Rocky Lubbers

SID 26839863

5/12/19

Music Production as an Organizing System

Overview:

Music production through computer software (like Ableton Live) is a highly structured and organized process. Complete songs are essentially composed of small audio files—known as "samples"—as well as MIDI-track note lanes to play virtual instruments on a timeline. In addition, external instruments and microphones may be used and recorded into the software as an audio file resembling a sample. These small parts are then copied, changed, modulated, and rearranged in the software by following learned systematic guidelines of which style and genre of music is being created. Through this process, audio files are structurally arranged into a full track and then exported into a cohesive whole, thereby transforming the arrangement of audio in the software into what we would consider a 'song'.

What is being organized?

In a broad sense, what specifically is being organized in music production are clips and pieces of audio on a timeline that one can move around, put effects on, and modulate to the user's desire. The producer is in charge of collecting and sorting all of the audio resources for their own use. Through this process, the user largely defines the scope of the genre that they align with by the sounds they choose to use. For example, someone that makes hip-hop beats would likely have an extensive 808[1] library, whereas someone that makes house may have many more 909[2] samples. In fact, these two specific drum machines have an important history in music production. When the 808 came out, electronic (and arguably all kinds) of music were changed dramatically. This was because the collection of entirely new sounds on the drum machine were incredibly novel for its time. This, paired with the ability to modulate the sounds to a new degree allowed for the 808 sound to go viral and find its way into almost every type of musical genre. A similar phenomenon happened with the 909, but due to its more limited collection of sounds, its reach was a bit more restricted and ended up becoming the archetype of primarily house and techno music. So, in this way, resources themselves dictate much of the style that the music appeals to. In order to start the process of music making, there are a couple of key distinctive elements needed: rhythmic and melodic sounds. Typically, the producer first makes a decision on which drum sounds are to be used and then constructs a beat out of them.

---

[1] The Roland TR-808 is an iconic drum machine from the 1980s that had reached critical acclaim for its recognizable set of sounds. Today, the term '808' refers primarily to the bass-heavy kick from the machine that is extensively used in electronic music, specifically rap and hip-hop.

[2] The Roland TR-909 is also a drum machine from the 1980s that succeeded the TR-808. Though similar to the 808, it has a much different set of sounds primarily designed for house and techno.

The rhythmic elements are usually a set of samples that are structurally arranged in a certain way in the software to follow a specific beat. After a basic beat is created, the producer can start layering other sounds and melodies. The melodic elements are either external instruments or vocals that are recorded in and treated as samples, or virtual instruments that can be played by writing in the notes through MIDI. The MIDI instruments are most often virtual synthesizers that allow for high amounts of modulation and flexibility in creating specific timbres that go well with the style one's making. One thing to note is that when you have a MIDI note lane inside the software, the box with itself could be thought of as a specific piece of audio. In this way, MIDI information playing the specific instrument may be reduced down to a sample, a process known as 'bouncing out'. When the producer has laid out a simple beat and basic melodic structure, this overarching process of creation in the software is constantly repeated by replacing original samples, adding more instruments or complexity to the rhythms or melodies, and ultimately, just following their musical intuition.

Why is it being organized?

The purpose of organizing the resources (samples) is to simply create a piece of music. Yet, making something meaningful out of just clips of audio is easier said than done. The user can't just throw a plethora of random sounds together and expect for it to turn into a cohesive whole. In order to begin, there are usually some conventions in the producer's mind about sound selection and arrangement that everyone in a specific genre starts with. Assuming that the sounds go well together and the user has some experience in this craft, the resources need to be systematically organized to create something meaningful. Note also that this is entirely subjective to what the producer 'thinks' sounds good and how the track should be arranged. It could be said that after a certain number of rhythmic arrangements and sounds are arranged and intertwined, a song starts to emerge out of the software. Music doesn't just appear out of thin air into our Spotify playlists or iTunes libraries—someone needs to arrange and create it. This is the motivation for why the resources are organized into specific ways, resulting in a product that is entirely different than just the set of sounds contained in the project file.

How much is it being organized?

The sheer depth of organizing the resources is entirely up to the user, and depends on how complex or simple they want the final result to be. That being said, in my experience a 'standard' song would likely have around 20-30 different audio tracks all serving different functions. A typical song would usually be constructed of Drums, Bass, Guitar, Synths, Vocals, and FX (which are all composed of smaller parts and audio tracks). If you are a meticulous producer and like to modulate many things at once and have a wide range of sounds inside of the song, this is where programs like Ableton allow for almost complete creative freedom. Over a continual process of updating the software to meet the producers' needs, it has now become

so expansive that the possibilities are essentially limitless in music creation on a personal computer and you do not need thousands of dollars worth of studio gear to create a track. Compare this to Garageband—the 'easy' music making software—which sacrifices complexity for ease of use. It is much more approachable because you can simply drag and drop pre-made audio loops to create a song and don't have to worry about all the modulations and effects that go on top of them, which can be intimidating for new users. Making music is a continual process that is never really 'finished', which allows the user to keep coming back to the old projects and fix or change aspects until they are satisfied with it. This process can take hours up to months or years to finalize a track.

How or by whom is it being organized?

It is being organized by a person using the software that collects audio samples and blends/arranges them into a new idea. The way in which a user organizes a song can be much different from another user for many reasons (knowledge of the software, workflow, and tricks learned along the way). Because there are so many ways to go about it, there is no right or wrong technique for organization if it gets the job done and creates something meaningful as a whole. Typically, however, the process follows some logic that goes something as follows: Individual tracks → Grouped Tracks → Automations/Effects on individual tracks and groups → Send/Returns → Final Mixdown → Export. See Figure 1 below.

Figure 1
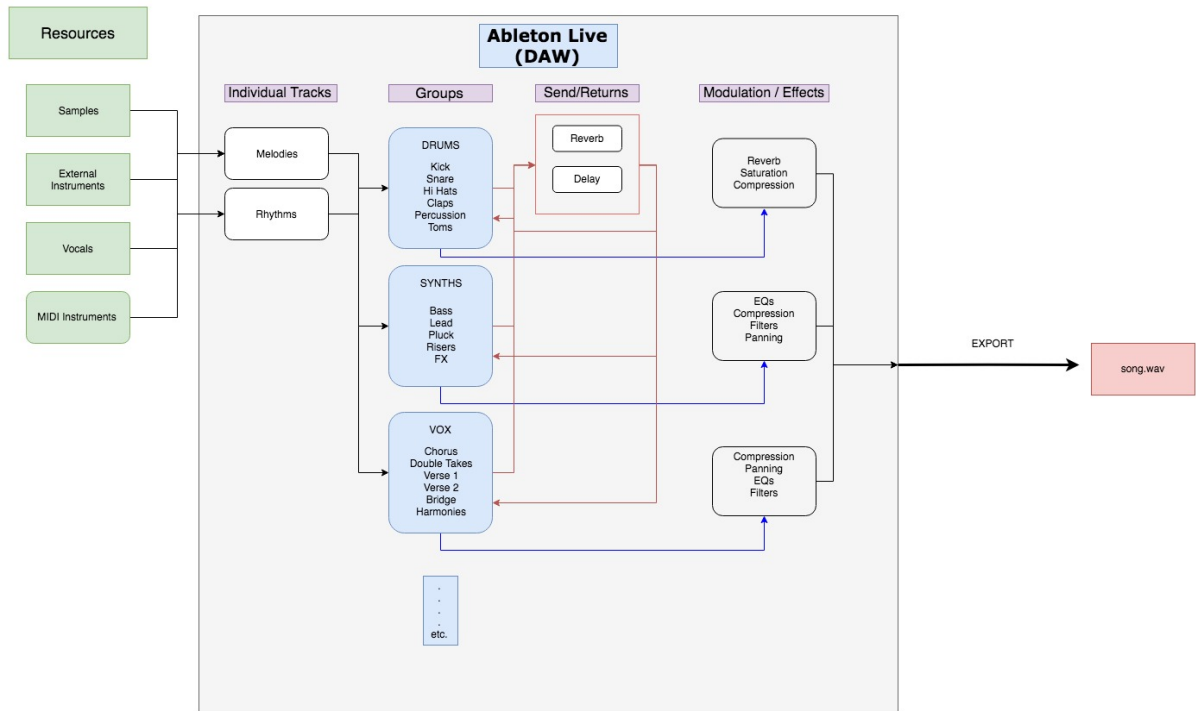
As we see in Figure 1, the first step is that the resources are selected, organized, and put/recorded into the software as individual tracks. Once in the software, the audio tracks can be grouped, modulated, arranged, or have effects thrown on top of them. Once the clips and pieces of audio are arranged in such a way so that the producer likes them, the final mixdown stage of the song starts: sends/returns and master bus effects. Sends are simply effects (typically reverb and delays) that can be dialed in by any audio track to a certain percentage. The reason for not putting one of these effects right on the track is to allow the audio to stay exactly the same, but be able to send a percentage of it out to the effect. This keeps the integrity of the original audio track, but without an overwhelming amount of an effect that can easily muddy the sounds in the song. For example, if you want a small amount of reverb on a drum group but don't want the drums to sound overwhelmingly large, you can 'send' the group channel to a reverb at a specific percentage (0%-100%) and the reverb channel will return that amount back to the group. This process allows for a cleaner mix and less instances of a specific effect (it would be much more tedious to put that effect on every individual channel inside of the group). Once the tracks and groups have the sends dialed in properly, the last step is to throw on some effects, like limiters and compressors, to the master channel (all of the audio coming out of the software). Finally, once the producer is happy with the sound, structure, and arrangement of the whole track, they will export it into one file. This file is therefore the resultant song.

Other considerations.

Workflow and methods of producing are different for everyone. I covered a simple but robust mechanism that many use and is somewhat genre agnostic. The music you can make through this process is limitless because of the samples you decide to use and what effects you put on them, as well as the melodic structure (if any) of them.

Sources

My many years of experience!