

Date: 13 Jan 89 19:24:00 GMT

Subject: R7000 Display/Sensitivity Problem

If you are having trouble with you Icom R7000 display being flaky and then a sudden decess in sensitivity try the following:

PROBLEM: ICOM R7000 radios that are used 24 hours a day for a long time (2 years ) when shut off the display will become flaky and it is also possible for a lost in overall gain (3 to 40 db).

SOLUTIONS: Officially there is ICOM ECO SB# 9288-004, attached below.

Unofficially from Tech who repairs R7000

The ECO does help the display problem, but most likely it is not the problem. \*

\* note repairing your own radio my void you warranty and only allow a qualified technician to do the job, otherwise damage could happen to your R7000. If the VCO does not track then a major alignment would have to be done after. Check the ICOM IC-R7000 Service Manual for more details before starting this repair, and to make sure I have not made any typeing errors you should get a copy of the ECO from ICOM !

1st SOLUTION:

Replace on the DC to DC Board the following capacitor. Check the noise with an oscilloscope on both sides of R3, if the noise is not way down on one side then replace C2 a 33uf 16V capacitor. Noise feedback can decess the overall sensitivity of the R7000.

Replace on the Display Board  
C19 and C20 a 10 uf 16VDC capacitor

I found that on my R7000 C19 & C20 were the cause of my display problems. They are 10 uf eletrolytics capacitors that are lemmon yellow pc mounted units, when they go bad the base of the yellow caps change to a brown color.

I put in the following ECO first but it did not help. If you look at the service manual you will see that the ECO values are on the schematic but my unit had the old values. I suggest that you check the above first, it is a lot easier to do, C19/C20 can be done in 10-15 min while the ECO will take about a hour.

2nd SOLUTION: The ECO

ICOM America, INC

2380-116th Ave, N.E.  
Bellevue, Washington 98004  
206-454-7619

## SERVICE BULLETIN

UNIT MODEL R7000  
SB# 9288-004  
EFFECTIVE DATE 4/1/88  
SERIAL # AFFECTED: ALL  
PRODUCT GROUP: Amateur

### BACKGROUND INFORMATION:

Display failure do to weak components

### TECHNICAL INFORMATION:

Improvement in DC to DC converter and display power supply.

### PARTS AFFECTED BOARD TYPE CHANGE TO NEW PART NUMBER

Q1/Q2	2SC 1214	DC to DC Board	2SC 2655	906-00385
R1/R2	3.3 KOHM	DC to DC Board	5.16 K	915-01173
C3/C4	PF	DC to DC Board	0.001 MF 50V	918-01500
	ceramic cap			
Q11/Q12		Display Board	2SC2655	906-00385
R31/R32	3.3KOHM	Display	5.16k Ohm	915-01173
C13/C16		Display	0.001 MF	918-01500

### DETAIL PROCEDURE:

1. Remove top and bottom cover.
2. Remove front panel sub-assembly from main chassis of radio
3. Remove the DC to DC board and replace components as listed
4. Reinstall DC to DC board.
5. Replace front panel sub-assembly onto main chassis of radio
6. Replace top and bottom covers.

ESTIMATE TIME TO COMPLETE IS 1 hour

Page 2 of the ECO has a new schematic but no information

-----end of ECO-----