resulting output coupled to the bandpass filter (c3, 11, 9 and 12 & L2 and L3) via L5 and L6 which provide the impedance matching. This part of the circuit worked very well, but when built, an issue with the final stage emerged.

At this point and taking advantage of the difference in the clock with me in the UK, and Pete on the West Coast, he was designing, and then retiring for the night as I was getting up, modelling the actual circuit in CAD, milling it in a small CNC machine and building and testing it as a real circuit.

What failed to show us was that a significant voltage appeared on the gate of the final device from the drain. We experimented with other devices in that location, managing to get an IRF 510 working, but unreliably, as the operating point on the gate was hugely sensitive, even with a stabilised supply to it. Pete abandoned that approach and embarked on a redesign, shown below;

Pete uses a CNC machine to build prototypes, but his favoured technique, which he has developed over the years to allow a degree of flexibility, is to build on a grid of isolated squares. Whilst not always tidy, it's immensely practical in that it's very flexible and gives room to make changes which the CAD technique tends not to.

Building this design in *LTSpice*, Pete was able to predict its performance (shown over-leaf), and then measure it in a real-world implementation: