

## Service Bulletin

Amateur Radio Division

**Subject:** AT-50 Blows ACCY Fuse in TS-50S**Date:** April 30, 1993

### Symptom:

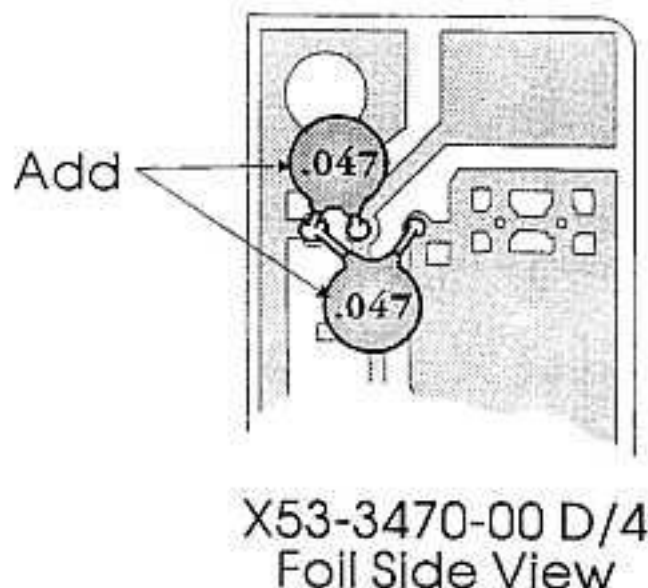
Attempting to tune the AT-50 when it is connected to an antenna with a relatively high SWR value might cause the ACCY fuse to open in the TS-50S. This change will correct this tendency.

### Parts Required:

Qty	Description	Kenwood Part No.
2	.047 $\mu$ F disc ceramic capacitors	CK45B1H473Z

### Procedure:

1. Remove the top cover from the antenna tuner.
2. Locate X53-3470-00 D/4 (It is attached to the top left side of the chassis with the foil side up.)
3. Add the two .047  $\mu$ F capacitors as shown in the drawing below.
4. Replace the top cover.



No additional adjustments or modifications will be required.

**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 30 minutes or less.

Service code A:01 B:X53-3470-00 C:ADDC D:91

# KENWOOD

ASB-1025

## Service Bulletin

Amateur Radio Division

**Subject:** AT-50 Blows ACCY Fuse in TS-50S (Part 2) **Date:** June 25, 1993

(Supersedes ASB-1010 dated April 30, 1993)

### Symptom:

Attempting to tune the AT-50 when it is connected to an antenna with a relatively high SWR value, especially on the 3.5 MHz band might cause the ACCY fuse to open in the TS-50S.

### Parts Required:

Qty	Description	Kenwood Part No.	Circuit Designation
2	Toroidal coil	L33-0699-05	NA

### Procedure:

1. Remove the top and bottom covers from the antenna tuner.
2. Locate X53-3470-00 D/4 (It is attached to the top left side of the chassis with the foil side up.)
3. Remove the two .047  $\mu$ F capacitors shown in figure 1 if they are present.
4. Cut the foil and add one of the toroidal inductors as shown in figure 2.
5. Turn the tuner over and locate capacitor C123 and C124, as shown in figure 3.
6. Move the capacitors (or add new capacitors) to the locations shown in figure 3.
7. Cut the foil path and add the remaining toroidal inductor as shown in figure 3.
8. Remove Jumper W106 as shown in figure 3. (Note: remove the jumper from the component side of the board.)
9. Add a jumper from the ATG foil to W104 as shown in figure 3.
10. Replace the top and bottom covers.

No additional adjustments or modifications will be required.

**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 30 minutes or less.

Service code A:48 B:X53-3470-00 C:ADDL D:91

# KENWOOD

ASB-1025

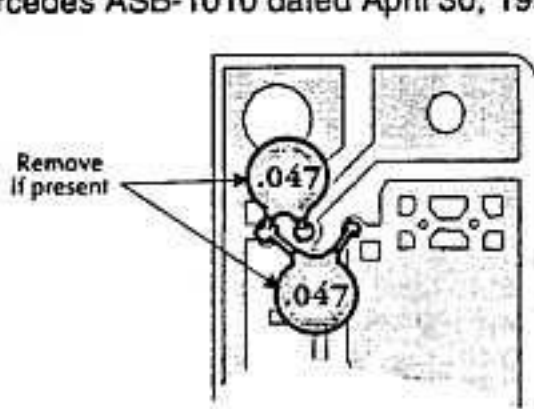
## Service Bulletin

Amateur Radio Division

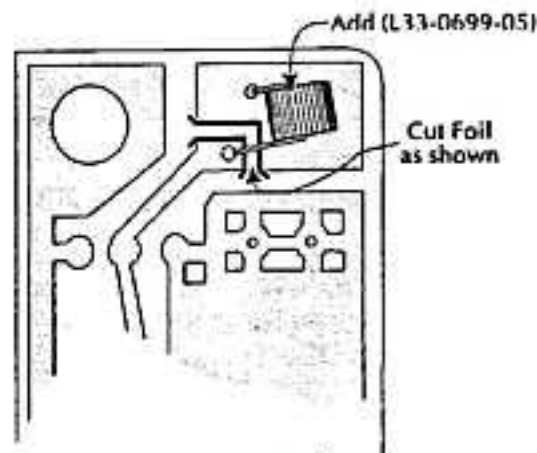
**Subject:** AT-50 Blows ACCY Fuse in TS-50S (Part 2)

**Date:** June 25, 1993

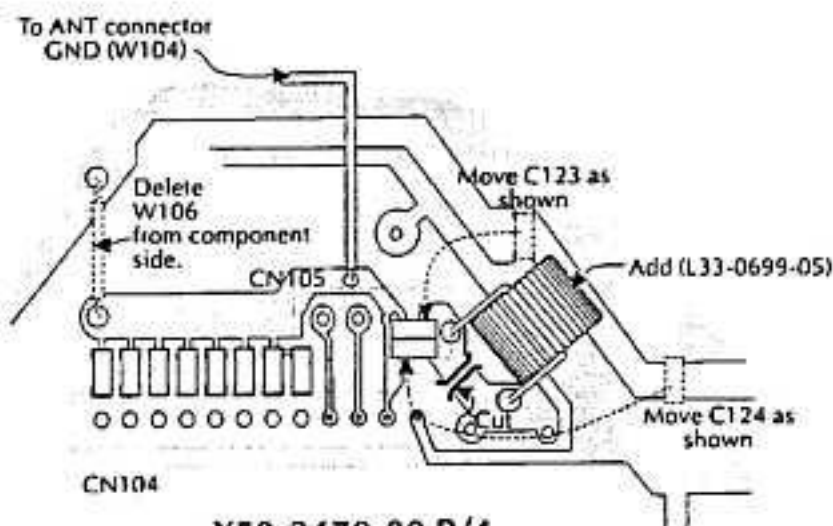
(Supersedes ASB-1010 dated April 30, 1993)



X53-3470-00 D/4  
Foil Side View  
Figure 1



X53-3470-00 D/4  
Foil Side View  
Figure 2



X53-3470-00 B/4  
Foil Side View  
Figure 3

Time required for this modification is 30 minutes or less.

Service code A:48 B:X53-3470-00 C:ADDL D:91

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## Service Bulletin

Amateur Radio Division

**Subject:** TS-50S Lithium Battery Replacement Notes

**Date:** May 10, 1993

### Procedure:

Immediately after replacing the Lithium battery you must cycle the radio ON then OFF. Failure to follow this procedure will result in premature failure of the battery. If the power is not cycled ON then OFF the microprocessor will immediately begin drawing approximately 1 mA of power from the Lithium battery, resulting in poor battery life.

When the battery is replaced we recommend the insulation sheet also be changed. Part numbers for the battery and insulation sheet follow.

### Parts Required:

Qty	Description	Kenwood Part No.	Circuit Description
1	Lithium Battery	W09-0515-05	BA1
1	Insulating Sheet	F20-0521-04	--

**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.

# KENWOOD

ASB-1030

## Service Bulletin

Amateur Radio Division

**Subject:** TS-50S "HELLO" Displayed during TX

**Date:** June 29, 1993

### Symptom:

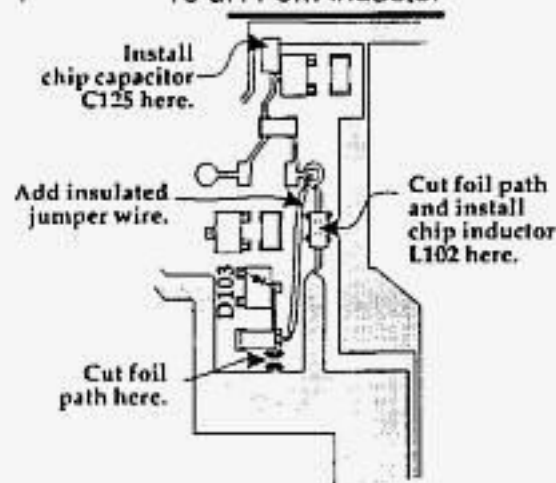
Occasionally an "HELLO" message will appear in the display of the transceiver when the TS-50S is loaded into an antenna without the use of an antenna tuner. This symptom usually occurs when the negative terminal of the power supply is floating (un-grounded for RF). This can result in RF feedback that causes the supply voltage to exceed 16 vdc.

### Corrective Action:

1. Cut the Final Unit PC Board foil in two places, as shown below.
2. Add a .1uF chip capacitor (C125) as shown below.
3. Add a 10 uH chip ferri-inductor (L102) as shown below.
4. Add an insulated jumper wire as shown below.

### Parts Required:

Qty	Description	Kenwood Part No.	Circuit Description
1	.1uF Chip Capacitor	CK73EB1E104K	C125
1	10 uH Ferri-inductor	L40-1001-48	L102



**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.

Final Unit (X45-3460-00) (B/2)  
Foil side View

Time required for this modification is 30 minutes or less.

Service code A:46 B:X45-3460 B/2 C:L102 D:91

# KENWOOD

ASB-1035

## Service Bulletin

Amateur Radio Division

**Subject:** TS-50S Antenna Lead Wire

**Date:** December 7, 1993

### Symptom:

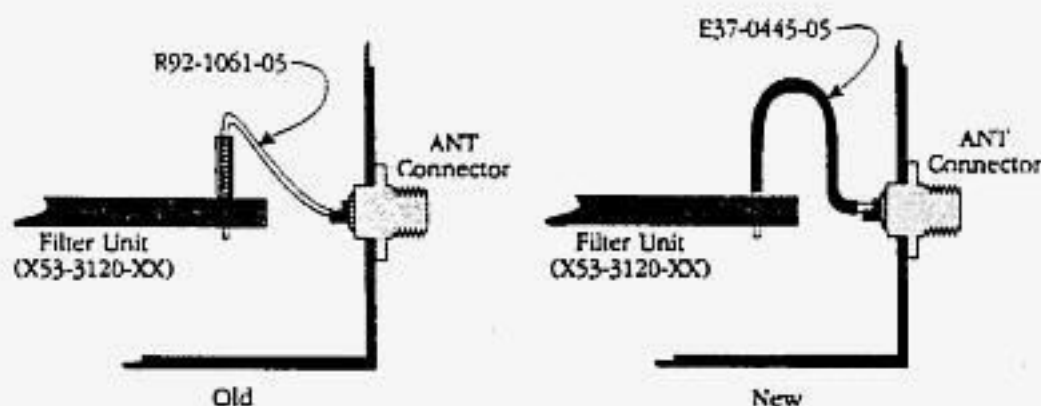
Several users have reported a problem with the antenna lead connection, i.e. the lead that connects the antenna connector to the Filter Unit (X53-3120-XX). Originally this connection was made by a zero ohm resistor. If excessive stress is placed on the antenna connector this lead is easily broken, with a resulting loss of receiver sensitivity and transmitter power. The use of a small flexible jumper wire will increase the flexibility of this connection, thus minimizing the effects of mechanical stress.

### Parts Required:

Qty	Description	New Part No.	Circuit Description
1	Cable	E37-0445-05	W2

### Procedure:

Remove the zero ohm resistor and replace it with the small piece of cable. See accompanying diagram.



**Caution:** This modification requires surface mount soldering equipment that is rated for CMOS 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 from your closest Kenwood Service Center (Long Beach, CA, or Virginia Beach, VA).

Time required for this modification is 30 minutes or less.

Service code A:05 B:X53-3120 C:W2 D:91



# KENWOOD

ASB-1044

## Service Bulletin

Amateur Radio Division

**Subject:** TS-50S Mechanical Noise from Final Unit

**Date:** March 28, 1994

### Symptom:

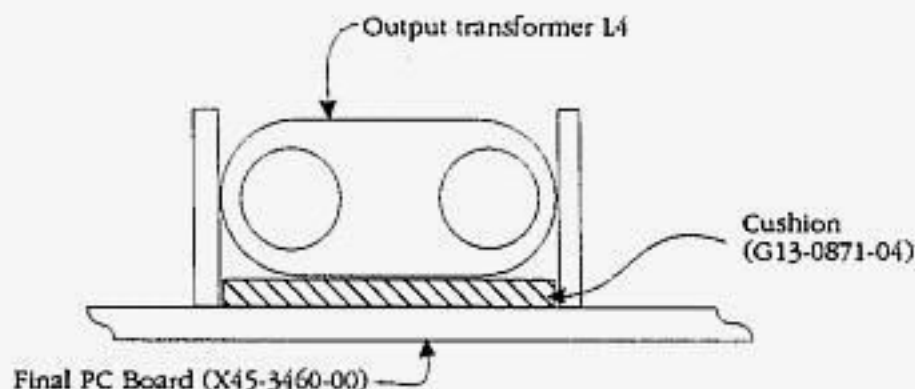
When the transceiver is subjected to vibration a mechanical noise can be heard from the output transformer area. This has led to concern by several consumers that something is loose or improperly installed.

### Corrective Action:

In order to ease consumer concerns you should add a cushion under transformer L4 as shown in the accompanying diagram, and replace transformer L13 at the same time. This transformer has been fastened to the circuit board with high temperature adhesive, so use caution when removing it from the circuit board.

### Parts Required:

Qty	Description	Old Part No.	New Part No.	Circuit Description
1	Cushion	NA	G13-0871-04	(Under L4)
1	Output Transformer	L39-1209-25	L39-1252-05	L13



# KENWOOD

ASB-1054

## Service Bulletin

Amateur Radio Division

**Subject:** AT-50 Mechanical Stability

**Date:** March 28, 1994

### Symptom:

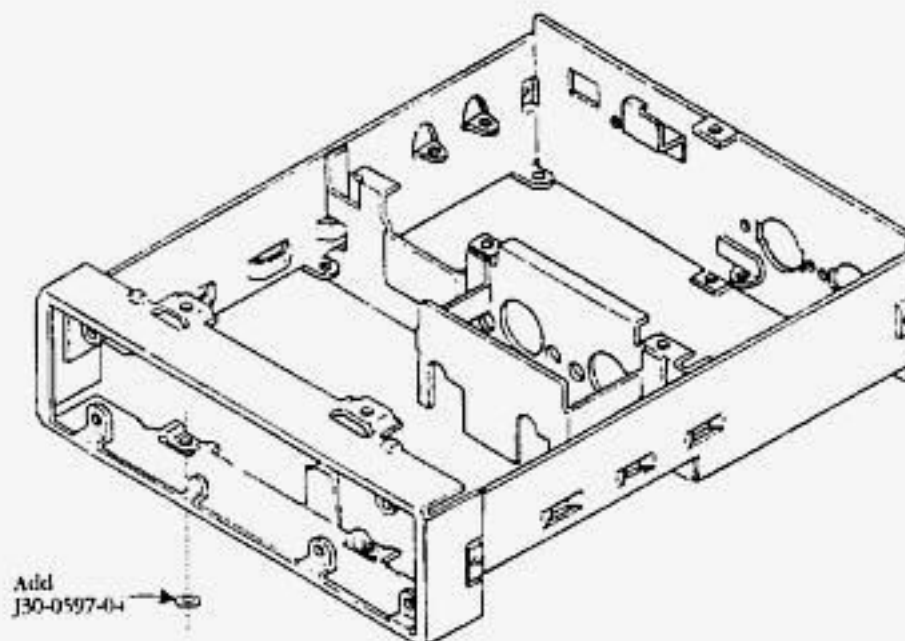
When the unit is placed on a flat surface it appears to be slightly unstable, i.e. rocks back and forth when pressing down on the left front corner of the unit.

### Procedure:

Add a flat spacer at the location shown between the chassis and the bottom cover.

### Parts Required:

Qty	Description	New Part No.	Circuit Description
1	Spacer	J30-0597-04	NA



Time required for this modification is 15 minutes or less.

Service code A:99 B:20 C:ADD D:91



# KENWOOD

ASB-1063REV1

## Service Bulletin

Amateur Radio Division

**Subject:** TS-50S SERVICE MENU

**DATE:** NOVEMBER 7th 2003

\*\*\*\*\*Bulletin-ID: B37DB0ZDF005\*\*\*\*\*

### Factory Adjustments

Hold down NB and MHz keys + Power ON.

Turn the Frequency Tuning knob to change menu number.

A0	Checksum display (version of YOUR installed pgm)		
A1	RIT center	Initial value	80
A2	IF-Shift center	Initial value	80
A3	LSB carrier point	Initial value	0
A4	USB carrier point	Initial value	0
A5	S-meter adjust S1 (not FM)	Initial value	2E
A6	S-meter adjust S9 (not FM)	Initial value	73
A7	S-meter adjust full (not FM)	Initial value	C2
A8	S-meter FM start	Initial value	91
A9	S-meter FM full scale	Initial value	CC
AA	RF-meter adjust low (10W)	Initial value	3C
AB	RF-meter adjust middle (50W)	Initial value	80
AC	RF-meter adjust high (100W)	Initial value	B1
AD	Write to Eprom by pressing UP or DOWN key.		