

Linear Power Amplifier on G811

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Credit Line: Spravochnik Radiolyubitelya
Korotkovolnovika, - 2 Izdanie, Kiev : Tehnika, 1984.
("Reference for Ham")

The PA is designed for ham bands 160- 10- meters. It provides 200 Wtts CW/ 500 Wtts PEP SSB. Efficiency of the PA is 65- 70% in depend on used r\band. **Figure 1** shows the schematic of the PA.

Four tubes G811 (switched in bridge, grounded grid) are used in the PA. Four tubes may dissipative 160- Watts on their plates, so, the PA can work continuously with 200- Wtts output. Input resistance of the PA is closed to 75- Ohm at 160- 10- meters.

RX: Tubes are closed by minus 27-V that is coming by relay K1. Contacts of the relay switch antenna to X3- Receiver Input.

TX: Grids of the tubes are connected to the ground by pedal S1, antenna through contacts of Relay K1 goes to PA output.

Transformer T1 provides 2x6.5-V at 8- A. It should stand 110- Wtts.

Inductors L1, L2, L3, L4 are wound on Russian Resistors MLT- 2 (for sizes see: <http://www.antentop.org/009/tst009.htm>). Each inductor contains 5 turns and coiled by wire in dia 0.62- mm (22- AWG).

Plate choke L6 is wound on porcelain form in dia 20- 25- mm and 150- mm length. It contains 150 turns, 50 turns at plate side is wound with gap 0.5- mm. Was used wire in dia 0.35- mm (27- AWG) in silk insulation.

Chokes L7 and L8 is commercial made from old military equipment. May be used any suitable chokes.

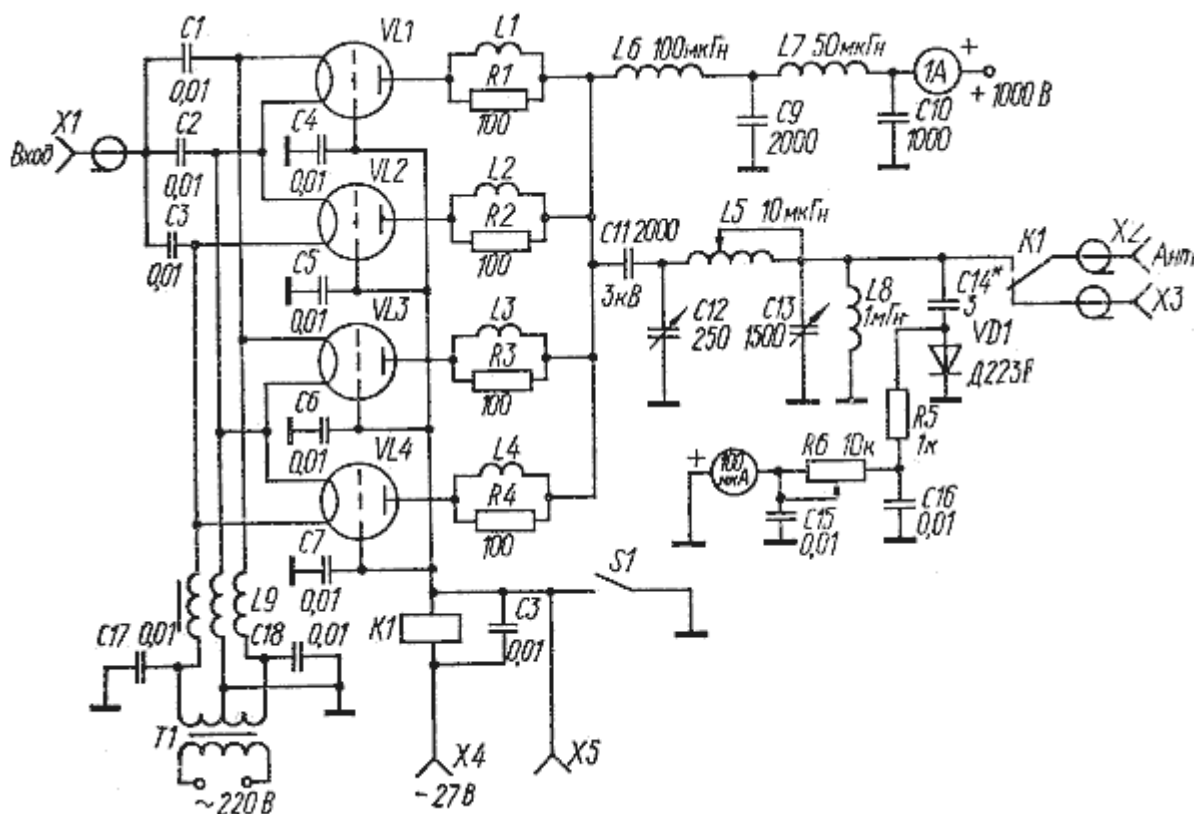


Figure 1 Schematic of the Four- G811 PA

Capacitor C12 should have plate gap not less the 1.2- mm.

Capacitor C13 should have plate gap not less the 0.3- mm.

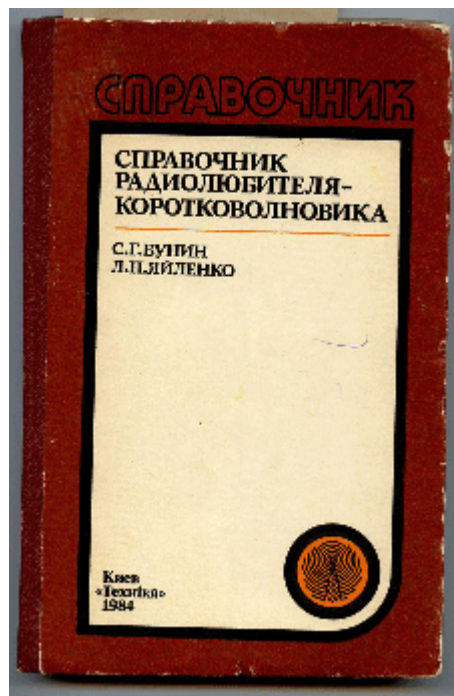
Variometer L5 is from old military TX.

For right tuning C12 should have 250- pF at 80- meters, 120- pF at 40- meters, 50- pF at 20- meters, close to minimum at 15- meters and minimum at 10- meters.

Montage of the PA is usual for such equipment. Grid wires should be screened from Plate wires. Wires with RF should be short and straight.

As rule, PA made correctly from good parts works straight away. At self-excitation it needs to decrease value for R1- R4 in 1.5- 2 times. It needs input power near 25- Wtts for plate current 400- mA.

PA is assembled in metal box h- 200-mm x w-400- mm x d- 300- mm. A small fan is installed inside for cooling of the tubes.



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