



## Most Common Service Questions for the Icom IC-736 & IC-738

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Unless otherwise noted, the following service questions apply to both models.

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**Symptom:** Frequency jump in LSB after changing modes.

**Probable Cause:** LSB BFO is not being switched properly by logic; unit may need factory update.

**Cure:** With radio turned off, measure resistance of pin 17 to ground on IC24 on main unit. Should be 47k. If it measures above one meg-ohm, install a 47k, 1/8 resistor over the top of IC24 between pins 10 and 17.

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**Symptom:** Radio is off frequency.

**Probable Causes:** Reference oscillator needs alignment.

**Cure:** Field: First reset CPU to clear all BFO presets, then tune in WWV and align L29 on PLL unit for zero beat in USB mode. Shop: Reset CPU. Align L29 for 60.0 MHz at P2. Check alignment of BFO.

**Remarks:** Before performing this alignment, make sure that update to prevent LSB frequency jump has already been installed in radio (see above cure).

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**Symptom:** In IC-736, TX SSB audio sounds harsh. Average talk power seems low.

**Probable Cause:** Driver and PA idle current is set too low.

**Cure:** Realign idle current as per procedure on page 5-8 of the service manual with a change in specs: Adjust R8 for a 300mA increase and R44 for a 500mA increase. Total idle current draw should be about 1000mA(1A).

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**Symptom:** In IC-736, unit will not turn on. Unit powers up if VCC cable is disconnected from PA.

**Probable Cause:** Shorted driver and PA FETs.

**Cure:** Replace driver and PA FETs. Inspect PA unit for overheated components and replace as necessary. Re-align idle current after repairs as per new spec. (see above)

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**Symptom:** Automatic antenna tuner cannot find tune on some bands, typically 40 and/or 80 meters

**Probable Cause:** Burned capacitors on tuner unit.

**Cure:** Replace capacitors C2 & C6 (82pf & 100pf) on tuner unit with 500 volt (or higher) versions. Look for other burned capacitors in same area and replace as needed.

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**Symptom:** Automatic antenna tuner hunts but cannot find tune on any band.

**Probable Cause:** Bad detector diodes on tuner CTRL unit.

**Cure:** Check these diodes on tuner CTRL unit: D1, D2, D3, D4, D5, D6, D11, and D12. Replace as needed.

**Remarks:** While tuner is disassembled, we recommend replacement of C2 & C6 on the tuner unit with 500-volt equivalents to prevent future failure. (see above)

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