

Audio - I used this term as the opposite of MIDI. Audio is a sound that has been recorded and you can see it as a waveform in the application. If you're working with the synthesiser, you can record the audio from it, but you can't change it afterwards, just adjust it with various effects. I like to use MIDI, which means that the information about the melody is in another app that sends it to the synth. It triggers it to play the melody, but you can change the sound and also the tempo as you like because the audio is not 'baked', it plays in real time.

Boxy frequencies - These are the frequencies (we usually talk about them in connection with vocals) that sound as if you were talking into a box or a can. They are around 500 Hz, but I mentioned that in my voice, for example, I can find them around 640 Hz. They can be more pronounced if you record in an untreated room, etc. Cutting them helps to make the sound brighter and clearer. To find them, I like to use the method of taking the band in the equalizer and pulling it up and then moving it from left to right. The place where it sounds the most boxy is where I pull it down. [This tutorial](#) is great to understand it better

Chord - It's when you play several notes at the same time, for example on a guitar where all 6 strings are played and they make a chord together, or playing several keys with your fingers on a piano. You use chords to accompany the melody, to create harmony in the song. See 'Key' for help to learn more about this.

Clipping - It's a term used to describe when the audio volume is so high that it causes distortion. As musicians, we need to check the meters and faders that normally help us control the risk of clipping with the red color - red appears above 0dB. It's very important to avoid going into the reds.

Compression - A compressor helps balance the sound so that the quiet parts are louder and the loud parts are quieter. People often say it's very simple, that it just does this thing and you have to set the ratio - how much it does it, attack and release - how fast it starts and stops to do it, and threshold - where it starts to do it. But to be honest, it's one of the most difficult things for me to master, because if you do these things wrong, it can cause a lot of problems in the mix... So be patient with yourself and learn step by step :)

dB - decibel - a unit of loudness

Delay - Effect that creates the illusion of an echo - the repetition of sound reflected from the walls of a large room, etc.

Ducking - An effect that can be achieved by a compressor sidechaining. It creates a pumping effect, sometimes completely interrupting the sound to create a very noticeable pumping or, I'd say "waves".

High pass filter (HPF) - A filter that allows only the high frequencies to pass and blocks the low frequencies. It starts on the left, where the lowest frequencies in the equaliser are. Then you can move it to the right, so you cut the lowest frequencies, then a little higher, and then you can move on to just the high frequencies. HPF is very useful because you need to tame the low frequencies for most of your sounds in the mix. Low frequencies often fight with each other, causing rumble, distortion, muddiness... just... lots of problems :) But there are other types of filters. This one cuts the frequencies completely, but others can only limit them.



Granulizing - Granular synthesis means that you break the sound down into small parts that you can then manipulate in very creative ways. In this case, where you can see how I was able to extend the sound of my voice, it is a great example of how it works. The little dots flying around in Samplewiz also illustrate where the app is taking the grains from the sample.

Key - Unless you're a trained musician, sooner or later you'll have to deal with keys. It will allow you to combine different elements in your song so that it fits together tonally. If you have a good ear, this will help a lot. If not, you'll need to learn what C, D, E, F, G, A, B mean, as well as sharp and flat notes, major and minor scales, and different types of scales that combine certain notes. Most apps have tools to help you, so don't worry :)

If you're new to music making and music theory, I highly recommend

<https://learningmusic.ableton.com/> , it's an interactive online course that guides you through all the elements of a song, including keys and chords.

Latency - The latency I described was that when I was singing, the signal came into the app later than I was singing. So I was hearing myself delayed. Then it's very hard to sing or play on the beat, it's even harder if you're sequencing drums or other things. There are other things that can cause latency than applications that use a lot of resources.

Low pass filter (LPF) - It's the opposite of the HPF. You cut the frequencies from the right to the left - from the highest to the lowest. I use this filter to make my sounds sound like they are getting lost in the background, it sounds a bit like the door of a room where music is being played is slowly closing :)



Low end - This term refers to the low frequencies of the mix. When you use this term, you are usually referring to kick drum and bass and low frequency processing. The opposite of this is the top end, which is responsible for clarity.

Oscillators - This is what creates sounds in the synthesiser. Oscillators can create different shapes of waveforms and then combine them. This is how you get all kinds of sounds. If you're completely new to this, go to <https://musiclab.chromeexperiments.com/Oscillators/> and learn what different basic waves sound like. It's very useful to know these shapes because you'll come across them in many applications. To get started with synths, I'd also recommend <https://learningsynths.ableton.com/>, it's an interactive fun course that I think is absolutely great, it gives you a lot of basics that will help you in other areas of electronic music production as well.



Piano roll - it's basically a big staff but much more intuitive. It looks like a grid with a piano keyboard on the side. You place the notes in it by tapping or clicking and they appear as colorful boxes. It is in many kinds of apps and it is actually a MIDI information. So you need to have some sound you choose that will be played. Sometimes you choose it within the app with the piano roll, sometimes in another app that you must connect with the piano roll one.

Master bus - it's the channel into which all the other channels go. It's the final one and usually it's placed on the right in the music apps. In AUM you can place it wherever you want but I recommend you to always put it to the right. If you mute this channel, you won't hear any music at all. This is also where you need to double check the red numbers and overall loudness.

Mastering - a final adjustment of the song that deals with the required loudness and tonal balance of the song. Usually, people have problems with their songs being too quiet so they need to know how to master it correctly. To be able to master a song well, the mix has to be done well first! It can be quite tricky to learn to mix and master, that's why we have mixing and mastering engineers. But you can learn to do it on your own but it will take you a while, it's okay.

MIDI - it's information that doesn't make any sound on its own. MIDI can be - "play a note C" for example, but also "play the note up and down in $\frac{3}{4}$ frequency". The most basic thing you will encounter midi first will probably be a piano roll or a sequencer. You put squares into grid and it triggers the oscillator of the synthesiser, a sample in the sample bank or a virtual instrument.

Mix - a combination and equalization of all elements in the song.

Mix (a setting within an app) - a ratio of the dry and wet signal. Ah, more terminology, huh? :D Dry is a signal that is without all the effects, raw. Wet is with the effects. So, when I turned the reverb mix to 100%, you could hear only the smudged sound, only the reverb.

Reverb - an effect that simulates reverberation, lengthening the tone. Similar to the situation when we sing in a cathedral for example

Sidechaining - it's when one signal affects another signal. In this case, it was a kick drum reducing the gain from the synthesizers and it was done via a compressor.

True Peak - it's the loudest point of your signal - the loudness the highest peaks reach. So when I set the limiter to -1dbTP, it means that nothing in the signal will cross -1dB.

Waveform - thank God that English has this word :D We don't have anything this simple in Czech. It's a visual representation of the sound wave of the signal.

