

Checklist after service of class TD

LAB 2000, LAB 2000C, LAB 2002, LAB 4000, fP 3400 & fP 6400

Created by: Patrick Bergwall

Date: 2006-12-15

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1 Introduction

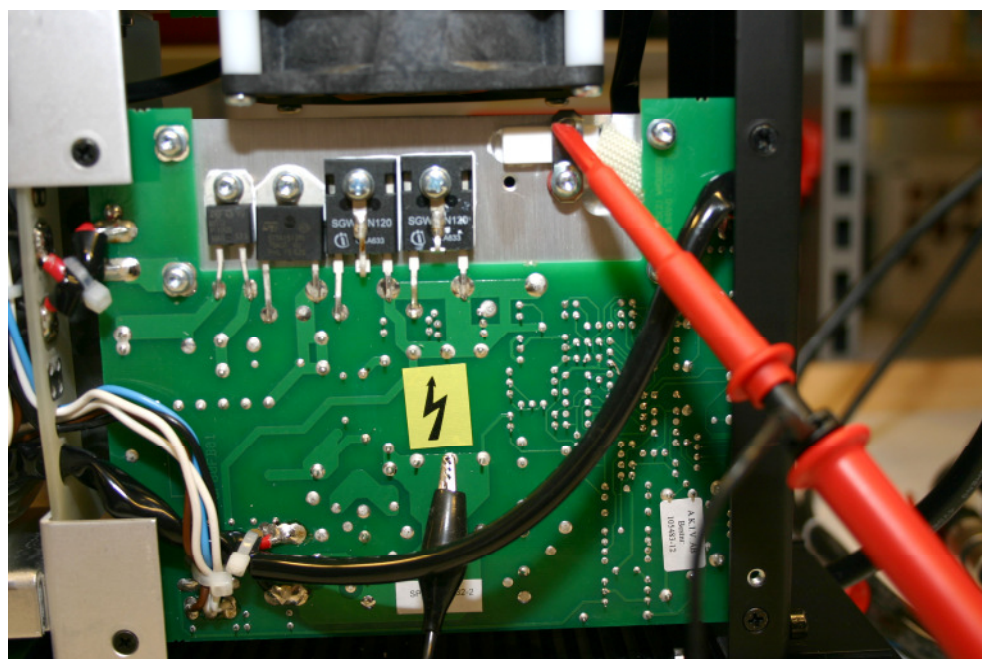
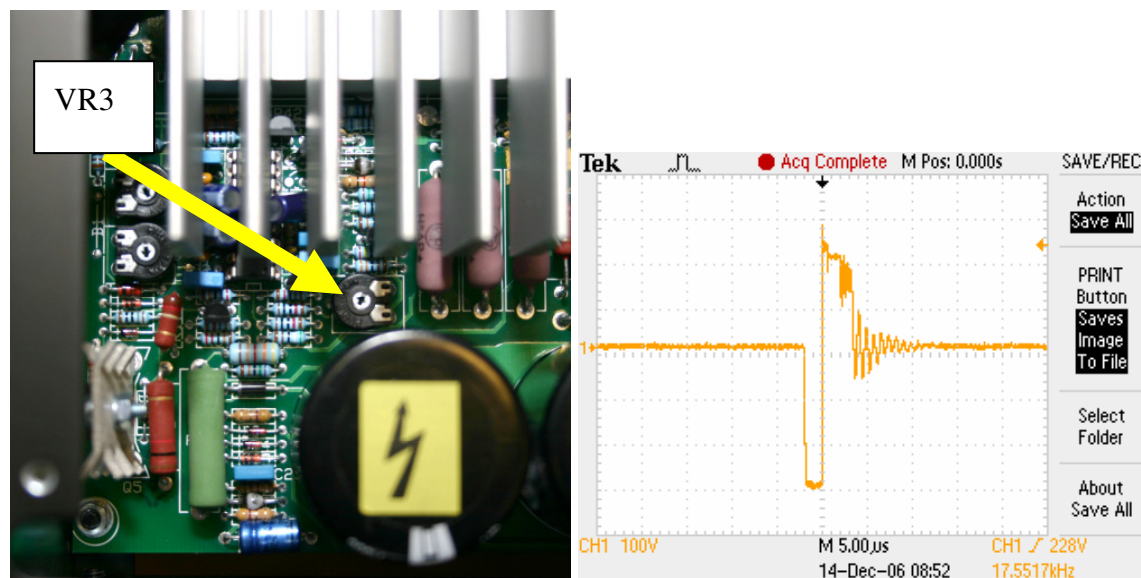
This checklist shall be used to make sure the amplifier is always checked in a proper way after service has been done. It is important to follow the steps in this check list and check all points so that the set up of parameters in the amplifier is correct adjusted. When have done all checks and adjusted the parameters the amplifier will work properly and will have the output power that it is designed for.

2 Check list class TD

Always clean the amplifier by blowing with compressed air through coolers and fans. Be careful when blowing where big electrolytic capacitors are placed so that the capacitor doesn't get damaged.

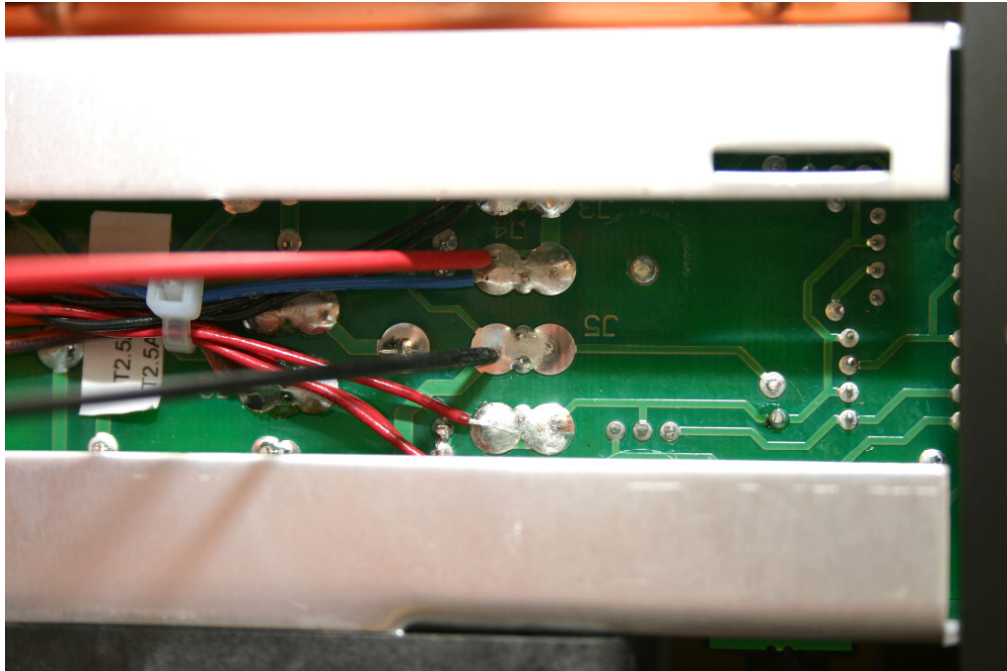
If HF- or LF-units have been repaired, always turn the potentiometers fully counter clockwise on HF-unit before starting the amplifier up (step 1).

1) After repair always start the amplifier with current potentiometer (VR3) in mains power circuit. On is clockwise (cw) and off is counter clockwise (ccw). Check that the switch pulse is normal. 300V line should increase some volts when relay clicks. Measure step 2 under start up.

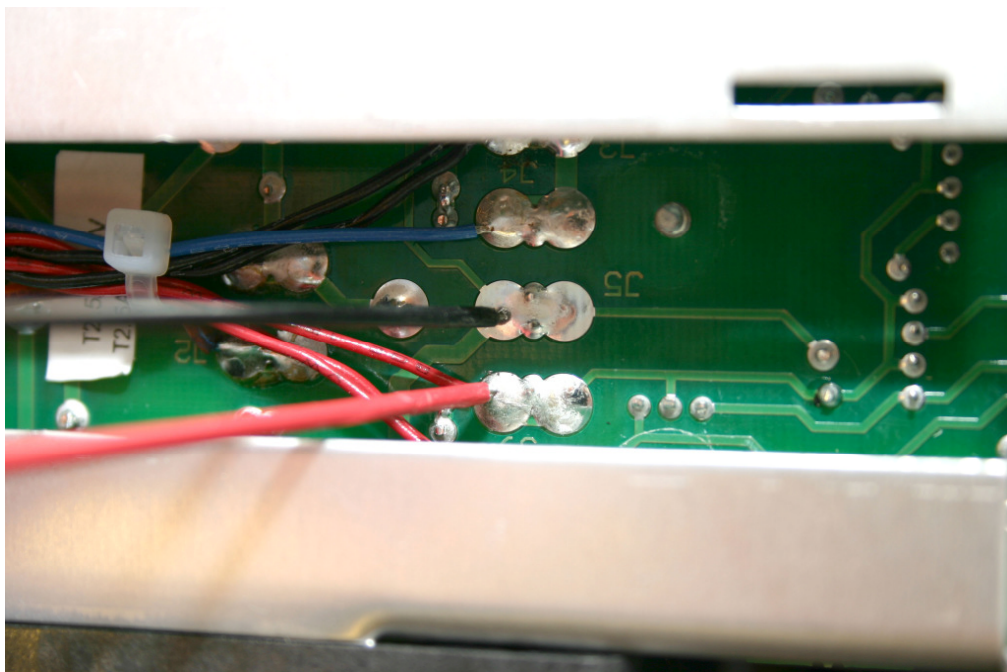


Measuring points.

2) Measure that $\pm 16V$ is correct balanced (tolerance $\pm 0.2V$). The voltage shall be balanced from $\pm 4.5V$ up to $\pm 16V$. If not stop immediately and turn the VR3 ccw again. Start troubleshooting the amplifier.

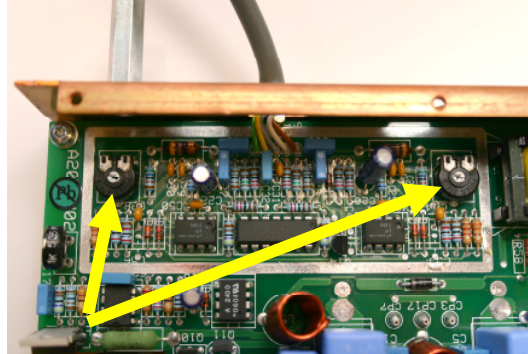
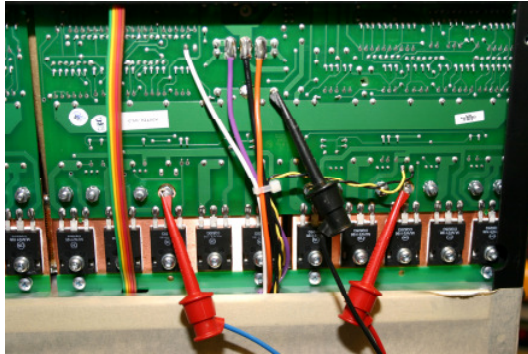


Negative side.

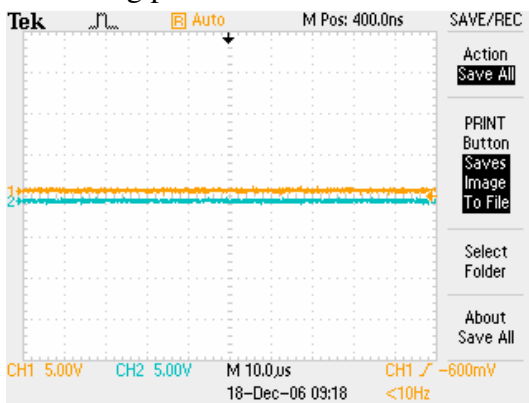


Positive side.

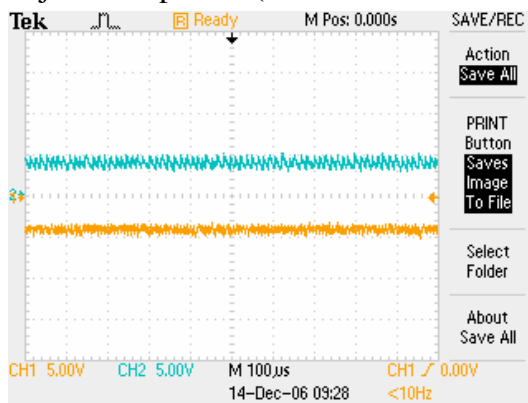
3) Start up of HF-unit. Check HF-wave at 1.3kHz and 13kHz at 8Ω.



Measuring points.

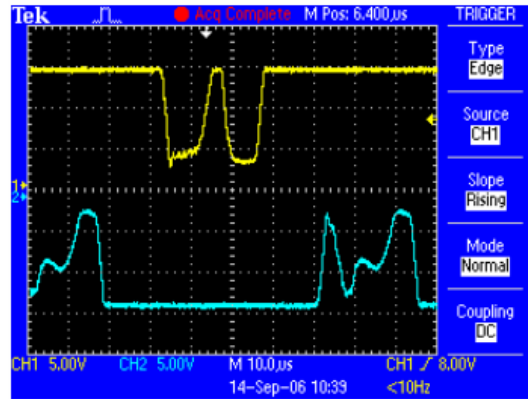
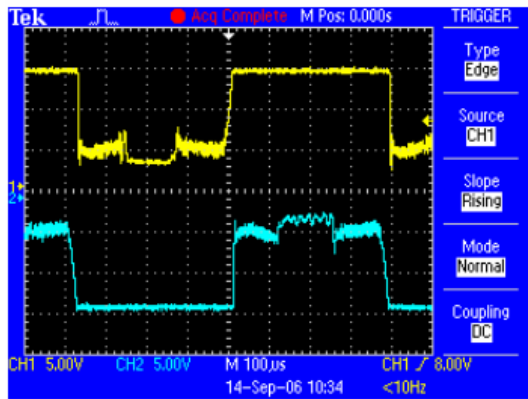


Adjustment points. (On=cw and off=ccw).



Potentiometers full cw.

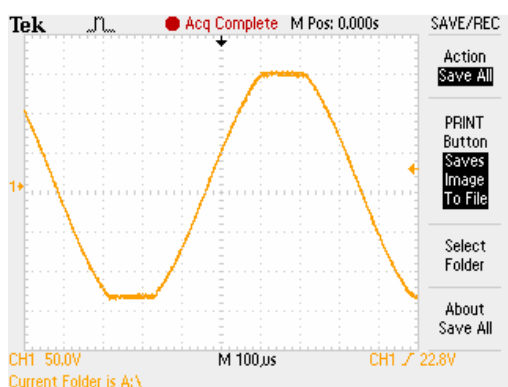
Potentiometers full cw.



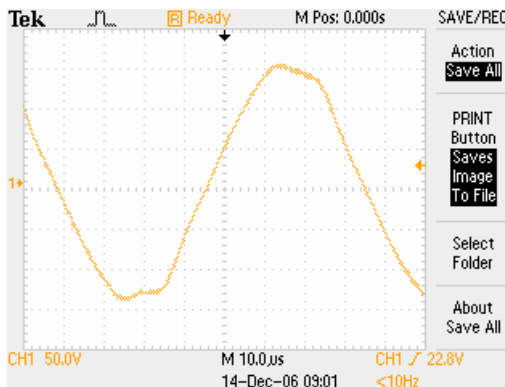
Clip 1.3kHz.

Clip 13kHz.

4) Check output signal at clip 8Ω .



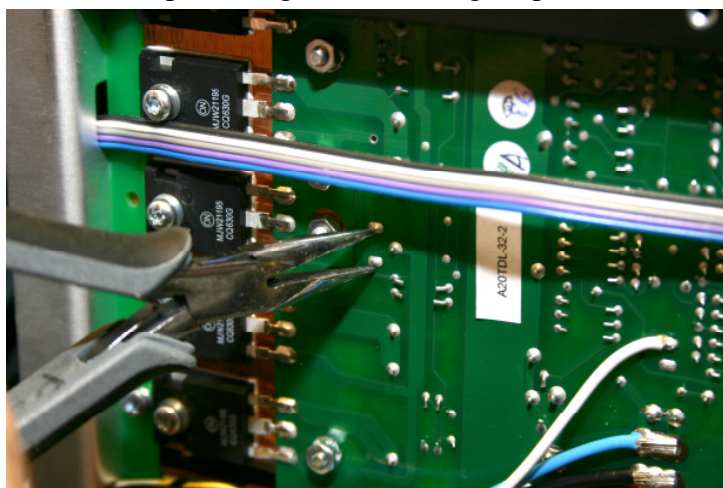
Wave measured at 1.3kHz.



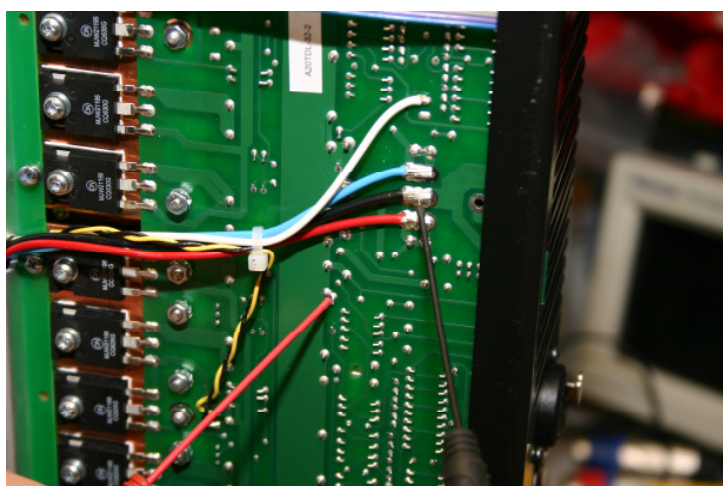
Wave measured at 13kHz.

5) Check offset on all channels, $<30\text{mV}$.

Check offset without load, $<100\text{mV}$, on all channels in protect. (Shorten temp resistor on each module, temp warning diode shall light up).



Shorten of temp resistor.

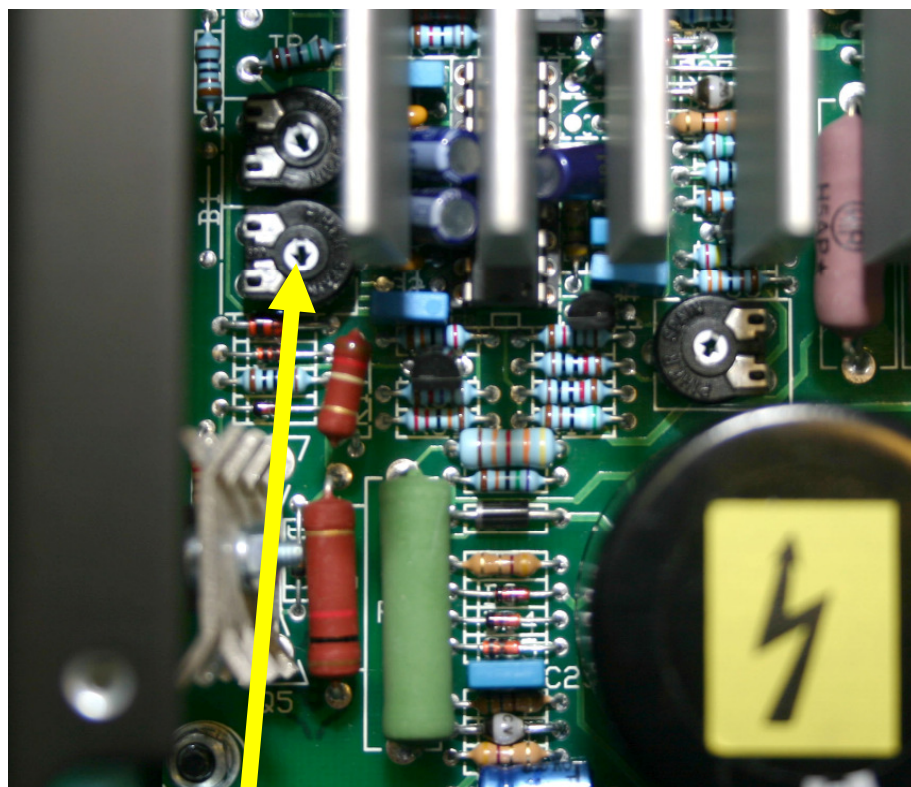


Measuring points.

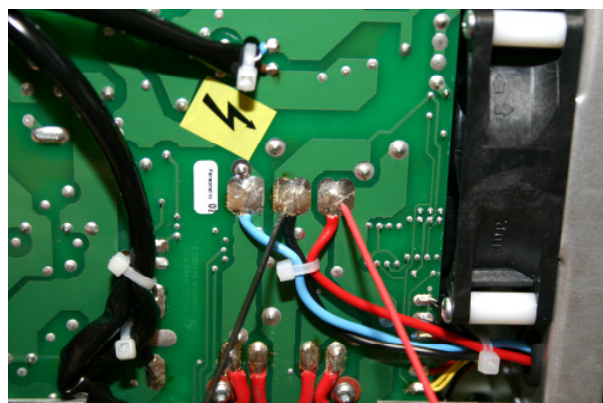
6) Check rail voltage.

SP80FB 2x17-2 shall be 136.2V, with a maximum -0 and +2V difference between positive and negative rail. (Increase voltage = cw, decrease voltage = ccw).

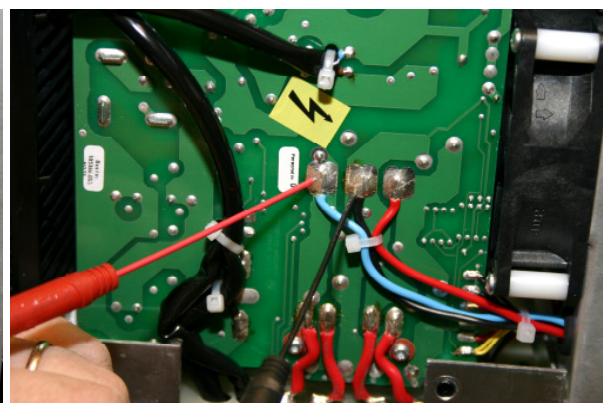
SP80FB 2x32-2 shall be 155V, with a maximum -0 and +2V difference between positive and negative rail. (Increase voltage = cw, decrease voltage = ccw).



Potentiometer for adjusting rail voltage.



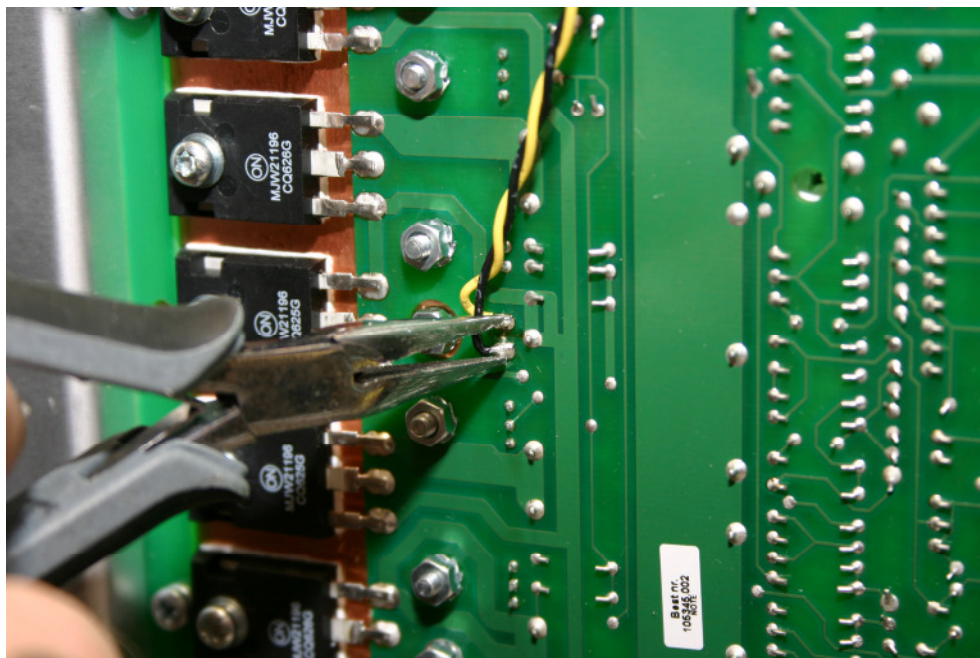
Measuring points positive side.



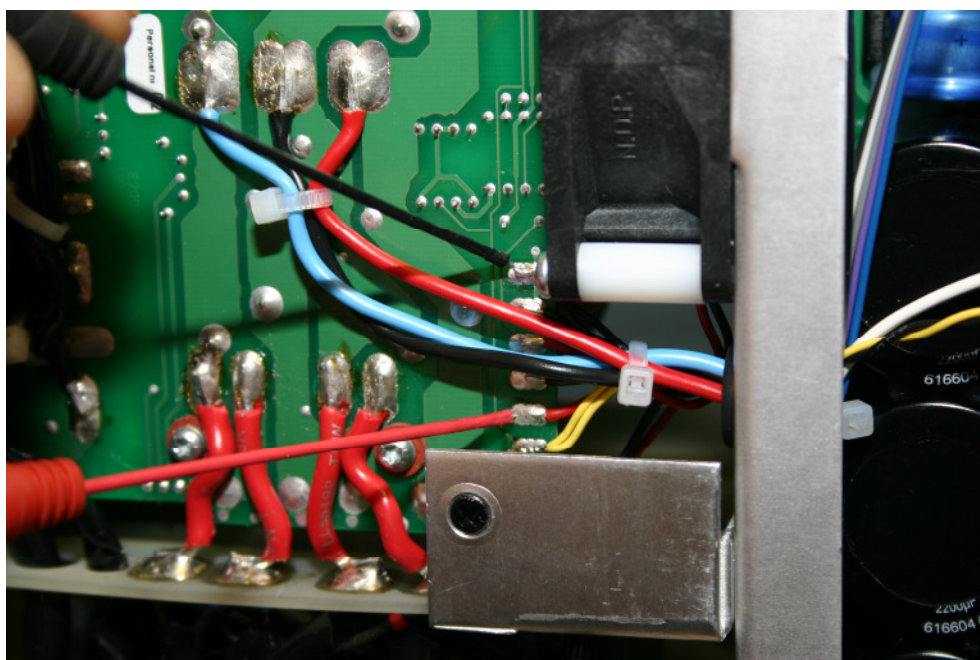
Measuring points negative side.

7) Check VHF protect on all channels. Turn on gain potentiometer at front to reach clip at 13kHz. Amplifier shall be in VHF protect between 4 – 7 seconds.

8) Check fan control. At idling mode measure approximately 23V and at full speed approximately 60V.

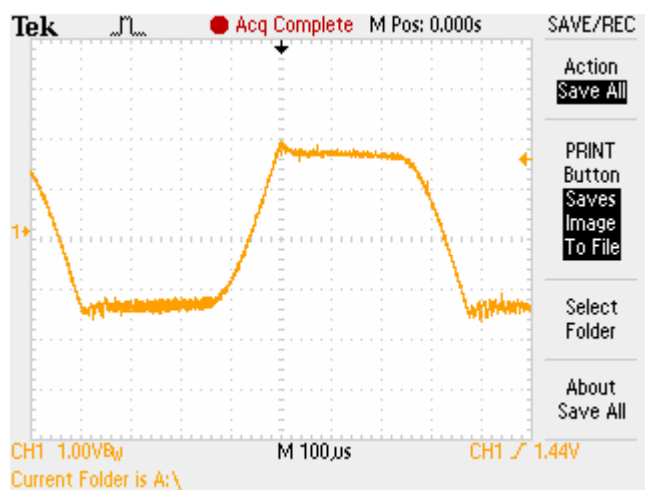


Short circuit of temp resistor (controlling fan speed) to get full speed of fans.



Measuring points for fan.

9) Check output signal at short circuit on the outputs.



10) Check mains switch for bad contact (click noise).

11) Check gain potentiometers at front. No disturbance at output signal shall be detected when turning the potentiometer from one end point to the other end point.

12) Check dust filter, change when needed.