Picture(s) of Kenwood - TS-830

19-07-1998	Modification to TS-830S, TS-530S English language
19-07-1998	TS-830S Frequency Shift English language
19-07-1998	Amtor modification English language
19-07-1998	Warc modification English language
19-07-1998	VFO-230 fine tune mod correction English language
19-07-1998	TS-830S Low Voltage Supply Optional Improvements English language
24-01-1999	Kenwood TS-830 filter modification English language
02-04-2000	TS-830S Operation on 240V AC English language
02-04-2000	TS-830S Low voltage Supply Optional Improvements English language
08-04-2000	TS-830S Noise Blanker Optional Improvements English language
08-04-2000	TS-830S Transmitter "Talkback" English language
19-05-2001	TS-830 Frequency Drift English language
30-09-2001	TS-830S Frequency Drift - "FIX" switch English language

19-07-1998

Modification to TS-830S, TS-530S

Subscriber's comments on qro modification to TS-830S, TS-530S and TS-530SP

I would like to pass on the problem I hace encountered in connection with the QRO modification to the Kenwood radios TS830S, TS-530S and the TS-530SP.

The problem occurs after many hours of long winded QSO's. It seems that with the increase in the screen voltage from 210 to 300 volts, R37 on the RF unit (#X44-1360-00) heats up tremendously and will

change it's value so greatly that even the receive either suffers or goes out totally. R37 originally is Metalfilm resistor at 3.3K ohms and is 1/2 watt.

I have changed mine to a Metalfilm as original same value but have used a one watt resistor. The brand I was abble to get was RCA and I suppose there are better on the market. This is a 2% tolerance. Three units that I know of have had this problem that I took care of in this area alone. Two units were TS-830S and one a TS-530SP. Just thought I would pass that information along for what it is worth. (Thanks, Frank J. Lukas, Jr., 5301 Main Ave., North Ridgeville, OH 44039)

top of page

19-07-1998

TS-830S Frequency Shift

Author: *Trio-Kenwood Communication, inc.*

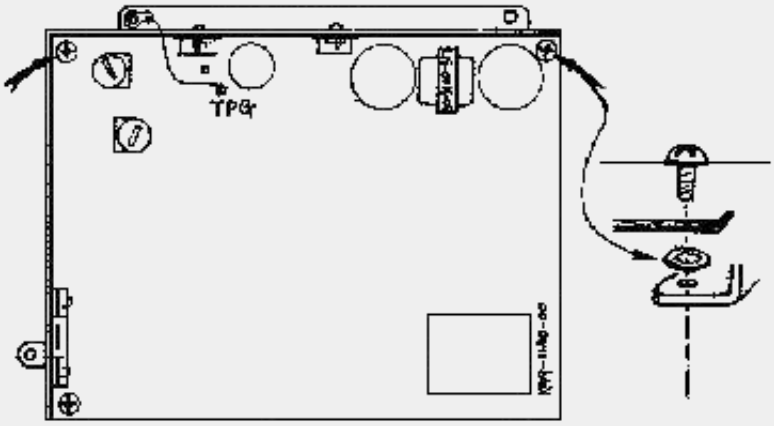
Service Bulletin no. 840 (14-4-1982)

Some users may report an intermittent shift in the display and operating frequency. This may typically be a 1 to 4 kHz random shift. Cause will be a loose grounding screw on the AF/AVR unit heat sink.

On the AF/AVR unit X49-1140-00, there are three self-tapping screws holding the aluminum heat sink to the PCB. These also supply the ground connection to that section of the board. Between the heat shink and PCB foil, add a toothe-lockwasher N17-1030-41 at eht two self-tapping screws on the side of the heatsink that has the two transistors attached. (The remaining screw already has a lock washer.)
When replacing the board to the chassis, add a solder lug E23-0420-05 to the heat sink mounting screw as shown, and tighten all screws for this board. Solder an insulated lead between the TPG (Test Point Ground) wrap post adjacent to C81, and the added solder lug.

Procedure:

1. Remove the top cover (8 screws) and unplug the speaker.
2. Remove the bottom cover (8 screws).
3. Remove 5 screws holding the AF/AVR unit and swing the board over. Leads do not have to be unplugged.
4. Add two tooth-lock washer as shown.
5. Replace the circuit board and heat sink to the chassis, adding the solder lug as shown.
6. Solder a jumper between the TPG wrap post and the added solder lug.
7. Replace the top and bottom covers.



Installation time for this procedure is 1/2 hour or less.

This modification is read 938 times.

top of page

19-07-1998

Amtor modification

1. Remove C500 (4.7uF) on the signal board (located top center near connector 30).
2. Ground the junction of R-476/Q-100.
3. This will provide a very noticable decrease in switching time.

This modification is read 1292 times.

top of page

19-07-1998

Warc modification

1. In early TS-830's, the WARC transmit was not enabled.
2. If this is the case, solder a jumper wire from Pin 12 of IC-23 to ground on the DIGITAL UNIT PCB. Ground can be obtained at Pin 8 of IC-4.

This modification is read 1727 times.

top of page

19-07-1998

VFO-230 fine tune mod correction

A note published in your t/k newsletter of january, 1983, issue no. 30, concerning a fine tuning mod for the vfo-230, impelledme to purchase a new vfo-230 for the sole purpose of obtaining a slower dial tuning rate for my ts-380s. then the combination of a defective new vfo-230 and some bad information in your newsletter note triggered many, many hours of frustration and irritation over a period of several months starting in june 1986. i believe you should know about it when information in your newsletter causes frustration and irritation.

I decided to try the diode cutting bit again. it did not work. the optical dial encoder went crazy. i was ready to explode and did. Fortunately there was nobody around to hear me. back to the drawing board. now i know practically nothing about optical encoders but i do have an engineering background so i spent some time staring at the vfo-230 schematic in the ts-830s service manual. suddenly the light came on. ka0nnf gave you the wrong information about which diodes to cut. (his call is not wa0nnf as given in your newsletter note. i tracked him down by telephone. he told me he had sold the vfo-230 and couldn't remember.)

The proper diodes to cut for 6-1/4 khz per dial rev. are d19. d20, d22, d23, d24, and d26. i presume cutting diodes d19, d21, d22, d23, d25, and d26 would also work but i will leave that for someone else to try. in other words, of the eight diodes, cut all but d21 and d25 or d20 and d24 fpr 6/14 khz per dial revolution.
that7s the end of the story. my vfo-230 now works perfectly at 6-1/4 khz per dial revolution. this jpermits me to use the excellent ts-830s receiver on 160m cw with very extreme if (250 hz) and external audio (50 hz) seletivity. incidentally, i wonder how many repair facilities (including yours) are equipped to motor drive the vfo-230 dial shaft at 300 rpm while observing the optical encoder waveform? this alignment procedure is necessary, and is prescribed in the service manual, before you should expect the encoder to work at slower than the "stock" rate. (i think this was part of the problem).

top of page

19-07-1998

TS-830S Low Voltage Supply Optional Improvements

7-29-81

Power supply drift and stability may be improved by these optional component changes and additions.

On the AF AVR unit X49-1140-00 (Vicinity of Q27-Q30) change:

R124 from 1K to 1.5K (RD14CB2E152J)*
R127 from 470 to 390 (RD14CB2E391J)*
R130 from 47K to 33K (RD14CB2E333J)#
D25 from WZ-061 to XZ-053 (V11-4101-60)*

*This will improve temperature drift from a maximum of about 100mV to a maximum of 1mV, and may be applied to any unit before serial # 201xxxx.

Add two 22 k ohm 1/4 resistors (RD14CB2E223J0, one each across Q30, and Q34, collector to emitter.#

#This will improve overall stability and may be applied to any unit before serial #105xxxx.

Note:
These changes are at the owners option and may not be performed in-warranty.

top of page

24-01-1999

Kenwood TS-830 filter modification

Here is an easy filter modification for the kenwood ts-830s. first to use this mod, your rig need the yk-88c and to mak t even better, the yg-455c installed. in short what we are going to do, is move around a 9 volt switching voltage. this voltage comes from the af board, connector no. 7, pin no. 5. its marked rlr on the schematic. this voltage ends up at the pll assembly, connector no. 8, pin novp2. please do try this modification by cutting in this circuit at he source, because this same switching voltage feeds the if shiqo circuit, and the vbt circuit, and the pll. so cutting the wire at the af board will make the pll unlock when the mode switch is anywhere but in the cw positions. now to te prtceires.

1. Remove the top and bottom covers, and turn the radio upside down with front facing you.

2. Locate the mode switch, and on the middle wafer set of contacts, cut the white wire with the blue stripe. it is located next to the terminal with no conn ction, on the middle wafer set of contacts9)3-;3 about 1/4 inch ox wire on t switch contact, so youcan make a connection there later.

3. You will need a another switch, one with at least three terminals, with the center teminal always in contact with one or the other of the outside contacts. its best to use a toggle type so you can mount it in one of the spare holes on the back of the radio.

4. Splice into the wire removed from the moeoppcich, and connect this wire to the center of your new switch.

5. From one (you select) of the side terminals of the new switch, connect a wire and run it back to the mode switch. connect this wire to t tminalon the mode switchnrom which you removed the white wire with the blue stripe. you did leave that 1/4 inch of wire didn't you? take care here, the grey wire next to the one you are working on carries 110 volts, so don't make any solder shorts!

6. Now from the remaining terminal of your new switch, connect and run a wire to the if board to pins cw1-cw4. connect this wire to the green wire, that is connected to one of these pins. you will then have two wires connected to one of these terminals.

7. Make sure tu have no solder shorts or bridges, make sure you have taped or insulated any bare wire connections. mount new switch in one of the spare holes on the baccof the radio. install the top aod

bottom covers.

The modification works great, one position on the new switch and everything isnormal, in the other position the cw filter is placed in-line regardless of the position of the mode switch. to use the cw filters on rtty/amtor i found i had to turn the if shift control ccw to about the 9:30 position to center the tones in the passband. if you need an even narrower passband, just tighten it up a little with the vbt.

top of page

02-04-2000

TS-830S Operation on 240V AC

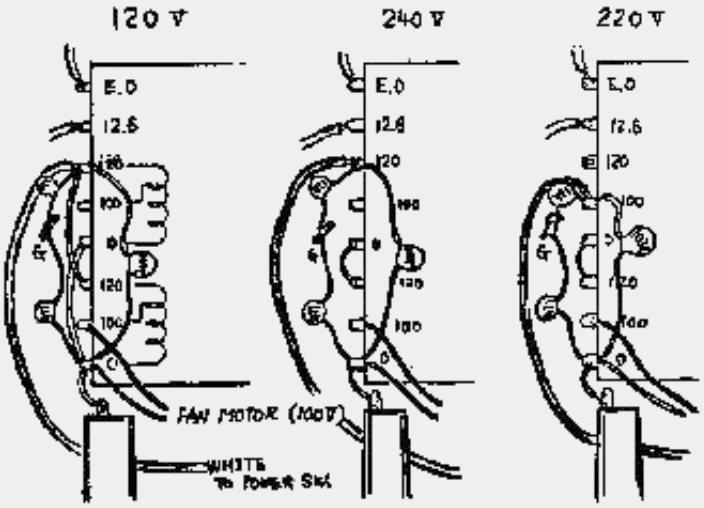
Author: *Trio-Kenwood Communication, inc.*

Service Bulletin no. 837 (15-12-1980)

To operate the TS-830S on 240V AC, the power transformer split primaries must be rewired from parallel to series connection.

1. Unplug the AC power cable.
2. Remove the bottom cover.
3. Remove the jumper wires between the two ø terminals and two 120 terminals on the bottom of the power transformer.
4. Connect the adjacent 120 and ø terminals at the middle of the transformer. This will provide 240V AC operation.

   For 220V AC operation, connect the adjacent 100 to ø winding.
5. Change the AC fuse from 6A to 4A. Tag the power cord at the back of the radio to indicate that the transformer is strapped for 240V AC, and the power fuse should be 4A, and not 6A.
6. Replace the bottom cover and reconnect power to verify your work.



This modification is read 3184 times.

top of page

02-04-2000

TS-830S Low voltage Supply Optional Improvements

Author: *Trio-Kenwood Communication, inc.*

Service Bulletin no. 847 (14-4-1982)

Power supply drift and stability may be improved by these optional compoents changes and additions.

On the AF AVR unit X49-1140-00 (Vicinity of Q27-Q30) changes:

```
R124 from 1 Kohm to 1.5 Kohm  (RD14CB2E152J) *
R127 from 470 ohm to 390 ohm  (RD14CB2E391J) *
R130 from 47 Kohm to 33 Kohm  (RD14CB2E333J) *
D25 from WZ-061 to XZ-053     (V11-4101-60)  *
```

* This will improve temperature drift from a maximum of about 100mV to a maximum of 10 mV, and may be applied to any unit before serial # 201xxxx.

Add two 22 Kohm 1/4W resistors (RD14CB2E223J), one each across Q30 & Q34, collector to emitter. *

* This will improve overall stability and may be applied to any unit before serial # 105xxxx.

Note: These changes are at the owners option and may not be performed in-warranty.

This modification is read 3517 times.

top of page

08-04-2000

TS-830S Noise Blanker Optional Improvements

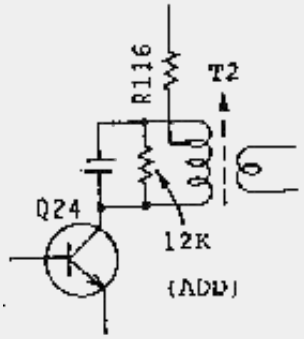
Author: *Trio-Kenwood Communication, inc.*

Service Bulletin no. 851 (26-7-1982)

Receiver Cross-modulation while using the noise blanker may be improved by these optional component changes and additions. Realignment is not required.

At the Noise Blanker level control VR8, change R19 from 22 ohm to 15 ohm (RD14BB2E150J)*

On the AF AVR unit X49-1140-00 (vicinity of Q20) change:
D22 from an MV-13 to an MV-203 (VII-3379-16)*
R96 from 2.2 Kohm to 820 ohm (RD14CB2E821J)*

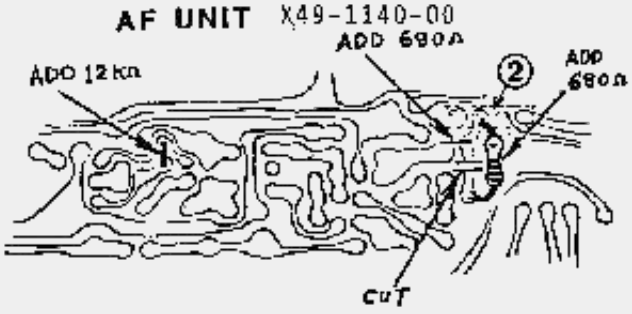


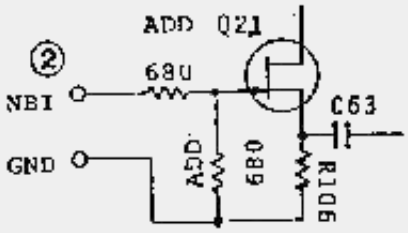
(vicinity of Q24)

R112 from 47 Kohm to 56 Kohm (RD14CB2E563J)*

Across T2, (Fig. 1) add a 12 Kohm (RD14CB2E123J)*

At Q21 (Fig. 2,3) add 2 pcs. 680 ohm (RD14CB2E681J) *





Note:

1. Applies to any unit before serial: 2010000*, 1120950*, 1132058*.
2. These changes may be performed in-warranty.

top of page

08-04-2000

TS-830S Transmitter "Talkback"

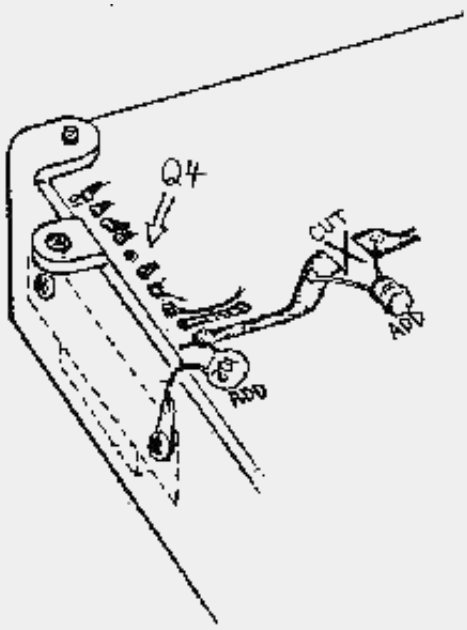
Author: *Trio-Kenwood Communication, inc.*

Service Bulletin no. 857 (11-2-1982)

Transmitter "talkback", either with or without a linear amplifier, may be eliminated by adding a filter at

the receiver audio power amplifier.

On the AF unit X49-1140-00 at Q4, cut the 12V DC B+ line between R47 and C28, and add a 1uH choke (L40-1092-02) in-line. Add a .01uF cap (C52-1710-36) from the IC pin 1 to ground, as shown using a 3 mm lug (E23-0015-04) under the IC mounting screw on the Heat Sink.



Installation time for this procedure is ½ hour or less.

top of page

19-05-2001

TS-830 Frequency Drift

Author: *Tommy Hayes - tah@txucom.net*

Before making any internal modifications for the freq. drift please try this.

Take both the top and bottom covers of the rig off the the transceiver. Find each and every phillips screw that you can get to with a philips screw driver and loosen it about 1/4 of the way. After doing that, retighten the screws.

This includes but is not limited ti each and every PC bord that you can get to. Done this with my 830 that had severe drifting problems and so far (4 months) have not had a problem with the drift yet on any band.

Hope that this proves to cure.

73s and Gud DX Tommy (N5PJY)

top of page

30-09-2001

TS-830S Frequency Drift - "FIX" switch

Author: *Alan N5LF*

If your TS-830S drifts or jumps frequency up & down 100 to 200 hz, the problem may be a dirty FIX switch. The FIX switch disables the VFO and is used for crystal control. The switch conducts voltage in both the on (crystal) and off (VFO) positions. Dirt, corrosion, or wear makes the switch provide uneven voltage to the VFO and therefore causes the drift/jumping.

To test for this problem, wiggle the FIX switch or press it in & out a few times and see if the drift/jumping stops for a few minutes.

Temporary cure: Spray the switch with contact cleaner. This works for me for 1 to 3 months, then it starts acting up again.

Permanent cure: Use a jumper to bypass the switch, so it is permanently in VFO position.

If someone knows a solution that doesn't disable the FIX switch's function, please let us all know.

Alan N5LF

top of page

Have you any tips, trick or modifications you can't find here, please E-mail them to me, or use the mail form.
Can't you find a mods, please don't e-mail to me. All mods i have is listed on this site.!
Back to start page