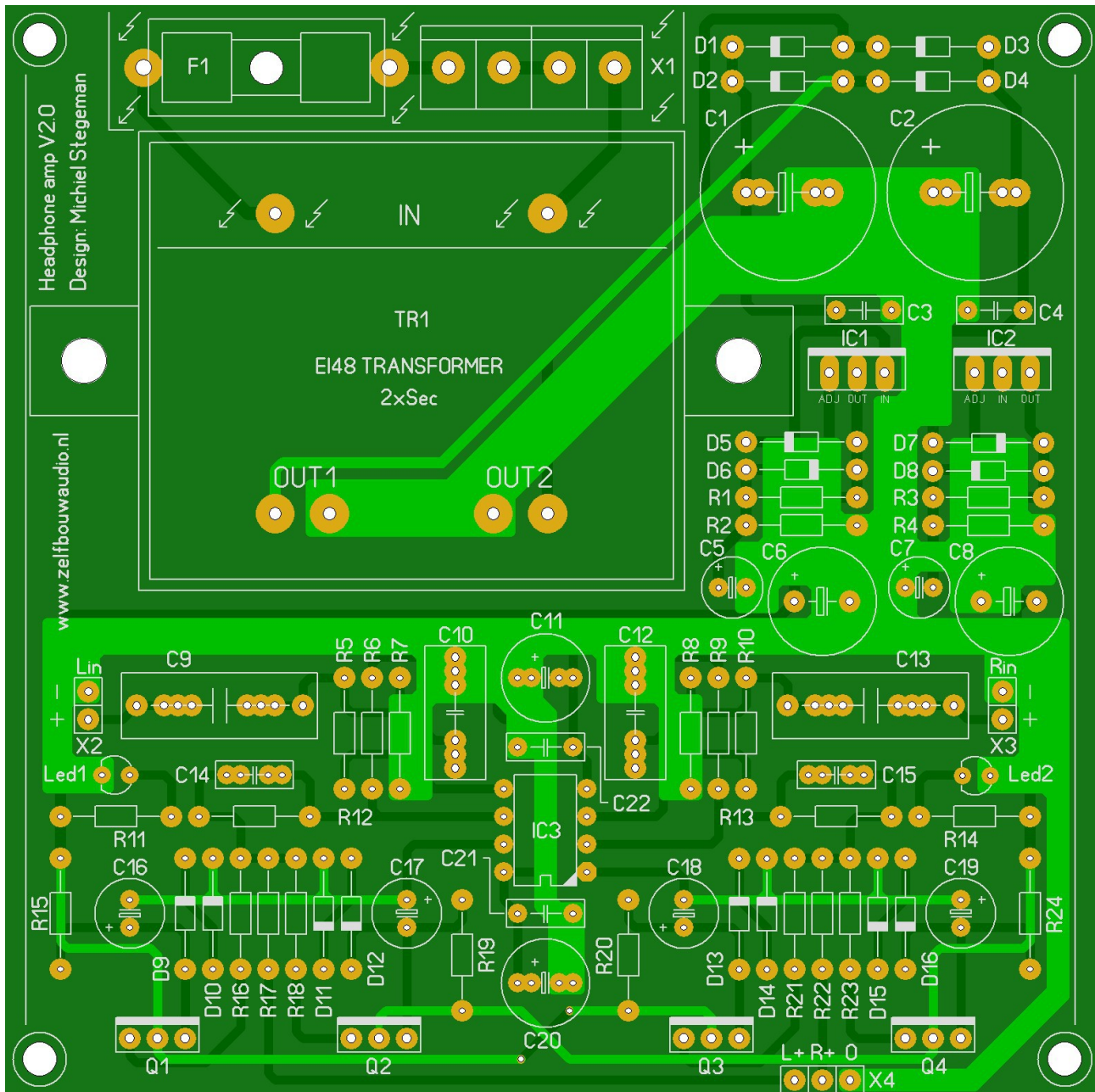


# Headphone Amp V2.0

## Component layout and partslist

Designed by: Michiel Stegeman (Jan 2013)



<b><u>Parts</u></b>	<b><u>Value</u></b>
D1, D2, D3, D4	1A / 40V or higher
D5, D6, D7, D8	1N4007
D9, D10, D11, D12, D13, D14, D15, D16	1N4148
C1, C2	1000u-2200u / 25V / R5 – R7.5
C3, C4, C21, C22	100n / R5
C5, C7	10u / 25V / R2.5
C10, C12	3u3 – 4u7 MKT / R5 – R10
C6, C8	470u / 25V / R5
C9, C13	1u – 2u2 / R5 – R15
C11, C20	22u / 25V / R2.5 – R5
C14, C15	33p (optional) / R5
C16, C17, C18, C19	47u / 25V / R2.5
R1, R3	220
R2, R4	2K4
R5, R10	1K
R6, R9	4K7
R7, R8	100K
R11, R14	1K
R12, R13	22K
R15, R19, R20, R24	6K8
R16, R17, R18, R21, R22, R23	22
Led1, Led2	3mm standard green or red led
IC1	LM317 (TO220)
IC2	LM337 (TO220)
IC3	8-pin DIL dual opamp – Low Cost: NE5532, TL072 or eq. – High Quality: OPA2134, LM4562NA or eq.
Q1, Q3	BD139
Q2, Q4	BD140
X1	4 pin PCB connector / pitch 5.08mm
X2, X3	2 pin header / pitch 2.54mm
X4	3 pin header / pitch 2.54mm
F1	Fuseholder R22.5 / 20mm fuse
TR1	EI48 transformer / 2x 15-18V / 8W