

## AUDIO POWER AMPLIFIER PROJECT

### 40 WATTS POWER AMPLIFIER PARTS LIST AND SPECIFICATIONS:

Rated Power Output: 20W - 42W RMS  
Load impedance: 4 - 16 Ohm  
Frequency Response: 25Hz - 1.2MHz (-3dB)  
THD: 0.1% (1kHz/85% Power)  
Input Signal: 1Vpp (full power)  
Input Impedance: 45k  
Overload and Short-Circuit protected

#### RESISTORS:

R1 = 82k  
R2 = 10k  
R3 = 100k  
R4 = 6k8  
R5,R8 = 680R  
R6,R14,R16 = 100R  
R7 = 1k  
R9 = 330R  
R10 = 1k5  
R11,R12 = 220R  
R13,R18 = 8k2  
R15,R17,R19 = 10R  
R20, R21 = 0R12 / 3W (0.12 Ohms)  
All resistors 0.25W 5% unless noted otherwise.

#### CAPACITORS:

C1 = 0.47uF/100V  
C2,C4 = 100uF/50V  
C3 = 3300pF/100V  
C5 = 10pF/100V Ceramic  
C6 = 220uF/50V  
C7 = 3300uF/50V radial or axial

#### SEMICONDUCTORS:

T1,T2,T3,T5 = 2N3904, PN2222 or eq.  
T6 = 2N3906, 2N2907 or eq.  
T4 = 2N2907 or eq.  
T7 = TIP31A  
T8 = TIP32A  
T9,T10 = 2N3055, MJE3055T, TIP3055, 2N3772  
D1 = 1N4001

NOTE: T7, T8, T9 T10 mounted on heatsink

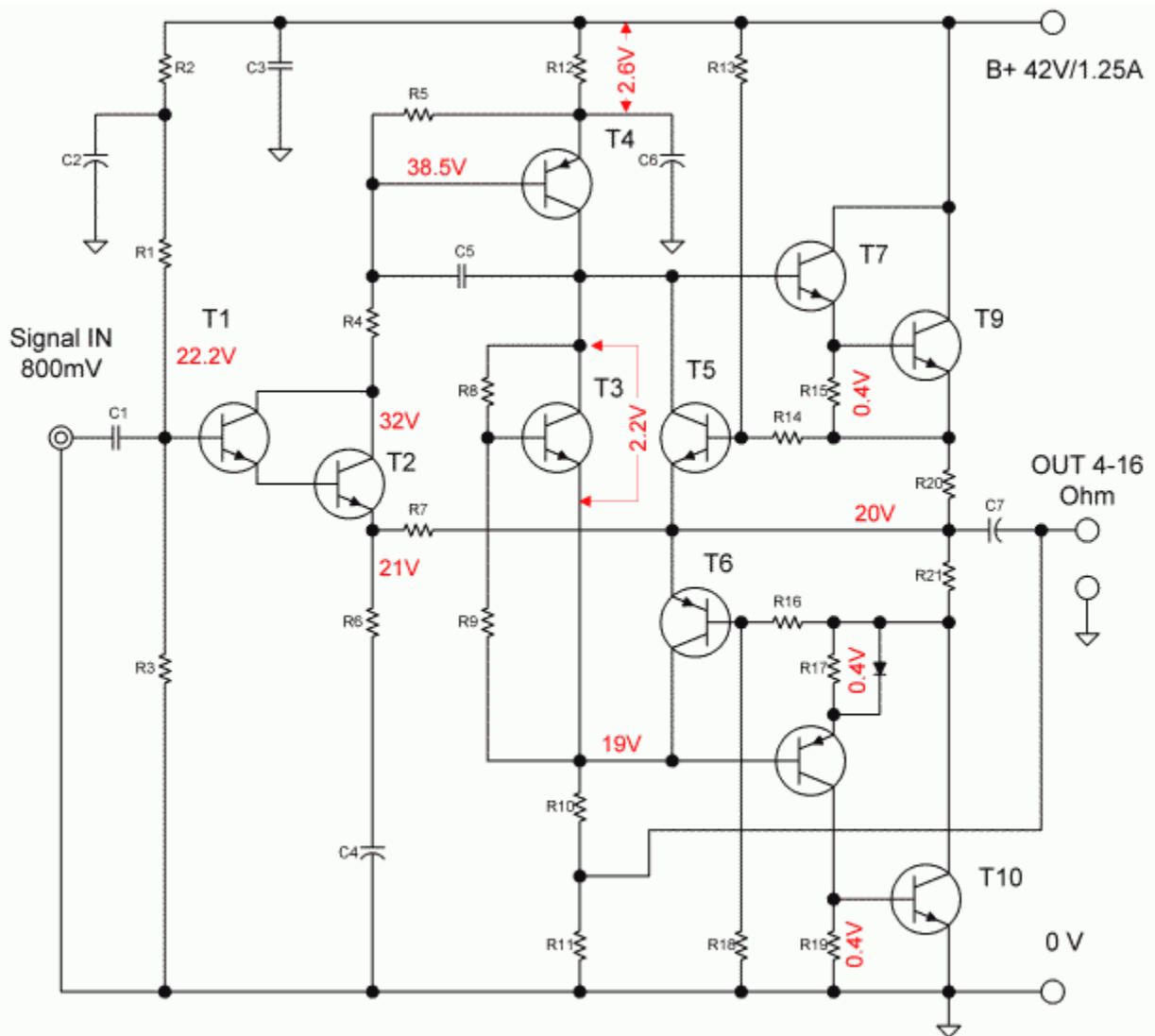
#### POWER SUPPLY:

##### Power Transformer:

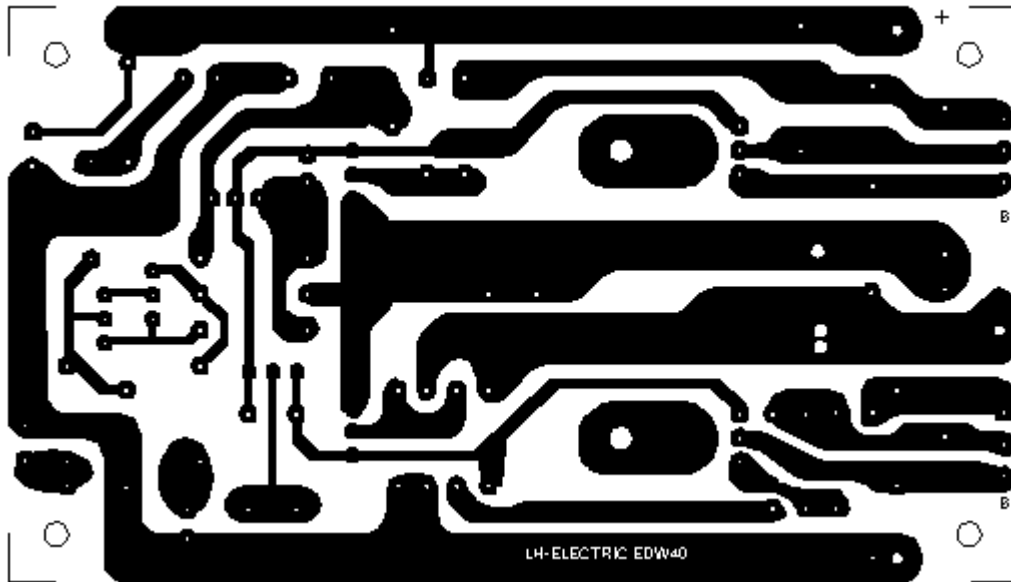
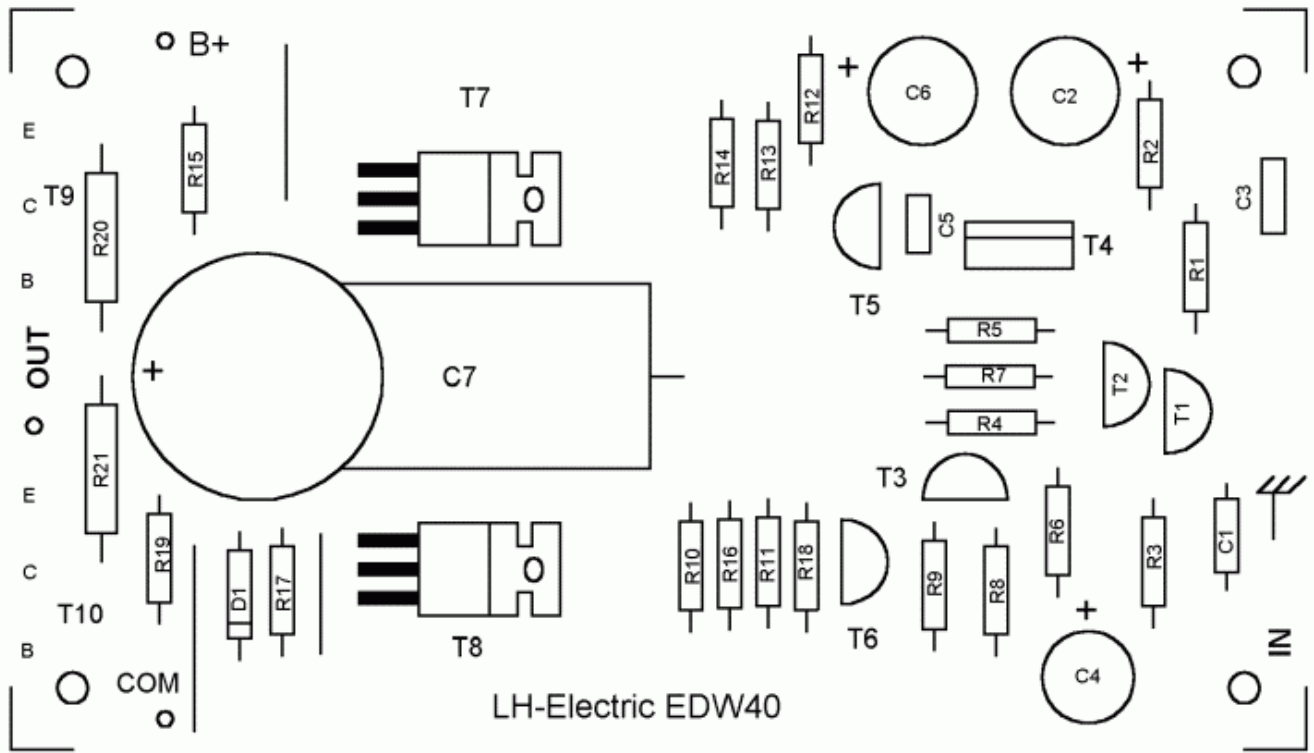
20 Watts = B+ 34VDC = Utr = 24VAC Ver.A or 2x24VAC Ver.B; Fuse F2= 1A  
35 Watts = B+ 42VDC = Utr = 30VAC Ver.A or 2x30VAC Ver.B; Fuse F2= 1.25A  
42 Watts = B+ 47VDC = Utr = 33VAC Ver.A or 2x33VAC Ver.B; Fuse F2= 1.5A  
Line Fuse F1= 1A  
All fuses MDL rated.  
For Stereo Amplifier, double amperages of transformer and fuses.

##### Power Supply Capacitors:

Mono 2 x 2200uF/50V  
Stereo 2 x 4700uF/50V



Shown voltages are referred to 42V B+ supply.



PCB Bottom View

PCB NOTE:

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PCB size: 3.00" x 5.25" = 7.65mm x 13.40mm

Layout design for:

T1, T2, T3, T5, T6 = TO92 (EBC)

T7, T8 = TO-220

