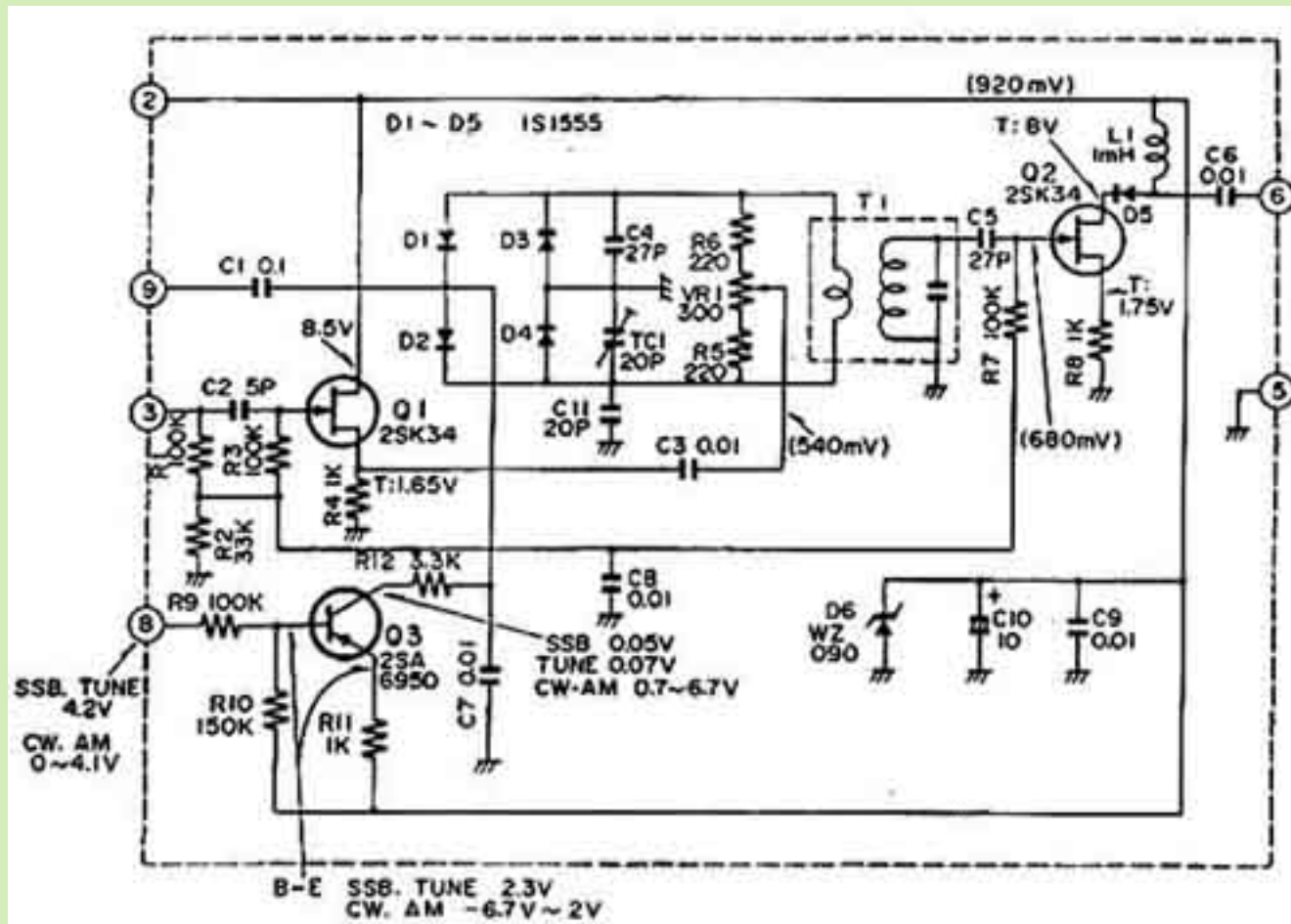


LA8AK

b52 . Sommerkamp FT-250 Yaesu FT-200/Tempo One



7360 solidstate replacement circuit

It is many old transceivers which it is very little point in expecting to improve by modifications, but it is an even older transceiver which may still be regarded as good.

Problems keeping the rig running:

The two worst problems with this transceivers is to obtain **PA tubes** and **7360 for the balanced modulator**. It is many more tubes, but apart from Mr and Mrs Mouse who believe they need half hundred spare tubes as replacements for a douzen, it is just showing that they don't understand, but it is wise to have a spare 12BY7, and at least a few 6JS6 or if it is **6JS6C**. But you may also use other types in the PA. Reports says **PL36, PL509** or EL509 will work just as good as 6JS6, the only problem is the heater voltage for PL36 and PL509. Suppose PL519 will also work - at least on the lower bands, it is supposed to be an improved PL519, but it seem to cause some problems in TV-sets and didn't always last as long as it should be expected (On an occasion G3TQD put a single PL36 in his Heath HW-100 transceiver, he got 120W PEP input).

The other problem is the balanced modulator. PA0DKO writes in Electron nr 7/91 about the solid state replacement for the **7360 valve**. It is shown on the circuit diagram, this was delivered with the later version of the series,

so you may not necessarily have to build it yourself.

He also mentions that **6CB6** has the heater connected in series with 7360, so here must be some rewiring or additon

of a resistor to drop the voltage from 12.6V

AGC improvement?

DF7JE mentioned that he modified the AGC. It is easy to see that large part of the AGC circuit is got from Drake TR-4

(or TR-3 ?), but it is some differences. On the output side is a difference which could make the AGC worse than it need to be

- possibly because it was limited understanding of how to make proper AGC, and only the Drake engineers really

understood

it, then. But it is easy, just by changing some component values - to make it like the TR-4, and I had some plans for it.

Problem was that I sold the FT-250 in 1970 to LA3LC and had to borrow it from him. Did so, but didn't have much time

for laboration, and I wasn't satisfied with the result, and didn't have the chance to test through it thoroughly.

Early problems

Since my rig was one of the first available, I had to wait for while for it (1969), it was some problems to cure, click in the loadspeaker when

you switched between receive/transmit and also a click in the modulation. Found a cure for this with some diodes in anti-parallel, but

I was later told that this problem was cured in the later models. I rebuilt the power supply which was earlier used for Heath HX-20.

Transverter connection, external receiver

Also made a transverter connection, which showed up to be almost the same as for FT-902 and could be used with external antenna and

to connect another receiver to the TR-relay of FT-250.

Intermodulation modification (xtal calibrator)

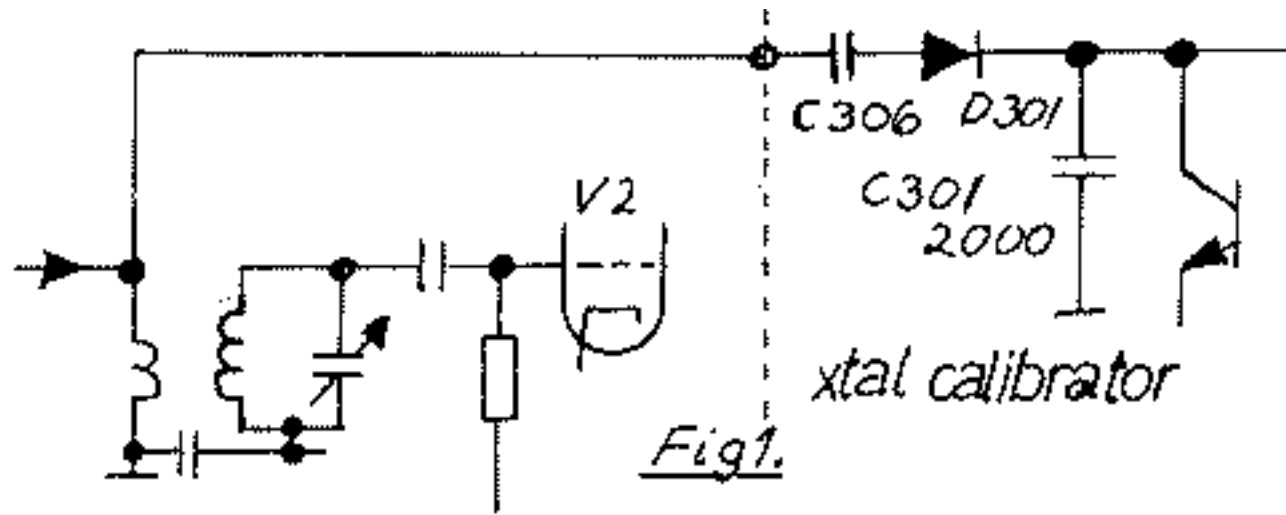
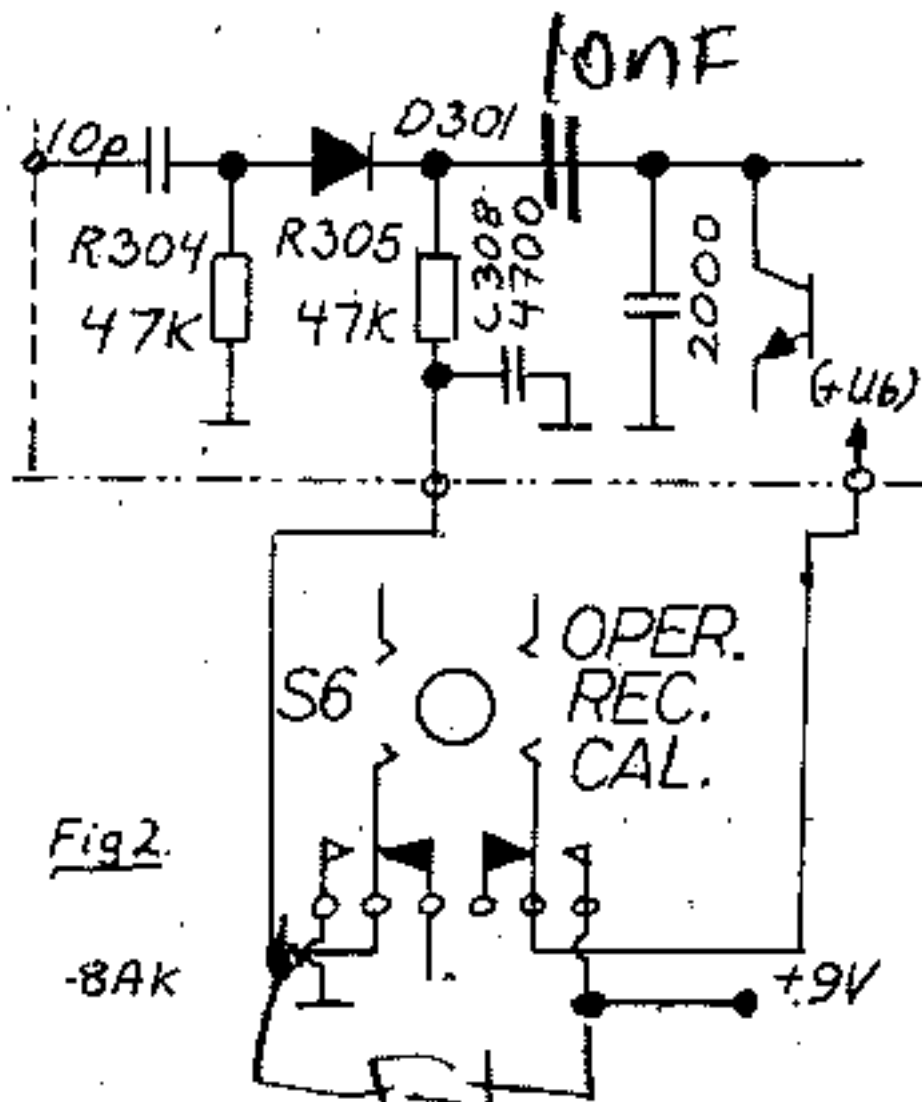


Fig. 1. Forenklet inngangskrets for FT-250.

Simplified RX input circuit without modification.



See Amatørradio nr 1/77

The harmonic gate diode is reverse biased when calibrator is off to avoid causing intermodulation from strong signals into the receiver

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