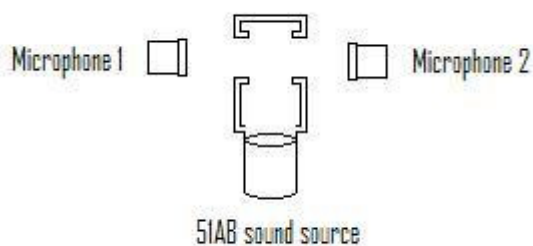


## Calibration of 51AB

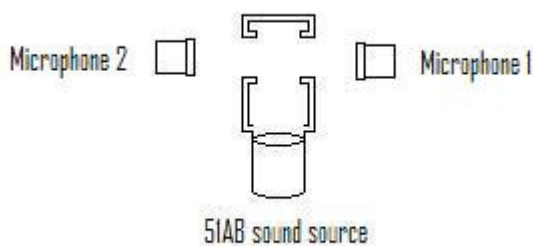
The Intensity Calibrator Type 51AB has two microphone ports. Theoretically the two microphones will have exactly the same distance to the sound source, which will result in 0° phase difference. But practically there can be a difference in the distance, due to a limited precision of the tools used in producing the Intensity Calibrator. This is the difference which is found when calibrating the Intensity Calibrator Type 51AB.

Two especially well phase-matched microphones, Microphone 1 and Microphone 2, Fig. 1, (calibration is traceable to NPL) are used in the calibration procedure, which consists of two steps. The following setup is used to calibrate an Intensity Calibrator Type 51AB.



*Figure 1: 51AB Calibration - step 1*

Step 1: The two microphones are mounted in the Intensity Calibrator Type 51AB. The sound source is switched on and the microphones measure the sound pressure inside the calibrator.



*Figure 2: 51AB calibration - step 2 (Microphones have switched side compared to Fig. 1).*

Step 2: The two microphones have now switched side and the measurement from step 1 is repeated. When the two measurements are completed, it is possible to calculate the difference in distance between the two microphones and the sound source of Intensity Calibrator Type 51AB.

The Intensity Calibrator Type 51AB complies with the IEC standard 61043.