

BAP130.2 Reflective Logbook

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1. INTRODUCTION

The following pages contain reflective summaries on the production of BAP130.1 studio assignment. It covers planning schematics, session accounts, tracking details, interpersonal observations and self-assessment reviews from pre-production to recording, right through to the mix and processing stages.

2. THE PERFORMANCE

On the Cold Floor is a song written by myself late last year. It was written in mind with parts for a full drum kit, an electric guitar, a bass guitar, synth pads and vocals. These instruments would require varied miking/recording techniques which will adequately fulfill the assignment's requirements for an acoustic based production. Fellow SAE students and personal friends will perform the various instruments needed to execute the recording.

SONG TITLE On The Cold Floor

WRITTEN BY Michael Mission

KEY SIGNATURE E Maj

METER 4/4

TEMPO 168

DRUMS Ilja Grey

BASS Max VanStee

ELECTRIC GUITAR Danny Fischer

VOCALS Michael Mission

ASSISTANT Malvin Nathaniel

3. PRELIMINARY NOTES/PRE-PRODUCTION ANALYSIS AND RESEARCH

I. THE DRUM KIT

It's a fallacy to believe that the only way to achieve a big rockin' drum sound is by miking every drum and cymbal, though. In fact, there are many tried-and-true methods of drum miking that have been the source of hit records for decades that use anywhere from only one to three mics. (Owsinski 2009, p.142)

Ilja Gray, a fellow SAE student will play the drums for this exercise. The drum part in mind for the song provides a monotonous but consistent beat, at a fast tempo of 168 bpm over an 8/4 meter. For the most part, the patterns are pretty straight-forward with basic fills throughout the song. Currently, Ilja doesn't own a drum kit, therefore we'll be using the SAE kit (sufficient for my first attempt at recording a full kit) with the following drums included:

A. INSTRUMENTS/GEAR

- Kick Drum
- Snare
- Hi-Hats
- Rack Toms
- Floor Toms
- Crash

Drums that sound great in live performance may not sound nearly as good when being closed miked. In a live performance, the rattles and rings are covered up by the other instruments and are lost before the sound reaches the listener. Close miking on the other hand, picks up the noises as well as the desired sound. (Huber 2010, p.159)

B. GENERAL CONSIDERATIONS

- the quality of the small o2R rec area (not a particularly nice sounding room)
- check the tuning of individual drums, paying close attention to undesirable rattles, distracting ringing or resonances
- arrange kit to the drummer's preference and *then* arrange mics
- if possible (and available) use a supported riser to elevate the kit off the floor
- precise positioning of mics to maximise isolation and minimise phase issues
- to capture less of the room - not wanting to capture the rattling of the ceiling vents and of the thin sliding glass door in the o2R rec area

C. MIKING CONSIDERATIONS

- SM57 on snare 1-2 inches up and pointing 2 inches from the rim
- overheads with small-diaphragm condensers in an ORTF set-up pointing towards the outer edges of the kit
- miking both the inside and outside of the kick
- experiment with taping up a small condenser above the SM57 for the snare
- mic the hats and the snare with a large diaphragm condenser with fig 8 polar pattern with the null axis rejecting the cymbals, toms and kick

II. THE BASS GUITAR

Bass instruments — whether acoustic, electric or electronic — are crucial to the majority of modern music... To the beginner, though, getting things right on the bass end of the mix can seem a mysterious art, not to mention hugely frustrating. (Houghton 2007, [online]).

A good friend of mine Maxwell VanStee will play the bass part for the song. For this project I will be going direct with the bass for two reasons; Max doesn't currently own a decent sounding bass amp, and I couldn't source one out to borrow for the day. Ideally, I would have liked the opportunity to mic up a bass amp as an exercise but in the end had to work around my limitations.

III. THE ELECTRIC GUITAR

Unless you're going direct, the sound of the electric guitar is really the combination of the guitar, the amplifier, and the effects signal chain. But the biggest contributor to the actual guitar sound is the one that's some- times overlooked, and that's the player himself. If the player doesn't have it, then no guitar, amp, pedal, or mic will get you there. (Owsinski 2009, p.191)

Daniel Fischer has been playing the guitar for fifteen years. He is proficient in other instruments including saxophone and trombone but he calls his ever growing collection of guitars his pride and joy. We'll be developing the guitar part by experimenting with the following instruments and gear:

A. INSTRUMENTS/GEAR

- Ibanez JEM7VWH
- Behringer Strat copy
- Marshall JCM 2000 DSL 100
- 2 x 12" Celestion Marshall cab
- 4 x 12" Celestion Vintage 30's cab
- G12T-7S speakers
- Bad Horsie Wah-Wah Morley
- MXR Phaser

B. GENERAL CONSIDERATIONS

- raise cab off the floor if possible
- experiment with mic placement from centre of cone to edge of cone
- experiment with distance from one inch to a foot from cab
- miking rear of cab and adding room mic for blending options in later stages
- simplifying signal chain by using less pedals, capturing amp's natural distortions
- if doubling guitar, record a second guitar on a different sized amp for tonal options

C. MIKING CONSIDERATIONS

- SM57 about 1 inch (classic setup) (Owsinski 2009, p.193)
- large diaphragm condenser set to omni for a warm capture of the room
- large diaphragm condenser set to cardioid to capture low end from rear of cab
- dynamic and fig 8 combination for an MS technique yielding a wider sound image
- taking into account phase coherency for a multiple mic setup

IV. THE SYNTH PAD

The synth pad will be the second instrument for this project that will not be recorded via mic. The part will serve a small, yet relatively important purpose of laying out the harmonic progression, unifying and binding the different track elements together. I've decided to utilise Propellerhead's Reason to design a synth sound that will compliment the nature and the characteristic of the song. I find Reason's interface thoroughly enjoyable to play around with and have an intermediate understanding of it's concepts. I also have a basic grasp of ReWire concepts and therefore feel confident in my ability to execute this part of the project successfully.

V. THE VOCALS

I wrote the song with my vocal range and phrasing style in mind therefore, I naturally wanted to perform the vocals for the song. With my ever growing repository of audio techniques and music mixing know-how, I took this opportunity to experiment and play around with my voice in the mix. I have specific goals of writing and producing my own material in the near future and therefore wanted to begin familiarising myself with the characteristics and sonar qualities of my voice, and even more importantly begin the process of scrutinising how it translates onto the recording medium. It became apparent however, that the tricky part in this whole scenario, was to successfully juggle the tasks of an engineer and a deliver the goods as a performer, all in the same recording session.

If the vocal is so much big-ger than everything else, then you are going to work on everything else until it's as good as the vocal. If the vocal sound sucks, then nothing is going to sound good because you don't want to overpower your vocal with the band. (Owsinski 2009, p.233)

A. GENERAL CONSIDERATIONS

- practice the song prior to tracking date, paying attention to the technical aspects (breath, phrase, vowels and consonants) and the dramatic energy of the piece
- placement of singer in the room, preferably off centre to avoid standing waves (White & Senior 2001, [online])
- positioning of the mic - just a little bit above mouth level to have the singer singing "slightly upward into a mic [forcing] the airway open and encourages a full-bodied voice" (Owsinski 2009, p.227)
- consider recording in sections as the song is moderately fast and breathing issues may arise

B. MIKING CONSIDERATIONS

- large diaphragm condenser to capture warmth in the voice
- NT2-A or an AT4050 or both
- use of pop shield to minimise plosives and shock mount to prevent mechanical vibrations being recorded
- consider using a dynamic such as a SM57 for comparison of tonal quality
- consider using a dynamic for room mic to pick up natural reverb

4. SESSION SUMMARIES

The following section contain summaries for the four main sessions for this project, including dates, times, instruments, and the main agenda. It also covers problematic issues which arose during these tracking dates and how they were resolved to the best of my ability, as well as reflections on how to tackle similar issues in future sessions.

I. VOCAL SESSION | 08.04.11 | 14:00-18:00 | MICHAEL MISSION, MALVIN NATHANIEL | HOME STUDIO

This session was initially to record scratch vocals for the track. I had a composite of drum and guitar samples to serve as a scratch guide track for the drummer and the bass player, but it also became quite useful in recording the vocals for this session. However, I found the material derived from this session quite satisfactory to use in the final mix. Back-up vocals, breath effects and bridge harmonies were later recorded in the o2R. Malvin Nathaniel engineered this vocal session.

A. EQUIPMENT, PLACEMENT AND POSITIONING

- NT2-A
- fine mesh pop shield
- shock mount
- mic upside down positioned slightly higher than mouth level to open up chest and throat cavity during performance
- positioned myself 5 inches from the capsule and an inch from the pop shield to capture more of the direct sound

B. ISSUES

- phrasing of the lyrics were problematic, breath times were too short, syllables were sometimes hard to enunciate and timing became quite off
- performance initially suffered due to working out the lyrical flow of the song
- too much room reverb captured especially during louder

C. RESOLUTIONS

- it took several attempts to get familiar with the technical aspects of the song, listening and recording back and forth to assess the desired delivery method for the lyrics and how to marry it with a dynamic performance
- recorded in sections so that slight overlap of words occurred allowing for breaths
- double tracking the vocals eliminated slight imperfections in terms of phrasing and made the overall sound much more fuller and more rounded
- repositioned mic stand at a lower ceiling part of the room to eliminate reverb issue

The harmonies for the bridge and the chorus background vocals were laid down at a later date in the o2R studio. The mic used for this session was the large condenser AT4050 yielding a different tonal quality to the main vocals recorded with the NT-2A. Variation the sonic palette resulted in a much more desired vocal blend during the mix stages.

D. REFLECTIONS

- difficulty in juggling being a performer and directing the session at the same time
- will better organise the session in Pro Tools in terms of *markers* and *selections* *markers* to indicate section overlaps and pre and post rolls
- perform a dry run of recording vocals pre-tracking date to get a better idea of how the singer (myself, in this case) translate the lyrics onto tape

II. DRUM AND BASS SESSION | 30.04.11 | 10:00-14:00 | MICHAEL MISSION, ILJA GRAY, MAX VANSTEE | 02R

This session involved Ilja Gray on drums and Max VanStee on bass. The kit was initially set up according to Ilja's preferences and the mics were then placed around the final kit configuration. Minor adjustments were made just before first takes in order to make sure that Ilja would not strike any of the mics and that each drum were secure and stable to avoid changing its mic relationships - and as we found out during tracking, actually displacing some microphones altogether.

The bass setup was quite basic - straight into a DI box and into one of the XLR inputs in the rec area.

A. EQUIPMENT, PLACEMENT AND POSITIONING

- D112, inside the kick drum, pointing at beater
- NT-2A set to cardioid, 24" in front of kick, pointing halfway up centre and edge
- SM57 level with edge of snare drum, pointing 2" from edge
- C1000s, 3 feet in front of kit pointing dead centre in the middle of snare and toms
- 2x SE1A as overheads pointing towards the edges of the kit set in an ORTF configuration (angle of 110 degrees and 7 inches apart)
- active direct box for bass guitar with phantom power

B. ISSUES

- setting up the kit, miking it up and attempting to tune the kit and setting up level for five different mics, took almost two and a half hours!
- ringing of snare drum; too much resonance on the kick; and rattling noises from the air vents in the rec area
- Ilja had trouble keeping time with the tempo map variations I applied to the scratch track, initially resulting in a severely disjointed performance
- a constant electrical hissing noise with the bass channel

C. RESOLUTIONS

- couldn't successfully find the cause of the ringing on the snare drum, so I taped the skin to the rim's edge with electrical tape on opposing sides to help secure it to the edges; this lessened the noise somewhat (but marginally dulled the snare); padded the cavity of the kick with some towels to dampen the resonance; and lowered the overhead mics to avoid picking up the rattling of the air vents from the ceiling
- I quickly erased the tempo mapping on the scratch track and had Ilja play to a straight click track with a constant tempo of 168 bpm, resulting in a much more dynamic performance
- after spending quite an inconclusive and considerable amount of time hunting down the cause of the bass channel hiss (changed instrument leads, changed DI box, turned off 48V supply, change channels, rested the actual bass guitar etc.), we decided to go ahead and track the bass line with the noise, applying a noise gate to the mic channel to prevent it from coming through to the headphone mix

III. GUITAR SESSION | 18.05.11 | 19:00-02:00 | MICHAEL MISSION, DANNY FISCHER | 02R

After our initial dry session run for the electric guitar, Danny and I agreed to record the warmer tones of the Behringer Strat copy and the 4 x 12" Celestion Marshall cab. At this point, I had a rough composite of the drum and bass tracks which served as a guide track for this session. After the last setup debacle with the drum session, I really wanted to be über-prepared and have this session properly planned out.

A. EQUIPMENT, PLACEMENT AND POSITIONING

- SM57, 1 inch from cone, positioned halfway from centre and edge of cone
- NT2-A, on top of the SM57 for an MS technique, set to fig 8 with 40 Hz roll off
- B52A, rear of cab pointing to a corner (Owsinski 2009, p.194)
- AT4050, 3 feet from cab, pointing at the Marshall logo

B. ISSUES

- Danny had his 21st birthday celebrations the night before which resulted in a really sluggish start to the session
- initial attempts at recording the song through but it soon became apparent that it he hadn't really looked into the performance and it proved too difficult to 'wing' it
- valuable time was lost in fiddling around with amp settings to get the 'perfect' tone
- the NT2-A was too heavy for its stand and kept dropping onto the SM57
- the room was just too small for such a loud amp with the sound from the room mic becoming too muddy as the sound gets trapped within the confines of the space

C. RESOLUTIONS

- in an attempt to improve the 'muddiness' of the room we decided to add some reverb from the amp - although it sounded great at the time, I had a lot of trouble taming the sound when it came to the mixing stages
- we had to break-up the performance in sections and record them separately, with each section on alternating tracks so as not to cut off the last notes prematurely
- had to reconfigure the mics so that the stands for the SM57 and the NT2-A were perpendicular from each other to give the NT2-A much more support
- turned down the gain so as not to create such a build up of low frequencies

D. REFLECTIONS

- learnt that even the most meticulous of session planning can easily go out the window if the artist is not well prepared, well rehearsed and well rested
- bigger is not always better in terms of recording - may have had a much more desirable sound if smaller speakers were used
- recording instruments dry as opposed to processed is preferable, yielding much more control during mixdown stages

IV. FINAL MIXDOWN SESSION | 10.06.11 | 10:00-13:00 | MICHAEL MISSION | O2R

Along the vein of trials and tribulations, I thought it best to have several practice runs both in the studio and in Pro Tools for the mix-down of the song. This also provided me with an opportunity to sample a few mixdowns on as many different sound systems as possible (ipod dock in the bathroom, lounge room system, bedroom system, at work, on iPod headphones, mixing headphones etc.). The greatest difficulties I encountered during this stage were the inconsistencies and limitations of the o2R desk and of the studio layout. I found that for this specific exercise I've had to 'dumb' down my mix in order to successfully work with the console.

A. ISSUES

- the L-shape setup of the control room, with the mixing console on the side and the computer screens and monitors at a right angle, means that you only have one ear trained at the monitors most of the time, making it difficult to judge levels accurately in stereo with both ears 'equally'
- having only two effect returns available proved frustrating and limiting
- automation was a nightmare to say the least with several failed attempts at overriding previous automation (the settings *absolute* and *relative* were so inconsistent seemingly performing a complete erase on the previous and accumulating levels on the latter)
- the reverb on the guitar and the stereo-wide capture of the MS-technique proved really difficult in the mix and eventually had to mix the whole song in relation to the 'washed out' sounds of the guitar
- the bass part was also lacking the depth and punch that I wanted
- having many double tracked vocal elements proved an editing exercise nightmare

B. RESOLUTIONS

- for most of the preliminary stages of mixdown (i.e. setting basic level and pan parameters) I had to utilise headphones to be able to work efficiently, only referring to the main monitors if I was first satisfied with the headphone mix
- having only two effect units meant that I've had to concentrate only on the reverb and delay effects for most of the tracks especially with the vocals
- tricky automation parameters meant that I've had to do very basic automation for this project and concentrate primarily on volume and panning
- mixing the electric guitar to serve more as a background instrument rather than a feature due to the lack of definition
- applying a SansAmp effect on the bass to enhance its driving rhythm
- tightening up the double tracked vocal elements with elastic audio to minimise the consonants ending at different times

5. CONCLUSION

Even though I had met with a hoard of frustrations throughout the course of this project, I still found the experience thoroughly enjoyable. I have learnt a lot in the past two months in terms of how to predict possible problematic scenarios and how to quickly assess situations and steer the course of the production back on track in a quick and efficient manner. Interpersonal relations and rapport with musicians pave the way for better communication which emphasised the 'fun' aspect of a session and alleviates any studio stresses that naturally occur from time to time. My saving grace in this project was definitely the effort I put into pre-planning each stage of the production. It certainly helped me, in my mind, achieve an overall satisfactory result. I guess any mix of a song can never really be finished in an absolute definitive sense, as you can always add to it in some way or another, but in the end I was greatly satisfied with what I've achieved this trimester.

6. REFERENCES

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