KENWOOD

#865

SERVICE BULLETIN AMATEUR RADIO

SUBJECT	DATE
TS-430S 500KHZ Hetrodyne	3.23.83

Some users of the TS-430S have reported a hetrodyne signal at the 500KHZ point on the band. This tone may be reduced or eliminated by the following procedure.

PARTS REQUIRED

QTY	DESCRIPTION	KENWOOD PART NUMBER
1	.001µf disc cap.	CC45B1H102K
1	220pf disc cap.	CC45SL1H221J
1	470µh coil	L40-4711-13

PROCEDURE

1. Remove top and bottom covers.
2. Turn radio bottom up and locate PLL Unit (X50-1910-00).
3. Remove the six (6) screws securing the PLL unit to the chassis and fold the unit over, to allow access to the foil side of the circuit board.
4. Remove the jumper wire that is installed between TP-1 and C6. Install the parallel circuit consisting of the 220pf capacitor and the 470µh coil in its place. See figure 2.
5. Install the .001µf capacitor as shown in figure 2.
6. Reinstall the PLL unit and replace the top and bottom covers.
7. No alignment is required.

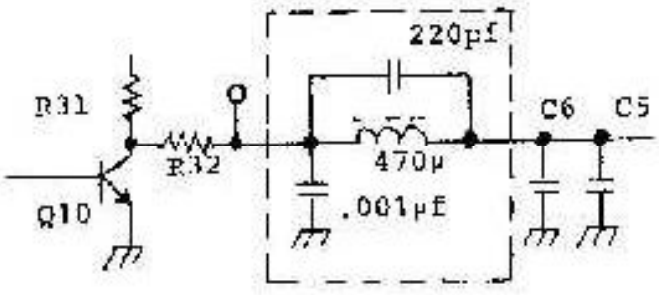

Figure 1

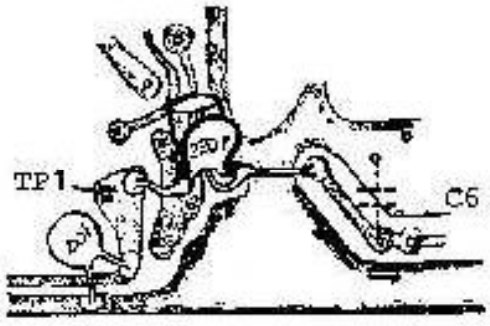

Figure 2

*NOTE: This change may be performed at the owners option and may not be performed in warranty.

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~~#883~~

SERVICE BULLETIN AMATEUR RADIO

SUBJECT	DATE
TS-430S AM WIDE/NARROW FILTER SELECTION	12-8-83

This procedure will allow selection of the Wide or the Narrow filter for AM.

PARTS LIST

QTY	DESCRIPTION	CIRCUIT DESIGNATION
2	2SA1115(E) Transistor	Q401, Q402
4	1S1555 Diode	D401-D404
1	4.7K ohm 1/8 watt	R405
2	22K ohm 1/8 watt	R403, R404
2	47K ohm 1/8 watt	R401, R402
	Insulated hookup wire #28 guage or larger	J401, J402, J403
1	Short Jumper	

MODIFICATION PROCEDURE:

CAUTION: THIS MODIFICATION REQUIRES ADVANCED SOLDERING AND PRINTED CIRCUIT BOARD MODIFICATION TECHNIQUES, AND SHOULD ONLY BE PERFORMED BY EXPERIENCED KIT BUILDERS AND OR TECHNICIANS. IF YOU ARE AT ALL UNSURE OF YOUR ABILITY TO INSTALL THIS MODIFICATION AFTER READING THESE INSTRUCTIONS, PLEASE HAVE SOMEONE WITH MORE EXPERIENCE PERFORM THE MODIFICATION FOR YOU.

1. Remove the power connector from the radio.
2. Using a #2 Phillips screwdriver, remove the top cover (8 screws). Be careful of the VOX controls, and the speaker lead, which may be unplugged.
3. Loosen the two countersunk side screws and remove the 2 screws securing the IF unit bracket. Swing the bracket up slightly to access and remove the two heat sink screws. Swing the assembly down.
4. Remove 7 screws from the IF unit. Protect the top of the front panel from scratching.
5. Desolder IB1 and discard (use a 45 watt or less iron, and solder wicking).
6. Locate the white jumper wire that is plugged on to the "S" terminal of the IF unit. Desolder the wire from its present location, and reinstall as shown in figure 1.
7. Install a short jumper wire, as shown in figure 1.
8. Cut the foil paths as shown in figure 2. There are five

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locations that must be cut. CAUTION: Ensure you cut only the traces as shown in the figure. Spend a little extra time to ensure you have correctly identified the trace to cut.
9. Install J401, J402 (may all ready be installed), J403, D403, D404, R403, R404, and R405 as shown in figure 2 (use the shortest lead lengths possible). Check to ensure there are no solder bridges, or splashes on the board.
10. Install Q401, Q402, R401, R402, D401, and D402 as shown on figure 2, again being careful to check for solder bridges, shorts, etc.
11. Check to see if D82 is installed, as shown in figure 1. If it is not, install it (1S1555). D83 should also be installed on the foil side of the board, as shown in figure 2.
Note: Some units have D82 and D83 installed, if so go to step 12.
12. Move the filter select jumper to the "A" pin, as shown in figure 1.
13. On Control Unit (X53-1290-00), cut the lead of resistor R129.
14. Solder a jumper wire to the metal lead of resistor R129, as shown in figure 5. Connect the other end to IF Unit connector 18 pin 2 from the foil side of the board as shown in figure 4. The wire may be conveniently routed between the circuit board and the chassis.
15. Install insulating tape below the area of the modification to ensure that no components short out against the case.
16. This completes the modification procedure. The TS-430S will now select either AM Wide or Narrow. Before reassembly, go back through the procedure and check you work, to ensure no errors have been made.

NOTE: This is an optional change and may not be performed in warranty.

CLM/c

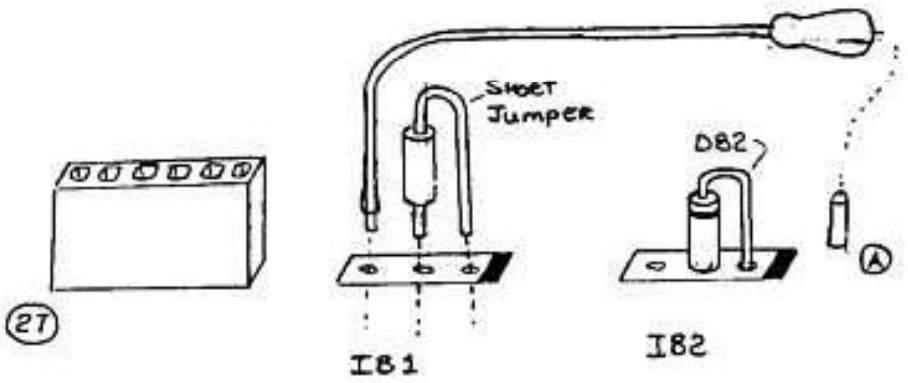


FIGURE 1

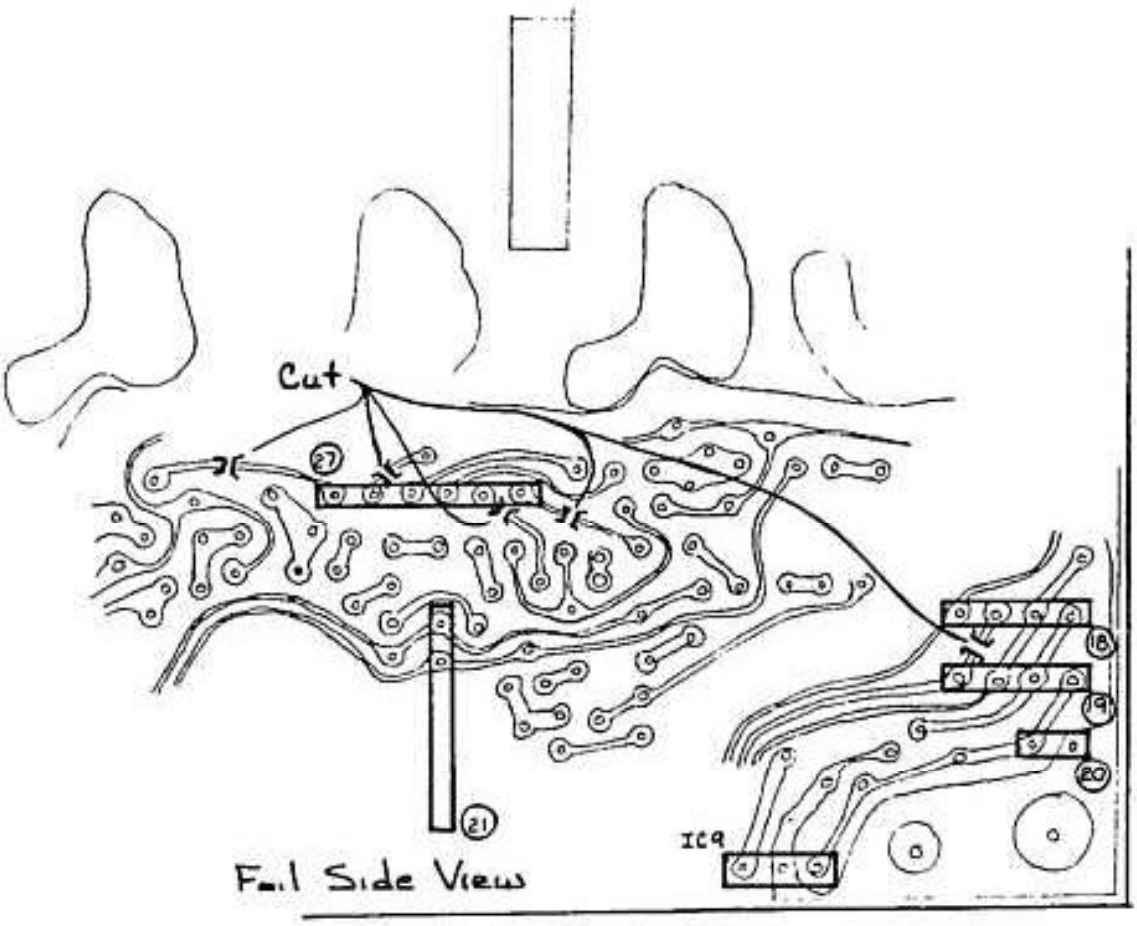


FIGURE 2

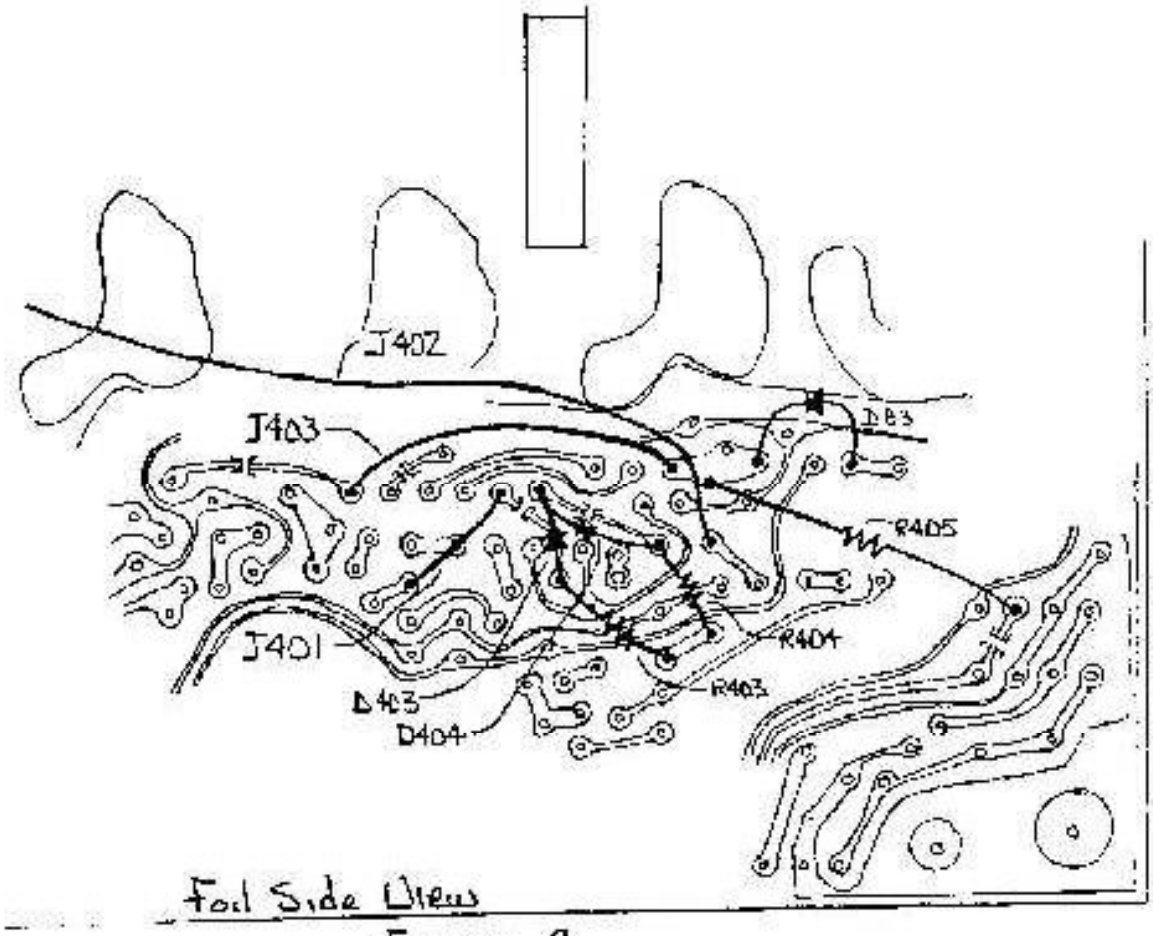


FIGURE 3

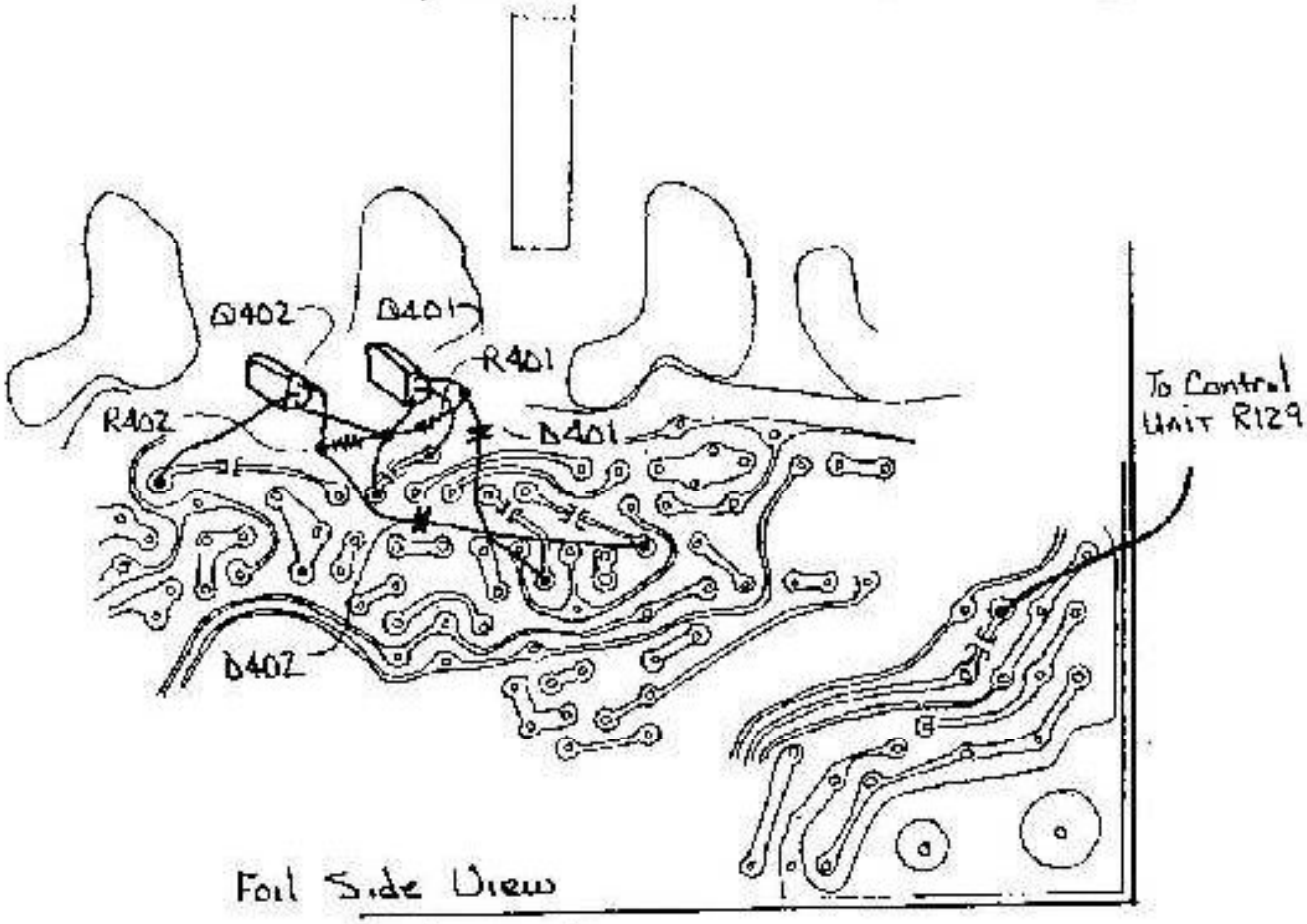
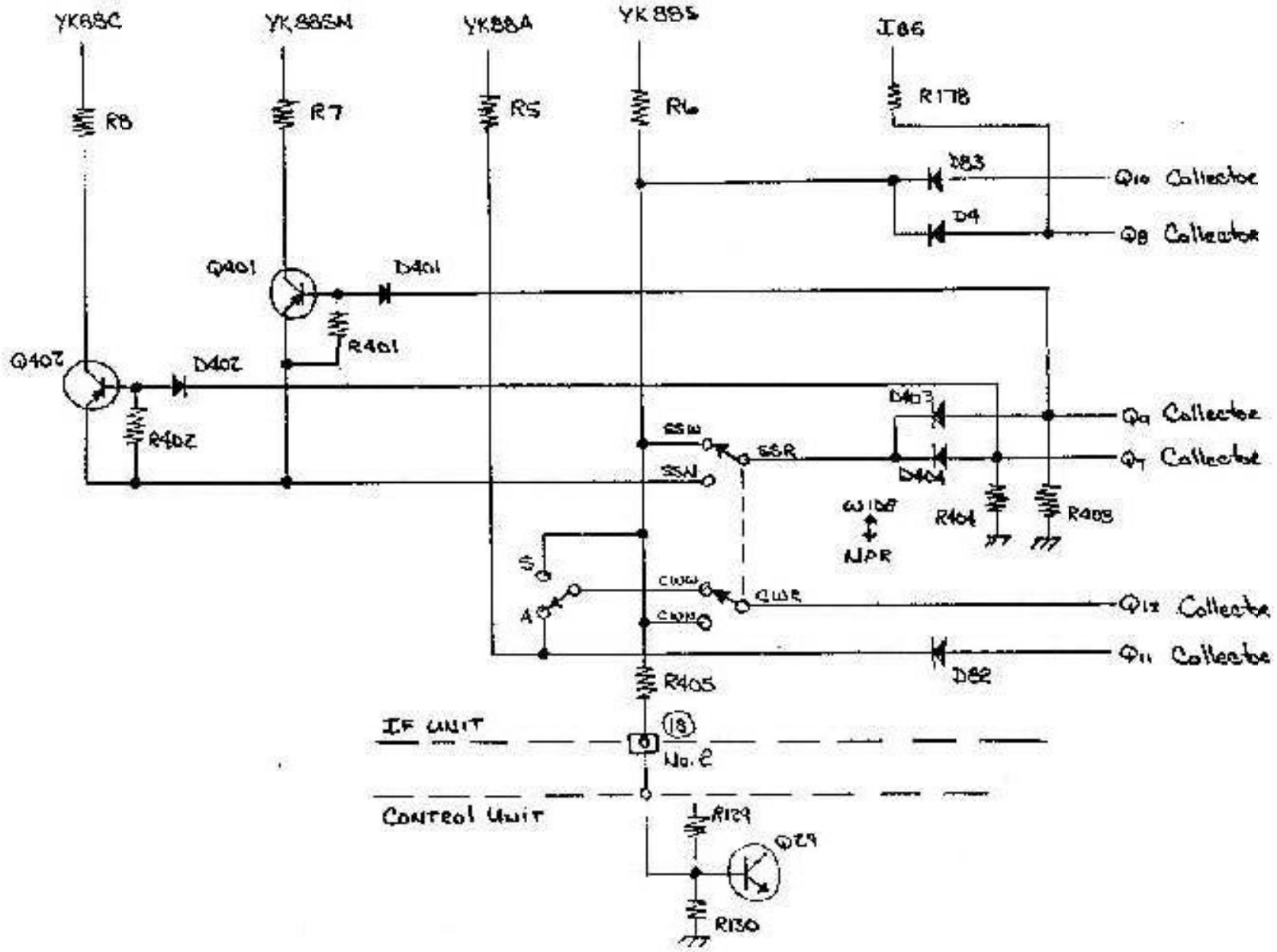


FIGURE 4

Schematic After Modification



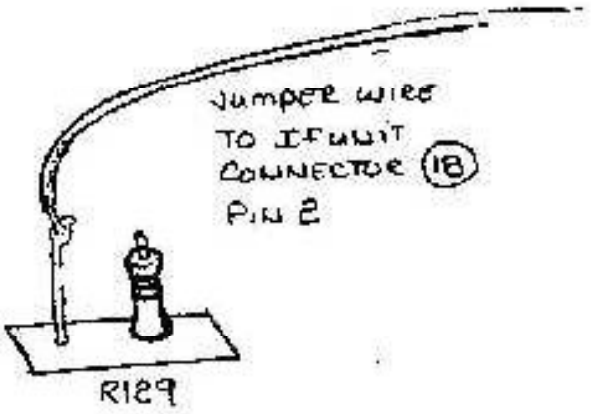


Figure 5

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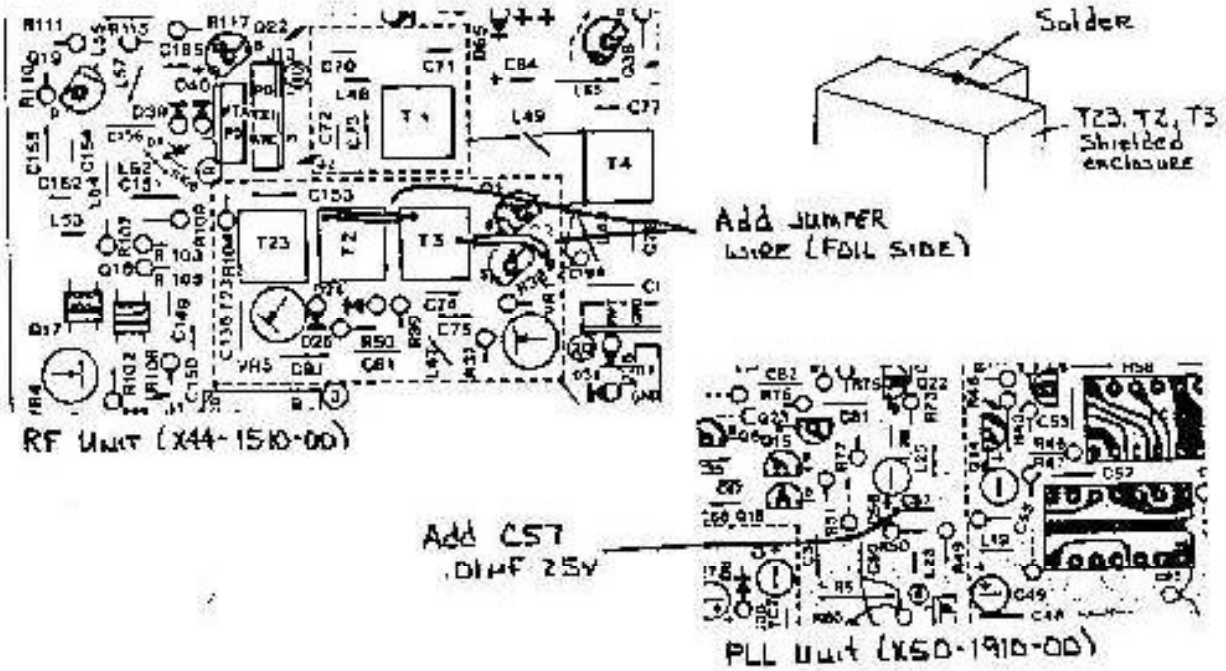
#885

SERVICE BULLETIN AMATEUR RADIO

SUBJECT	DATE
TS-430S RECIEVER INTERNAL BEAT	1-27-84

For reports of an internal beat at 20.415 Mhz or at 21.526 Mhz perform the following modification.

1. On the RF Unit (X44-1510-00) add a short jumper wire from the primary ground of transformer T2 to the primary ground of T3 as shown.
2. Add a jumper from the ground of the secondary of T3 to the ground side of capacitor C194, as shown.
3. Solder a jumper from the shield surrounding T1 to the shield surrounding T2, T3 etc. It may be possible to just bridge the two cases together with solder, either way is acceptable.
4. On PLL Unit (X50-1910-00) locate the position shown for capacitor C57. This capacitor was not installed at the factory, install a .01 uf 25v disc ceramic capacitor.



This change is applicable to units prior to serial number 407XXXX.
Time required for this modification is 1/2 hour or less.

This modification may be performed in warranty on a case by case basis.

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SB # 887

SERVICE BULLETIN AMATEUR RADIO

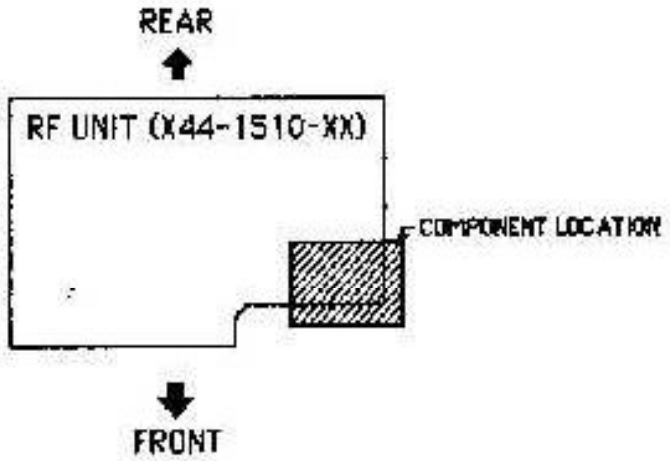
SUBJECT	DATE
TS-430S NOISE BLANKER IMPROVEMENTS	10-17-84

Some operators have indicated a desire to have their TS-430S noise blanker operate similar to the noise blankers in the TS-120S/130S series. By performing the following modifications the operator will be able to increase the effectiveness of the TS-430S Noise Blanker Circuit.

PROCEDURE

On the RF UNIT (X44-1510-XX) change the following components.

R80 change to a 100KΩ 1/4 watt resistor (RD14CB2E104J)
R81 change to a 56KΩ 1/4 watt resistor (RD14CB2E563J)
C125 change to a 560pF 25 v disc capacitor (CK45B1H561K)



This is an optional change and may not be performed in Warranty.
No realignment is required.
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SB • 888

SERVICE BULLETIN AMATEUR RADIO

SUBJECT	DATE
TS-430S INTERMITTENT PLL UNLOCK IN FM/AM	10-17-84

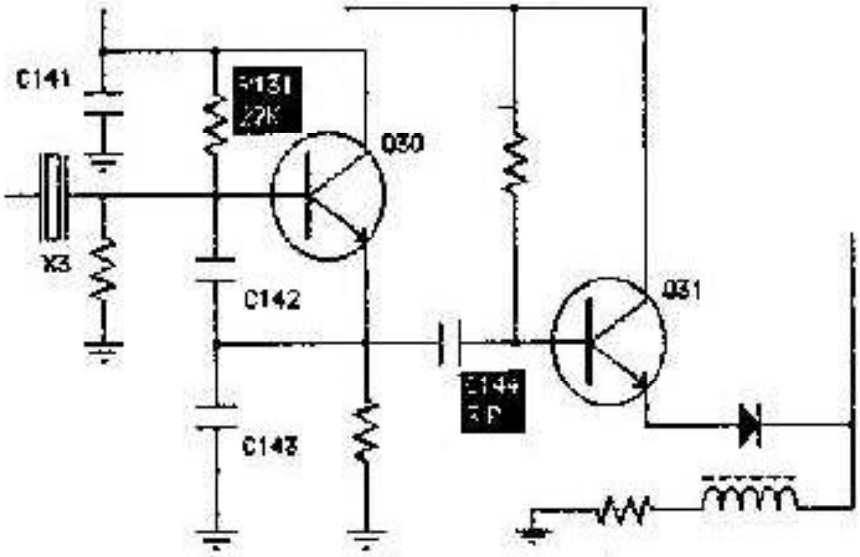
Some owners of the TS-430S have reported intermittent loss of Transmit and Receive when operating in the FM or AM modes, along with a loss of the Digital Display.

The cause of this may be due to a loss of the FM/AM Heterodyne Oscillator signal. Replacing the components listed below will correct most instances of this failure.

PROCEDURE

On the CONTROL UNIT (X53-1290-00) change R131 to a 22 KΩ 1/4 watt carbon resistor (RD14CB2E223J), and change C144 to a 3 pF 25 v disc ceramic capacitor (CC45SL1H050C).

No realignment is required.



CONTROL UNIT (X53-1290-00)

Time required for this modification is 30 minutes. CLM

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SERVICE BULLETIN AMATEUR RADIO

SUBJECT	DATE
TS-430S PLL UNLOCK AT HIGH TEMPERATURES (REVISION)	9-14-85

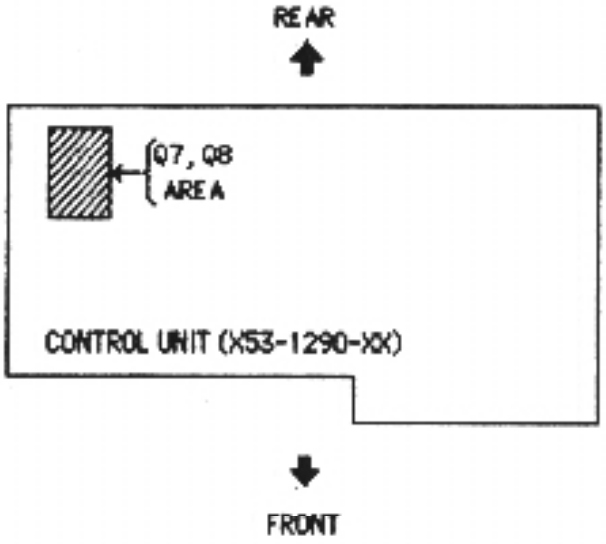
This service bulletin supercedes bulletin 891, which concerned low input levels to IC-16 as the radio warmed up. This bulletin incorporates information contained in Bulletin 891 plus additional information.

PROCEDURE:

On the CONTROL UNIT (X53-1290-XX):

Check transistor Q8. If it is not a 2SC1815(Y) change it to this type (Serial numbers 408XXXX-509XXXX).

For serial numbers before 408XXXX change R29 to 820.0 Ω and C41 to 100 pF.



In addition to the changes listed above check for the following signals, (You must check these at a dial frequency of exactly 14.000.000 Mhz):

TP-1 6.0 volts (L-18 is the adjustment)
TP-2 70 Mhz
TP-3 45.3 Mhz
TP-4 6.35 volts (L10 is the adjustment)

Time required for this modification is 1 hour or less. ©TKC985CLM

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902

SERVICE BULLETIN AMATEUR RADIO

SUBJECT	DATE
TS-430S LOW/INTERMITTENT RX	10-10-85

Low or intermittent receive on the TS-430S may be caused by a poor contact on one or more of the LPF relays. In most cases the following procedure will correct this problem without having to replace relays. The procedure has two steps, first initial cleaning of the contacts by passing a relatively high current thru them (about 500 mA), and then installing a contact maintenance circuit that will apply a relatively low current (about 8 mA) whenever a new band is selected.

PROCEDURE:

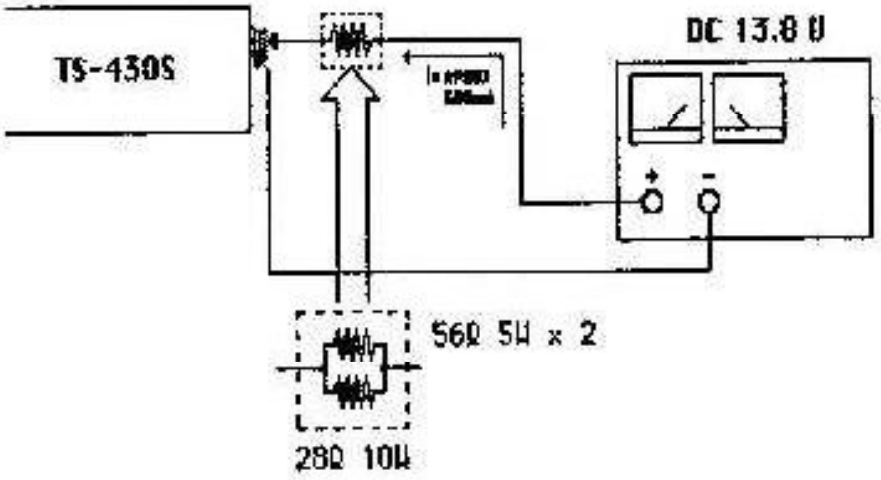
I. Inital contact cleaning procedure.

Parts List:

56Ω 5W Ceramic Resistor (R92-0622-05).....2 ea.

1. Press and hold the "UP" bandswitch of the TS-430S (ensure the 1 Mhz switch is ON).

2. Apply 13.8 vdc to the antenna terminal thru a 28 Ω, 10 W resistor for approximately 1 minute. This will cycle thru all the relays and burn any oxidation/contamination from the contacts.



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II. Contact maintanance circuit installation.

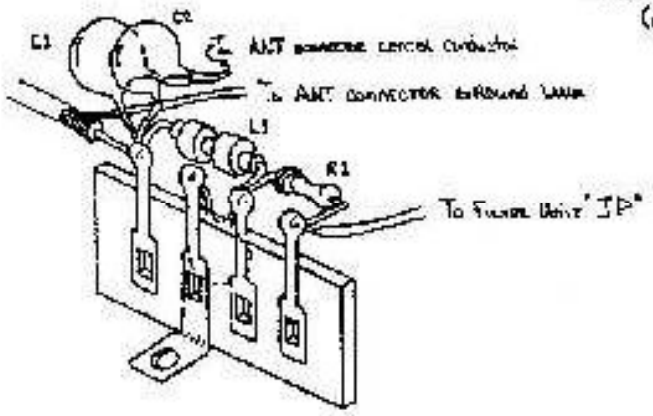
Parts List:

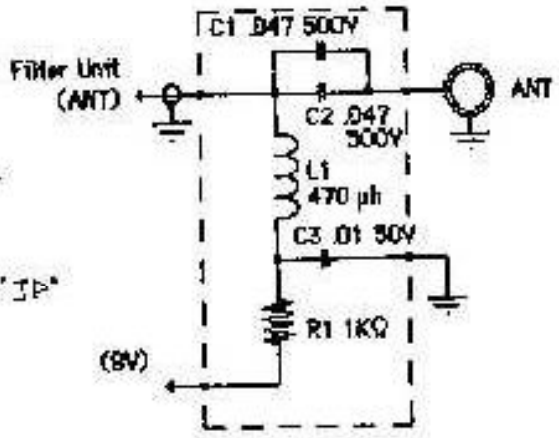
Terminal Strip (E22-0371-05).....1 ea.
C1,C2 (CK45D2H473M) .047 µF 500V.....2 ea.
C3 (C91-0117-05) .01 µF 50V.....1 ea.
L1 (L33-0259-05) 470 µh.....1 ea.
R1 (RD14CB2E102J) 1 KΩ 1/4 Watt.....1 ea.
Small length of bookup wire.....6 inches

1. Disconnect the center lead of the coaxial cable from the antenna terminal.

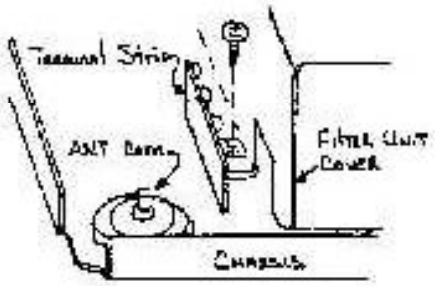
2. Install the contact maintanance circuit as shown in the accompanying diagrams. Attach the terminal lug strip with one of the filter unit cover screws.

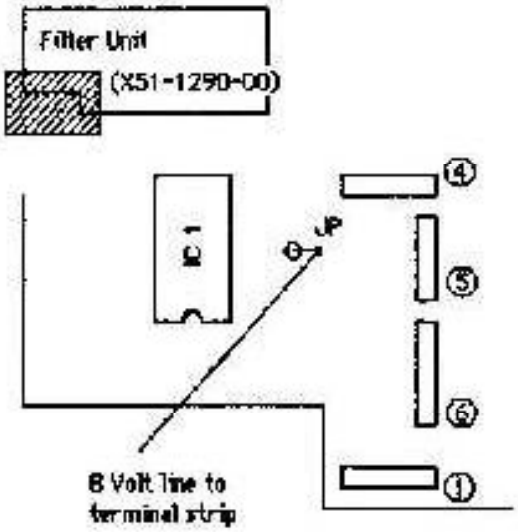
3. Solder the 8v lead to the "JP" terminal of the Filter Unit.





Contact Maintenance Circuit





This procedure should may be performed only to those units received for this specific repair symptom. Time required for this procedure is 1 hour or less. ©TKC102185 CLM