                                      NP<sub>0</sub>
C_{90} = 620 \text{ pF}
                       500 V
                                      Silvered mica
                       500 V
C_{91} = 33 \text{ pF}
                                      NP<sub>0</sub>
C_{92} = 220 \text{ pF}
                       500 V
                                      NP0
C_{93} = 100 pF
                       500 V
                                      NP0
C_{94} = 150 \text{ pF}
                       500 V
                                      NP0
C_{95} = 120 \, pF
                       500 V
                                      NP0
C_{96} = not present
  97 = 1300 \text{ pF}
                      500 V
                                      Silveredmica
C_{98} = 82 \text{ pF}
                       500 V
                                      NP<sub>0</sub>
                       500 V
C_{99} = 620 \text{ pF}
                                      Silvered mica
C_{100} = 1600 \text{ pF} 500 \text{ V}
                                      Silvered mica
C_{101} = 390 \text{ pF}
                       500 V
                                      Silvered mica
                      500 V
C_{102} = 1600 \text{ pF}
                                      Silveredmica
C_{103} = 560 \text{ pF}
                       500 V
                                      Silveredmica
C
                                      NP0
   _{104} = 150 \text{ pF}
                       500 V
C
   _{105} = 390 \text{ pF}
                       500 V
                                      Silvered mica
C
                       500 V
                                      Silveredmica
   _{106} = 620 \text{ pF}
C
                                      NP0
   _{107} = 33 \text{ pF}
                       50 V
   _{108} = 2,2 \text{ pF}
                       50 V
                                      NP0
C_{109} = 100 \text{ nF}
                       50 V
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 \mathbf{C}

 $_{110} = 10 \text{ nF}$

50 V

$C_{111} = 33 \mu F$ 25 V	D_{13} to $D_{17} = 1N4148$
$R_1 = 330 \Omega$ 2W	$D_{18 \text{ to }} D_{23} = 1N4007$
$R_2 = 68 \Omega$ 2W	D_{24} , $D_{20} = 1 M / 1 / 1 / 2$
	$D_{24 \text{ to }} D_{30} = 1N4148$
$R_3 = 68 \Omega$ 2W	$D_{31} = 1N4007$
$R_4 = 1.0 \text{ K}\Omega \frac{1}{4}\text{W}$	$Dz_1 = Zener 7.5 V \frac{1}{2}W$
$R_5 = 2.2 \text{ K}\Omega ^{1}/_{4}\text{W}$	Fuse 1 to Fuse $4 = 10$ A Fast
$R_6 = 4.7 \text{ K}_{\Omega} {}^{1}/_{4}\text{W}$	$Ic_1 = LM 7805$
$R_7 = 10 \text{ K}\Omega {}^{1}/_{4}\text{W}$	Ic 2 = Micro RM3
$R_8 = 10 \text{ K}_{\Omega} {}^{1}_{4}\text{W}$	Ic $_3 = 74HC4020$
$R_9 = 2.2 \text{ K}_{\Omega} {}^{1}/_{4}\text{W}$	$Tr_1 = BDX 53 BFP$
$R_{10} = 1.0 \text{ K}\Omega \frac{1}{4}\text{W}$	$Tr_2 = BC 327$
$R_{11} = 33 \Omega$ 5W	$Tr_3 = BC 557 B$
$R_{12} = 47 \Omega \qquad 5W$	$Tr_4 - Tr_5 = BC 547 B$
$R_{13} = 100\Omega$ 2W	$Tr_6 = BD 241 BFP$
$R_{14} = 150 \Omega \qquad 2W$	Tr 7 - Tr 15 = BC 547 B
$R_{15} = 39 \Omega \qquad 2W$	$Tr_{16 \text{ to}} Tr_{19} = SD 1446$
$R_{16} = 1.0 \text{ K}\Omega \frac{1}{4}\text{W}$	$Xt_1 = Xtal 11.059 MHz$
$R_{17} = 10 \text{ K}\Omega \qquad {}^{1}/_{4}\text{W}$	$Ser_1 = P0102$
$R_{18} = 1.0 \Omega$ $^{1}/_{2}W$	$R1_1 = 30229012$
$R_{19} = 680 \Omega$ $^{1}/_{4}W$	$R1_2$ to $R1_8 = 41529012$
R 20 to R 23 = $4.7 \text{ K}\Omega$ $^{1}/_{4}\text{W}$	$T_1 = Input Decoupler Transformer$
$R_{24} = 10 \text{ K}_{\Omega} \frac{1}{4} \text{W}$	T 2 and T 3 = Input Transformers
$R_{25} = 220 \Omega$ $^{1}/_{4}W$	T 4 and T 5 = Output Transformers
$R_{26} = 22 K_{\Omega} \qquad {}^{1}/_{4}W$	T ₆ = Output Coupler Transformer
$R_{27} = 4.7 \text{ K}_{\Omega} {}^{1}/_{4}\text{W}$	$T_7 = ANRA 700/12$
$R_{28} = 1.0 \text{ M}_{\Omega} ^{1/4}\text{W}$	$L_1 = ANRA 455$
R 29 to R 34 = $4.7 \text{ K}\Omega$ $^{1}/_{4}\text{W}$	$L_{2 \text{ and } L_{3}} = FH002100$
$R_{35} = 100 \Omega$ 2W	$L_{4 \text{ to }} L_{7} = FH002110$
$R_{36} = 10 \Omega$ $\frac{1}{2}W$	$L_8 = ANRA725$
	L 9 and L 10 = ANRA $725/1$
$R_{37} = 68.0$ 5W	
$R_{37} = 68 \Omega \qquad 5W$	
$R_{37} = 68 \Omega$ SW $R_{38} = 10 \Omega$ $\frac{1}{2}W$	L 11 and L 12 = ANRA $725/2$
$R_{38} = 10 \Omega$ $^{1/2}W$	L 11 and L $_{12} = ANRA 725/2$
$R_{38} = 10 \Omega$ $\frac{1}{2}W$ $R_{39} = 68 \Omega$ 5W	L_{11} and $L_{12} = ANRA 725/2$ $L_{13} = ANRA 725/3$
$R_{38} = 10 \Omega$ $\frac{1}{2}W$ $R_{39} = 68 \Omega$ 5W	L_{11} and $L_{12} = ANRA 725/2$ $L_{13} = ANRA 725/3$
$R_{38} = 10 \Omega$ $\frac{1}{2}W$ $R_{39} = 68 \Omega$ $5W$ $R_{40} = 10 \Omega$ $\frac{1}{2}W$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4
$R_{38} = 10 \Omega$ $\frac{1}{2}W$ $R_{39} = 68 \Omega$ $5W$ $R_{40} = 10 \Omega$ $\frac{1}{2}W$ $R_{41} = 68 \Omega$ $5W$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5
$R_{38} = 10 \Omega$ $\frac{1}{2}W$ $R_{39} = 68 \Omega$ $5W$ $R_{40} = 10 \Omega$ $\frac{1}{2}W$ $R_{41} = 68 \Omega$ $5W$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5
$R_{38} = 10 \Omega$ $\frac{1}{2}W$ $R_{39} = 68 \Omega$ $5W$ $R_{40} = 10 \Omega$ $\frac{1}{2}W$ $R_{41} = 68 \Omega$ $5W$ $R_{42} = 10 \Omega$ $\frac{1}{2}W$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6
$R_{38} = 10 \Omega$ $\frac{1}{2}W$ $R_{39} = 68 \Omega$ $5W$ $R_{40} = 10 \Omega$ $\frac{1}{2}W$ $R_{41} = 68 \Omega$ $5W$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5
$\begin{array}{lll} R \; 38 & = \; 10 \; \Omega & \frac{1}{2}W \\ R \; 39 & = \; 68 \; \Omega & 5W \\ R \; 40 & = \; 10 \; \Omega & \frac{1}{2}W \\ R \; 41 & = \; 68 \; \Omega & 5W \\ R \; 42 & = \; 10 \; \Omega & \frac{1}{2}W \\ R \; 43 & = \; 68 \; \Omega & 5W \end{array}$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7
$\begin{array}{lll} R \; _{38} \; = \; 10 \; _{\Omega} & \; ^{1}\!\!/_{2}W \\ R \; _{39} \; = \; 68 \; _{\Omega} & \; 5W \\ R \; _{40} \; = \; 10 \; _{\Omega} & \; ^{1}\!\!/_{2}W \\ R \; _{41} \; = \; 68 \; _{\Omega} & \; 5W \\ R \; _{42} \; = \; 10 \; _{\Omega} & \; ^{1}\!\!/_{2}W \\ R \; _{43} \; = \; 68 \; _{\Omega} & \; 5W \\ R \; _{44} \; = \; 1,0 \; K_{\Omega} & \; ^{1}\!\!/_{4}W \end{array}$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8
$\begin{array}{lll} R \; _{38} \; = \; 10 \; _{\Omega} & \; ^{1}\!\!/_{2}W \\ R \; _{39} \; = \; 68 \; _{\Omega} & \; 5W \\ R \; _{40} \; = \; 10 \; _{\Omega} & \; ^{1}\!\!/_{2}W \\ R \; _{41} \; = \; 68 \; _{\Omega} & \; 5W \\ R \; _{42} \; = \; 10 \; _{\Omega} & \; ^{1}\!\!/_{2}W \\ R \; _{43} \; = \; 68 \; _{\Omega} & \; 5W \\ R \; _{44} \; = \; 1,0 \; K_{\Omega} & \; ^{1}\!\!/_{4}W \end{array}$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8
$R_{38} = 10 \Omega \qquad \frac{1}{2}W$ $R_{39} = 68 \Omega \qquad 5W$ $R_{40} = 10 \Omega \qquad \frac{1}{2}W$ $R_{41} = 68 \Omega \qquad 5W$ $R_{42} = 10 \Omega \qquad \frac{1}{2}W$ $R_{43} = 68 \Omega \qquad 5W$ $R_{44} = 1,0 K\Omega \qquad \frac{1}{4}W$ $R_{45} = 47 \Omega \qquad \frac{1}{4}W$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8 L 19 = ANRA 725/9
$R_{38} = 10 \Omega \qquad \frac{1}{2}W$ $R_{39} = 68 \Omega \qquad 5W$ $R_{40} = 10 \Omega \qquad \frac{1}{2}W$ $R_{41} = 68 \Omega \qquad 5W$ $R_{42} = 10 \Omega \qquad \frac{1}{2}W$ $R_{43} = 68 \Omega \qquad 5W$ $R_{44} = 1,0 K\Omega \qquad \frac{1}{4}W$ $R_{45} = 47 \Omega \qquad \frac{1}{4}W$ $R_{46} = 10 K\Omega \qquad \frac{1}{4}W$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8
$R_{38} = 10 \Omega \qquad \frac{1}{2}W$ $R_{39} = 68 \Omega \qquad 5W$ $R_{40} = 10 \Omega \qquad \frac{1}{2}W$ $R_{41} = 68 \Omega \qquad 5W$ $R_{42} = 10 \Omega \qquad \frac{1}{2}W$ $R_{43} = 68 \Omega \qquad 5W$ $R_{44} = 1,0 K\Omega \qquad \frac{1}{4}W$ $R_{45} = 47 \Omega \qquad \frac{1}{4}W$ $R_{46} = 10 K\Omega \qquad \frac{1}{4}W$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm
$\begin{array}{lll} R \; 38 & = \; 10 \; \Omega & \; \frac{1}{2}W \\ R \; 39 & = \; 68 \; \Omega & \; 5W \\ R \; 40 & = \; 10 \; \Omega & \; \frac{1}{2}W \\ R \; 41 & = \; 68 \; \Omega & \; 5W \\ R \; 42 & = \; 10 \; \Omega & \; \frac{1}{2}W \\ R \; 43 & = \; 68 \; \Omega & \; 5W \\ R \; 44 & = \; 1,0 \; K\Omega & \; \frac{1}{4}W \\ R \; 45 & = \; 47 \; \Omega & \; \frac{1}{4}W \\ R \; 46 & = \; 10 \; K\Omega & \; \frac{1}{4}W \\ R \; 47 & = \; 1,0 \; K\Omega & \; \frac{1}{4}W \end{array}$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8 L 19 = ANRA 725/9
$R_{38} = 10 \Omega \qquad \frac{1}{2}W$ $R_{39} = 68 \Omega \qquad 5W$ $R_{40} = 10 \Omega \qquad \frac{1}{2}W$ $R_{41} = 68 \Omega \qquad 5W$ $R_{42} = 10 \Omega \qquad \frac{1}{2}W$ $R_{43} = 68 \Omega \qquad 5W$ $R_{44} = 1,0 K\Omega \qquad \frac{1}{4}W$ $R_{45} = 47 \Omega \qquad \frac{1}{4}W$ $R_{46} = 10 K\Omega \qquad \frac{1}{4}W$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm
$\begin{array}{llllllllllllllllllllllllllllllllllll$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/7 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522
$\begin{array}{llllllllllllllllllllllllllllllllllll$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm
$\begin{array}{llllllllllllllllllllllllllllllllllll$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/7 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522
$\begin{array}{llllllllllllllllllllllllllllllllllll$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522 Board A
$\begin{array}{llllllllllllllllllllllllllllllllllll$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/7 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522
$\begin{array}{llllllllllllllllllllllllllllllllllll$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522 Board A C 1 = 10 nF 50 V
$\begin{array}{llllllllllllllllllllllllllllllllllll$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522 Board A C 1 = 10 nF 50 V C 2 = 10 μ F 16 V
$\begin{array}{llllllllllllllllllllllllllllllllllll$	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522 Board A C 1 = 10 nF 50 V
R 38 = 10 Ω $\frac{1}{2}$ W R 39 = 68 Ω 5W R 40 = 10 Ω $\frac{1}{2}$ W R 41 = 68 Ω 5W R 42 = 10 Ω $\frac{1}{2}$ W R 43 = 68 Ω 5W R 44 = 1,0 KΩ $\frac{1}{4}$ W R 45 = 47 Ω $\frac{1}{4}$ W R 46 = 10 KΩ $\frac{1}{4}$ W R 47 = 1,0 KΩ $\frac{1}{4}$ W R 48 = 27 Ω $\frac{1}{2}$ W R 49 = 10 KΩ $\frac{1}{4}$ W R 50 = 1,0 KΩ $\frac{1}{4}$ W R 51 = 1,0 KΩ $\frac{1}{4}$ W R 52 = 100 Ω 2W R 53 = 1,0 KΩ $\frac{1}{4}$ W	$\begin{array}{lll} L \ \mbox{11 and } L \ \mbox{12} &= ANRA \ 725/3 \\ L \ \mbox{13} &= ANRA \ 725/4 \\ L \ \mbox{15} &= ANRA \ 725/4 \\ L \ \mbox{15} &= ANRA \ 725/5 \\ L \ \mbox{16} &= ANRA \ 725/6 \\ L \ \mbox{17} &= ANRA \ 725/7 \\ L \ \mbox{18} &= ANRA \ 725/8 \\ L \ \mbox{19} &= ANRA \ 725/9 \\ L \ \mbox{20} &= 3 \ \mbox{turn wire } \emptyset \ 2 \ \mbox{mm on } \emptyset \ 13 \ \mbox{mm} \\ PTT &= GP305522 \\ \hline \textbf{Board A} \\ \hline C \ \mbox{1} &= 10 \ \mbox{nF} & 50 \ \mbox{V} \\ C \ \mbox{2} &= 10 \ \mbox{nF} & 16 \ \mbox{V} \\ C \ \mbox{4} &= 10 \ \mbox{nF} & 50 \ \mbox{V} \\ \end{array}$
R 38 = 10 Ω $\frac{1}{2}$ W R 39 = 68 Ω 5W R 40 = 10 Ω $\frac{1}{2}$ W R 41 = 68 Ω 5W R 42 = 10 Ω $\frac{1}{2}$ W R 43 = 68 Ω 5W R 44 = 1,0 KΩ $\frac{1}{4}$ W R 45 = 47 Ω $\frac{1}{4}$ W R 46 = 10 KΩ $\frac{1}{4}$ W R 47 = 1,0 KΩ $\frac{1}{4}$ W R 48 = 27 Ω $\frac{1}{2}$ W R 49 = 10 KΩ $\frac{1}{4}$ W R 50 = 1,0 KΩ $\frac{1}{4}$ W R 51 = 1,0 KΩ $\frac{1}{4}$ W R 52 = 100 Ω 2W R 53 = 1,0 KΩ $\frac{1}{4}$ W R 54 = 2,2 KΩ $\frac{1}{4}$ W	$\begin{array}{lll} L \ \mbox{11 and } L \ \mbox{12} &= ANRA \ 725/3 \\ L \ \mbox{13} &= ANRA \ 725/4 \\ L \ \mbox{15} &= ANRA \ 725/4 \\ L \ \mbox{15} &= ANRA \ 725/5 \\ L \ \mbox{16} &= ANRA \ 725/6 \\ L \ \mbox{17} &= ANRA \ 725/7 \\ L \ \mbox{18} &= ANRA \ 725/8 \\ L \ \mbox{19} &= ANRA \ 725/9 \\ L \ \mbox{20} &= 3 \ \mbox{turn wire } \emptyset \ 2 \ \mbox{mm on } \emptyset \ 13 \ \mbox{mm} \\ PTT &= GP305522 \\ \hline \textbf{Board A} \\ \hline C \ \mbox{1} &= 10 \ \mbox{nF} & 50 \ \mbox{V} \\ C \ \mbox{2} &= 10 \ \mbox{nF} & 50 \ \mbox{V} \\ C \ \mbox{3} &= 10 \ \mbox{nF} & 50 \ \mbox{V} \\ C \ \mbox{5} &= 10 \ \mbox{nF} & 50 \ \mbox{V} \\ C \ \mbox{5} &= 10 \ \mbox{nF} & 50 \ \mbox{V} \\ C \ \mbox{5} &= 10 \ \mbox{nF} & 50 \ \mbox{V} \\ \end{array}$
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R 38 = 10Ω	$\begin{array}{lll} L \ \mbox{11 and } L \ \mbox{12} & = ANRA \ 725/3 \\ L \ \mbox{13} & = ANRA \ 725/4 \\ L \ \mbox{15} & = ANRA \ 725/4 \\ L \ \mbox{15} & = ANRA \ 725/5 \\ L \ \mbox{16} & = ANRA \ 725/6 \\ L \ \mbox{17} & = ANRA \ 725/7 \\ L \ \mbox{18} & = ANRA \ 725/8 \\ L \ \mbox{19} & = ANRA \ 725/9 \\ L \ \mbox{20} & = 3 \ \mbox{turn wire } \emptyset \ 2 \ \mbox{mm on } \emptyset \ 13 \ \mbox{mm} \\ PTT & = GP305522 \\ \hline \textbf{Board A} \\ \hline C \ \mbox{1} & = 10 \ \mbox{nF} \qquad 50 \ \mbox{V} \\ C \ \mbox{2} & = 10 \ \mbox{nF} \qquad 50 \ \mbox{V} \\ C \ \mbox{3} & = 10 \ \mbox{nF} \qquad 50 \ \mbox{V} \\ C \ \mbox{5} & = 10 \ \mbox{nF} \qquad 50 \ \mbox{V} \\ C \ \mbox{8} & = 10 \ \mbox{nF} \qquad 50 \ \mbox{V} \\ R \ \mbox{1} & = 1,0 \ \mbox{K} \Omega \ \ ^{1}\!\!/4W \\ R \ \mbox{2} & = 8,2 \ \mbox{K} \Omega \ \ ^{1}\!\!/4W \\ \end{array}$
R 38 = 10Ω	$\begin{array}{lll} L \ \mbox{11 and } L \ \mbox{12} & = ANRA \ 725/3 \\ L \ \mbox{13} & = ANRA \ 725/4 \\ L \ \mbox{15} & = ANRA \ 725/4 \\ L \ \mbox{15} & = ANRA \ 725/5 \\ L \ \mbox{16} & = ANRA \ 725/6 \\ L \ \mbox{17} & = ANRA \ 725/7 \\ L \ \mbox{18} & = ANRA \ 725/8 \\ L \ \mbox{19} & = ANRA \ 725/9 \\ L \ \mbox{20} & = 3 \ \mbox{turn wire } \emptyset \ 2 \ \mbox{mm on } \emptyset \ 13 \ \mbox{mm} \\ PTT & = GP305522 \\ \hline \textbf{Board A} \\ \hline C \ \mbox{1} & = 10 \ \mbox{nF} \qquad 50 \ \mbox{V} \\ C \ \mbox{2} & = 10 \ \mbox{nF} \qquad 50 \ \mbox{V} \\ C \ \mbox{3} & = 10 \ \mbox{nF} \qquad 50 \ \mbox{V} \\ C \ \mbox{5} & = 10 \ \mbox{nF} \qquad 50 \ \mbox{V} \\ C \ \mbox{8} & = 10 \ \mbox{nF} \qquad 50 \ \mbox{V} \\ R \ \mbox{1} & = 1,0 \ \mbox{K} \Omega \ \ ^{1}\!\!/4W \\ R \ \mbox{2} & = 8,2 \ \mbox{K} \Omega \ \ ^{1}\!\!/4W \\ \end{array}$
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R 38 = 10Ω	$\begin{array}{llllllllllllllllllllllllllllllllllll$
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R 38 = 10Ω	$\begin{array}{llllllllllllllllllllllllllllllllllll$
R 38 = 10Ω	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/8 L 19 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522 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 K α $\frac{1}{4}$ W R 2 = 8,2 K α $\frac{1}{4}$ W R 3 = 1,0 K α $\frac{1}{4}$ W R 4 = 4,7 K α $\frac{1}{4}$ W Ic 1 = LM 3915 Led 1 - Led 11 = LED
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R 38 = 10Ω	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/4 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522 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 C 8 = 10 nF 50 V R 1 = 1,0 K Ω $\frac{1}{4}$ W R 2 = 8,2 K Ω $\frac{1}{4}$ W R 3 = 1,0 K Ω $\frac{1}{4}$ W R 4 = 4,7 K Ω $\frac{1}{4}$ W Ic 1 = LM 3915 Led 1 - Led 11 = LED
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R 38 = 10 Ω $\frac{1}{2}$ W R 39 = 68 Ω 5W R 40 = 10 Ω $\frac{1}{2}$ W R 41 = 68 Ω 5W R 42 = 10 Ω $\frac{1}{2}$ W R 43 = 68 Ω 5W R 44 = 1,0 KΩ $\frac{1}{4}$ W R 45 = 47 Ω $\frac{1}{4}$ W R 46 = 10 KΩ $\frac{1}{4}$ W R 47 = 1,0 KΩ $\frac{1}{4}$ W R 48 = 27 Ω $\frac{1}{2}$ W R 49 = 10 KΩ $\frac{1}{4}$ W R 50 = 1,0 KΩ $\frac{1}{4}$ W R 51 = 1,0 KΩ $\frac{1}{4}$ W R 52 = 100 Ω 2W R 53 = 1,0 KΩ $\frac{1}{4}$ W R 54 = 2,2 KΩ $\frac{1}{4}$ W R 55 = 2,2 KΩ $\frac{1}{4}$ W R 56 = 47 Ω 5W R 57 = 33Ω 5W NTC 1 = 4,7 KΩ B 1 = Buzzer 12 V ARIMB12A12 Trim 1 = Trimmer PT10LH 10 KΩ Trim 2 = Trimmer PT10LH 10 KΩ D 1 to D 3 = 1N5400 D 4 = 1N4007 D 5 to D 7 = 1N4148 D 8 to D 10 = 1N4007 D 11 = 1N5400	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522 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 1 /4W R 2 = 8,2 KΩ 1 /4W R 3 = 1,0 KΩ 1 /4W R 4 = 4,7 KΩ 1 /4W 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
R 38 = 10Ω	L 11 and L 12 = ANRA 725/2 L 13 = ANRA 725/3 L 14 = ANRA 725/4 L 15 = ANRA 725/5 L 16 = ANRA 725/6 L 17 = ANRA 725/7 L 18 = ANRA 725/9 L 20 = 3 turn wire Ø 2 mm on Ø 13 mm PTT = GP305522 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 C 8 = 10 nF 50 V R 1 = 1,0 K Ω 1 /4W R 2 = 8,2 K Ω 1 /4W R 3 = 1,0 K Ω 1 /4W R 4 = 4,7 K Ω 1 /4W Ic 1 = LM 3915 Led 1 - Led 11 = LED