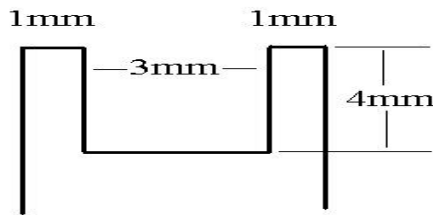


## GW6WRP - Ron

### INSTRUCTIONS FOR KOELN E52 RF & MIXER/OSCILLATOR COIL UNIT REMOVAL

1. Remove outer case.
2. Whilst Rx is top upwards, remove covers from Rf and mixer/oscillator stages.
3. Remove Rf and mixer modules. Be careful not to lose the insulating washers under the modules. Disconnect the wire from the antenna socket to the 1<sup>st</sup> Rf module.
4. In all three compartments, remove screws which secure conducting strips passing rearwards into the coil units. These are also the contacts for the brass connecting strips on the Rf and mixer/oscillator modules. A special screwdriver is needed, with a tip as in the diagram below;-



5. Once the screws are loose (they are captive), carefully bend the connecting strips upwards to allow sufficient clearance for removal of the connecting tags for the coax cables in the 2<sup>nd</sup> Rf and mixer/ oscillator compartments. The strips should be bent enough to allow subsequent withdrawal of the strips through the slot in the casting when the coil units are finally removed.
6. Turn the Rx over until it is bottom upwards and with the rear facing you. Loosen the retaining screws for the power supply and withdraw it. This will reveal the switch units.

7. Set the band switch on band 2 (this may be different on your Rx). In this position you should be able to see all 11-grub screws securing the switch rotors, bearing housings, brass earth contact bushes and the screw-locating groove in the switch shaft.

## 2.

8. Remove the spring and roller switch selector mechanism from the right hand end of the shaft. This is best done by removing the circlips from the pivot pins. Leave the toothed wheel in place.

9. **COMPLETELY REMOVE ALL 11 GRUB SCREWS SECURING THE BEARINGS, SWITCH ROTORS AND THE THREE BRASS CONTACT BUSHES. LEAVING THE SCREWS IN PLACE PARTIALLY REMOVED COULD CAUSE DAMAGE TO THE SWITCH MECHANISM SHOULD THE SWITCH BE ROTATED AT THIS STAGE IN DISMANTLING.** Note that the two screws, which go into the bearing housings, are 3.5mm and non-standard. Don't lose them!

10. Carefully clean and lightly oil the switch shaft.

11. It is now time to withdraw the switch shaft Grip the toothed wheel at the right hand end and pull out the shaft – careful levering under the wheel may help to get it started. Observe the switch rotors while the shaft comes out in case any sticking occurs. Once the shaft is out, relax and have a beer – you may need it!

12. Each of the three coil units is held by four screws and located by two dowel pins each. According to whichever coil unit you wish to remove first, remove the screws and ease off the unit. It will probably stick on the pins due to corrosion. As each unit is removed, carefully guide the brass connecting strips and screws through the slot in the casing to ensure that they are not damaged.

13. You should now be able to carry out any necessary repair and service on the Rf and mixer/oscillator coil units and switches. In particular the adjustable ferrite cores in the coils can be very difficult to move due to the felt rings at the bottom of some of the coils. This can be overcome by application of silicone grease to the felt ring and the core.

14. Reassembly is the reverse of the above, remembering the following points:-

15. Replace the coil units, securing all screws, making sure that the connecting strips to the Rf and mixer/oscillator compartments are not bent or damaged in the process.

16. Tighten all the connecting strip securing screws with the special screwdriver, not forgetting to replace the coax cable connecting tags. Reconnect the wire from the aerial socket to the 1<sup>st</sup> Rf stage.

### 3.

17. Lubricate the switch shaft and pass it back through the bearings and switch units. Don't forget the three brass earth contact bushes.

18. Making sure that the slot in the switch shaft is uppermost and the band switch is still on band 2, check that all screw holes in the switch rotors, brass bushes and bearing housings line up with the slot. Replace and tighten the screws.

19. Replace the switch mechanism and circlips. Replace the power supply unit.

20. Turn the Rx over and replace the Rf/mixer/oscillator modules and the covers, making sure that the insulating washers under the modules are present.

21. Hopefully the Rx will now work!