EVH 5150 III 50 Watt

- REAL 3 channel mod!

- Stealth mod (excl. Resonance)

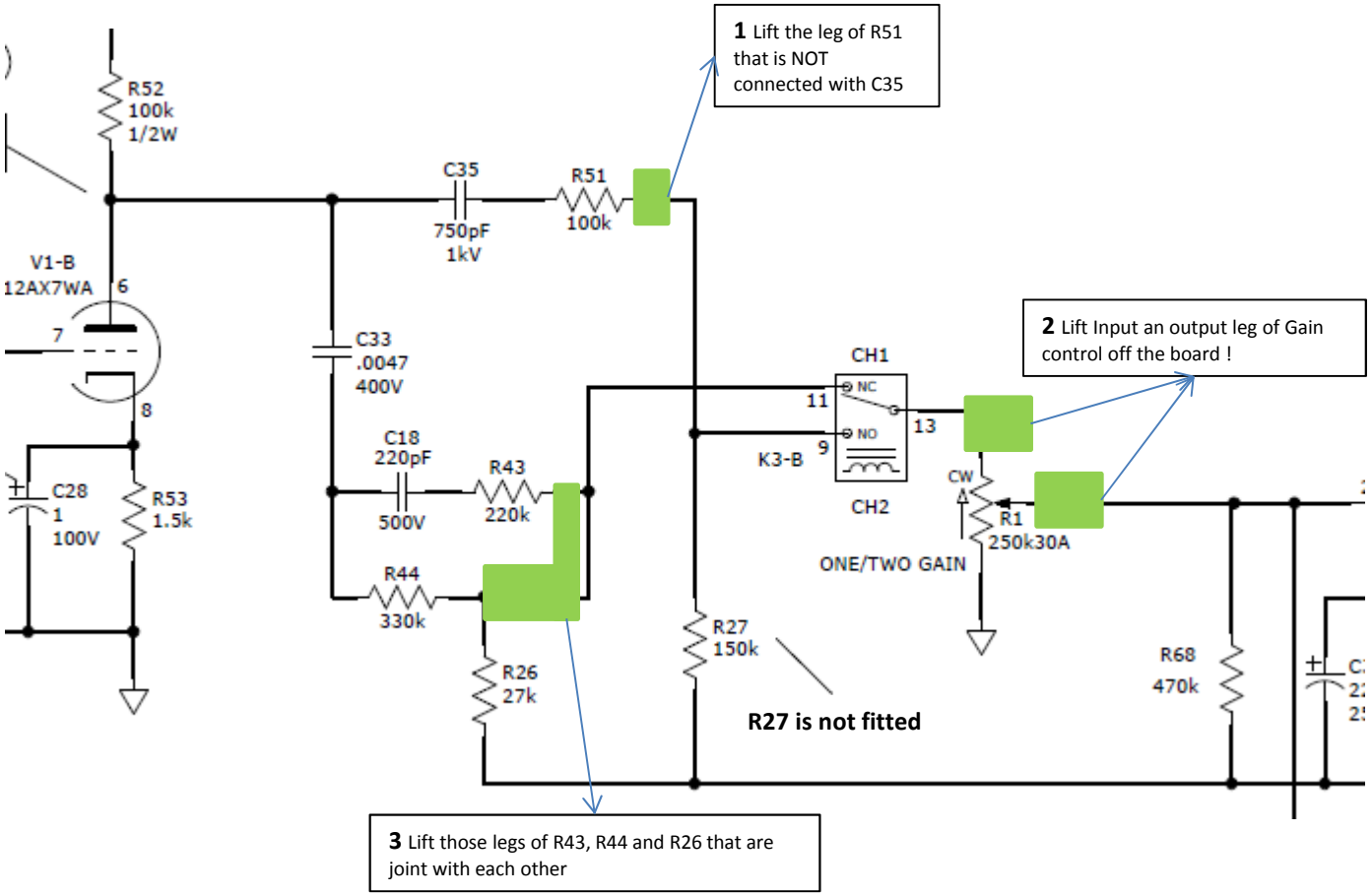
REAL 3-channel mod

Part 1: Seperate Gain Mod

EVH 5150 III Separate Gain Mod

Head-Version

- **NEW** Layout Step 1: Disconnecting



EVH 5150 III Separate Gain Mod

Head-Version

- **NEW** Layout Step 2: Connecting

Explanations:
What happens here is that we route the gain pot for the crunch channel before the relay using the existing pot. Or you can remove the exinsting pot completely and install a concentric pot if you wish not to have extra pots flying around somewhere. Looks quite cool, too.

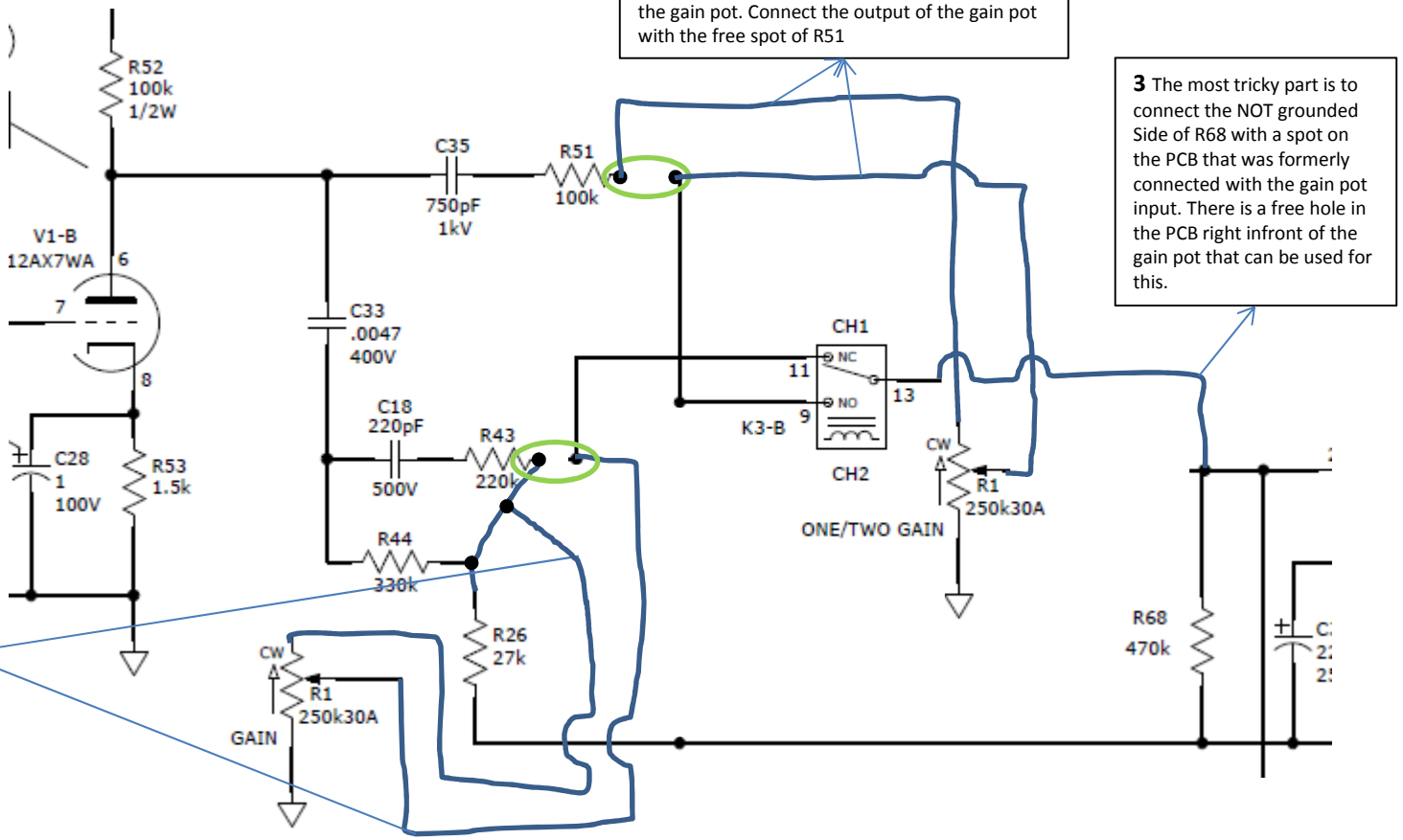
Good disconnection of both the input and output legs from the ICB are cruicial here.

To have a designated Clean gain pot, we need to install that pot also before the relay. Don´t forget to ground the new gain pot!

2 Connect the lifted leg of R51 with the input of the gain pot. Connect the output of the gain pot with the free spot of R51

3 The most tricky part is to connect the NOT grounded Side of R68 with a spot on the PCB that was formerly connected with the gain pot input. There is a free hole in the PCB right infront of the gain pot that can be used for this.

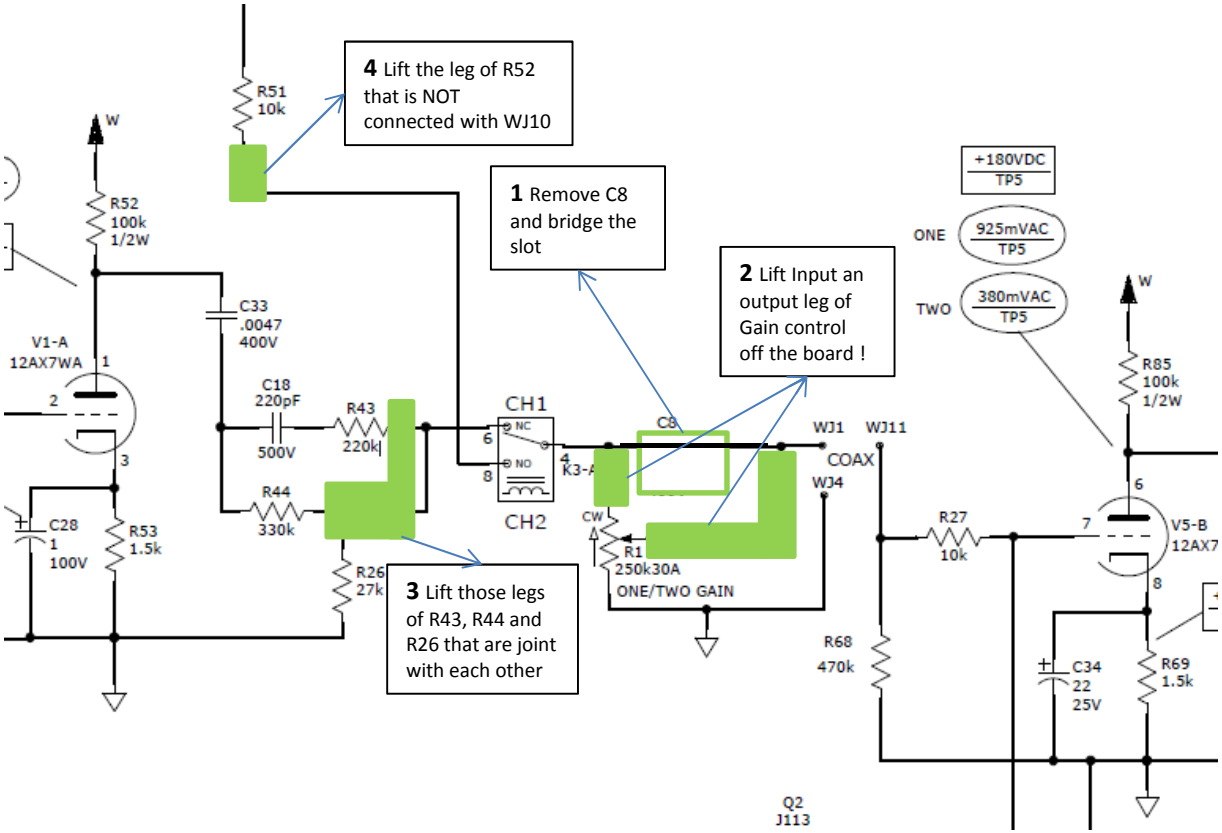
1 Connect the lifted legs of R43, R44 and R26 and connect them with the input of the clean gain control pot. Then connect the pot output with the free spot of R43. Connect the 3 leg of the pot with ground (for example the still fitted leg of R26)



EVH 5150 III Separate Gain Mod

Combo-Version

- **NEW** Layout Step 1: Disconnecting



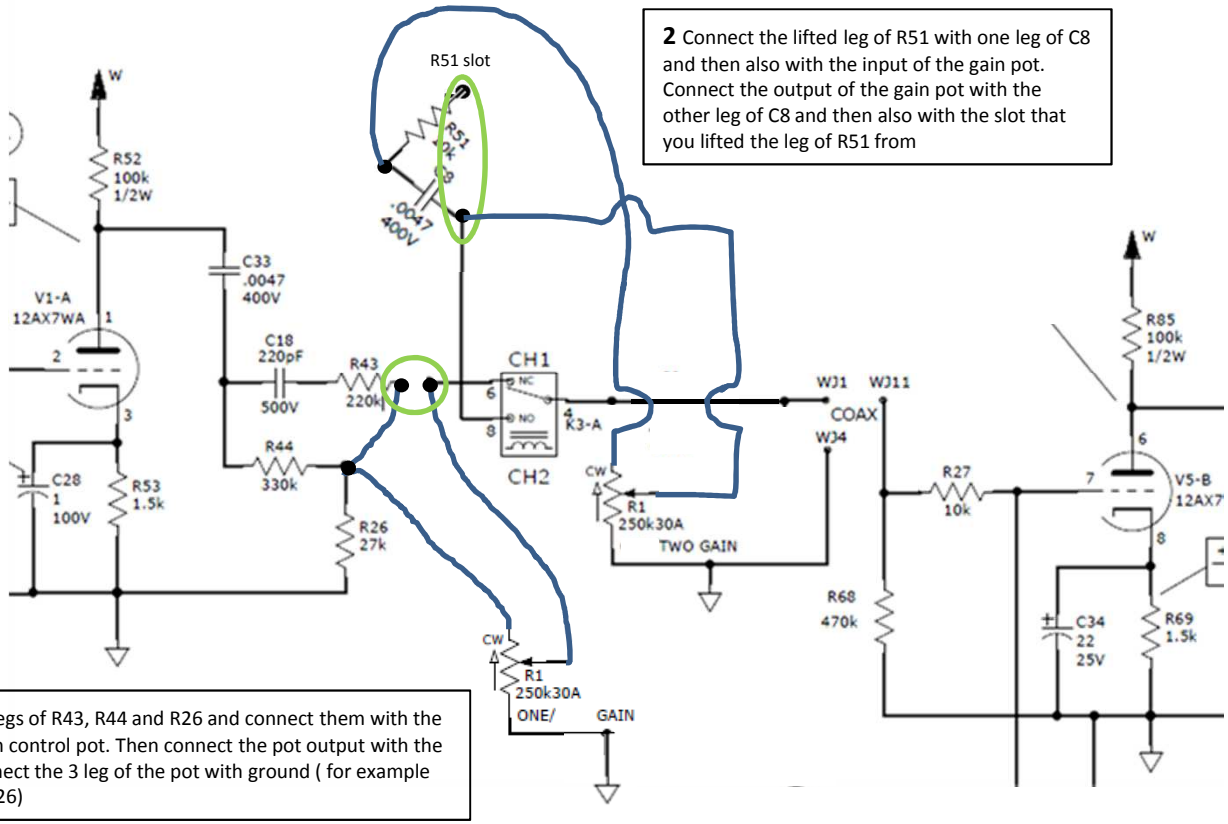
EVH 5150 III Separate Gain Mod

Combo-Version

- **NEW** Layout Step 2: Connecting

Explanations:
What happens here is that we route the gain pot for the crunch channel before the relay K3-A. Good disconnection of both the input and output legs from the ICB are cruicial here.
The free spot of C8 needs to be bridged in order to build a connection to WJ1, otherwise the amp will be really (really really) silent… ☺

To have a designated Clean gain pot, we need to install that pot also before the relay K3-A. Don´t forget to ground the new gain pot!



2 Connect the lifted leg of R51 with one leg of C8 and then also with the input of the gain pot. Connect the output of the gain pot with the other leg of C8 and then also with the slot that you lifted the leg of R51 from

1 Connect the lifted legs of R43, R44 and R26 and connect them with the input of the clean gain control pot. Then connect the pot output with the free spot of R43. Connect the 3 leg of the pot with ground (for example the still fitted leg of R26)

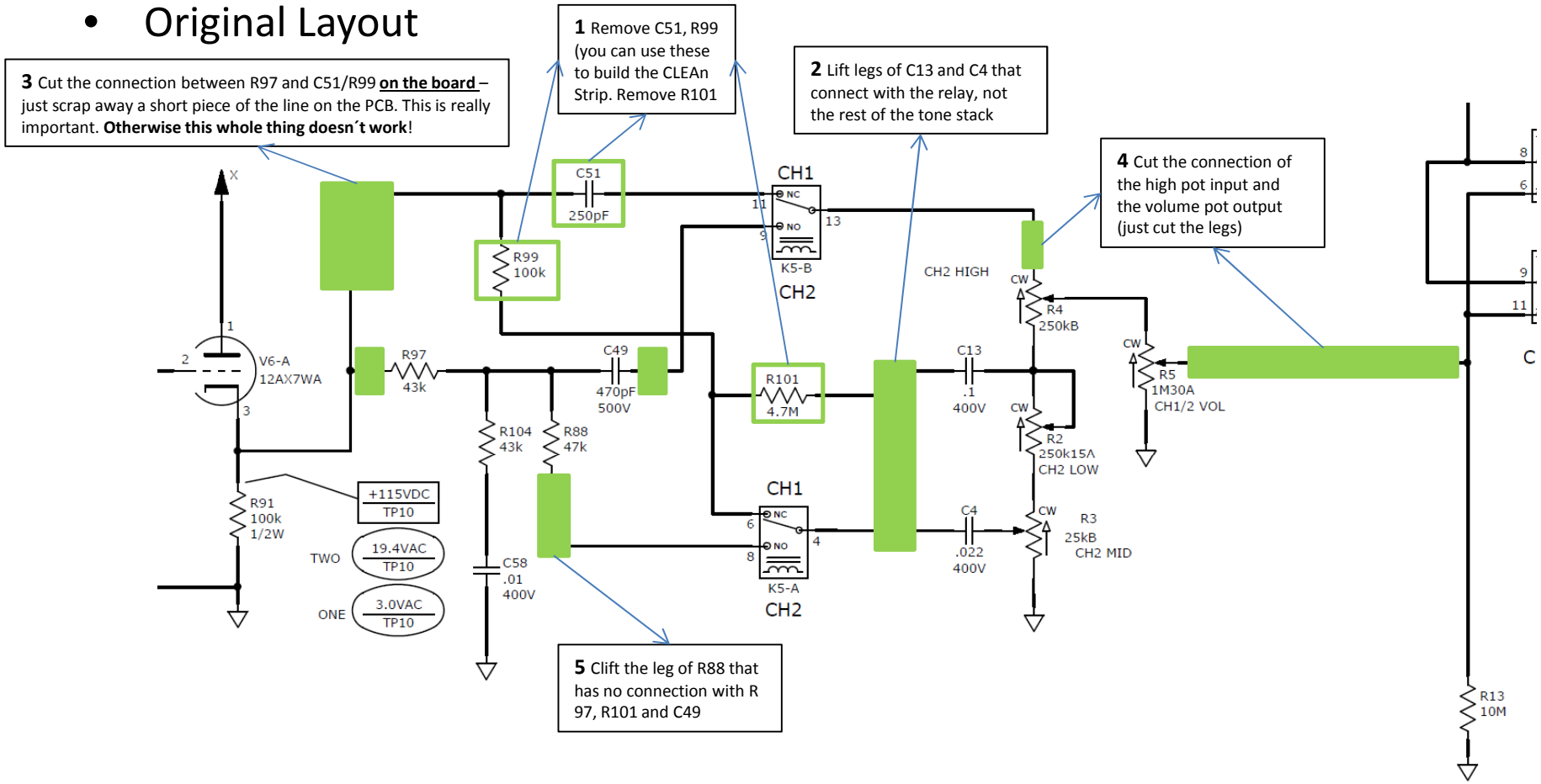
REAL 3-channel mod

Part 2: Seperate Volume and Tonecontrol Mod

EVH 5150 III Separate Volume+Tonecontrol Mod

All 50 Watt Versions

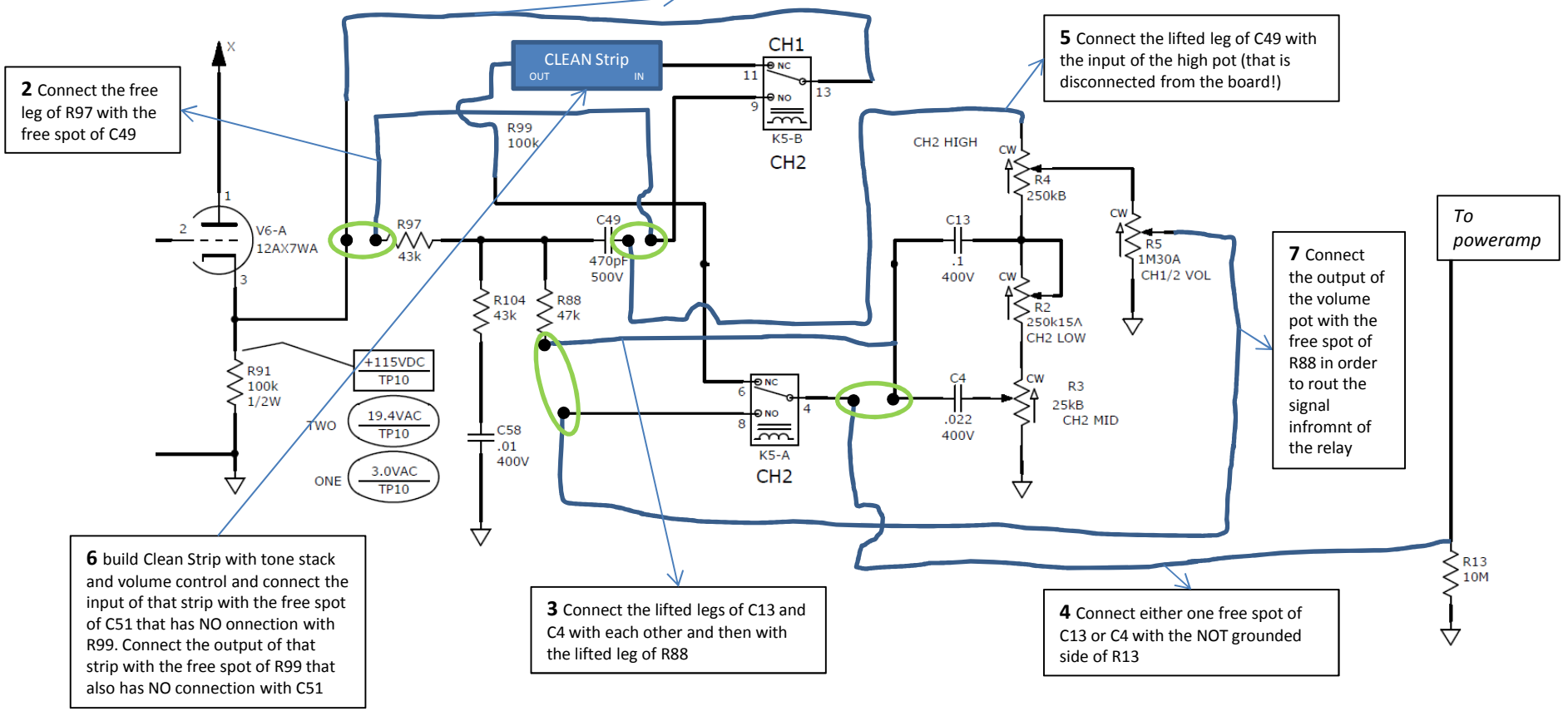
- Original Layout



EVH 5150 III Separate Volume+Tonecontrol Mod

Explanations:
What happens here is that the signal from Valve 6, which is both the clean and the crunch signal, since the difference in the signal for these 2 channels lays before valve 6 with the different gain control and resistor-values to ground (also in the V1 routing for the combos) is re-routed „behind" the relay K5-B, so the 2nd part of that 2-part relay. Thereby, the signal is split by K5-B. Then, the signal runs seperately through 2 independent controls using a Clean Strip (to be build!) and the existing components, now the Crunch-Strip. Obviously the signal needsd to be kept independently, so all the connections the components used to have that were used for both signals need to be removed / re-routed. After the control strips the ready signals run through the other part of the relay, the K5-A, in order to have one connection that actually goes out of the pre-amp section of these two channels and further into the circuit, so effects loops, headphone connection etc. and eventually into the power amp. Routing the 2 signals together again by using the K5-A relay, while this relay only lets through that part of the signal where the channel is chosen for, is cruicial in order to prevent interferences of the channel strips!

1 Most tricky part upfront: connect the free spot of R99 with the part where the input leg of the High pot was connected to. Herefore it is best to solder a spare leg of any other component into one of the non-used wholes in the PCB that had a connection with the High pot input - there is one right infront of the pot.



2 Connect the free leg of R97 with the free spot of C49

5 Connect the lifted leg of C49 with the input of the high pot (that is disconnected from the board!)

7 Connect the output of the volume pot with the free spot of R88 in order to rout the signal infromnt of the relay

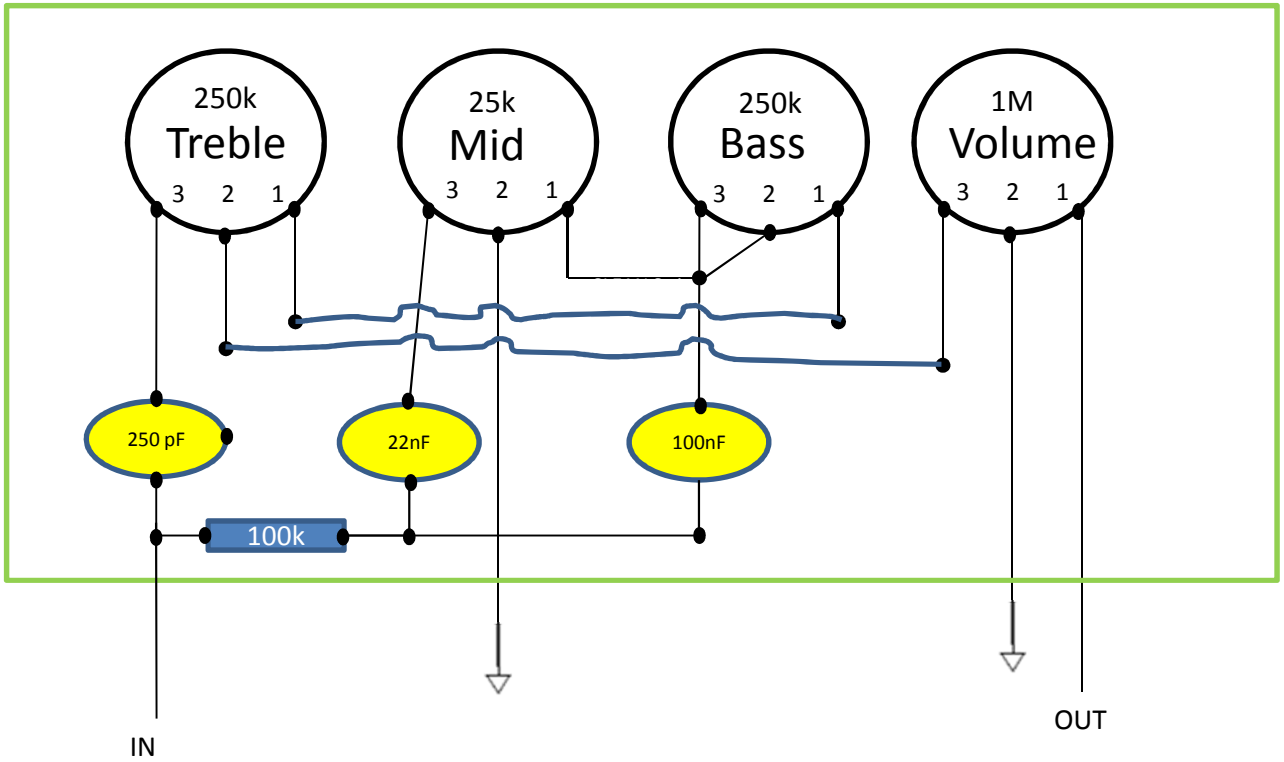
6 build Clean Strip with tone stack and volume control and connect the input of that strip with the free spot of C51 that has NO onnection with R99. Connect the output of that strip with the free spot of R99 that also has NO connection with C51

3 Connect the lifted legs of C13 and C4 with each other and then with the lifted leg of R88

4 Connect either one free spot of C13 or C4 with the NOT grounded side of R13

EVH 5150 III Separate Volume+Tonecontrol Mod

- Example of the Clean Strip I use (I am not 100% sure if this is all correct… just give it a shot…)



Stealth Mod (excl. Resonance)

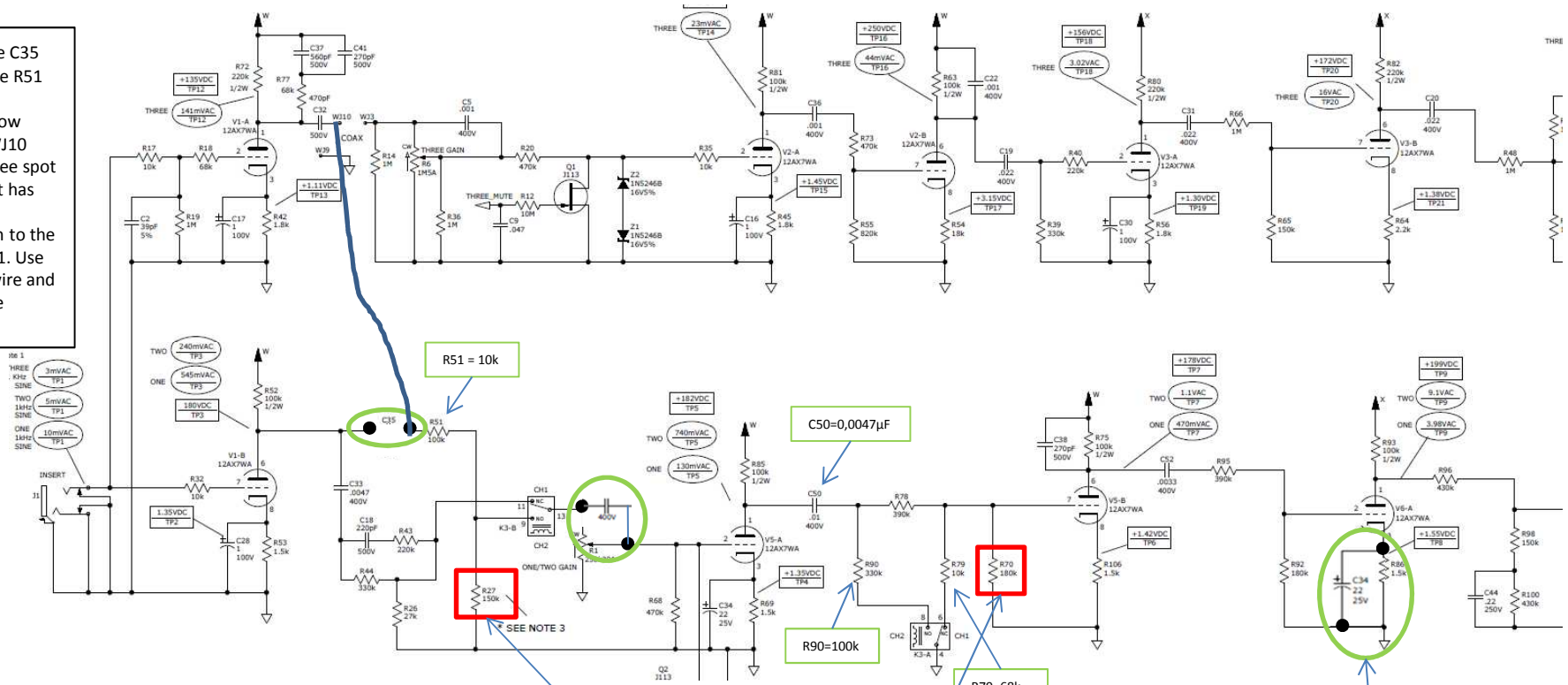
Stealth Mod for 50 Watt Head

- These changes will turn the 50 Watt head into a hot rodded „Stealth“- Head! In total, the blue channel gets a lot more gain, but the clean channel too. Almost impossible to get clean tones without the gain pot mod

- The needed changes:
  (differences identified comparing the 100 vs. the 100S; numbers are already those of the 50 Watt head version)
  - The blue channel now uses the same first half of V1 like the red channel
  - Additional 22µF cathode bypass capacitor at the fourth gain stage enphasises all frequencies and adds a lot of gain and saturation
  - 0,0047µF capacitor over the input and output of the gain control = frequency control regardless of gain level (more highs at less gain, or the other way around, not sure…)
  - R51 is a 10k (instead of 100k) = 2nd gain stage is hit harder
  - R90 is a 100k (instead of 330k) = more signal is led to ground, probably to hit the next gain stage less hard and keep the signal from flubbering and getting too muddy
  - R79 is a 68k (instead of 10k) = clean channel becomes louder and gets a bit more gain
  - C50 is a 0,0047µF (instead of 0,01µF) = frequency correction
  - R27 not stuffed = 2nd gain stage is hit harder
  - C35 not stuffed (not needed)
  - R70 not stuffed = less signal led to ground to hit gain stage harder

Stealth Mod for 50 Watt Head (excl. Resonance)

1 Cremove C35 and replace R51 with a 10k resistot. Now connect WJ10 with the free spot of C35 that has the direct connection to the spot of R51. Use shielded wire and ground the shielding



2 Creplace the various components with other values:
- R90 is a 100k (instead of 330k)
- R79 is a 68k (instead of 10k)
- C50 is a 0,0047µF (instead of 0,01µF)

5 Add capacitor across the input and the output leg of the gain control (0,0047µF)

3 Remove resistors R27 and R70

4 Add cathode bypass capacitor across R86 (22µF)