Front-panel Sidetone Level Control
for the
Kenwood TS-950S
(may also apply to TS-950SDX)
de K0ZL 2/2/05

DISCLAIMER: Performance of this modification is undertaken AT YOUR OWN RISK. Surface mount soldering and desoldering is involved. Static damage prevention measures MUST BE TAKEN or damage to your radio can result. If you do not feel that you are able to safely perform this modification, get technical assistance from someone who is. Don't risk it! Neither the author nor any Web entity involved in the dissemination of this information is responsible for any damage or personal injury resulting, directly or indirectly, from the performance of this procedure. GET HELP if needed.

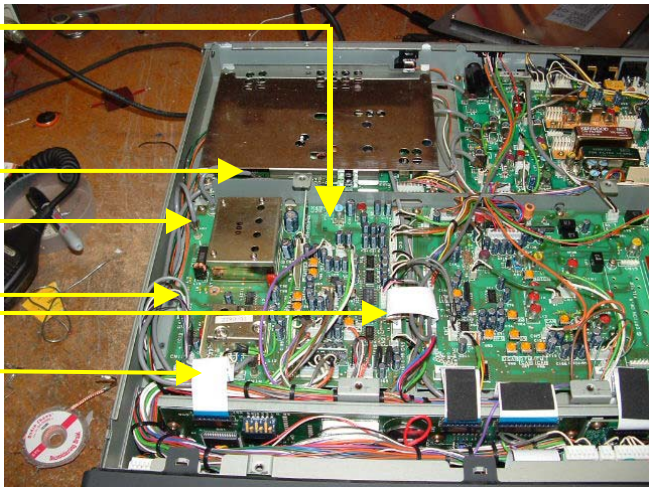
This procedure describes a modification to the Kenwood TS-950S that will allow front-panel control of the sidetone LEVEL in the speaker for CW operation. This is helpful to allow "seamless" full break-in (QSK) operation, as it allows the operator to balance the CW TX sidetone level with that of the band noise and QRM. It also negates the need to remove the bottom cover of the rig to adjust the sidetone level.

On the downside, after the modification the sidetone will not operate in receive mode as before; it will only sound when the key is closed in transmit mode. Also, the front panel MON switch must be ON or IN for the sidetone to work. I have found these to be minor inconveniences; you may not however. Please consider these items before performing this modification.

Let's proceed:

Unplug the AC power and antenna leads. Remove top and bottom covers. Invert the radio.

FIG. 1 AF UNIT



Locate the AF unit (FIG. 1).

Carefully remove the indicated connectors, to allow the board to be "flipped". The ribbon connector is most easily pulled from the black connector on the front unit.

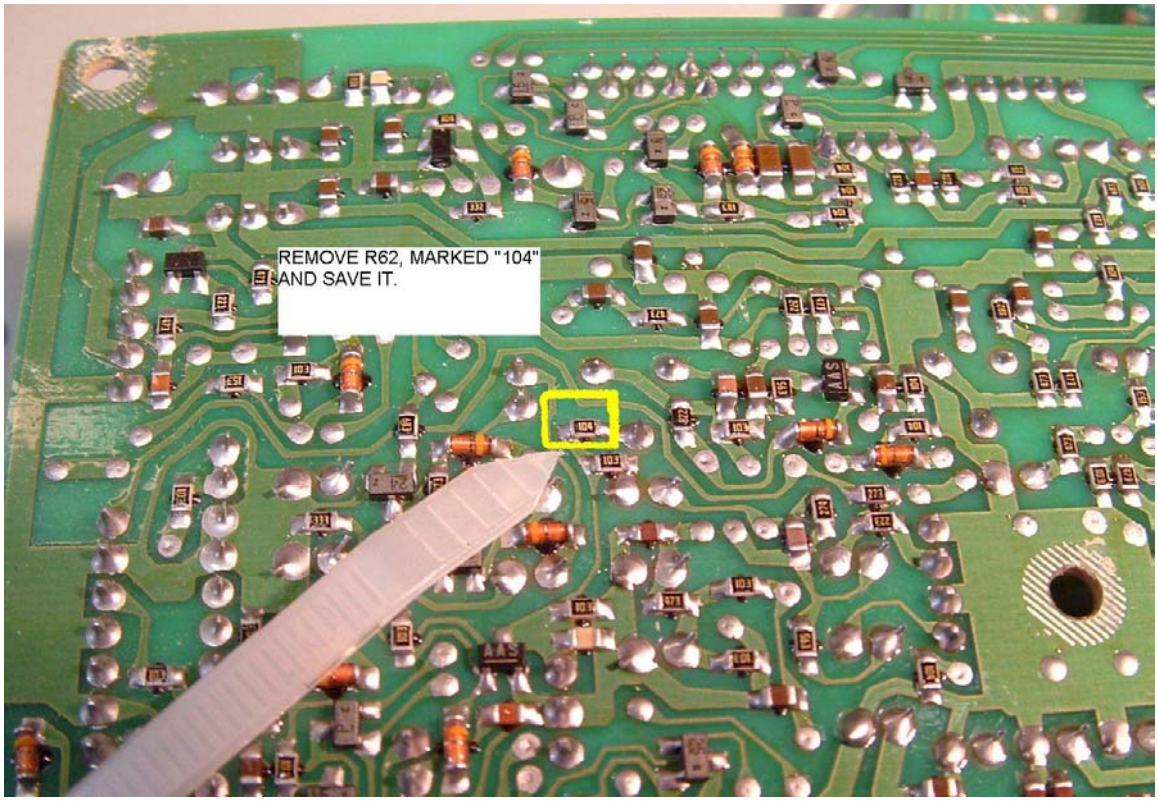
Remove these connectors

Now remove the mounting screws on the AF unit, and "flip" it to allow access to the bottom of the board (Fig. 2)

Fig. 2 AF unit "flipped"

Fig. 3 R62 Location

Using the detail in Fig. 3, locate and remove R62.



It is best to desolder the resistor and save it, in case you want to replace it and undo the mod later.

Next, locate a 100K ohm, 1/8 or ¼ watt resistor and some small heat-shrink or spaghetti tubing. This resistor will be soldered between the right-hand pad at

the former location of R62, and Pin 4 of CN12 which routes MON audio to the front panel MON level control. See Fig. 4.

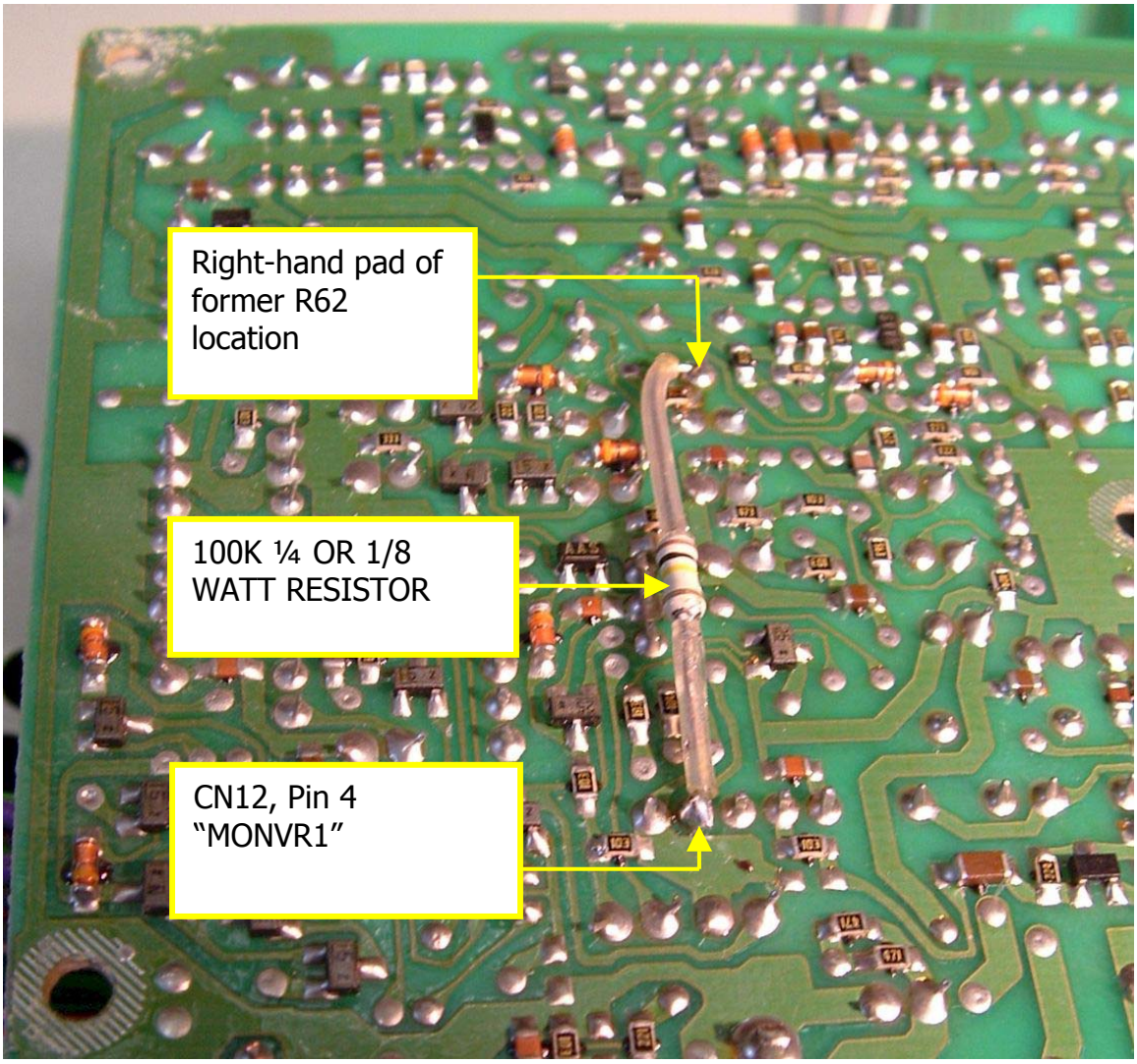


Fig. 4 Location of new resistor

Replace the AF unit, being careful not to pinch any wires. Replace all connectors. Reassemble radio and enjoy your new feature.

<end of procedure>

Corrections or additions to K0ZL, email: coorsbill@yahoo.com