

MA Commercial Music Producer (Online Blended)

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Element C2a – Portfolio Reflective Commentary

CPO Creation P1D

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Introduction

My creation proposal outlined my desire to, 'scratch an itch' that simply wouldn't go away. A desire to write, record, arrange and produce my own songs to a standard I am completely happy with. The creation project provided me with an opportunity to put into practice the research I had undertaken in mixing and producing music. I referred to two particular books in my proposal and they underpinned my approach to recording six tracks:

Zen and the Art of Mixing

This was published in 2011 by Hal Leonard, written by Mixerman.

and

Mixing with your Mind: Closely Guarded Secrets of Sound Balance Engineering.

This was published in by Flux Research in 2003, written by Michael Paul Stavrou.

I wanted to write, perform and produce six tracks which I could listen back to and think yes, that is the quality of product I am aiming for. The overall sound of the six tracks would be driven by my main instrument, the guitar. The overall sound would be created through a mix of acoustic and crunchy electric guitars, male vocals, bass and drums. It would also include a limited use of synths in the production, relying mainly upon virtual piano and strings.

Intentions

Within my proposal, I had set clear aims, taken from Mixerman's (2011) 10 Steps to Better Mixing.

- 9 The overall vibe of the track is much more important than any individual part.
- 4 Putting everything proportional in a mix is going to make for a shitty mix.
- 10 Just because a part was recorded doesn't mean it needs to be in the mix.
- 11 Be aggressive! (Oops, that's 11).

To help achieve these targets, I would first need to improve my own recording space, equipment and production process.

Home Studio Setup

After reading *Zen the Art of Mixing* (Mixerman, 2011) and *Mixing with Your Mind: Closely Guarded Secrets of Sound Balance Engineering* (Stavrou, 2003), I felt equipped with enough knowledge to complete the project using my own equipment; in a home studio setting. I set up my Logic Pro X iMac with Yamaha HS7 monitors, spaced using the guidance provided in Chapter 1 and 2 of *Mixing with Your Mind: Closely Guarded Secrets of Sound Balance Engineering* (2003). I would use two main audio interface systems, the Steinberg UR824 and the AXE I/O. The UR824 has 8 analogue inputs with built in preamps, this would be used for microphone-based recording: vocals, acoustic and electric guitars. The maximum number of channels I would require at any one time would be two, using a spaced pair of dynamic mics to record the electric guitar. I had planned to use the AXE I/O for direct input electric guitar recording but explained later in the analysis, I opted to record using the UR824 and a spaced pair. The AXE I/O would be used for bass guitar recording though.

The main issue with using my own recording setup was the construction of the room I would be working in. All the surfaces in the room were very reflective and this could be heard in my earlier experimental recordings. Both the floor and ceiling were suspended timber, the floor finished in a polished laminate. The rectangular room is about twice the size of the space I require to record in, two walls are plastered brick, one side of the room serves as the entrance and is glass double doors. The final side to the room is a large window.

As mentioned on MasterClass (2021), 'You'll want to give your room an acoustic treatment that deadens reverberating sound. You can purchase acoustic foam sound absorbers that go on the walls to capture undesirable echoes.' To provide me with greater control of the sound I was recording, I added foam squares to the plastered wall behind my monitors. I also obtained three sets of heavy curtains which were demonstrated in Week 3 of the Recording Skills session (Tileyard, 2023) and hung them over the window, glass doors and final brick wall. I managed to purchase a carpet offcut from a local store for £30 and lay this on the floor space and hung an old rug across the ceiling. I hung one of the three curtains about halfway down the room to reduce the size of the recording space. After implementing these changes, I experimented with vocal and acoustic guitar recordings and the signal had massively reduced levels of reflection.

Given the nature of my home studio setup and after reading Chapter 12 of *Mixing with Your Mind: Closely Guarded Secrets of Sound Balance Engineering* (Stavrou, 2003) I began to explore how I could establish a reference point for my recording setup. In this chapter Stavrou explains how a reference CD will demonstrate how a recording should sound in a perfect room. I have often found that my recordings sound good on the system I produce on but then run them through my car stereo or earphones and they sound drastically different. I was not able to develop a reference CD so began exploring other possibilities. After researching sound referencing and speaking to my course tutor, I was introduced to Sonarworks, Sound ID reference software. The Sonarworks website (Sonarworks, 2023) explains the function of the Sound ID reference package:

SoundID Reference is a standalone app and a DAW plugin that calibrates speakers and headphones to deliver an accurate studio reference sound.

SoundID Reference ensures perfect translation so you can create music that sounds great on phones, laptops, earbuds, or wherever else its played. (Sonarworks, 2023)

The description of the software on the Sonarworks website, seemed to address my concern completely:

Even the best speakers can't compensate for the acoustics of a poorly designed room. SoundID Reference compensates for that by measuring the frequency response of your room and speakers to create a calibration profile. For headphones - simply apply a pre-made calibration profile available in the software. With calibration applied, your music will sound great everywhere. (Sonarworks, 2023)

Once I had the core elements of my home recording studio in place, I set about addressing the key recording elements of my project.

Vocals

Feedback from previous course submissions suggested trying alternative microphones for recording my vocal parts. I had previously used an AKG Perception 120, which was certainly at the lower budget end of condenser microphones; I purchased it ten years ago for £80.00. After watching the course video, Microphone Shootout - Week 10 (Tileyard, 2023) and speaking to the course tutor, I outlined suitable vocal microphones. I narrowed the search down to two options, the Aston Spirit or the Lewitt LCT 940 microphone. The Aston Spirit microphone was priced at around £300 whereas the Lewitt, £1500 (Andertons, 2023)

The Aston Spirit microphone is described on the Aston Microphone website: (Astonmics, 2023)

The Aston Spirit is a high-performance switchable pattern microphone utilising a 1" gold evaporated capsule. A switch on the mic body selects from Omni, Cardioid or Figure-of-Eight polar patterns. It is versatile enough to use with most instruments and excels on vocals and acoustic guitar. The capsule, selected by the Aston 33, is paired with high-end transformer balanced circuitry using only the best components.

The Spirit is designed to deliver a beautifully open sound with sparkling harmonics. This highly accurate microphone gives a stunningly natural and transparent recording, capturing all the detail in the high range but without adding the harshness of some condenser microphones. (Astonmics, 2023)

At five times more expensive the Lewitt LCT940 is described by Lewitt Audio on their website: (Lewitt Audio, 2023)

The LCT 940 unifies the specific characteristics of a premium large diaphragm FET condenser microphone and a top-notch tube microphone.

With "Tube" you get warmth and musical harmonics, while "FET" gives you clear and nuanced sound. Blend tube and FET circuit at any ratio and find your ideal mix. The LCT 940 features a total of nine different polar patterns.

To help make the decision, I considered several reviews. Paul White (2016) of Sound on Sound helped steer me towards purchasing the Aston Mic. The writer explained that,

With just a hint of flattery to lift the 'air' region of the spectrum, the Spirit comes over as smooth and natural-sounding, and passes the acoustic guitar test very nicely, with no phasiness or exaggerated grittiness at the high end.

As the Aston microphone was significantly less in price, I was concerned that the sound quality wouldn't be much of an improvement to my previous unit, but the review addressed that issue (White, 2016):

Given its competitive cost, the Spirit stands up well against more costly US-made boutique mics that take a similar approach in teaming third-party capsules with high-quality custom electronics.

Although published by the same magazine, the review of the Lewitt microphone was written by a different author. Hugh Robjohns (2013) explains how the microphone is designed to give the sound engineer the ability to, 'blend between valve and solid-state circuitry'. Although this is certainly a feature of the microphone, it wasn't particularly one I was looking for at this stage. The review explains that the Lewitt is very good in recording acoustic instruments:

On acoustic guitar, clarinet and cello it turned in fine performances again, with an overall neutral tonality that was solid at the bottom end and with a nicely judged airiness at the top, all in well-balanced proportions. (Robjohns, 2013)

I didn't want to purchase a new microphone based purely on one review alone, albeit a reputable one. I read further articles and Music Radar (Stamp, 2021) reinforced the views given in Sound on Sound:

We found the Spirit an easier mic to position on acoustic guitar, for example, with an instant quality tone in all three polar patterns. The figure-8 was a great match for the old Epiphone acoustic at my studio, and adding a double track using omni (to trim back the proximity-effect LMF tilt) was very pleasing; we would recommend the same technique for vocals and BVs, with cardioid on the former (Stamp, 2021)

Given the large price difference and that I was looking for a good quality microphone to record my voice and acoustic guitar, the Aston Spirit seemed like the most viable. To some extent, I also preferred the simplicity of the Aston Spirit.

To maintain a similar vocal sound across all tracks and one which felt authentic, I established a suitable input level and then experimented with EQ and compression. Once I had established the appropriate settings, I saved the channel strip as 'Lead Vocal' preset on Logic Pro and applied it to all new projects. This provided a solid starting point for further enhancing or adapting vocal sounds, depending on the song production.

Reverb

It wasn't until I watched the Week 7 mixing skills video (Tileyard, 2023) about typical reverb settings, that I started to grasp the subtle difference a small amount makes. Mixerman (2011, pg. 80) provides a great explanation of how simply applying loads of reverb to an audio track, 'will not create the illusion of distance within a mix.' He adds that EQ and relative balance (2011, pg. 80) all play a part in our perception of distance.

In the past, I have simply applied too much decay time and/or had too much of the wet mix in the full mix (obviously this may be suitable for certain situations) which made both vocal and instrument parts sound incorrect against the other parts of a mix.

Again, through recommendation in the Week 7 mixing skills video (Tileyard, 2023). I purchased the Valhalla reverb plugin and explored the preset to narrow down some of the sounds. I found that a short decay time on the Osmium setting seemed to suit my voice, instrument pallet and balance of the mixes well.

To maintain a natural sounding lead vocal line, I limited the effects to compression, EQ and reverb. Before I began the course, I had often double tracked vocal lines. However, since purchasing a new microphone and learning to use compression, EQ and reverb more effectively, I have found that far fewer parts need to be doubled. I did opt to double parts for backing vocals; often recording two or more parts to add a sense of warmth to the track. I am aware of several features in Logic designed to do this for you. For example, there is a plugin called Ensemble designed to double up vocal parts for you. In using this though, I find the output sound can be a little robotic and not suited to the style of music I wanted to create. I did, however, find a plugin called VocaAlign Project 5. VocaAlign is by Synchro Arts, who describe the plugin as:

The industry standard plugin for aligning audio, VocAlign™ Project 5 takes two separate vocal performances and effortlessly aligns their timing in seconds (Synchroarts, 2023)

This plugin works excellently at aligning backing parts, rather than manually editing parts to be in time.

Electric Guitar

In the past I have run an electric guitar through my AXE I/O guitar interface and used the Amplitude modelling plugin on the audio channel. Recording in this manner meant that the guitar signal was recorded clean i.e., without any processing or distortion and could be edited more easily. It also meant that sound of the guitar could be altered very easily using the presets in Amplitude. However, since exploring a spaced pair of SM57's, routed through my Steinberg interface, I have found the direct input method of recording lacked the warmth and tone achieved through micing up an amplifier. For a majority of tracks in the project, I wanted to achieve a crunchy level of gain and a fairly simple amp setup was required, I relied upon different guitars to provide a certain function in the mix. I used a Les Paul with humbucker

pickups for a richer, thicker sound and a Fender Telecaster with single coil pickups to achieve a thinner, more jangly guitar sound.

The most significant progress I felt in recording guitars came with the acoustic guitar. I have previously experimented with recording the acoustic guitar using my lower budget AKG Perception 120 microphone and several other lower budget condenser microphones. I never felt satisfied with the quality of the recording as it always seemed dull, lacking the warmth and tonal quality of an acoustic guitar. The AKG Perception 120 (AKG, 2023) only records in an omni directional polar pattern and struggles to absorb a balance of the acoustic guitar sound.

Since purchasing the Aston Spirit, I have placed the microphone, between the bottom of the acoustic guitar neck and sound hole which I learned from the Tileyard video in Week 9 of the Recording Skills module (Tileyard, 2023). Switching the microphone to the figure of eight polar pattern meant it recorded the sound from the sound hole and the neck side of the guitar, creating a much warmer and authentic acoustic guitar sound. Before setting out recording the acoustic guitar parts for my final tracks, I took some time to experiment recording the Aston Spirit as I did with vocals. I established an acoustic guitar channel strip setting which included an EQ and compressor plugin.

Bass Guitar

In the same way I explored the best way to record my acoustic and electric guitars, I followed the same process with the bass guitar. My initial set up used a line 6 bass amp, and an Ibanez bass guitar. I recorded several bass lines, trialling condenser mics and dynamic mics, routed through my Steinberg UR824 and into Logic Pro. All the tests yielded reasonable results. I then tried my bass input directly into the AXE I/O and applied the Amplitude plugin to the relevant audio channel in Logic Pro. I wanted to achieve a punchy but clear, natural sounding bass and selected a clean Fender bass preset in Amplitude. I set up a compression plugin and EQ'd the channel before saving it as a preset. I found the DI method of recording here more effective in achieving the sound I wanted, compared to micing up the bass amp. An alternate method here would be to invest in a microphone designed for recording bass.

Drums

As I am only able to play very basic drum patterns on an acoustic drum kit, I didn't believe I could achieve the right feel in any of my tracks if I were to record my drum performances. I opted to explore the use of MIDI drums and virtual drummers. There are numerous drum plugins available on the market, so I researched the best available in terms of sound quality and rhythmic elements. There is a plethora of virtual drummer and drum VST reviews available on the internet, from sources including Music Radar (Williams, 2022) and Ditto Music (2022). EZ Drummer (Toontrack, 2023) and Addictive Drums (XLN, 2023) seemed to feature in all reviews suggesting that both packages had something to offer. I listened to various samples from both versions and was blown away with the sound from the Addictive Drums range. The only downside to the Addictive Drums range was the cost of additional MIDI collections which range from £300 up (XLN, 2003). To add to the range of drum patterns, I was able to download further MIDI patterns through my monthly subscription to East West.

As Logic Pro X includes a virtual drummer, I also had the option to export drum patterns from this and run them through the Addictive Drums plugin.

As the drum patterns are received in a single MIDI region i.e., contains kick, snare and overheads I decided to split them into three parts; as if to replicate three separate microphone locations. I was then able to control compression, EQ, reverb and panning for each element of the drum track. Once I had the three main tracks established, I bounced the three tracks into one and ran this track as a highly compressed track, adding more punch to the overall feel. This idea was taken from a Paul Whalley video in the Composing and Arranging module. (Tileyard, 2023).

Individual Track Development

My creation proposal outlined key focal points in terms of recording each individual track.

1) You Don't Know

My original version of this song had a piano, strings and acoustic guitar. I recorded the acoustic guitar and added a piano VST. In retrospect, I think I added the piano VST as the quality of the acoustic guitar recording was poor and the piano added more colour to a somewhat dull recording. Since, achieving a much better recording of an acoustic guitar and being able to balance the electric guitar better, I have found that the piano adds very little to the mix and removed it. Here, I refer to point 10 from Mixerman's (2011, pg. 15) 10 Steps to Better Mixing and simply removed it from the mix. I always envisaged the acoustic guitar being prominent in the chorus mix and using Mixerman's (2011) guidance regarding acoustic guitar recording from page 13, was able to make this prominent. Previously, the chorus of this song was a good example of Mixerman's Point 4 (2011, pg. 16) in, 'Putting everything proportional in a mix is going to make for a shitty mix.'

Mixerman (2011, Pg13) provides guidance in working with acoustic guitars:

If the track derives its overall rhythm from the acoustic guitar, and if the drums are quite simple in their part, the acoustic guitars are most assuredly designed to play a prominent role in the mix.

2) Fire in my Veins

My concerns with this track related to having too many bars of instrumental music which would perhaps disengage the listener or simply become boring. I initially recorded the song with a verse chorus pattern and had a chord tone-based guitar riff beneath the chorus vocal line. This arrangement simply didn't sit correctly as I believe I everything had become too proportional (again relating to Mixerman's point 4 (2011, pg. 6)) i.e., the vocals were proportional to the guitar riff, and it felt flat, nothing stood out. I addressed this issue by introducing panned hard left and right guitars to the chorus playing simple power chords and adding the instrument break after the chorus, this had the benefit of creating an A,B,C type structure but more importantly, 'enhanced the journey and the payoff of the song.' Mixerman's (2011) page 147

3) Lifelong Friend

I struggled in the past with recording the introduction to this track, it is an acoustic guitar arpeggio played on two strings. In previous recording attempts, the guitar sounded very thin. Using the Aston Spirit microphone produces a much richer recording, and I added a small amount of reverb to the track. Finally, I introduced a low in the mix bass guitar to add a little extra depth.

4) Mountain Bikes

I wanted to create a sense of space in the production of this song and did so using simple block piano chords. I input MIDI notes and used an EastWest piano virtual instrument (Soundsonline, 2023). I felt the sense of space in the production would help, 'manipulate the listeners emotion,' (Mixerman, 2011, Pg 24) by giving them chance to absorb and reflect on the song words.

As my instrument of choice is usually a guitar, I added some panned hard wide guitar chords to the chorus section of the song, but they simply did not seem to fit the mix sonically. I then opted for a low in the mix string section which added lift to the chorus but helped maintain the 'overall vibe of the track'. Mixerman's (2011, pg. 15)

5) Winter Coat

I mentioned in my creation proposal that I had struggled in creating contrast with this track. In an old version of this song, there were three sections (verse, chorus and instrumental) but the level of contrast just didn't work; it felt like the instrumental section was a little aimless. This song starts with what I would describe a retro vibe, driven by the acoustic guitar and light crunch on the electric guitar arpeggios. To add contrast to the verse and chorus, I introduced a third section which uses heavy guitars and drums. To ensure the volume level did not change drastically between the sections, '...these days we don't use much more than about 4db of dynamic range from the loudest to the quietest parts of a mix.' (Mixerman, 2011, Pg 77) I used the automation controls to fade out chorus instruments and fade in the heavier guitar parts.

7) Secret Promenade

Secret Promenade is a straightforward arrangement with crunchy guitars, drums and bass. I noted in my creation proposal that balance would be key in this mix, taken from Mixerman's (2011, Pg 85) explanation of directing a listener's attention:

Balance is our most effective tool for directing the listener's attention. If we make the vocal loud, the listener will tend to focus on it.

I arranged this track by ensuring the guitar were panned hard left and right, but the vocal line sat prominently in the centre of the stereo field.

Mastering

As Mixerman explains (2011, pg. 267) you should not try to master your own mixes as they never end up sounding very good.

I had planned to mix my tracks and have them mastered via another source. Mixerman adds that you need to find a mastering engineer you can trust (2011, pg. 262) as it is easy for a poor engineer to make a mess of your mix. A quick google search of Mastering Services results in over 100, 000, 000 results! (Google, 2023)

To narrow this down though I worked my way through several online reviews. I found one provided by Music Gateway (Ellis, 2023) to be the most informative and easy to decipher. The review presented several mastering options but two stood out to me. The first was to rely upon an established and reputable studio and the second, to use an online AI mastering system. There are two significant differences in the options; the cost and your chance to work with a human in the mastering process.

The Music Gateway review (Ellis, 2023) presents two physical mastering studios: Abbey Road and Metropolis. Abbey Road doesn't really need an introduction, most people outside of the music industry have heard of this studio due to its historical links with The Beatles. Abbey Road mastering services received an Audio Quality Rating by Music Gateway (Ellis, 2023) of 3/5 with a cost of around £100 track. If you decide to have your tracks mastered at Abbey Road, you can work with the mastering engineer.

Metropolis Studios, which is perhaps not as much a household name as Abbey Road but hugely successful, offer a similar service. The difference being the review provided by Music Gateway (Ellis, 2023) offers them a 5/5 for audio quality.

Comparatively, Music Gateway (Ellis, 2023) details two notable online AI based mastering services; Landr and Cloudbounce, both are driven by an AI engine.

Landr works by, 'analysing the production of the style of your track, Landr can cross-reference with its extensive music library to create a unique master fingerprint. The AI then creates a unique set of post-production processors to ensure perfect audio balance.' (Ellis, 2023)

There is a significant cost reduction in using Landr compared to an actual recording studio. The Pro subscription with Landr is £25 per month (Landr, 2023) and allows an unlimited number of mastered tracks. The audio quality review given by Music Gateway (Ellis, 2023) is 3/5, suggesting the output is comparable to Abbey Road studios.

Cloudbounce is very similar to Landr in its service, 'allows the artist to tailor their master to their music's genre and edit other elements such as volume, brightness, warmth and bass... all without additional subscription purchases.' (Ellis, 2023) Music Gateway (Ellis, 2023)

awarded 4/5 for Cloudbounce Audio Quality mastered track. Cloudbounce charges just under £11.00 per mastered track which is again significantly cheaper than one of the real studio facilities (Cloudbounce, 2023).

Although it is my intention to have my music mastered at one of the established studios, I had two main concerns at this point in the project. I plan to put at least few days between completion of none mastered audio mixes, go back to them and review the mix. If I had the tracks mastered by one of the recognised studios, it would have already cost over £600. If I then decide to make amendments to the mix, I will potentially want them remastering. Furthermore, in doing this, I run the risk of driving the mastering engineer mad! Given the time constraints in completing this project, I also didn't feel that I had would have the time to successfully build a relationship with a mastering engineer. I decided to master the tracks using the Cloudbounce service due to the audio quality review from Music Gateway (Ellis, 2023).

Challenges

My main issue in completing the project was the time constraints in working as a full-time secondary teacher. The role of secondary teacher means that although I am home from work at round 5pm, I am often required to plan lessons for an hour or two most evenings. This meant starting work on the recording project at around 7pm and then working into the early hours of the morning. I found this was manageable a couple of nights a week but towards the end of the week, I was very low on energy levels. Thankfully, I managed to recoup time at weekends.

I devised a plan for my creation proposal which seemed like the most efficient way to work. Week 1, I would record drums. Week 2, I would record bass parts and so on. However, the flow of work seemed to be much more manageable and relevant if I worked on a single track each week. I ended up inputting/arranging drum parts on a Monday, recording bass parts on a Tuesday, guitars on Wednesday and so on... this method could possibly be referred to as the Craig David technique! Once I had the tracks recorded, I was able to dedicate further time to mixing the tracks.

I also realised that writing, performing and producing music as an individual means you need to be very self-disciplined. As the project progressed, I tried to approach the three tasks from a different perspective and work towards my own daily and weekly deadlines. I found it very easy to record all parts of a song and then think hmmm maybe I could play that guitar part slightly differently and go through the process again. I think that having a writer/performer separate to the producer would help in driving the project forward and eliminate the risk or artistic change from the writer's perspective.

Conclusion

Before I started this project, I would almost always listen back to my recordings and wonder why something didn't quite feel right in the song. I believe that in focusing heavily on individual parts, I had lost sight of, 'The overall vibe of the track being much more important than any individual part.' Mixerman's 10 Steps (2011, pg. 15). This was coupled with various recording and production issues I have explained in each specific track. Now that all 6 tracks are completed, I listen back to them expecting to hear issues I had become familiar with but that isn't the case anymore. I listen back and think they are actually starting to sound pretty good; this was always my goal. I do not believe that the tracks are perfect by any means, certainly not to a professional audio engineer. However, having completed music study before, I now need a couple of weeks or so to absorb everything. I will then go back to the tracks and see what I can improve, this will hopefully push me on further with my ability to produce music.

Future

I explained in my creation proposal, that my project was very much self-focused, and I am still completely aware that this is the case. I have made no reference in my analysis of marketing my music or responding to the general public's opinion of my music, but this certainly forms part of my long-term plan.

My initial step is to continue writing and producing music but take a break away from the six tracks submitted for the creation process. I will then go back to these six tracks in a few weeks and see how I can improve them (from a writing, performance and production perspective). I shall compare the tracks to similar music already released in the industry and reflect on what I can develop. Once I am happy with the final mixes, I intend to have them mastered at either Abbey Road studios or Metropolis. I will submit the tracks to appropriate commercial music brief's and promote my work through online music distribution and social media platforms.

After I submit the portfolio of work, I shall begin work on developing my own dedicated studio space rather than working in an adapted room. This will hopefully help in enhancing my audio quality.

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