

TRC-453 and PC-122 TROUBLE SHOOTING GUIDE

UNIT WILL NOT TURN ON

1. Broken/defective DC Power cable.
2. Fuse blown. Be sure you check for the cause.
3. Defective power switch.
4. Defective wires or poor soldering in power supply circuit.

NO SOUND RECEIVED

1. Defective RF circuit in receiver.
2. Defective Noise Blanker.
3. Defective audio power IC, IC5.
Check Voltage at pin 6 of IC5; if approximately 6V, problem is not with this IC.
4. Squelch is "ON" all the time.
If voltage at Base of TR12 is approx. 0V with Squelch Control in fully counterclockwise, problem is not with squelch circuit.
Defective TR12.
5. Check whether the transceiver's signal strength meter deflects when a signal (27 MHz carrier with 1 kHz, 30% modulation, 100 μ V level) is applied to antenna.
 - a. The meter indicates "S-9".
You can assume that antenna through IF stage are OK.
NO AM Checks should be made on Detector (D16 and 17) ANL circuit (D18), TR24 and AF stage (TR11, TR12, VR501 and IC5).
NO SSB BUT AM OK Check frequency and level on TP5, if no signal, checks should be made on X-tals and TR24.
NO SSB Checks should be made on Detector, TR11, TR12 and AF stage, VR501 and IC5.
 - b. No deflecting of meter.
Checks should be made on RF stage (TR13 and TR14), IF stage (TR15, TR16, TR17 and TR18) or AGC circuit (TP8, D7, D8 and IC1). Or trouble may be in PLL circuit. Check frequency on TP3; if it is as listed in the Table, problem is not with PLL circuit.
6. Defective AGC circuit.
7. Defective PLL circuit.
8. Defective antenna connector.

NO NOISE

1. Broken or bad contact in microphone connector and/or push-to-talk switch.
2. Defective RX power circuit.
3. Defective RX audio circuit.
4. Defective PLL circuit and/or channel switch.
5. Defective squelch.
6. Defective PA-CB switch.

NO TRANSMISSION

1. Broken or bad contact in microphone connector and/or push-to-talk switch.
2. Broken or bad contact in antenna connector.
3. Defect in power supply.
4. Defect in PLL and/or Carrier Oscillator (Improper adjustment).
5. Inoperative microphone amplifier and/or balanced modulator in SSB mode.
6. Check the frequency at TP3; carrier oscillation may have stopped; if no carrier, check TR24, D27, 28, 29 and X2.
7. Carrier is OK, but no TX; check the frequency at TP3. If not same as listed in Frequency Table, PLL circuit defective. If OK, check IC3, 6, TR35, 538 and 539.
8. If no TX on SSB modes and no modulation on AM mode, Mic amplifier or ALC/AMC section is defective. Check TR36, 37, 38 and 544.

NO MODULATION

1. Defective microphone.
2. Defective microphone connector.
3. Inoperative microphone amplifier, (both AM and SSB modes.)

NO NOISE BLANKER OPERATION

With NB Switch ON, apply a 27 MHz carrier signal to antenna. Then check DC voltage at TP1 varying the carrier signal from 1 μ V to 100 μ V.

1. When TR1 voltage stays on and does not vary: Check TR1, 2, 3, 4, 5, D1 and D2.
2. When TP1 voltage varies from 0V to approx. 2V. Check TR6 and 7.
3. If (A) and (B) are alright, L2 may be misaligned; go to alignment procedure for adjusting L2.

CHANNEL LED DOES NOT LIGHT

When a specific segment fails to light, it is probable there is an open-circuit in the LED display or bad contact in the channel selector switch.