

Hearing Field

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Checked version of the article can be found here (https://www.wikilectures.eu/index.php?title=Hearing_Field&oldid=18547).

See also comparison of actual and checked version (https://www.wikilectures.eu/index.php?title=Hearing_Field&diff=-&oldid=18547).



Hearing Field

Introduction:

The hearing field describes the range of audibility by the ears of humans or animals. Each species has a different range of audibility, an average 16Hz to 20 KHz being the widely accepted frequency of hearing for humans. Though this number can differentiate between individuals and can decline with age.

Humans:

Children can hear sounds as low as 12 Hz. Once hitting the age of around 8, the range of hearing for a human begins to lessen. In general, women tend to have a smaller amount of hearing loss than men. By the age of 40, men may have 5 dB to 10 dB more loss than women.

Range of Audibility By the Human Ear



Above Graph Explained:

The above graph shows the range of audibility by the human ear. The most outer line shown below 120 dB is the border of the threshold of hearing. The outer line above the 120 dB shows the border of the threshold of pain. The area coloured in (the inside of the circle) shows the average hearing field of humans. Anything outside this circle is either not heard by the human ear, or hearing it can cause pain. There are three circles shown on the graph. The innermost circle shows the vocal range, the middle circle shows the musical range, and the outermost circle shows the full auditory range of humans. As shown, the frequency of the range of hearing is between 14 Hz to 20 KHz (results may vary between individuals as stated before). The intensity in dB varies between -10dB to 130dB.

Conclusion:

The audibility by the human ear varies between all individuals. The audible frequency range on average is between 16 Hz to 20 KHz, and the intensity detected by the average person is between -10dB to 130 dB.

Reference:

http://en.wikipedia.org/wiki/Hearing_range

<http://hyperphysics.phy-astr.gsu.edu/hbase/sound/earsens.html>

<http://hypertextbook.com/facts/2003/ChrisDAmbrose.shtml>

<http://donrathjr.com/audible-range-human-hearing/>