

TS690 Mods. Mods for your Kenwood TS690 - by Tuomo OH1LEU Six News.....

In issue 36 of Six News there was an article concerning the Kenwood TS690.

A few questions were asked. I hope the following information will answer a

few questions, including the 30 - 50MHz coverage. I have a 690 bought direct from the States and my friend Kari OH1MLD has one bought from Finland. We have been comparing the differences between models! All band assignments are controlled by diodes in the digital unit, which is located

behind the front panel. There are several (probably) yellow 4148 look-a-like diodes in a row, marked D20-D23. D23 affects the rx range. Removing it opens the receiver from 30KHz (yes!) to 60MHz continuously. Also any frequency change can now be controlled directly from the keyboard.

D20 may have something to do with the WARC bands, at least in the US model

there is only one diode D21, so you might like to try taking others away. Also the logic changes when entering a new frequency because of the "new bands", so be careful when you decide to operate! If you want to make these

mods, take both covers off, note the extra filters, which are now the highest parts of the rig and note also that those little flat cables coming

from the digital unit can very easily break. After that, loosen two lower screws (on both sides) that are securing the front panel and take away the

two upper screws. Now the front part can be twisted downwards. Diode D23 can be removed easily from the digital unit PCB, located at the right hand

side. You may also like to make some changes to the mic gain scaling. It is

very easy to overdrive the PA. Between the mic gain pot and the centre tap

is a 10k resistor, which causes the mic gain to be somewhat non-linear.

Changing this resistor between centre tap and ground, still results in a non-linear pot, but, if for example I had the mic gain at 9 o'clock now I can turn it to nearly 12 or even more. This is very handy when using the processor, the ALC setting is now not as critical. The maximum gain remains

the same. You may have noted that the AM band has poor sensitivity. You may

change the coupling in the RF-unit on that particular band 500KHz - 1.6MHz.

The coupling has two 39 ohm resistors (R6,R7) in series, controlled through

a 10 ohm resistor (R8) between them. Changing the 10 ohms to a miniature coil 1uH and those 39 ohms to 0 ohms makes AM sensitivity much better. If you live near a AM station forget this mod! The SMD components are located

in the RF-unit, from the CN4 connector and IC2 towards the centre of the PCB, at the opposite end to the filters. I would recommend the purchase of

a service manual before undertaking these mods. I also can not be held responsible for any damage Hi! 73 de Tuomo OH1LEU.

**\*\*Note\*\*** Cutting D23 reverts the 690 back to Japanese spec i.e. full Rx coverage up to 60MHz but only 50w o/p on 10m due to their regulations. (Thanks G0HVQ)