

<http://diygallery.de/DIYsites/inductor.html>

If you want to diy the inductor:

You have to calculate the turns for each tap/pin. It depends on which core material you're using. There are different core materials available for the RM8 core from epcos. If you choose a higher value core material you'll need less turns and vice versa. If the core is filled with wire but you need to add some turns... either your wire thickness is too big or your core material is too low. (or both) ;-)

1600nH and 0,14mm wire worked for me. This may work for you. But measure the values in the end if they're right:

26mH=127 turns

39mH=156 turns

78mH=221 turns

155mH=311 turns

312mH=442 turns

The capacitors

You can use wima capacitors, orange drops or styroflex capacitors if you want. The layout is made for wima capacitors. Some capacitors are wired in parallel because they aren't available for with the exact value. You could match some capacitors if you want to have the 100% correct value. Capacitors can have around 20% tolerance.

Potentiometers and switches

You can use what you like. Lorlins will do. Its nice to have a shortened switch on the low frequency switch. That because you'll here some plops when switch through the frequencies. (only when the potentiometer is clockwise). Grayhill or elma's will do a great job, too. Manley are using Grayhill for example.

The Gain Stage

The PSU is on the gainstage pcb. You can use 7818/7918 (18V Voltage Regulators) to use NE5532 opamps or 7824/7824 (24V Voltage Regulators) if you want to use burr brown OPA2604 opamps. You'll need a power transformer with two secondary windings. 18V AC/AC should work for 18V. There is a gnd lift circuit on the board. You can add a switch on the backside of the case. Connect "chassis gnd" to the chassis. Don't forget to remove the powder coating or laquere where you want to connect the gnd at the case. If you want to have a power switch, just switch one phase of the mains connections. The earth of the mains connector must be connected to the case all the time! Maybe you need to adjust the gain when the filter is turned on. Replace the 18K resistor next to the "OUT, GND, IN1, IN2" connections with a trimpot and adjust the level while the filter is NOT in bypass mode. Input and output level must be the same then. Either you just leave the trimmer in the circuit or measure the resistor value and replace the trimpot with a resistor.

If your see smoke on the pcb something is wrong. Probably the 10R resistors next to the voltage regulators are on fire ;-)

They act like a fuse. There is a short somewhere. Connect your multimeter to GND and then measure the 10R resistor at the side where the ground lift switch is... if there is a short (e.g. low resistance on the multimeter) find the short and remove it. :-)

Modifications

Instead of having one switch for the low frequency you can use two lorlin switches. You can change the cut frequency and the boost frequency seperately. (if this helps) ;-)



