

KENWOOD

TS-950 S / SD/ SDX

Noise Repair Info



 **KB2LJJ**
Radio Mods Database

SERVICE BULLETIN AMATEUR RADIO

SUBJECT TS-950SD RX DIGITAL NOISE	DATE 01/17/90
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Some early TS-950SD transceivers may exhibit a low Signal to Noise ratio on ten and fifteen meters. In addition, rotating the encoder may allow the user to hear a crackling noise in his headphones. The following modification will correct this condition.

NOTE: This modification has already been performed on models from serial number 101XXXX

1. Disconnect the power cord and antenna.
2. Remove the top and bottom covers (18 screws).
3. Open the subchassis as shown in figure 1 (remove 4 top screws, remove 3 back panel screws, unplug the RX ANT OUT and DRIVE IN connectors).
4. Remove the cover from the subchassis (12 screws). FIGURE 1.
5. Remove the 9 screws from the Filter board.
6. Desolder the antenna connector wires at the antenna connector. Do not damage the surge absorber.
7. Rotate the Filter unit to expose the foil side of the board. Disconnect coax cables as necessary to rotate the board and remove the mesh plate as the board is rotated.
8. Cut the two ground foils as shown in figure 2.
9. Assemble the transceiver by reversing steps 1 - 7. Remember to install the mesh plate, resolder the antenna connector, and plug in the two connectors on the back panel.

PAGE 1 OF 2

This modification is covered under the 1 year warranty.
Time required to perform the modification is 1 hr. or less. (C)12690EWP

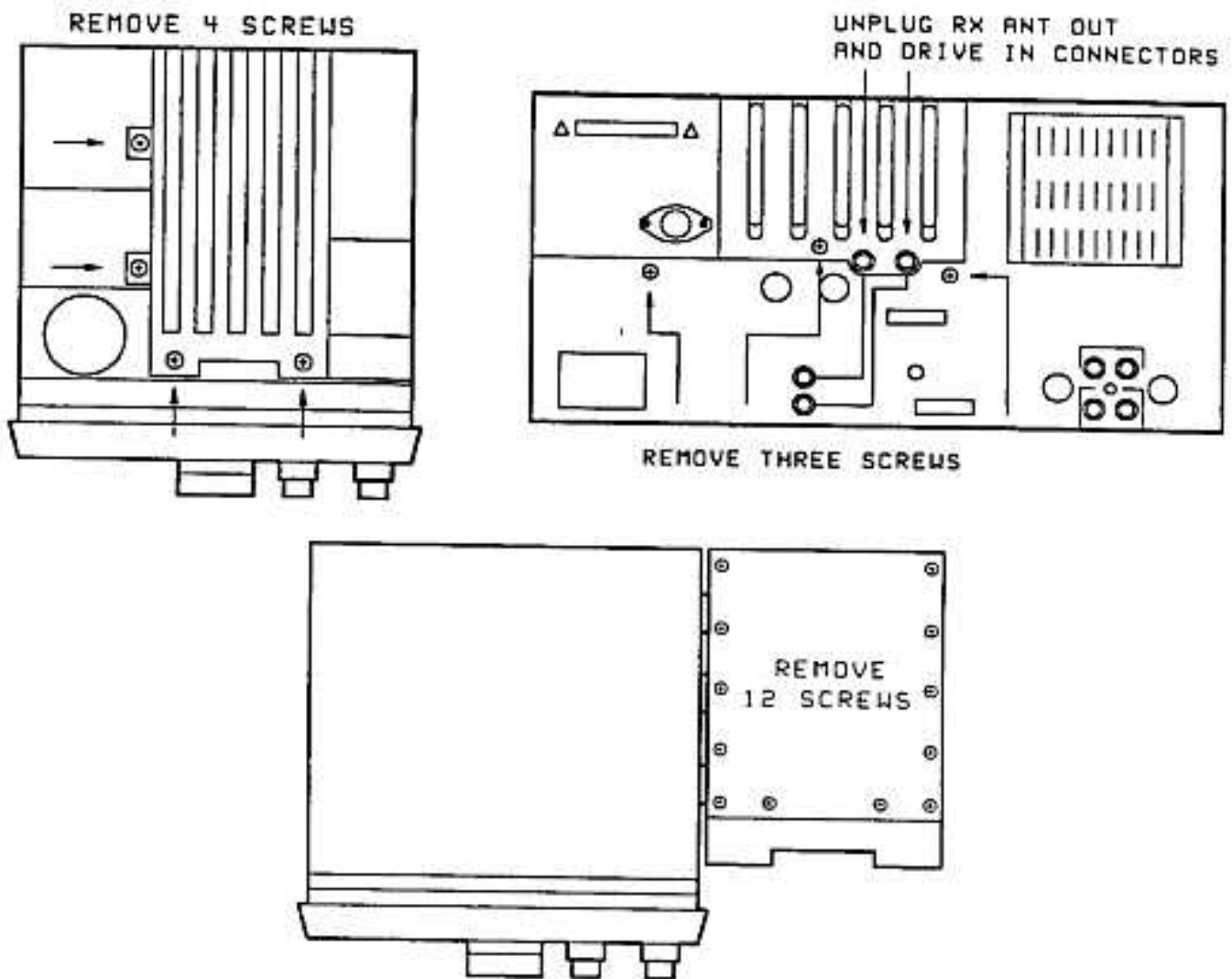


FIGURE 1

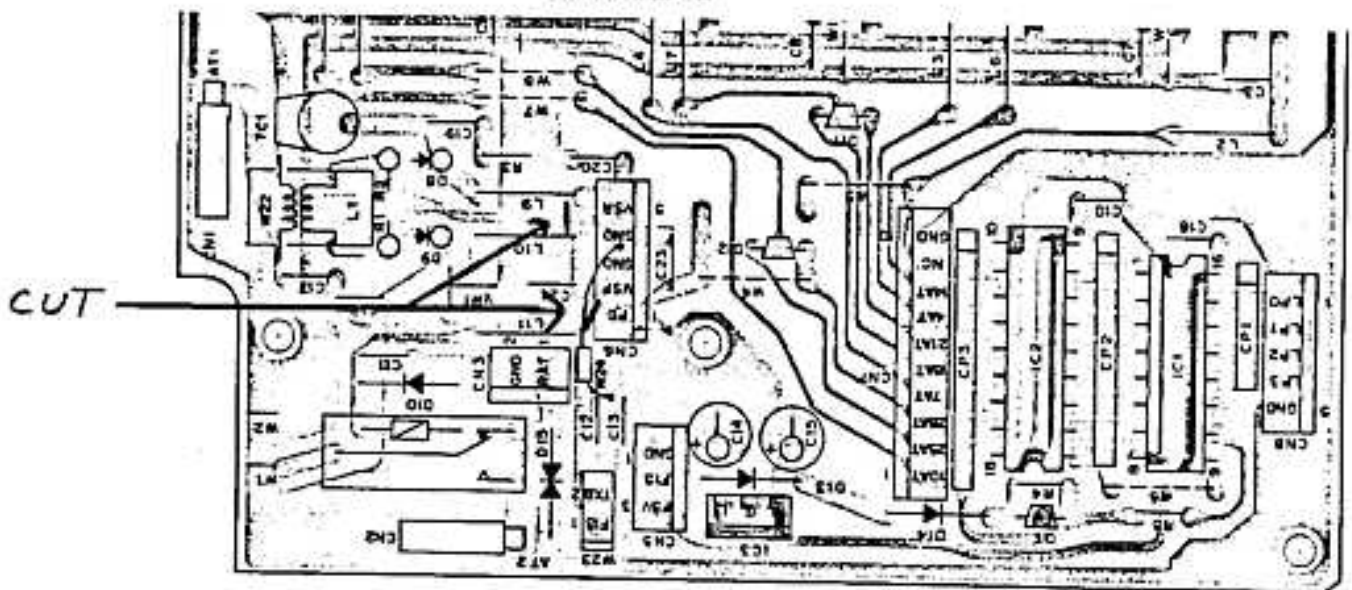


FIGURE 2
PAGE 2 OF 2

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ASB-1026

Service Bulletin

Amateur Radio Division

Subject: TS-950SDX "Click Noise" with NOTCH ON

Date: June 7, 1993

Symptom:

A click noise might be generated when receiving a strong signal (S-9 or above) when the NOTCH is ON and the Notch Control is turned away from the notch point.

Corrective Action:

Lengthening the AGC release time of the IF Amp just before the NOTCH circuit will correct this symptom. The enclosed modification has been designed to change the time constant only when the NOTCH circuit is activated. Do not install this modification on sets that do not exhibit this symptom as the AGC FAST time constant is affected by this change.

1. Cut the printed circuit foil pattern between the test point (TP) and gate 2 of Q2 as shown.
2. Install the 47 K ohm chip resistor from TP to gate 2 of Q2.
3. Add a 0.047 uF ceramic capacitor as shown in the accompanying illustration.
4. Add the DTC124ES transistor as shown.

Note: The .047 uF capacitor and the digital transistor must be connected together as shown and installed so that they do not touch the surrounding circuit board patterns.

5. Install a jumper wire from the base of the digital transistor to pin number 6 of CN14.

Parts Required:

Qty	Description	Kenwood Part No.	Circuit Description
1	0.047 uF capacitor	CK45B1H473Z	NA
1	Digital Transistor	DTC124ES	NA
1	47K Chip resistor	RK73FB2A473J	NA

Caution: This modification requires soldering equipment rated for CMOS type circuits. It also requires familiarity with surface mount soldering techniques. If you do not have the proper equipment or knowledge do not attempt this modification yourself. Seek qualified assistance.

Time required for this modification is 1 hour or less.

Service code A:09 B:X57-4130-00 C:ADDTR D:91

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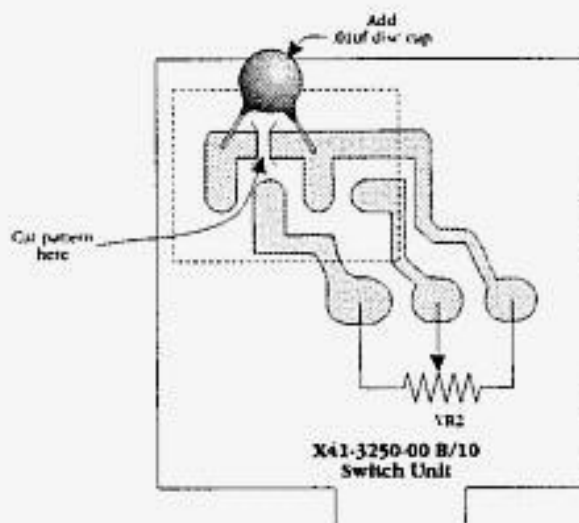
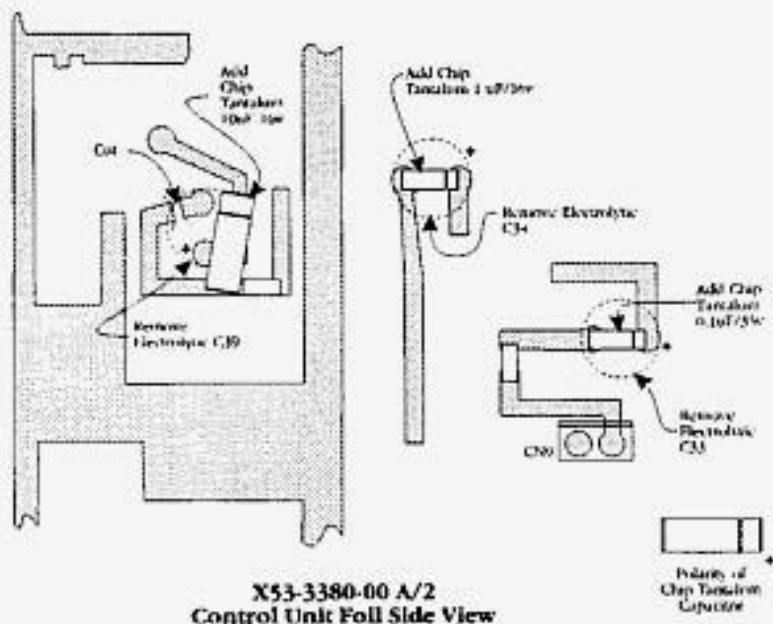
ASB-1050

Service Bulletin

Amateur Radio Division

Subject: TS-950SDX Sub Band Residual Noise

Date: March 28, 1994



Time required for this modification is 60 minutes or less.

Service code A:09 B:X53-3380-00 C:C33, 34, 39 D:91

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ASB-1050

Service Bulletin

Amateur Radio Division

Subject: TS-950SDX Sub Band Residual Noise

Date: March 28, 1994

Symptom:

The level of residual noise (AF VOL at Min) on the SUB band is slightly higher than that of the MAIN band. This is especially true at audio frequencies of around 50 Hz, as viewed on a spectrum analyzer. As a result the SUB receiver is more susceptible to motor noise, such as might be generated by fans, refrigerators, etc.

Countermeasures:

Replacing the Control Unit electrolytic capacitors (C33, C34, and C39) with Tantalum capacitors, and adding the bypass capacitor to the Switch unit reduces or eliminates this symptom.

Parts Required:

Qty	Description	Kenwood Part No.	Circuit Description
1	0.1 uF 35v Tantalum cap	C92-0001-05	C33
1	1.0 uF 16v Tantalum cap	C92-0004-05	C34
1	10 uF 16v Tantalum cap	C92-0505-05	C39
1	.01 uF disc capacitor	CK45B1H103Z	NA

Caution: This modification requires advanced surface mount soldering equipment that is rated for CMOS circuits. It also requires familiarity with advanced surface mount soldering techniques. If you do not have the proper equipment or knowledge do not attempt this modification yourself. Seek qualified assistance from your closest Kenwood Service Center (Long Beach, CA, or Virginia Beach, VA).

Time required for this modification is 60 minutes or less.

Service code A:09 B:X53-3380-00 C:C33, 34, 39 D:91

SERVICE BULLETIN AMATEUR RADIO

SUBJECT	DATE
TS-950SD N.B. GATE SWITCHING NOISE	01/11/90

Switching noise from the main band noise blanker circuit may be induced on the 15V line and pass through the AF amplifier to the speaker. The following modification will correct this condition.

NOTE: This modification has already been performed on models starting with serial number 104XXXX.

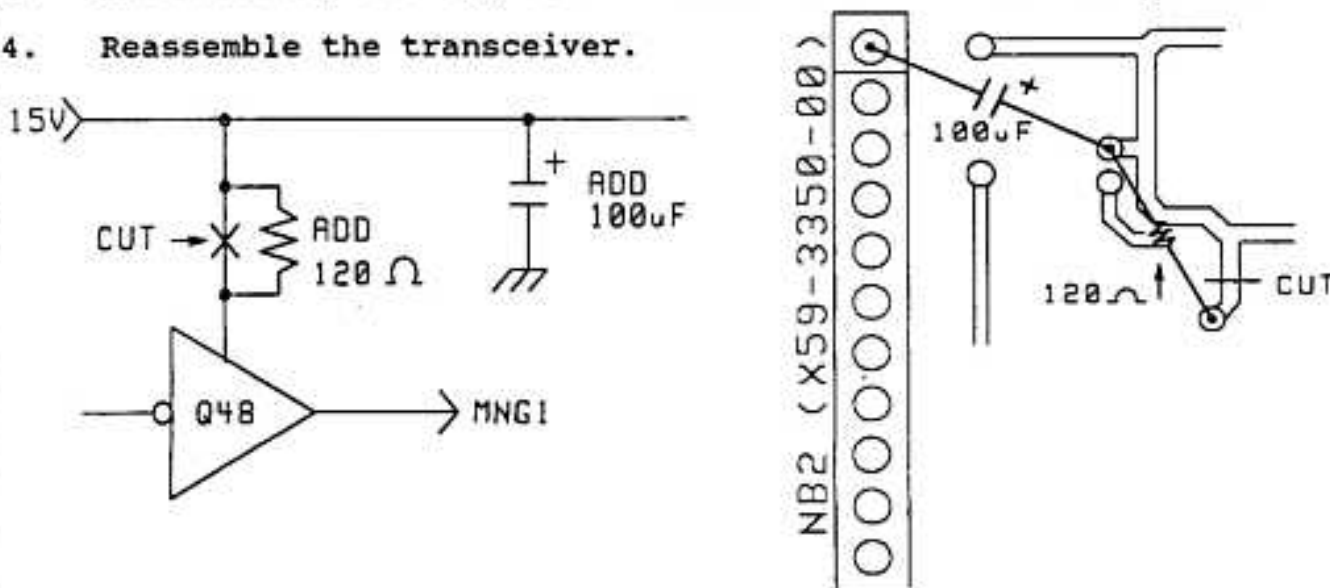
REQUIRED PARTS:

120 OHM, 1/8 WATT RESISTOR	PART # RD14BB2B121J
100uF, 16V ELECTROLYTIC CAPACITOR	PART # CE04EW1G101M

1. Disconnect the power cord and antenna.
2. Remove the top and bottom covers (18 screws).
3. Locate the AF board. This is the front left board of the 4 boards on the bottom of the transceiver.

THIS WORK WILL BE DONE ON THE COMPONENT SIDE OF THE AF BOARD.

1. Cut the foil as shown in the accompanying diagram.
2. Add a 120 ohm resistor between the emitter of Q48 and the 15V line.
3. Add a 100uF, 16V capacitor between the 15V line and ground.
4. Reassemble the transceiver.



This modification is covered under the 1 year warranty.
Time required to perform the modification is 0.5 hrs. (C)011190EWP

SERVICE BULLETIN AMATEUR RADIO

SUBJECT TS-950S/SD RECEIVER NOISE

DATE 05/29/90

About 1mV of noise is present at the speaker or headphone jack in the receive mode with the AF GAIN control set to minimum. If the transceiver is in the CW mode, a faint tone might also be heard through the headphones (sidetone leakage). The following modification will reduce the level of the noise and the tone.

REQUIRED PARTS:

2SD1757K(S)

1. Disconnect the power cord and antenna.
2. Remove the top and bottom covers (18 screws).
3. Locate the AF unit on the bottom of the transceiver. This is the front left board of the four boards on the bottom of the transceiver.
4. Remove the screws from the AF unit and disconnect the plugs as necessary to turn the board over to expose the foil side of the board.
5. Replace Q6 with a 2SD1757K(S).
6. Solder a 22 AWG jumper wire as shown in figure 1.

PAGE 1 OF 2

This modification may be covered under warranty.
Time required to perform this modification is 1 hr. or less.
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AF UNIT X49-3020-00

