

the detector when making low sensitivity measurements. When checking detector zero in this manner always place the sensitivity knob on a zero position between the sensitivity setting to be used and the next lower sensitivity. A common zero check position is used for the 10^{-2} and 10^{-3} sensitivity settings. Zero offsets are corrected by adjusting the ZERO knob on the front panel to bring meter reading back to zero.

When making precise measurements on resistance bridges, adjust detector zero with the SENSITIVITY knob in the measuring position (positions 1 or 10^{-1} as required) and with the bridge "battery" key open. This will minimize any measuring errors caused by possible thermal emfs generated in the leads, lead connections or in the bridge itself. The same procedure should be followed when making precise potentiometer measurements except in this instance the "galvanometer" or "detector" key is opened.

F. Operating Procedure

In some cases, null balance may be obtained using only one of the three

sensitivity settings available. In other cases, a final precise balance is more readily obtained after making one or more preliminary balance adjustments at reduced sensitivities. If so, follow this procedure:

(1) Turn the sensitivity switch counterclockwise to the first zero check position; then check and adjust detector zero.

(2) Turn the switch one position clockwise to 10^{-2} and obtain a null balance.

(3) Turn the switch to the 10^{-1} position, check and readjust detector zero with "battery" or "galvanometer" key open as described above. Then obtain a measured null balance.

(4) Repeat this procedure, advancing the sensitivity switch clockwise in measuring positions, alternately adjusting zero and obtaining null balance. Final balance is completed at the maximum desired sensitivity. This procedure may be at any sensitivity position depending upon the number of preliminary balance adjustments desired.