

Foundation Element 2

By

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To support my portfolio assignment, this paper will explain how I came to produce the 3 tracks of different genres. My portfolio includes 3 reference tracks for the genres I chose, these genres are punk rock, hip hop and hardcore. I will explain how I deconstructed the reference tracks and how I have put my findings from all other research into the production.

Punk:

A current sub genre of punk rock is pop punk and this includes bands such as offspring and Blink 182. The reference track I have used for this is 'Darkside' by Blink 182. The instruments used are electric guitars, electric bass, drums and vocals. Keyboards are also used. The music has energy, helped by the distorted guitar and loud vocals.

I firstly analysed the track using Logic Pro X to obtain the bpm and help determine the key signature. By applying region tempo to project tempo once I had imported the audio file I could see logic considered the track to be at approximately 77.5bpm. Through my experience of music I could tell that this was much slower than the actual tempo so doubled the value and checked this matched to the metronome. I also created a piano synth to try and work out the Key signature of the track which I believe to be E Major as this note played continuously nicely over the entire track. By listening to the reference track you can hear that it is a fairly upbeat sound, and not sad, so I would expect it to be a major of some kind. So I decided my track will be a major key at 155 bpm.

Listening to the instrumentation of the track I can make out numerous guitar parts layered together and panned over the musical image. Example in the intro, the first guitar part sounds very wide and I would get this effect by either having two recorded guitar parts panned left and right. Another method would be to have the guitar part panned to the left with a very short and fast delay on the right or vice versa. Also the clean guitar played after this in the intro has the panning automated between the left and right. The guitar sound is nicely distorted but not overly compressed for the intro and verses, however it sounds as though more compression is used in the chorus. At the end of the verses and in the pre chorus a more brighter, cleaner sound is used and I feel this helps give the chorus more impact when it comes in. The bass is fairly high frequency for the verses, again giving a nice separation and impact when it lowers to fill out the bottom end during the chorus.

The drums are used sparingly at the start of the verses, then use a range of fills quite regularly to lead to the next sections. However the drum sequence is never that complicated with a basic 4/4 time signature. As I was having to use a virtual drummer for my track I needed to ensure I had the arrangement entered into logic before adding the drum track so that I had a good variation and fill placement throughout the track. For this track I copied the exact arrangement from my reference track which was a 16 bar intro/verse, 8 bar pre chorus and 16 bar chorus all repeated once, then 16 bar bridge, 8 bar chorus and 12 bar outro.

Apart from the intro where it sounds as though a phaser and heavy delay/verb effects have been used, the vocals are fairly dry with slight reverb (more so on the higher frequencies and a clear example can be heard as the chorus ends and goes into verse 2). Also it sounds as though a low cut eq has been used around 200-300 Hz. They have used multiple layers, and the other vocalist, to add the effects of a delay and in some instances a pad to fill out the quieter empty parts of the track as shown in the last 4 bars of the pre chorus. Most of the backing vocal sections during the verse and pre chorus are quite heavy with eq and effects. Clever examples of using the other vocalist to harmonise during the chorus also give the track a special feel.

To create the track I needed an energising chord sequence to use for the chorus as this would be the main focus of the track, I could then create guitar parts based around those chords for the verses etc. After a lot of playing I came up with the chord progression C sharp, E, A, C sharp played as power chords. So my track is in the key of C sharp Major. I used an electric guitar plugged into the DI of my sound card and used the amplifier emulators that come within Logic. This allowed me to record each guitar section fairly easily. I used different settings on the same amp preset, also the guitar tone settings, to create the brighter cleaner sounds in the verses and

pre chorus compared to the more distorted chorus. For the bass I used the EXS24 sampler with a muted bass sound. I high cut this so that it fitted nice under the rest of the guitars. The melody is the same as the guitar chords over the top.

As my guitar playing is very rusty, I had to use a few techniques to tighten it up and ensure I had the best recording possible. Before recording each part I used a guitar tuner to ensure it was tuned as perfect as possible. For all the guitar parts I looped the recording to enable the comp mode in logic and comped each section picking out the best sounding sections. I then bounced these down so I could enable flex time and quantised the regions to ensure timing was perfect.

With the virtual drummer I converted the regions to midi in the arrange window, this then allowed me to edit the drum hits as I saw fit. This made it easy to erase a lot of the hits during the bridge and also add to some of the fills. I also ensured the virtual drummer was created as a multi out so I could then adjust the levels, panning, processing and effects to each individual element. This allowed me to bus the kick drum to a mono channel with the bass guitar sampler.

Setting up for recording the vocals was tough as I had to use a noisy, large room. From checking the reflections of the room by 'clapping and checking for a nice even reverb decay' (Owsinski B, 2017 p.100), I knew there would be a lot of issues due to a flutter echo. As a window was close by with no way of covering the glass I ensured the mic was facing at a 45 degree angle to this to help deflect the reflections. I used a condenser microphone (Vintage F47) as this was my only option. I placed the mic stand on a rug I extended the mic stand so the microphone was above my chin and I had roughly 15 degree angle upwards to encourage a full bodied vocal performance (Owsinski B, 2017 p.225).

The vocals were going to be tough as I am not a singer however I wanted it to sound like there was a few singers at any one time. I split the phrases of the chorus into 4 sections and comped each section twice. This gave the impression of multiple vocalists singing each phrase and also overlapping them where I thought was appropriate. To help the later phrases stand out over the initial sustained "Party" vocal I added a side chain compressor to the aux these were connected to. I also used autotune on each comp (after bouncing) and adjusted manually to ensure the correct notes were being hit.

Once all these parts were in logic I set about doing a basic mix of the levels. I opened up the pink noise generator in utilities and used this to gradually increase each level until I could just hear over the noise. This was done in order of drums, guitars, bass. The vocals I then raised to the desired level.

This is how I created the submitted track. I am fairly happy with the overall result, however there are many things I would have liked to do differently. Firstly having a full recording session with an entire band could make the track sound a lot more natural. The microphone I used sounded very nasal and tinny which was not helped by the recording environment. A much smaller room dedicated to recording would have yielded much superior results. The track needs a much more in depth mix down in my opinion and I would like to spend more time practicing this to get it right for the genre.

Hiphop

Hip hop has evolved a lot over the years. Originally created from rapping over old vinyl tracks, today it can be created in numerous ways. "generally, rap can be described as using a slow laid back beat that can vary between 80-110bpm (Snoman R, 2004 p.240).

The reference track submitted for the hip hop track is 'Taste' by Aitch. As with the punk reference track this was imported into logic. Tempo being 98bpm and key of C major. Hip hop can have both a sad or happy feel so when looking at tempo and key signature you are not really bound on anything specific. For instance 'Godzilla' by Eminem feat Juice world is at 83bpm in a B flat minor key. The arrangement of the reference track is pretty straight forward, 2 bar intro, (8 bar chorus, 16 bar verse) x 3 with the third verse having a bridge style change in instrumentation, 8 bar chorus, 4 bar outro.

The instrument parts of aitch are very sparse, however each sound is used at perfect timings. The main riff heard throughout the tune is a vocoder sounding riff. This is broken up throughout the whole track but heard mainly at the start and choruses in full. This is quite a full sound and catchy riff which gives the track its originality and something that will make you recognise it instantly. At the start of verse 2 it is pretty much removed completely and for this verse only a high piano is used to accompany this melody.

For the low end of the track there is a very in your face sub bass synth layered with a short tight kick. The bass fills out the entire lower end and as it is used sparingly I feel it allows the track to flow and continue to sound interesting to the listener. The subtle kick layered with it gives the essential drum beat needed to create a stable rhythm. The percussion to go with this includes shakers panned heavily left and right, wood blocks, clap, closed hats and the odd open hat. Also a flute or recorder part is used like a percussion element. All these sounds are again used very sparsely throughout the verses which keeps the interest in the track. Not much processing can be heard on these elements.

To finish off the instrumental are a range of vocal effects. It sounds as though this has come from the same sample as the vocoder riff. These are heavily processed with wide reverb and delays.

The main vocals are very dry for the verses, I believe they are using a high cut reverb with a 1-2 second decay, side chained to ensure the vocals cut through. With the effects being used on the fx vocals not much delay is needed for the main vocal however this is used to fill in a gap on 2 occasions with a wide stereo delay used on the end of a line mid verse. During the chorus the vocals have been overdubbed with a second and third track panned left and right. These however are not at a constant level as cannot be heard continuously, or words may have been missed out on the overdub.

To create the track I began by having a creative session on the keyboard. Finding an interesting vocoder/robot style synth and found a riff I liked. This happened to be in the key of F minor. I recorded the midi and adjusted the tempo until I felt it sounded right. This was 95bpm. I decided the arrangement would be a copy of the reference track. I next added a bass. This was to fill out the lower end of the riff as I felt this was missing low end.

I needed to fill out the higher frequency spectrum so decided a choir sounding pad playing the chord sequence would add a nice touch. Choirs have been used in numerous hip hop hits, examples are Kanye West's 'Ultralight' and Drakes 'Furthest Thing'. So with the riff, bass and high end sounding good I needed to add a nice hip hop beat. I used ultra beat and loaded up a hip hop construction kit. This was also made as a multi out so I could process each sound separately. Once I was happy with a beat I transferred to the arrangement as MIDI so I could also edit during the tracks progression.

I copied the arrangement from the reference track and made changes to the bass at the start of the verses to keep it interesting. I also arpeggiated the choir sound at points during the verse for the same reason. Listening to the track on its own can sound very repetitive so making as many of these changes to the instruments is essential.

Due to restrictions currently in place the vocals have been recorded on a mobile phone speaker and lacks any kind of quality. As this is hip hop, anything gritty and low quality can still be used in hits however this is usually left for the instruments. - "for rap it is recommended to sample the hits at 22KHz and 12-bit. This reduces the ranges of the samples and gives them a grittier feel" (Snoman R, 2004 p.240). During the chorus vocal, the rapper was very heavy with his breaths between phrases. To counter this I moved the breaths onto a separate track, took out some low end and reduced the level.

Overdubbing is very important in hip hop as it keep the vocal interesting as a 16 bar verse can tire a listener if they are not kept intrigued. Doubling up the last word or words at the end of a phrase is very standard. Some rappers will overdub an entire verse. To help the chorus sound fuller and hide some of the poor recording quality of the main vocals I recorded myself 3 times to pan over the track to give it more energy.

For the verse I added a side chained reverb to the vocals with a very high cut. This helps fill up the top end of the spectrum but refrains from putting the vocals too far back in the mix, as I believe was done in the reference track.

To summarise I believe the track is OK, but next time I may refrain from using the ultra beat plugin as I felt this may have made the beat sound too repetitive due to the sequencer. By using individual samples on a midi piano roll in each channel it would allow for much more sparse compositions. The vocals would obviously be done in a much more professional setting.

Hardcore

For the hardcore track I have referenced 'Close to me' by Teknikore. This is a happy hardcore sub genre and the defining characteristics are uplifting, happy vocals, with a loud in your face synth. As with most EDM genres the idea of a track is to build up to each section, breaking back down and building up again. As listening to the reference track this is very obvious. 22 bars of build, 16 bars main riff, 8 bar build, 24 bar main section, 16 bar bridge, 32 bar build then 24 bars main section again. The biggest build is left for the end as it is about building up the energy in the clubs.

I have used almost the same arrangement but had my bridge splitting up the build as I felt this fitted more than playing straight after main chorus. The tempo of the reference is 165. These are usually sped up in clubs and I prefer the higher tempo so went with 178. A lot of DJ's will play at 180 at big venues. The key of the reference is A major as to be expected. I have use a C major to ensure an upbeat feel.

A majority of the kick and base is very similar in every track in the genre which is '4 to the floor' pattern. Kick on the beat and bass off beat. It's key to get the kick punchy and the bass complimenting it though as this does supply the groove to the track. The kicks are very often sampled from a vinyl but sometimes multiple kicks are layered together to ensure a big kick is obtained with nice low end and a punchy mid/high. To get the 'pump' effect a compressor must be used.

The vocals and synth are the main parts of the track that need to be interesting for the listener. With the synth it is important to get a sound that is 'rich in harmonics as it is going to occupy a lot of the mid and upper range' (Snoman R, 2004 p.230). Pulse and saw waves detuned with some LFO on the pitch is a good starting point. Popular synths for the genre are the V-station, massive, Virus TI.

The vocals are heavy in effects, with delay and reverb being the main choice. A lot of the low end is removed to have the floaty feel. Also a nice technique has been used just as the vocal comes in at 3:00, it sounds as though a reverse reverb has been used and then that has also been gated but with the gate slowing down giving it a lovely lead into the vocal. Also during the second break down they have repeated the 'come close to me' line in the background. So editing the vocals help make the track sound professional and keeps it engaging for the listener.

Snare rolls, kick rolls and swells are used throughout, some long and some short to help transition each section of the track. Automation of these are evident throughout and is also essential to help with building the intensity of the drop. Pads are also used a lot during the breaks and builds, as this fills the gap from the big lead in the chorus. Another common effect is to have a high Q-resonance on the synth filter and sweep up through the frequencies with a high cut filter as heard at 2:48.

To Summarise I feel I have included all the above in my track, however the vocals are poor quality with minor popping due to flextime being used to fix very bad timing. Ideally this would be re-recorded to ensure the timing is correct. Also I would have liked an analogue hardware synth to record the main lead as I feel this is much better quality for this style of music. Apart from that I am happy with the overall track.

Bibliography:

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