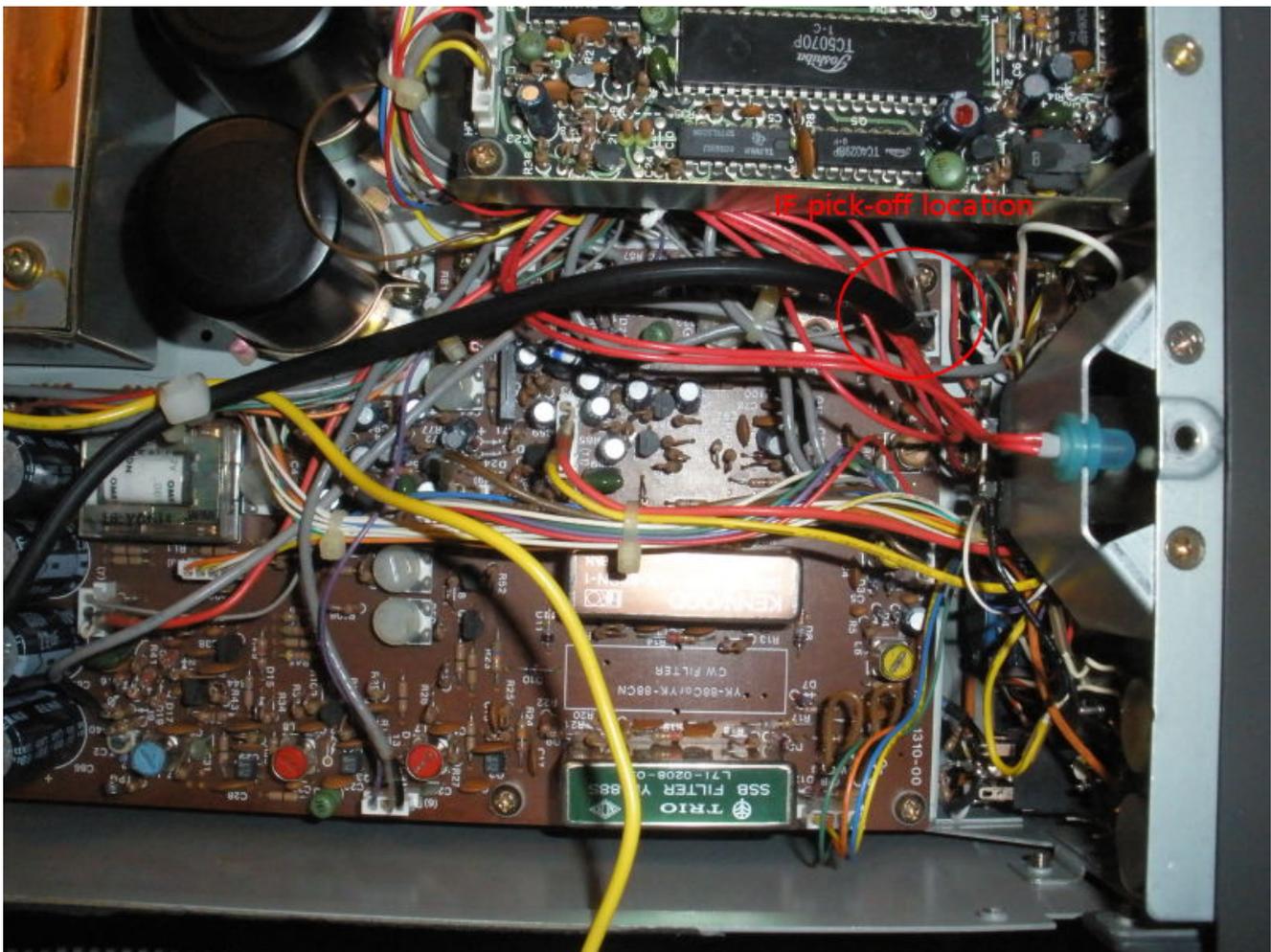


SM-220 w/BS-8 Pan Adapter – TS-530S Installation Instructions
Nathan Fowler / KJ4AUR – November 11, 2009

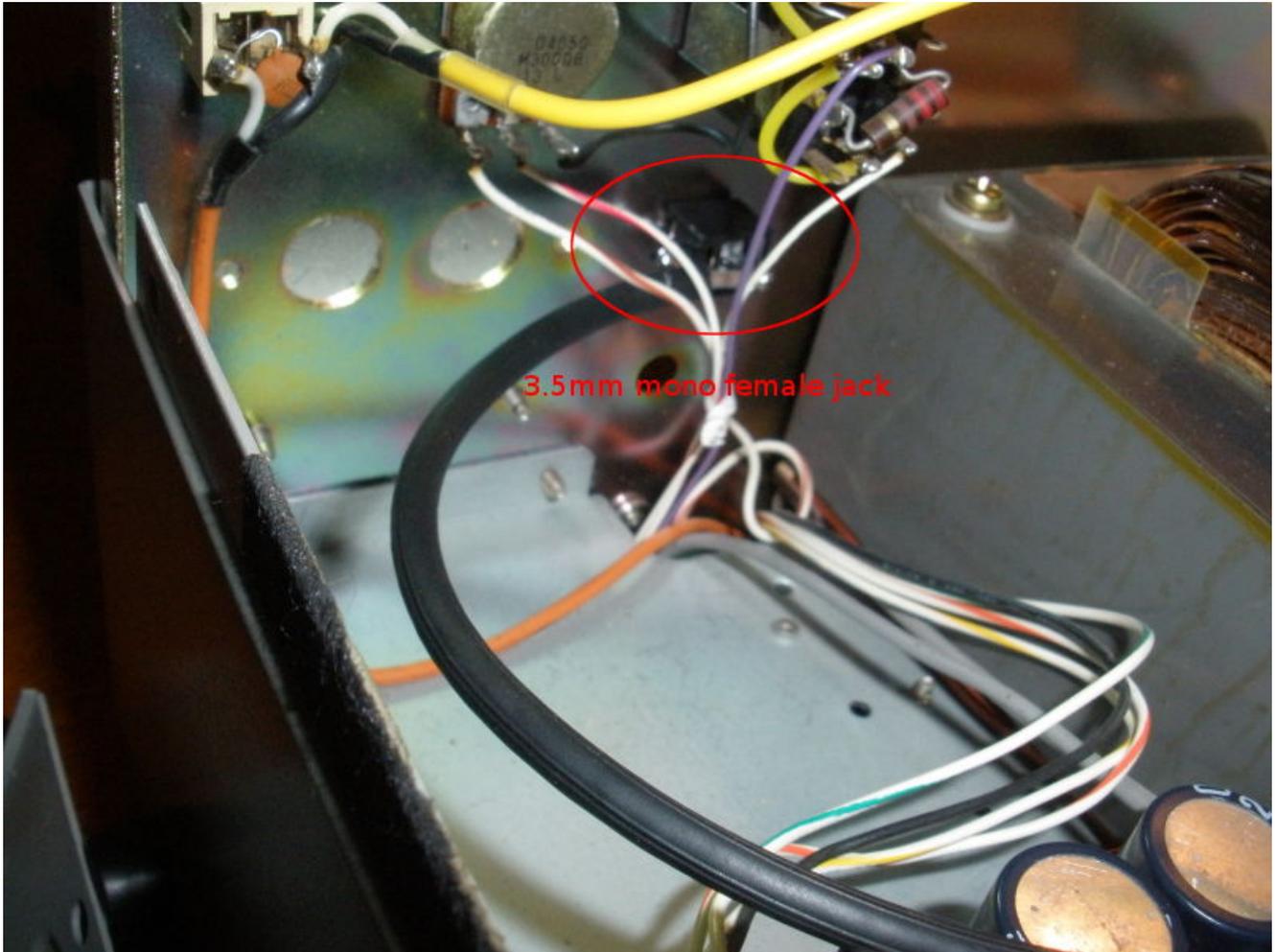
There is a fair amount of misinformation coupled with a lack of information regarding the installation of the SM-220 with the BS-8 pan adapter in the TS-530S. The IF frequency of the TS-530S is 8830kHz, the BS-8 is the correct module for use in the SM-220 for the TS-530S and the TS-830S. As you have likely already encountered the TS-530S does not have an IF out RCA connection for use with the SM-220; this is present on the TS-830S. The SM-220 manual does not provide connection information for using the TS-530S with the BS-8.

The IF location does not supply enough output power so it was necessary to use a Ramsey LPA-1 power amplifier or equivalent amplifier. Without this the V.Gain on the SM-220 must be turned to maximum and only S8+ signals are registered on the display. The Ramsey LPA-1 enables the SM-220 V.Gain to work as one would expect, with V.Gain at center registering S4+ signals.

On the IF board (X48-1310-00) (facing radio, far-left board), towards the front-right of the IF board, near the VFO board there is an IF pick-off location labeled (1) which is by Q1 and C1. Using a decent quality RCA cable, I cut and tinned the center connection and stubbed the center pin into the white connector closest to Q1. The tinned shielding was connected to the center pin on the white connector.

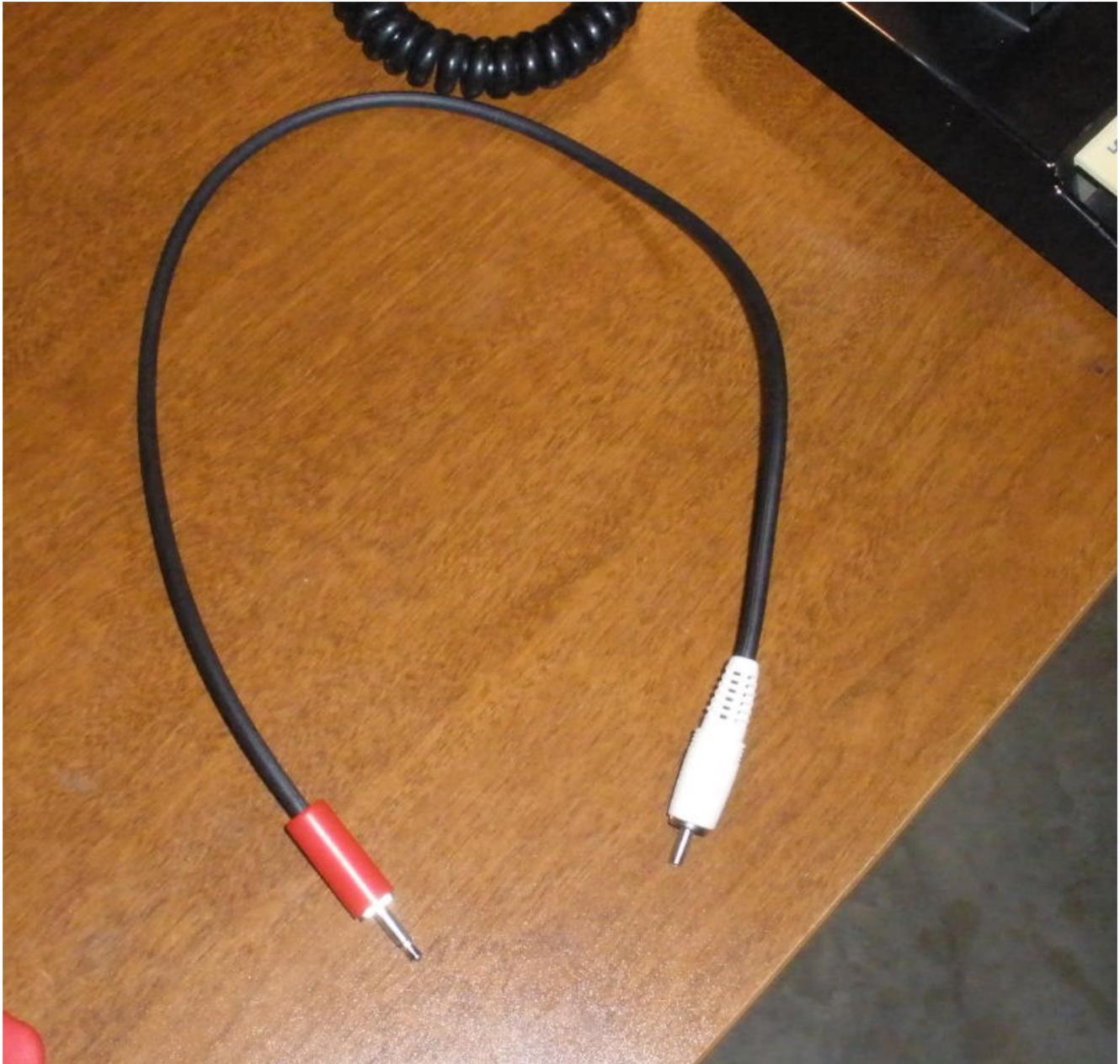


The cable then is routed towards the rear of the radio where a 3.5mm mono female jack is located. This cable is soldered and the female mono jack is mounted to the chassis below the CW KEY 1/4" female jack.



MORE INFORMATION – PLEASE TURN TO NEXT PAGE

An RCA to 3.5mm male mono cable was constructed from the remaining RCA cable that was hacked up earlier. If you have one of these on hand obviously there is no reason to create one.



MORE INFORMATION – PLEASE TURN TO NEXT PAGE

The 3.5mm male plug is connected to the TS-530S 3.5mm IF jack we added. The RCA connection from the TS-530 enters the Ramsey LPA-1 at the INPUT side. An RCA-RCA cable is the connected from the LPA-1 OUTPUT to the SM-220 BS-8 RCA connector on the rear of the SM-220.



MORE INFORMATION – PLEASE TURN TO NEXT PAGE

Now that everything is connected perform the alignment for the BS-8 as indicated in the SM-220 instructions. Both 100kHz and 20kHz scan width options will perform as expected. I hope this information is helpful for future amateurs who wish to accomplish the same. The Ramsey LPA-1 is required to visualize signals that are not S8+ without the SM-220 V.Gain turned to maximum.



73 – Nathan Fowler / KJ4AUR