



Calibration Manual

Oscilla® TSM300

Specifications are subject to change without notice
2017-03-22

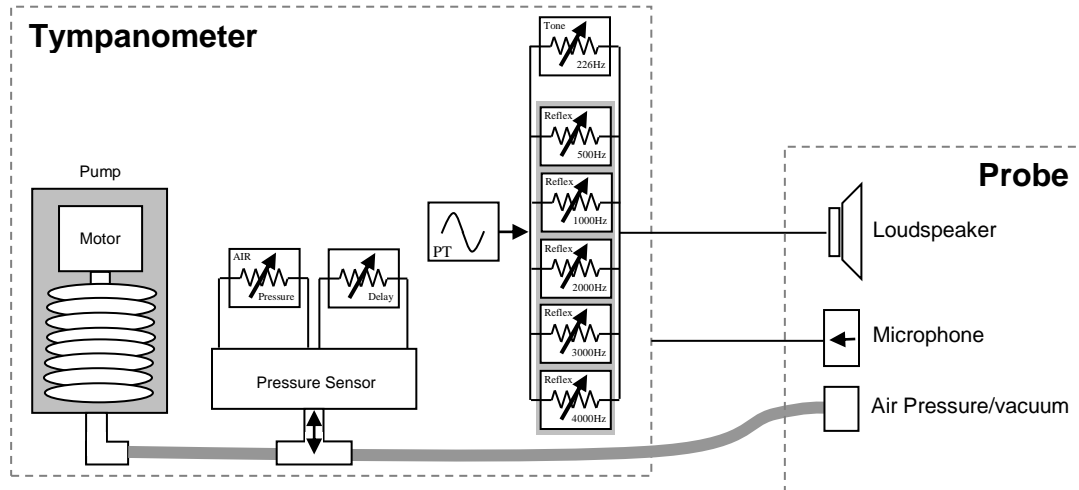
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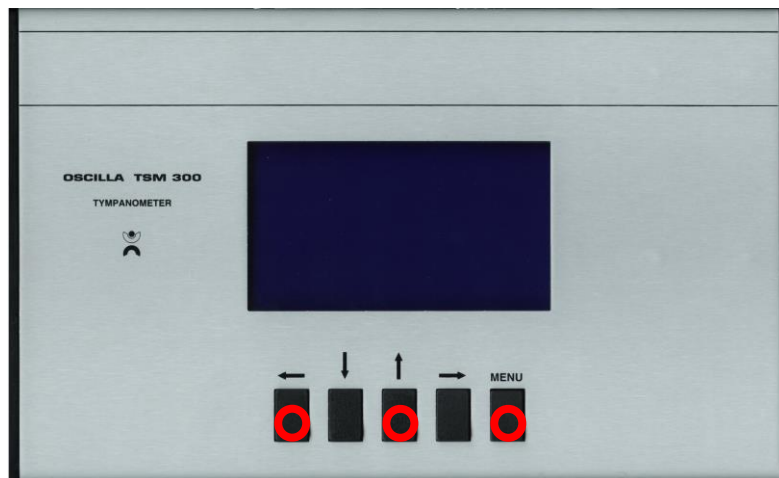
1.1 Adjusting sound pressure

Due to tolerances in electronics and probe it is necessary to adjust the output signal to correct intensity. The adjustment has to be made with the probe belonging to the specific device.

IF YOU REPLACE THE PROBE, THE UNIT MUST BE READJUSTED.



2.0 Entering the calibration mode



To enter the calibration mode do the following steps.
 Turn the tympanometer off.
 Press and hold the **Left, Up, Menu key**.
 Turn on the tympanometer and wait for the tympanometer test screen is ready.
 Release the three keys.

Then the calibration menu should appear on the screen.

226 Hz
500 Hz
1000 Hz
2000 Hz
3000 Hz
4000 Hz
Pressure delay
Pressure sensor

2.1 Calibration sound

To leave the calibration menu, press the Menu key.

To be able to step up and down in the menus, press the Up / Down key.

To be able to change the values, press the Left / Right key.

When the user is in calibration mode, the calibration levels are shown in **Calibration dB**.

Frq	Calibration dB
226 Hz	85
500 Hz	110
1000 Hz	110
2000 Hz	110
3000 Hz	110
4000 Hz	110

All values are constantly stored within the CPU during adjustment.

You may leave adjusting mode in one of two ways:

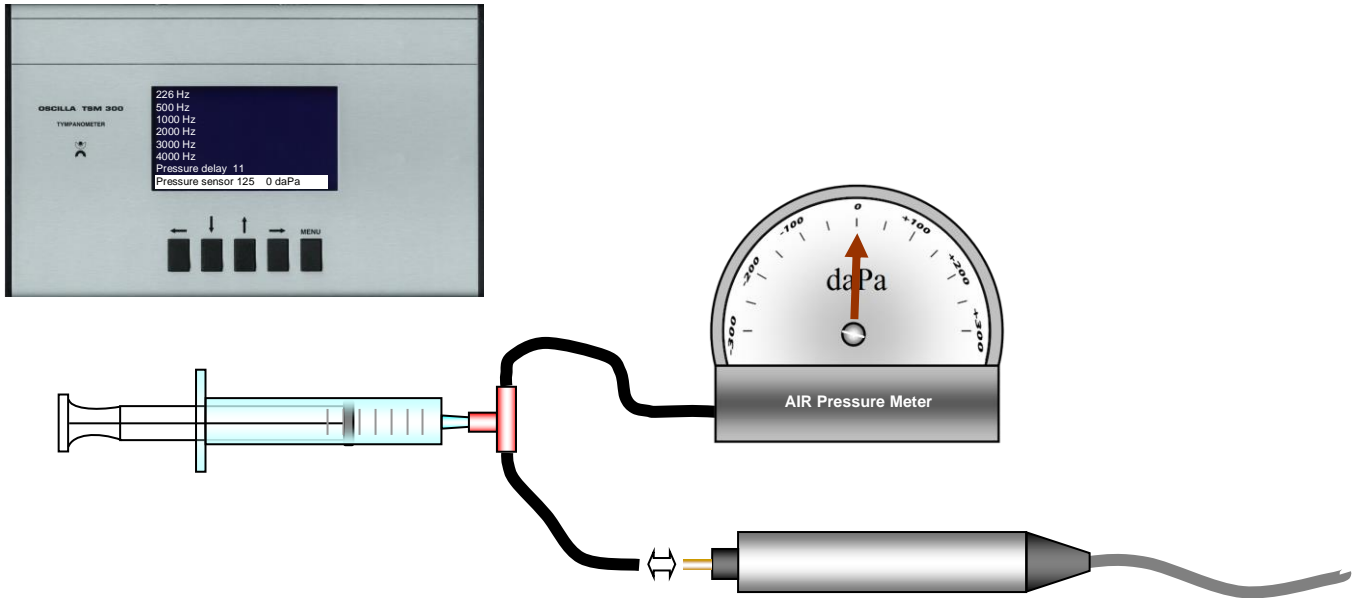
Press **Menu key** or turn the device off.



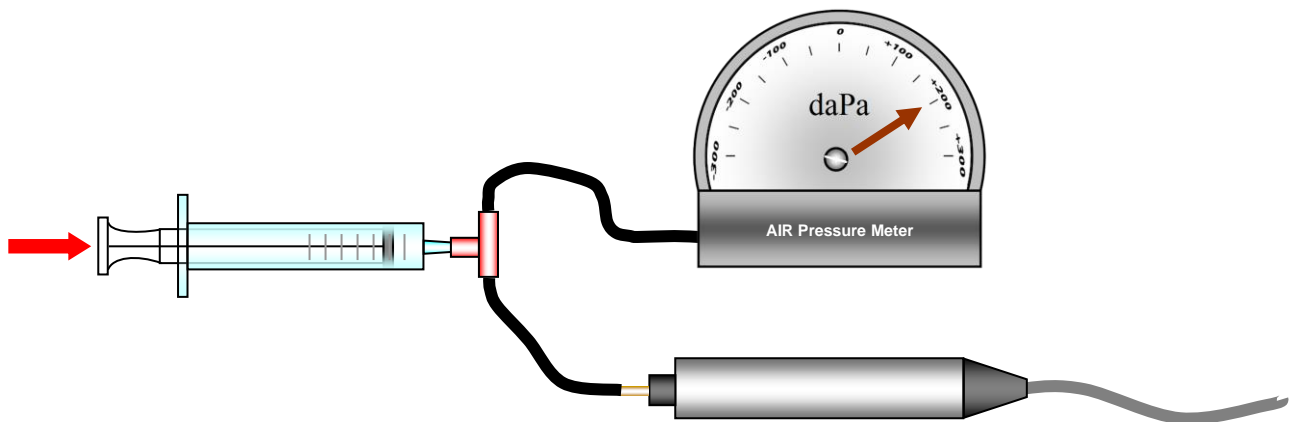
2.2 Calibration pressure

To calibrate the pressure sensor a pressure reference shall be used to determine the absolute pressure, when calibrating.

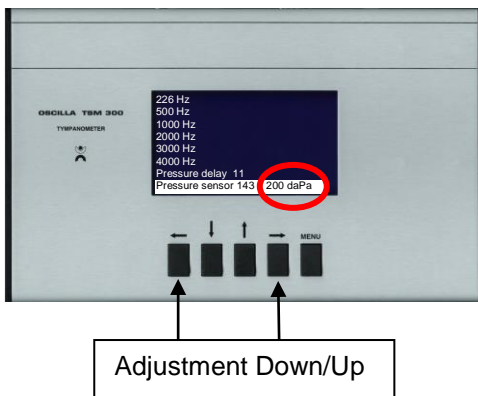
1. Use the "up" / "down" buttons to move the white cursor bar to "Pressure Sensor" and read out "0 daPa"



2. A t-piece is used to connect the reference (Pressure Meter) and a syringe to the tymp. probe.



3. Put the pressure to the value +200 daPa on the reference with the syringe.



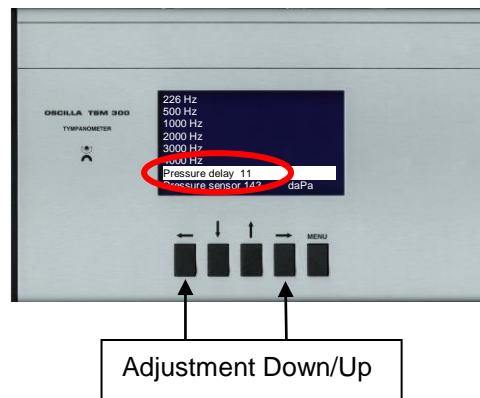
4. Use the "Left" and "Right" keys to adjust readout on the right side to the exact same value on the reference (200 daPa)

5. Pull out the syringe until the value on the reference is -200 daPa.

6. Use the "Left" and "Right" keys to adjust readout on the right side to the exact same value on the reference (-200 daPa) as in point 4.
7. You can end the calibration by clicking the "Menu" key.

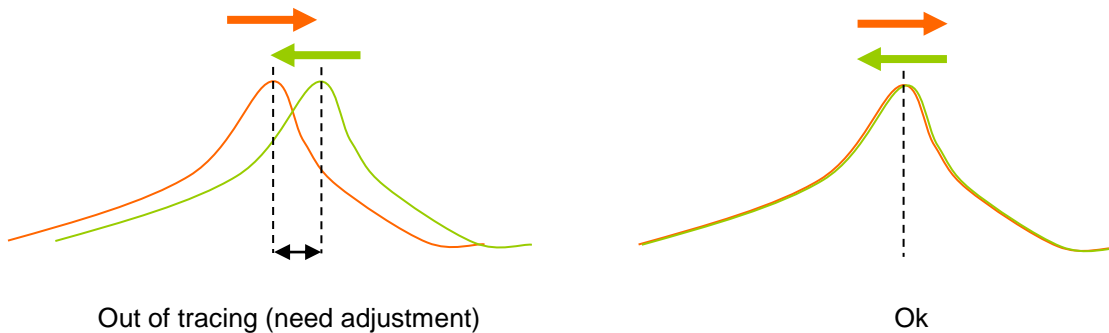
2.3 Calibration delay

The calibration delay is used to compensate for the delay line in the air tube from the pump to the probe. As default this value will be on 11, and there is normally no need for adjusting the value.



The compensation is performed in the following way.

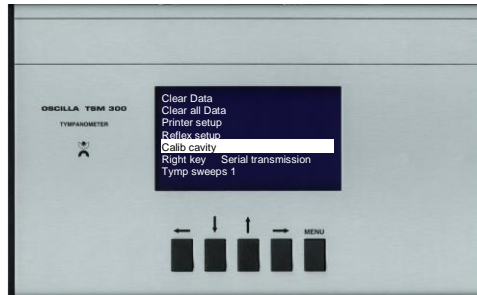
Make a tympanogram and see if the peak is tracing in both directions, if it's not tracing then adjust the calibration factor, and make a new test.



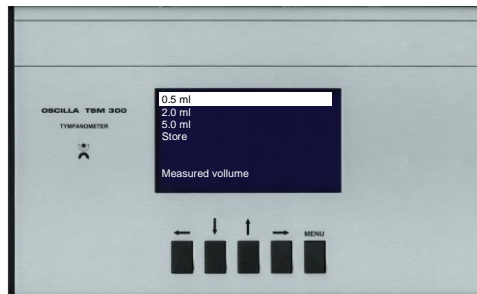
2.4 Cavity Calibration

You should adjust your tympanometer before use, to the actual atmospheric pressure by means of the enclosed calibration cavity chamber set. The calibration is very easy and takes only a short while.

1. Enter the **Calib cavity** item from the main menu.



2. Put the probe tip with ear tip into the hole of the test cavity labelled 0.5 ml and then press **Right key**.



3. Press the **Down key** to select 2.0 ml.

4. Put the probe tip with ear tip into the hole of the test cavity labelled 2.0 ml and then press **Right key**.

