

range. Similarly, 24-bit digital audio calculates to 144 dB dynamic range.^[7] All digital audio recording and playback chains include input and output converters and associated analog circuitry, significantly limiting practical dynamic range. Observed 16-bit digital audio dynamic range is about 90 dB.^[11]

In 1981, researchers at Ampex determined that a dynamic range of 118 dB on a dithered digital audio stream was necessary for subjective noise-free playback of music in quiet listening environments.^[23]

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

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Dynamic range - Wikipedia, the free encyclopedia

Since the early 1990s, it has been recommended by several authorities, including the Audio Engineering Society, that measurements of dynamic range be made with an audio signal present, which is then filtered out to get the noise floor.^[24] This avoids questionable measurements based on the use of blank media, or muting circuits.