

This is uPC2824C/uPC2816C PLL SSB Chassis Trouble-Shooting Chart
Use in correllation with appropriate SAMS, Reference: Radio Shack TRC-451

Will forego usuall General Trouble-shooting and go straight to amplified instructions:

Unit will not turn on: Broken power cable, blown fuse (check cause),
power switch, wires/soldering in power supply ckts.

No Rx Audio: 1. Bad RF, Noise Blanker, AGC, PLL ckts. Audio IC, antenna
conn. Mike/Cable/connector.

2. Check IC4, Pin 5 should read 6VDC approx.

3. SQ always on - TR11 or soldering.

4. Meter deflects on Rx - antenna thru IF is OK.

No AM - check D22, D23, D24, TR18, TR10, TR11, VR401,
TR36, and IC4.

No SSB, have AM - ck F ϕ and level at TP5, also Xtals
and TR23.

No SSB - TR10, TR11, VR401, TR36, and IC4.

5. Meter has no deflection on Rx - ck TR12, TR13, TR14,
TR15, TR16, TR17, D4,
D10, D11, and IC1.

---Still no audio go to PLL ckt.

No Tx: 1. Tx power sources, Mike/cable/conn., Ant. conn.

2. PLL, Carrier Osc., adjustment off.

3. Mike amplifier, Balanced Modulator in SSB mode.

4. Check TP3, if no carrier F ϕ - TR23, D34, D35, D36, and X2

5. Carrier OK - no Tx; check PLL ckts, if OK; ck IC3, IC5,
TR38, TR39, TR40, and TR41.

6. No Tx on SSB, No mod. in AM modes - Mike amp, ALC/AMC ckts.
TR42, TR43, TR44, TR45, and TR46.

No Mod: check mike/cable/conn.

No Noise Blanker: check TR1, TR2, TR3, TR4, TR5, TR6, TR7, TR8, D1, D2,
first check alignment of L1 and L2.

Ch. LED inop: if segment out, probably the LED itself; check selector sw.
and wiring to it.

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PLL Chip Trouble-shooting:

Should be RF at TP3; if not—check for approx. 8VDC at collector of
TR21. If there, check IC2, L14 open/poor
soldering. If not, check TR34, TR35, L15.

Check TP2 for 2-5V; if not—check for 1-2V P/P RF at TP4. If not, TR22
should read 10.2417MHz. If not, check Xtal,
switching ckt, TR22. If there check TR23
or L18, soldering.

IF, 1-2V is at TP4, check Pins 1-6 IC2
logic programming/truth table. If not
there check Ch. Sw./cable. If there and
all above checks good then you have bad PLL.

Check TP2 for ea Ch. F ϕ per table—check for 3.5VDC at Ch. 40.

If not there, readjust L14. If all
the above checks out then PLL Chip
is GOOD.