

## SERVICE BULLETIN

AMATEUR RADIO

SUBJECT

TR-2600A PLL UNLOCK (TROUBLESHOOTING)

DATE

10-18-85

The owners manual for the TR-2600A lists the lithium battery as a possible cause of the display showing "UL". You may wish to check the battery, but realistically on a new radio this is probably not the reason for the unlock condition.

I. If the radio shows "UL" when first turned ON you should perform the following test. This will help you to isolate the symptom:

1. With the radio turned OFF, press and hold the [5] key, and then turn on the radio. Release the [5] key. If the display shows a frequency indication you may have a bad X2, on the TX Unit (X56-1470-10).
2. If there is no frequency display other than "UL" then proceed with step II.
3. You may also wish to check crystal X1 the Reference Oscillator (10.240 Mhz at pin 16 or 17 of IC1).

II. There are several other points to check:

1. Check trimmer capacitors TC4, TC5 and TC6. If you press on the trimmer and the "UL" disappears replace the trimmer.
2. Check pin number 18 of IC1, it should be 5.4-6 vdc.
  - a. If the voltage is over 6.5 vdc: Replace Q17, Q18, and IC1.
  - b. If the voltage is less than 5 vdc: Replace Q17, and Q18.
3. Check the CLK signal at the flex pc board connector, and pin 10 of IC 1.
  - a. The CLK signal should be aprox. 4-4.4 vdc. Pin 10 should be aprox. 0-.2 vdc.
  - b. If pin 10 is high check Q16, and for cold soldering on the flexible pc board between the keyboard and the RX unit.
4. Check the alignment of the PLL section, as given in the Service Manual.
5. Press the RESET pushbutton on the back of the radio.