

# Frequency Chart – The Most Important Audio Frequency Ranges

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The “perfect” human ear can hear frequencies ranging from **20Hz** to **20.000Hz** (or 20KiloHz/Khz) according to the official frequency chart.

The average hearing range of the human ear though can hear from **50Hz** to **16Khz**.

The lower the Hz the bassier the sound. The higher the Hz the higher/brighter the sound.

We can easily say that the more we grow old the less high frequencies we’ll hear – usually from 18Khz to 15Khz – but we can hear the mids no matter our age.

The above are not a problem though cause music important frequencies can be found around 50Hz and 16Khz, so even if you are old and “lost” some frequencies don’t worry, it’s never too late to start mixing!



## The Frequency Chart

I broke down the frequencies into **6 main frequency ranges**.

This way it will be easier for you to practice and remember the frequencies. I am positive that this list will improve your mixing skills a lot



Let’s start!

### 0 – 60Hz (Sub-Bass)

**0 – 35Hz:** You can remove it completely. You won’t find any musical information here. There’s an “energy” that you can feel and will make your mixes sound dull and muddy, plus it will lose it’s clarity. This kind of energy is really bad for your mix.

**35 – 60Hz:** You can still feel the energy rather than hearing it. Around **50** to **80Hz** you can find the wonderful energy that “hits you in the chest”. This is the exact feel we have when we go to concerts and we feel the bass hitting our chest. It’s an extremely important frequency range especially for Dubstep, Hip Hop, Drum & Bass etc... Since this sound is so sweet it’s really easy to overdo it so please keep your ears open and mix correctly or you’ll end up with the above drawbacks (muddy sound and no clarity).

### 60Hz – 250Hz (Bass or Main Bass)

The enhancement of these frequencies can make the sound “fuller” and “bigger”. On the contrary, cutting these frequencies will make the sound “thin”.

Depending on the sound, cutting these frequencies will also reduce the “muddiness”. Every project/sound is recorded differently so you’ve also got to treat it differently.

**60 – 120Hz:** Fundamental frequencies for the kick bass and the bass guitar.

### 120Hz – 350Hz – “Really Heavy Area”

That’s really the heaviest frequency area. Almost every single instrument has some frequencies in there.

Try to cut as many frequencies as possible from instruments that don't really benefit from these frequencies. And I don't mean to cut lots of db's but just a couple of db's would do the trick.

## 250Hz – 2Khz (Low Mids)

Here you'll find the fundamental frequencies of the most instruments.

By boosting these frequencies you'll make the sound fuller but if you overdo it you will cause ear fatigue to the listener.

The sound hurts the ear and you have a strange sense like "feeling the sound to your stomach".

## 2KHz – 8Khz (High Mids)

**2 – 4Khz:** Frequencies that help vocals and instruments to be more noticeable. You can achieve the same thing by cutting the same frequency range from different tracks than the one you're trying to make it more noticeable.

**4 – 6Khz:** Clarity. I should also mention that by boosting these frequencies the sound seems that it's closer you and by cutting them it seems to be afar.

## 8Khz – 20Khz

**8 – 12Khz:** Frequencies dominated by the cymbals.

**8 – 16Khz:** Clarity and sibilance. It's really important to record properly without "Sh's" in the vocals so can you boost for clarity in case you need it, without worrying about the sibilance.

**12 – 20Khz:** "Air". It gives the sense of air and openness in the mix.

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