

## NS-OPS building instructions

Q4 (npn in the 1-st spreader) - don't put it on a heatsink under the board. Put it vertically at the top of the board (mind the pinout, base is always marked with square plate).

R19 - NTC under the board - put it close to the board (1-2 mm from the board), it does not need to touch the heatsink, measuring the ambient air temperature.

See the trimmers orientation on the photo - R2 (on the left), trimming screw is at the bottom, R14 (on the right), screw is at the top.

Before you power it on:

- 1) Set the bias trimmer (R2) all the way counter-clockwise (maximum value);
- 2) Set the clamping trimmer (R14) in the middle position (or a bit counter-clockwise from the middle).
- 3) Connect a milli-voltmeter to the "BIAS" plug (200mV scale or so).

Make sure, everything is connected properly, you did not forget to connect NFB.

Power On!

Now:

- 1) See the voltage on the milli-voltmeter, must be couple of millivolts. Rotate R2 trimmer clockwise slowly and carefully - voltage will increase, set it to 20 mV. Let it warm-up (10-15 minutes) and adjust again.
- 2) The dummy load (say, 8 ohm) is in place, send the input signal (1KHz), so that you have some 10V RMS sine at the output and leave it this way.
- 3) Note the voltage at your milli-voltmeter. Now start rotating the other trimmer (R14) clockwise carefully - watch the voltage at your milli-voltmeter. As soon as it starts growing a bit (plus 5 millivolts or so) - stop and make 2 turns back (counter-clockwise). Your clamping spreader is set to the optimum position.

Once again - you set the bias (R2) with no signal, but you set the clamping spreader (R14) with the signal constantly on. Dummy load is connected at all times.

That's it - the board setup is done.

