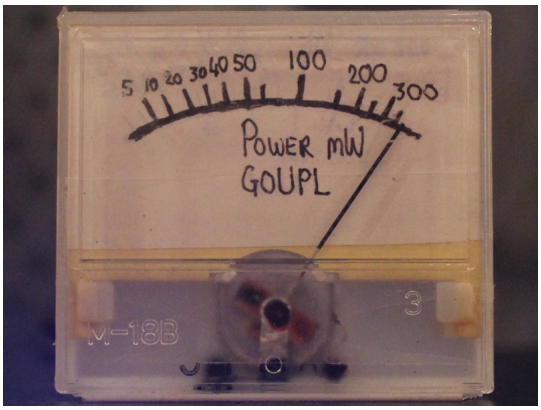


It's really simple to make a QRP power meter measuring RF output powers from a few mW up to half a

The diode is a historic old OA81. Any diode will do but a Germanium diode is better because of the lower voltage drop across the junction. The 100K trimmer potentiometer adjusts the full scale deflection of the meter.

I opened the meter, stuck sticky white labels over the old "VU" scale, and drew on my new scale. To calibrate the power meter scale I adjusted the power output of my Ultimate3S QRSS/WSPR transmitter into a 50-ohm dummy load, monitoring the accurate power measurement on my spectrum analyser. An oscilloscope could be used too, look at the peak-peak of the sinewave and calculate the output power.

{gallery}powermeter{/gallery}

The photographs above show how I built this QRP power meter right inside the RF output (antenna) connection of my Ultimate3S QRSS/WSPR transmitter in its officical QRP Labs case . The meter stays wired in during operation and doesn't significantly affect output power. Of course, the reading is only accurate if the antenna matching is correct (50 ohms). I don't really get 350mW on the 10m band from this transmitter in its current configuration but the antenna is a 30m dipole, so there's some mismatch presumably.