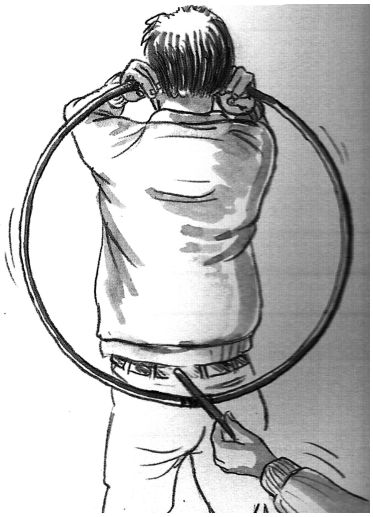
# 5. Information about the location of a sound source

**Theoretical background:**

We can locate the position of a sound source with closed eyes. This is possible because we are hearing with two ears. The ear closer to the sound source gets the signal earlier and with a slightly bigger intensity. Out of this minimal difference the brain calculates the location of the sound source. A difference in time, small as 0,00003 s, is still distinguishable!

***The examinee puts the funnels of both ends of the tube to his ears. The examiner taps with a pen 10cm from the middle mark (red mark) on the tube. The examinee has to decide, if the sound source is closer to the right or the left. Then approach from each side to the middle by tapping on the tube and measure the smallest distance to the middle, in which a sound source could be allocated to the left or right.***



***2-3 cm***