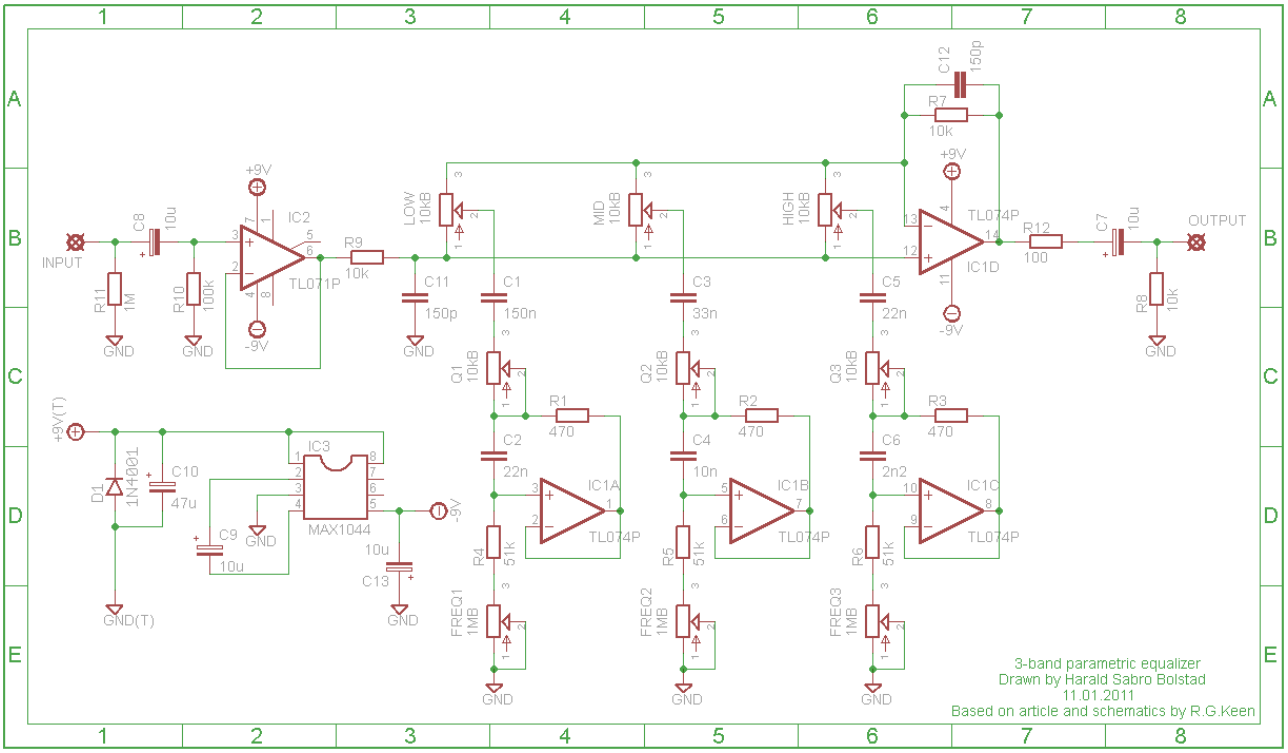
3-band parametric EQ

Here’s my first attempt at a parametric equalizer. I combined parts of the graphic equalizer I did previously with information on how to make gyrators from R.G.Keen at Geofex. There’s a schematic and a vero layout, and I haven’t verified either yet. Updates to come soon.

Update (13.01.2011): Correctly labeled C1 as 150nF and not 150pF.

Update (24.02.2011): Built this circuit yesterday and I can hereby verify it as working.

Update (29.03.2011): Boxed this effect last night with a friend. This is my second take at using a transparent film for artwork and labeling, and it came out a lot nicer now. Only thing missing is a few (many!) knobs.

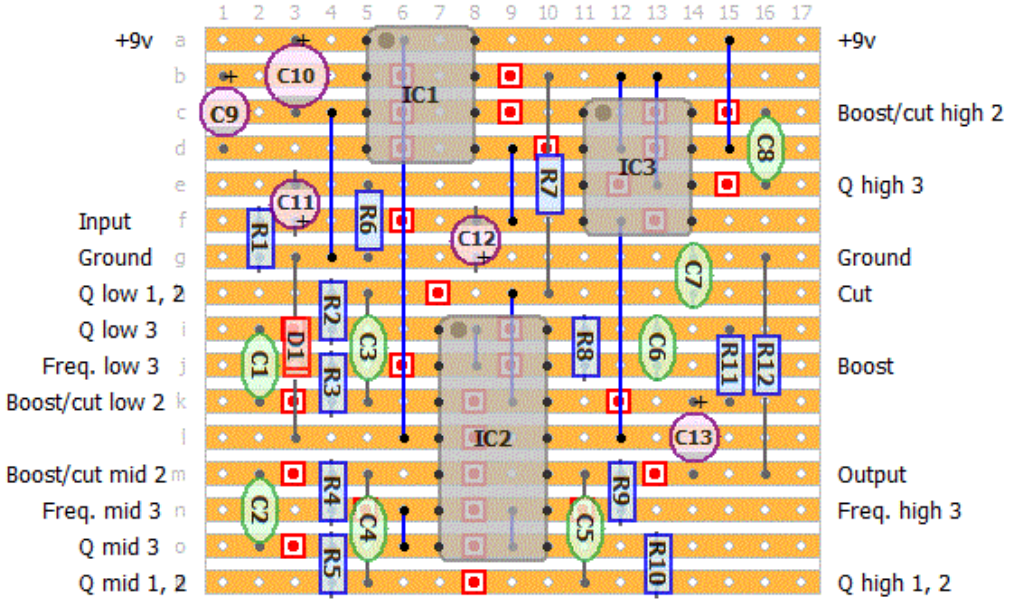


3-band parametric EQ, rev. 1

Layout by Harald Sabro. Based on own schematic

VERIFIED

17 x 16 vero board, 31 cuts, 11 jumpers



R1: 1M
R2: 470R
R3: 51K
R4: 51K
R5: 470R
R6: 100K
R7: 10K
R8: 10K
R9: 51K
R10: 470R
R11: 100R
R12: 10K

C1: 150nF
C2: 33nF
C3: 22nF
C4: 10nF
C5: 2.2nF
C6: 150pF
C7: 150pF
C8: 22nF
C9: 10uF
C10: 47uF
C11: 10uF
C12: 10uF
C13: 10uF

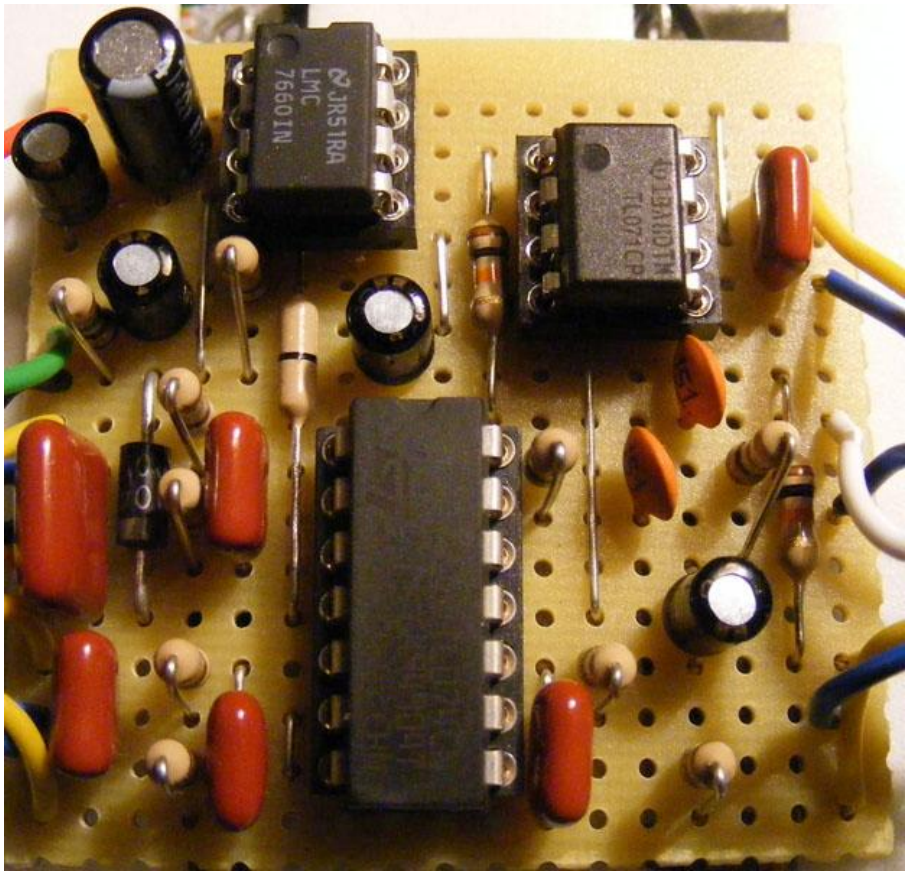
IC1: MAX1044
IC2: TL074
IC3: TL071
D1: 1N4001

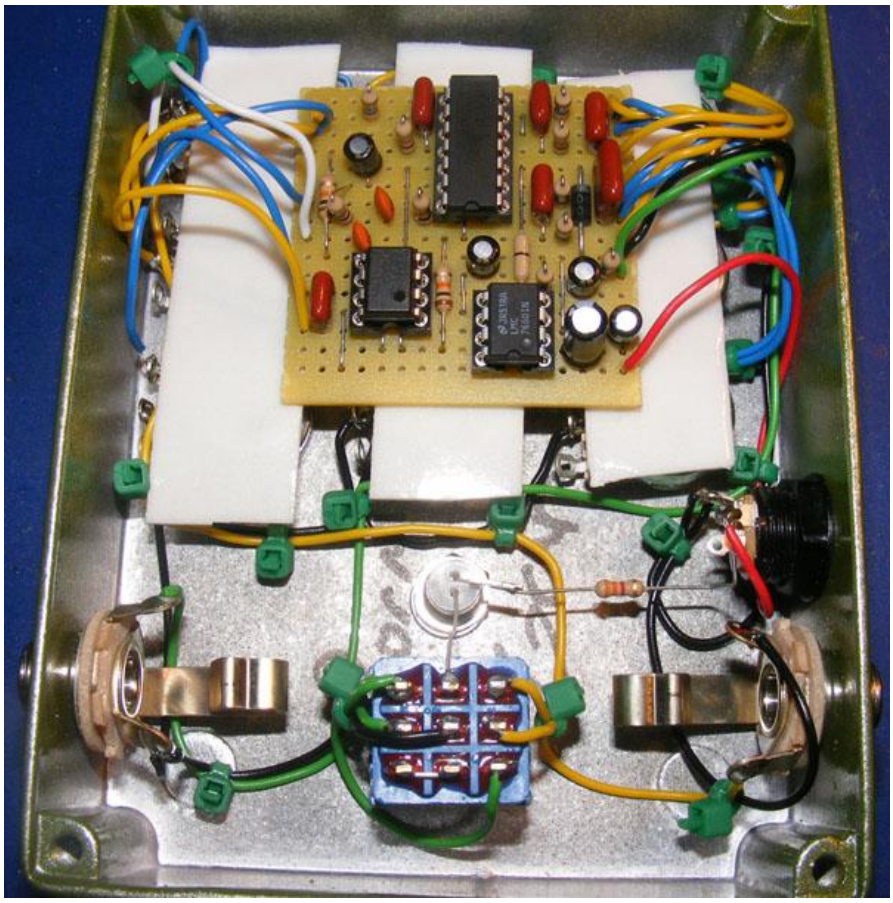
Boost/cut: 3x 10k linear
Q: 3x 10k linear
Freq.: 3x 1M linear

Freq. low 1, 2 -> Ground
Freq. mid 1, 2 -> Ground
Freq. high 1, 2 -> Ground
Cut -> Boost/cut low 1 -> Boost/cut mid 1 -> Boost/cut high 1
Boost -> Boost/cut low 3 -> Boost/cut mid 3 -> Boost/cut high 3

Notice cuts underneath D1, C4 and C5
Capacitors rated 25v+

Rev. 1: Reoriented C11 and C12 to make polarity clear


JR51RA
LMC
7660IN
TL071CP




Boost
Cut
Bandwidth
Frequency
Output
Input
Para EQ