Improved Power Supply for the Vanderveen-Trans-PP80 amplifier

Some constructors informed us that the two 360 Vdc supply sections show some drift when the amplifier gets hot. We discovered that the 170 Vz zener diodes $D_{8,9}$ and $D_{18,19}$ were too sensitive for temperature change. Figure-1 shows the original supply circuit with this zener diode stabilization.

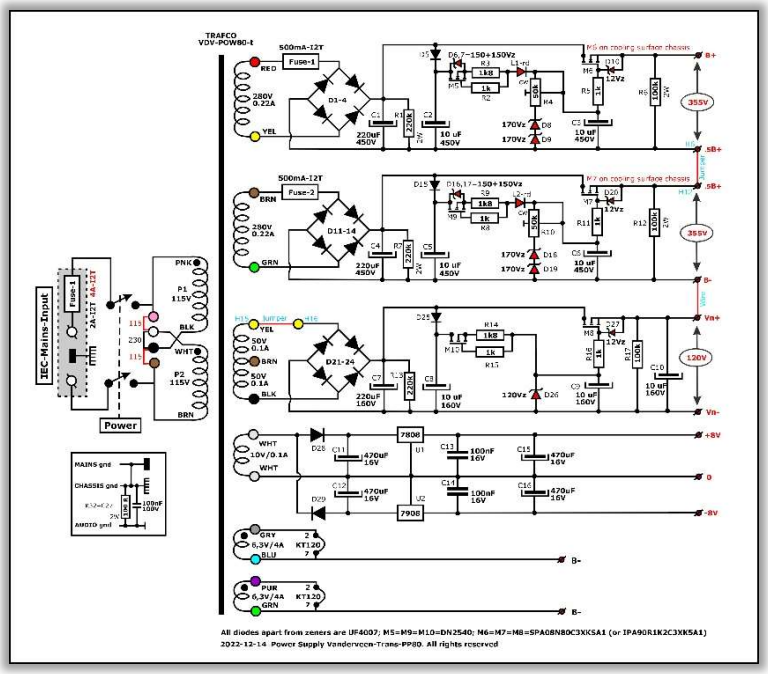

Figure-1: Original power supply circuit as published in audioXpress May 2023 pp 20-28.

We decided to make a new sturdy stabilized power supply. Figure-2 shows the “Maida circuit” with its Fet-regulators (placed on the cooling chassis and connected at jumpers J4 and J8) around voltage stabilizators LT3083 en LT3080. For the two 360 Vdc sections we also applied an extra Maida-circuit (see Fets M1,2) to guarantee voltage headroom for proper functioning of the internal LT3083 opamps.

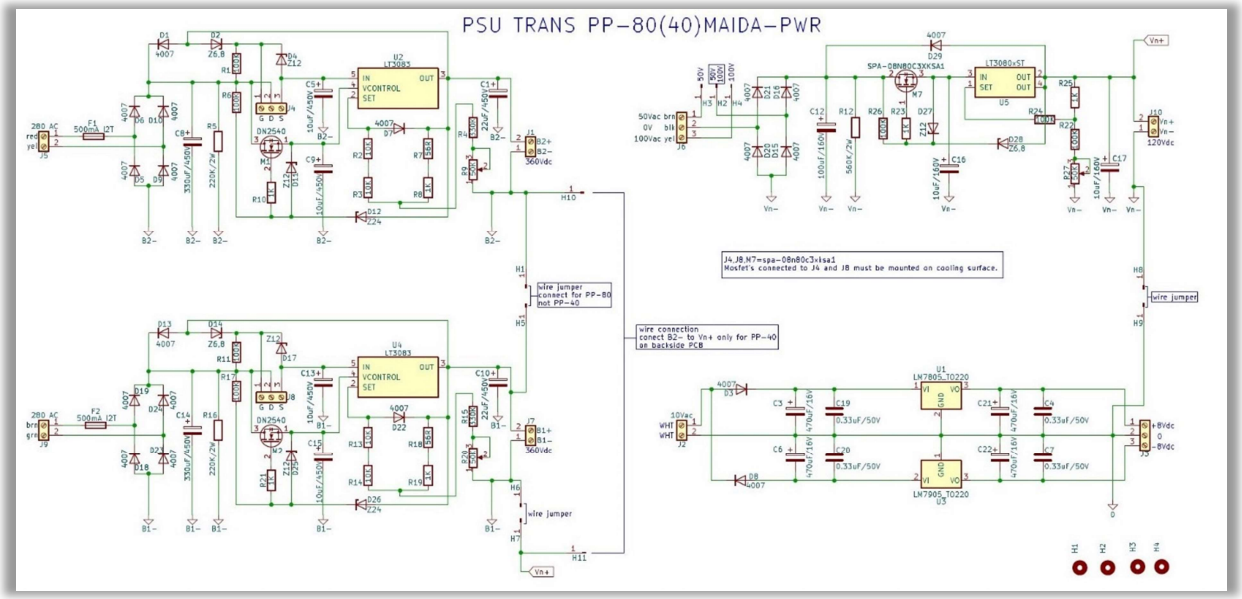

Figure-2: The new “double-Maida” power supply circuit for the Vanderveen-Trans-PP80

Figure 3 shows the new power-supply PCB with dimensions 140/105 mm (the previous version was 140/97 mm). To make exchange easy the four M3-holes are at the same positions in both PCB's.

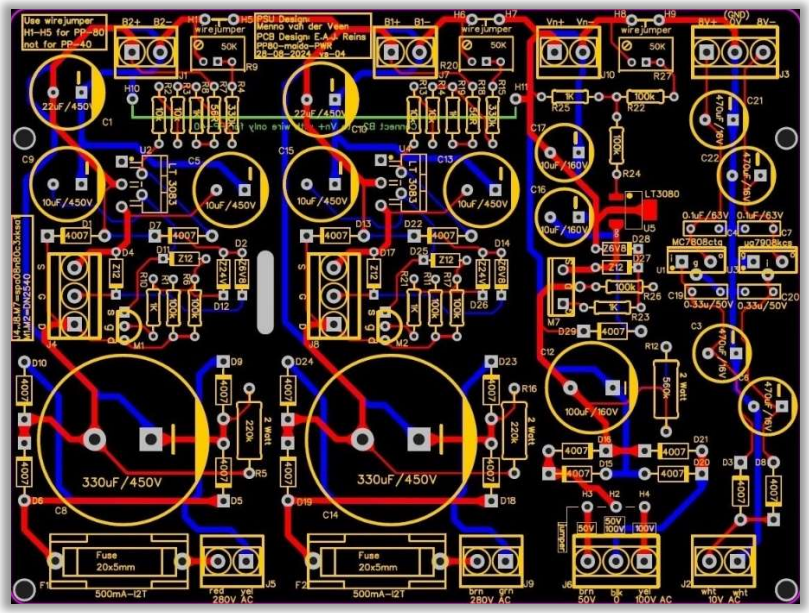

Figure-3 shows the new double-Maida-power-supply-PCB, designed by Erwin Reins

In the May-2023 audioXpress publication the two 360 Vdc supplies where indicated by B-, ½ B+ and B+. The new PCB uses {B1- to B1+} = 360 Vdc and {B2- to B2+} = 360 Vdc; see figures 2,4 for the details.

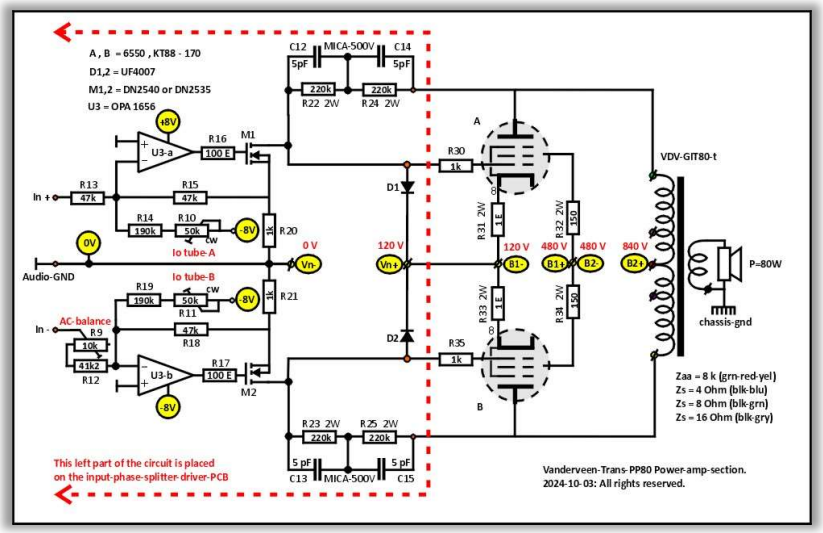

Figure-4 shows how to connect B1- , B1+ , B2- and B2+

Please visit www.meten-en-aan-buizenversterkers.nl for buying the new PCB and to find the BOM for ordering components.

For questions, please contact me at info@mennovanderveen.nl or check www.mennovanderveen.nl.

The Netherlands: 2024-10-10
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