

## 8. Calibrating the Transducer

1. The procedure in **Balancing the Transducer** (Section 7) should always be done as the first step before proceeding with this section on **Calibrating the Transducer**.
2. After you have balanced the transducer and returned to the Main Menu, the displays will appear as below. (If the displays show anything else, lightly press and release the **MODE** Button.)

run  
bAL  
CAL  
InTr

3. Lightly press and release Button 3 to enter the Calibration Menu. Window 2 will read CAL to indicate this mode and the displays will appear thus:

rET	<i>Press Button 1 to return to Main Menu.</i>
CAL	<i>Press Button 2 to calibrate the transducer.</i>
[350]	<i>Maximum calibration value in mmHg: fixed.</i>
[100]	<i>Current minimum calibration value in mmHg.</i>

4. Maximum pressure will be shown in the third display as a fixed value (normally 350 mmHg). The fourth display shows the minimum calibration pressure: either the factory default value of 100 or the last value at which the BPA was calibrated.
5. Connect the transducer to a manometer and raise the mercury column to a value which is *above* the minimum calibration pressure currently shown in Display 4. *The calibration value chosen must be at least 100.*
6. Press and release Button 3 until the calibration pressure shown in Display 4 matches the pressure on the manometer. Each time the button is pressed, the value will change in increments of 1.

7. You can also press and release Button 4 to increment the minimum calibration pressure by 5.

In making the selections above, you can hold the button down, causing the values to cycle rapidly. When you near the desired value, press and release the button to avoid cycling past your selection.

8. When the desired value appears in Window 4, press and release Button 2, beside the CAL display. Light 2 will come on and remain lit for approximately 2 seconds while the analyzer calibrates the transducer.
9. Press and release the **MODE** Button to return to the Main Menu. The displays will again read  
run  
bAL  
CAL  
InTr
10. Press the **MODE** Button again to switch into Operating Mode. The pressure value in Display 1 should be within  $\pm 0.2$  mmHg of the pressure on the manometer.

**If problems arise:**

If the pressure reading in Display 1 does not match the manometer within the stated accuracy specification, check the manometer for a slow leak. The column in the manometer must remain at a constant height during the calibration procedure. Always ensure that the transducer has been allowed to warm up for 10 to 15 minutes before carrying out the procedures above.

If, after the safeguards above have been taken, the mean pressure in Display 1 still does not match the manometer, perform the following steps:

- a. Turn **OFF** the **BPA RESET SWITCH**, then turn it back **ON** again. Repeat the balance and calibration procedures.
- b. If the calibration is still outside the stated specifications, replace the transducer and repeat the balance and calibration.
- c. If the values are *still* incorrect, contact your Digi-Med Product Specialist at 1-800-326-8096.