

Models 402, 402R, 402REU: Troubleshooting Electronic Problems

- 1) Remove the AC power, and disconnect the red coaxial signal cable from the electrometer PC board.
- 2) Set the zero pot mid-range at 500, and the span pot at 300.
- 3) Set the range switch to the low range position.
- 4) Turn on the power to check the output of the amplifier circuit.
- 5) Connect a DC voltmeter with the negative lead to span-pot CCW (common).
- 6) Connect the voltmeter positive lead to the red wire on the range switch (SW2 terminal H).
- 7) Verify zero volts +/- 20 millivolts. If not, adjust potentiometer P1 on the electrometer board.

Check linearity:

- 1) Move positive lead to Test point TP1 on the motherboard (to check 0-1 VDC full-scale).
- 2) Adjust Zero pot from 500 up until the meter reads 1 volt DC at TP1.
- 3) The analyzer digital display meter should read full-scale of low range = 2.0 PPM. If not, adjust the pot behind the display meter.
- 4) Switch to the middle range, verify TP1 = 100 millivolts and display = 2.0 PPM
- 5) Switch to the high range, verify TP1 = 10 millivolts and display = 2.0 PPM.