A471 PROJECT 1

POST SESSION DOCUMENTATION

HEOLINY JUNG

JACOBS SCHOOL OF MUSIC
Audio Engineering and Sound Production
INDIANA UNIVERSITY
Bloomington

Session Preparation Form

Engineers: Heoliny Jung Session date: 09/09/2020
Artist: Bristol Empire Song title:
Instrumentation: Drums, Bass, Lead Guitar, Rhythm Guitar, Vocals

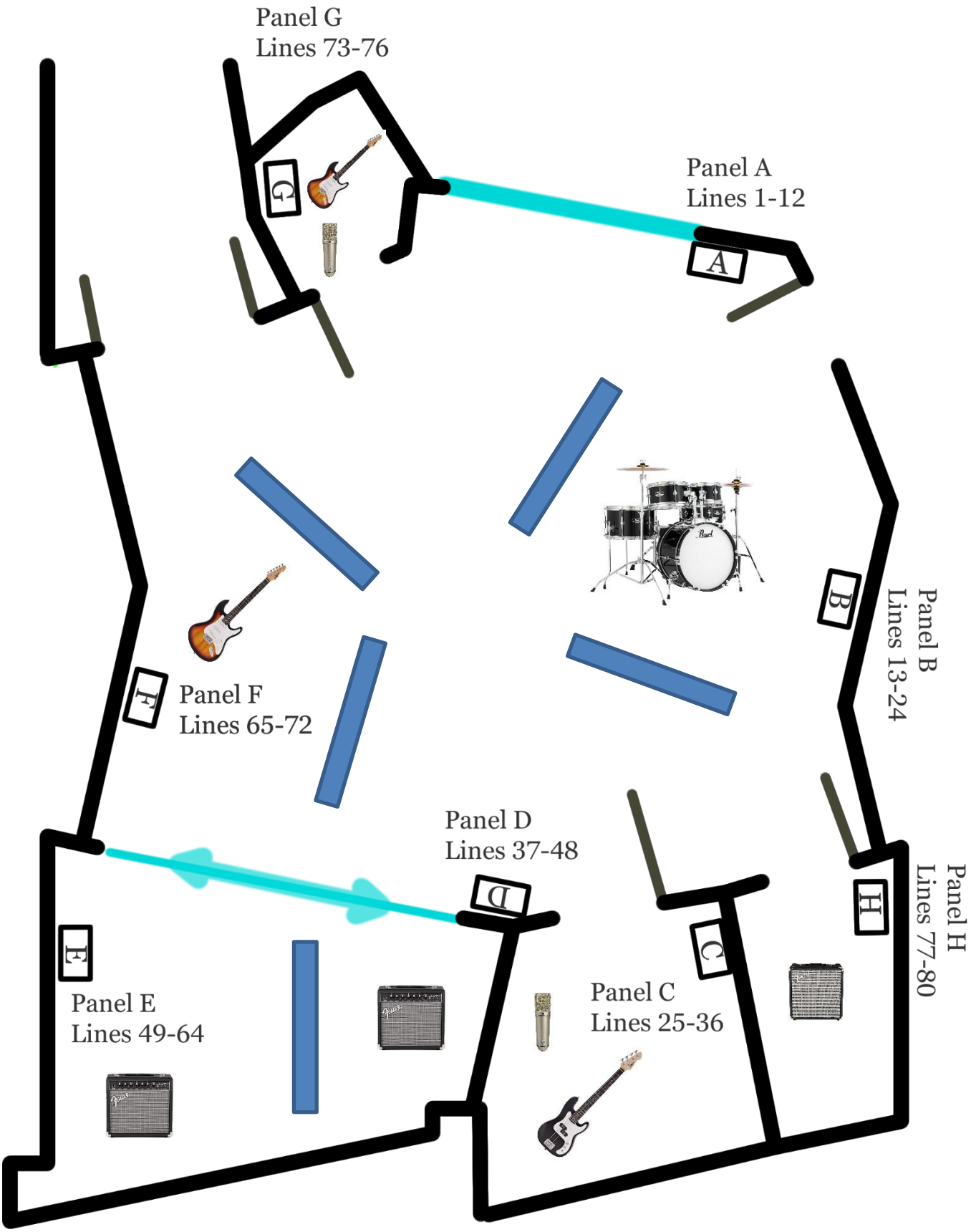
start time		end time	description
6:00 pm	until	7:30 pm	engineers arrive and set up mics/headphones
7:30 pm	until	8:00 pm	band arrives
8:00 pm	until	9:30 pm	get sounds/ set-up headphone mixes
9:30 pm	until	10:00 pm	start recording basic tracks
10:00 pm	until	10:30 pm	overdub
10:30 pm	until	11:00 pm	overdub
11:00 pm	until	11:30 pm	rough mix/ band tears down and loads out
11:30 pm	until	11:59 pm	studio cleaned and empty/ board cleared

Mic input list

Mic Pocket	Preamp	Room	Mic	Instrument	Outboard	Basic /OD	PT input#
1	API 1	Live	MD421	Kick In	SSL Comp 1	B	Line 13
2	API 2	Live	FET47	Kick Out		B	Line 14
3	API 3	Live	SM7B	Snare Top	SSL Comp 2	B	Line 15
4	API 4	Live	M130	Snare Bot		B	Line 16
5	API 9	Live	R121	Rack Tom	Brute 1	B	Line 21
6	API 10	Live	R121	Floor Tom	Brute 2	B	Line 22
7	API 5	Live	414	OH Hat A		B	Line 17
8	API 6	Live	414	OH Ride A		B	Line 18
9	API 7	Live	N8	OH Hat B	33609 1	B	Line 19
10	API 8	Live	N8	OH Ride B	33609 2	B	Line 20
11	TT 1	Live	2247SE	OH Mono		B	Line 23
25	TT 2	Drum	TD-100	Bass DI	LA2A 1	B	Line 24
77	AEA 1	Closet	LCT 640 REX Dyn	Bass Amp A		B	Line 9
78	AEA 2	Closet	LCT 640 REX Card	Bass Amp B		B	Line 10
65	Neve 7	Live	JDI	Lead Guitar DI		B/OD	Line 7
49	Neve 1	Piano	2247SE	L Guitar Amp A		B/OD	Line 1
50	Neve 2	Piano	R84	L Guitar Amp B		B/OD	Line 2
73	Neve 8	Vocal	JDI	Rhythm Guitar DI		B/OD	Line 8
51	Neve 3	Piano	LCT940	R Guitar Amp A		B/OD	Line 3
52	Neve 4	Piano	R84	R Guitar Amp B		B/OD	Line 4
74	Neve 5	Vocal	P-67	Scratch Vox/Vox A	dBx 1	B/OD	Line 5
26	Neve 6	Drum	TLM 170	Scratch Vox/Vox B	LA2A 2	B/OD	Line 6

Aviom Assignments

1-2	3-4	5-6	7-8	9	10	11	12	13	14	15	16
Drums	Bass	Gtr A	Gtr B	Vox A	Vox B					C	TB


Panel G
Lines 73-76
G
Panel A
Lines 1-12
A
B
Panel B
Lines 13-24
F
Panel F
Lines 65-72
Panel D
Lines 37-48
D
E
Panel E
Lines 49-64
C
Panel C
Lines 25-36
H
Panel H
Lines 77-80

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Session Reflection

Engineer: Heoliny Jung
Artist: Fire Sale
session date: 09/09/2020
song title: No Running

1. Overall, how did you feel the session went?

Terrible	Not well	OK	Good	Great!
☐	☐	☐	☒	☐

2. What was different from what you had planned?

   I had a Guitar DI that somehow did not make it to Pro Tools, and one of my guitar amp mics (R84) stopped working mid-session. I didn't take the chance to troubleshoot due to time constraints, but after the session ended I checked the mic and found it was working. I also had not known that they vocalists would be trading off the lead vocal spot, so I had to adjust my session around that a bit more.

3. What could you have done in planning that would have made the session better?

   I should have given more time to getting sounds and got my vocal and guitar overdubs in a real overdub session. I think the song would have sounded much better if we did more guitar stacks, but because of time restraints we just moved on. I also should have grilled the band a bit more on formalities like song structure and such. Because I didn't, I had to adjust a lot of things on the fly to get them to work and missed some opportunities to really work around the form of the song.

4. Did the band feel good about the session when they left? Have you spoken to them since the session to confirm how they felt it went? What did they feel went well and not so well.

   The band seemed to feel lukewarm about the session after they left, which was very unfortunate and made me feel incredibly bad. But overall they had good performances, it was just that there wasn't as good of a feeling in the room after tracking since some of the sounds were not in the state they needed to be. Since then, they've felt much better after a few mixes of progress, but I made what I am now thinking as a mistake in sending them rough mixes, even when I had things I knew I needed to fix. I think hearing the raw mixes might have given them bad ideas on how the song sounds. In future sessions I think I'll try to hold off a bit longer than usual before I send mixes to artists.

To answer the next questions you need to have listened to your session and created a rough mix AFTER the day of the session. Make sure to do so BEFORE answering these questions.

5. What is the best sounding track you recorded? Describe why in DETAIL!

   I liked my guitar tracks and my kick. I thought the kick was punchy and deep with a good amount of snap (snap from the kick in and the low end punch from the kick out). My guitar tracks were pretty clean and captured the tone of the amp well. They needed some work of course but they were very workable and especially for the verses worked really well.

6. What is the worst sounding track you recorded? Describe why in DETAIL!

   My tom tracks were not placed well and the floor tom specifically was really buzzy for no reason. I would love to get another crack at that, but the good thing is that the overheads got the toms pretty well and they didn't play much either way.

7. What would you do differently for the track above?

   I would spend more time on getting sounds and troubleshooting. Of course this seems obvious, but the importance of knowing that I have gotten better sounds in the past makes it even more obvious.

8. What did you learn from this session?

This was a big slap in the face about backup plans and taking more time in general for sounds. Every session I learn so much, and with this session being the first I was going in to having a bit of confidence in Joshi rather than just being nervous about signal flow, I was a bit too confident in my ability to get good sounds quickly. Each night is different, and I need to take lots of time on every mic at this point in my engineering career.

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Project Information Document

(Use Adobe Acrobat to complete)

Artist/Band Name: Fire Sale

Producer: Heoliny Jung

Engineer: Heoliny Jung

Does this recording contain samples? ◉ No ○ Yes (List sample sources in Notes field)

Studio: ◉ Joshi ○ 405 ○ Auer ○ Ford ○ Recital ○ Mac ○ Other _____

Sample Rate: ○ 44.1 ○ 48 ○ 88.2 ◉ 96 ○ 176.4 ○ 192 *All sessions must be 24-bit*

Song Title	Composer/Lyricist/Arranger
No Running	Antonio Rosario
	Kristofer Rosario

Musician	Instrument
Antonio Rosario	Rhythm Guitar/Vocals
Kristofer Rosario	Bass Guitar/Vocals
Dan Ahrendt	Lead Guitar
Jackson Greene	Drums

Add Session Details

Department of Audio Engineering and Sound Production
Musical Arts Center 426 • 1201 E Third St • Bloomington, IN 47405 • (812) 855-1087 • audio@indiana.edu

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Session Details:

Date: 2020-09-09 Start time: 18:00 End time: 23:59

(•) Tracking ( ) Overdub ( ) Editing ( ) Mixing ( ) Mastering

Notes:

Update this field with additional info. from each session including what was recorded/mixed, additional musicians, artist comments and all pertinent information about the session. Add new pages as needed.

- Tracked full takes as well as lead guitar and vocal overdubs
- Session was not done to a click
- Notable losses during session:
  - Floor tom mic was being very buzzy
  - R84 on gtr cab was lost midway through the session
  - Lead gtr DI was not able to be recorded
  (All fixable problems if I took more time in the getting sounds stage)
- Artists left satisfied, however I felt that they were somewhat disappointed with the initial mix.

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Session Details:

Date: 2020-09-23 Start time: 22:00 End time: 23:59

○ Tracking ○ Overdub ○ Editing ◉ Mixing ○ Mastering

Notes:

Update this field with additional info. from each session including what was recorded/mixed, additional musicians, artist comments and all pertinent information about the session. Add new pages as needed.

- First rough mix session after EOS
- Did initial balances, panning, and EQ, with focus on drums and bass
- Some dynamics processing as well
- Please with drum sounds, but maybe live room was not the best option for this piece
- Decided that the 414 OH are better than N8's

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Session Details:

Date: 2020-09-24 Start time: 09:30 End time: 11:30

○ Tracking ○ Overdub ○ Editing ◉ Mixing ○ Mastering

Notes:

Update this field with additional info. from each session including what was recorded/mixed, additional musicians, artist comments and all pertinent information about the session. Add new pages as needed.

- Second rough mix session
- Balanced, EQ'd, and put dynamics processing on guitars and vocals
- Melodyne on vocal pre-chorus
- Added drum reverb
- Added Guitar reverb and delay
- Added Vocal reverb and delay
- Not pleased with the vocal sound, stuck on having it pop without being obnoxious

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Session Details:

Date: 2020-09-30 Start time: 09:30 End time: 11:30

○ Tracking ○ Overdub ○ Editing ◉ Mixing ○ Mastering

Notes:

Update this field with additional info. from each session including what was recorded/mixed, additional musicians, artist comments and all pertinent information about the session. Add new pages as needed.

- Third rough mix session
- Moved to 354
- First session after mentoring, worked on many of the concerns and fixes brought up during mentoring (changing reverbs, compressors, etc.)
- Vocals sound much better
- Re-balanced vocals during chorus so that the correct one is the melody

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Session Details:

Date: 2020-10-02 Start time: 12:00 End time: 14:00

○ Tracking ○ Overdub ○ Editing ◉ Mixing ○ Mastering

Notes:

Update this field with additional info. from each session including what was recorded/mixed, additional musicians, artist comments and all pertinent information about the session. Add new pages as needed.

- Added guitar distortion mainly during chorus for more bite
- Ran clip gain and automation on many tracks
- Initial vocal rides
- More Melodyne on vocals

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Session Details:

Date: 2020-10-16 Start time: 12:00 End time: 14:00

○ Tracking ○ Overdub ○ Editing ◉ Mixing ○ Mastering

Notes:

Update this field with additional info. from each session including what was recorded/mixed, additional musicians, artist comments and all pertinent information about the session. Add new pages as needed.

- Beat detective for tick-based delay throws
- More limiting/compression on drums and guitars
- Automation, and lots of it

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Session Details:

Date: 2020-10-17 Start time: 17:00 End time: 19:00

○ Tracking ○ Overdub ○ Editing ◉ Mixing ○ Mastering

Notes:

Update this field with additional info. from each session including what was recorded/mixed, additional musicians, artist comments and all pertinent information about the session. Add new pages as needed.

- Finalized automation rides
- Minor EQ changes to Gtr and Vox
- Minor master processing, added HEAT

SESSION PICTURES

Drums:

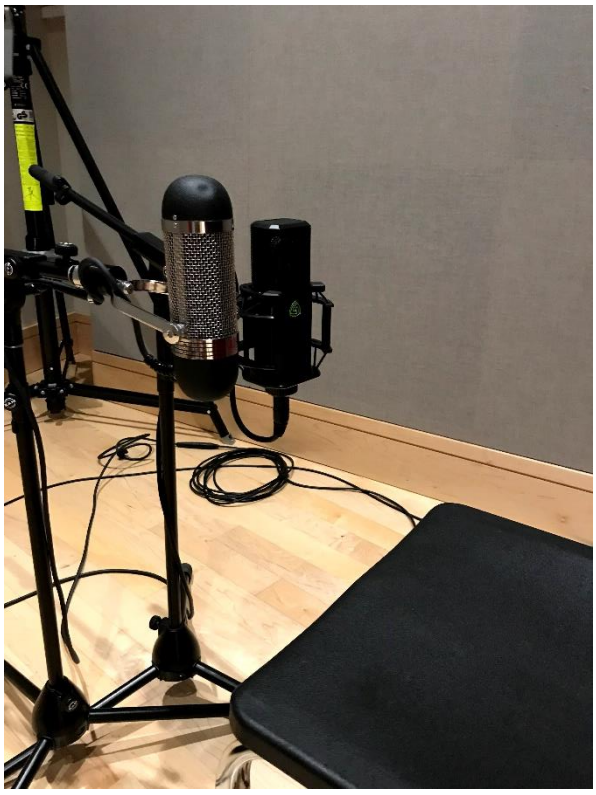
I set my drums up in the live room on the side opposite the rock wall behind a set of gobos. I have liked the sound of the live room and drum overheads in the past, and I like it here, but I would say that I should have either brought my overheads closer or put them in the drum room or both! Just because I felt like they sounded a bit too reverberant for the song style.

My snare “top” mic was set up in a way first introduced to me by Adam Beck from Shure at a masterclass last year. The tone of the snare sounded great, but the hi hat bleed was significant. That being said, it wasn’t insanely more prominent than a regular snare top with the same mic, so it could be worth it.

Bass:

The bass was brought in through a TD-100 DI and miked in the closet with an DTP 640 REX. (The amp was positioned on top of the chair)

Rhythm Guitar:



The Rhythm Guitar was miked with a DI and two mics on the amp. The DI was brought in through a pocket in the vocal booth as the rhythm guitarist was also singing in the vocal booth. I used the instrument tie lines to make it from the vocal booth to the piano room, which worked miraculously but was not A-B ‘d without, so its affect to the tone is unknown. (The amp was positioned on the chair)

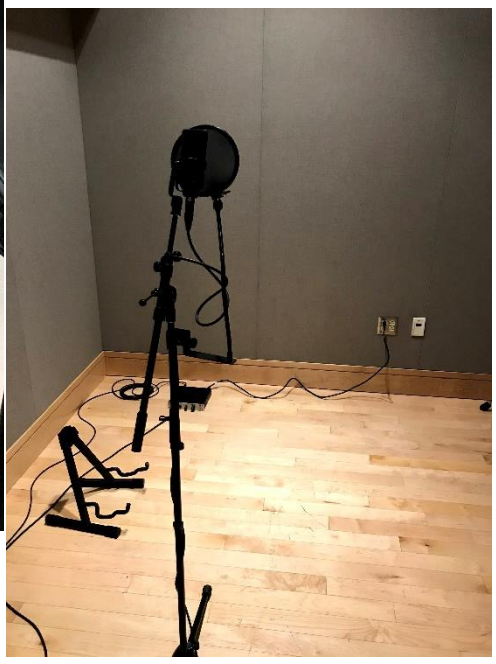
The LCT 940 was used in fully tube mode.

Lead Guitar:

Like the Rhythm Guitar, I had the lead guitar's amp on a chair in the Piano room. The two amps were separated by two gobos. I think my decision to have two guitar amps in the same room was ok, however, I think that it might have been a better idea to put a bass amp in the same room in order to be able to EQ out the bleed easier. Either way though, this method went well enough. Maybe also some more directional microphones.

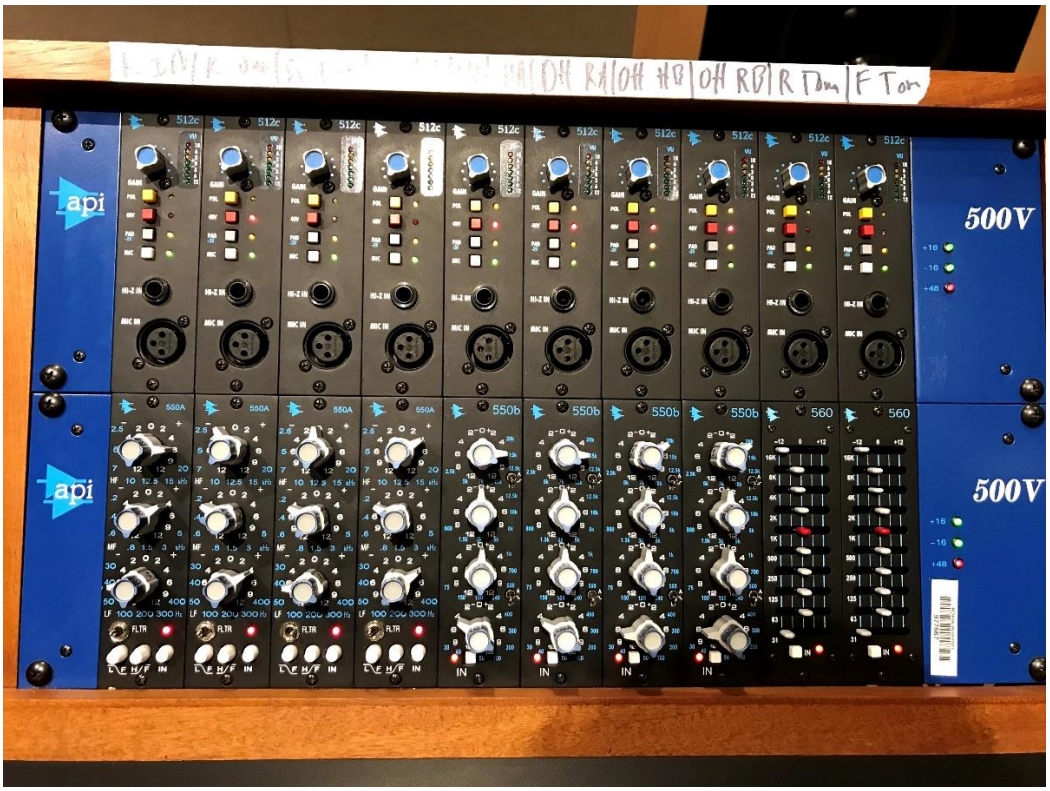
Vocals:

I had both vocal mics positioned similarly. I placed the pop filters about 6" from the mics so that the vocalists would keep some distance.

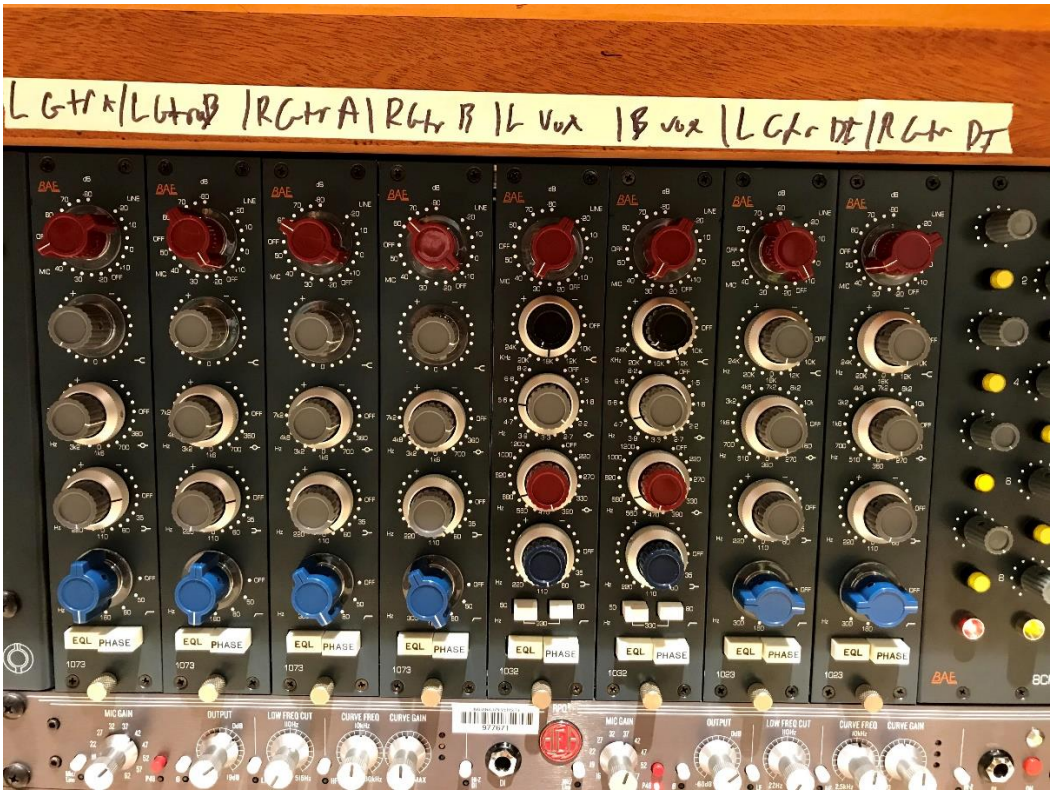


OUTBOARD GEAR

Pre-amps:



I had all my drums besides my OH Mono coming into API pres.



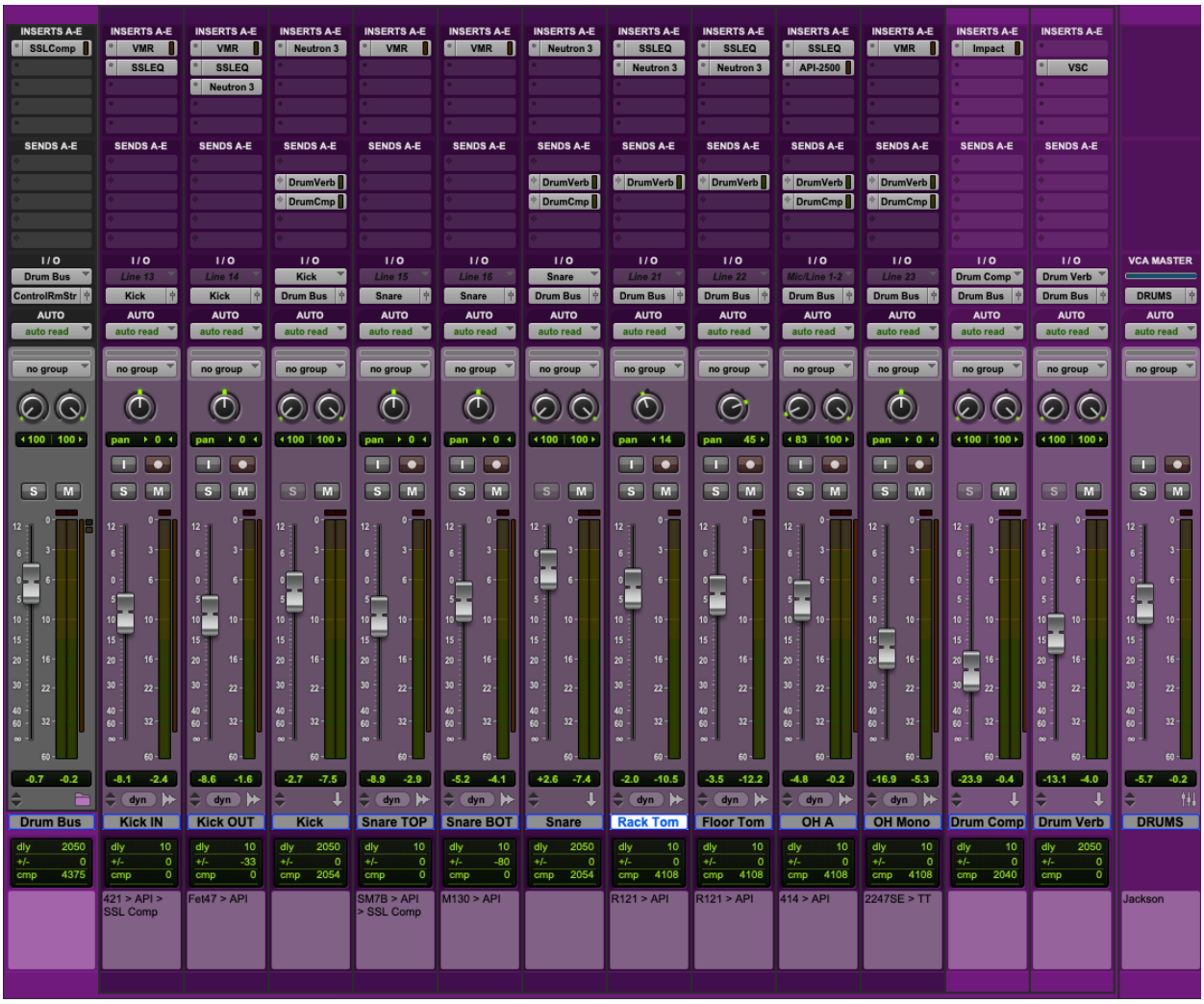
Here you can see most of the rest of the sources and pre-amps. The L Gtr amp B was the R84 that did not want to cooperate with me that day, same with the L Gtr DI.


api
525
525
543
543
REL MODE
REL MODE
OFF
BYP
CEILING
Distressor
GAIN REDUCTION
BY PASS
RATIO
INPUT
ATTACK
RELEASE
OUTPUT
POWER
DETECTOR
AUDIO
Distressor
Transient Designer
DYNAMIC EFFECT PROCESSOR
ATTACK
SUSTAIN
1
2
3
4
dbx 560A
dbx 560A
COMPRESSOR/LIMITER
COMPRESSOR/LIMITER
500


INPUT
OUTPUT
RELEASE
1176LN LIMITING AMPLIFIER
UNIVERSAL AUDIO
OFF
TELETRONIX
ENGINEERING CO
LEVELING AMPLIFIER
MODEL LA-2A
LIMIT
COMPRESS
GAIN
PEAK REDUCTION
GAIN REDUCTION
OUTPUT +10
OUTPUT +4
ON
POWER
VU LEVEL INDICATOR
TELETRONIX
TELETRONIX
ENGINEERING CO
LEVELING AMPLIFIER
MODEL LA-2A

PRO TOOLS SESSION

Drums:



Starting with the kick, my Kick In and Out processing can be seen below:

I used the VMR Drum gate on both to try to get the cleanest sounds possible, and as always that took a lot of tweaking, but it worked out for the most part. I then used a slow attack, medium release compressor to try and emphasize the transients a bit more.

On the kick in, I used the SSL EQ to get more snap from the kick, however on the kick out I did the same but also use it to take out a bit of resonant low-end around 200 Hz. I then boosted in a low, thumpy frequency to get more impact, around 60-80 Hz, with Neutron.

Both then went into a Kick bus that just had a EQ bump at around that same thumpy frequency and added a little more punch at around 1 - 1.5 kHz.

My Snare Top had too much hi-hat bleed to use a gate, so I only used EQ so keep it in check. I boosted in the upper-mids to get some snap and clarity, and cut out some of the resonant lows with a narrow band.

My Snare Bottom was much cleaner from bleed so I was able to comfortably gate and compress it without any problems.

I used the EQ to push some more high-end for snappy clarity and take out some of the honkyness and thump, since I got most of that from the snare top.

Both went through a snare bus with a Neutron EQ.

Note: something that was a general theme in this mix was that instead of going back to previous plug-ins to fix issues, I would often just put a new plug-in on to try and solve the problem that was probably being made by the previous plugin. It was a good session to learn from, and I've since been paying much more attention to my plugin chains.

Moving on to overheads, the ones I ended up using out of the two were the 414's, a.k.a. OH A. I used the SSL EQ to take out low-end so that it doesn't muddy up the mix, and accentuate some of the cymbal resonance. They were very bright, however, so I also took out some of the highs with a shelf.

I then put them through the API compressor, which, as I learned from the mentoring session, sounded great when set to a fast attack and release. It let the drum spot mics pop through clearer and had the cymbals do more of that swooshing pumping that is common in many songs of this style.

I also had a mono OH 2247SE, which I compressed hard through a Distressor and used some EQ to take out some lows and accent some clarity and snap.

It sounded very cool, but it was a bit too overwhelming for the verses, so I only put it in for the choruses.

I put all the drums through a parallel compressor with a slow attack and fast release that was also sent to the drum bus.

I also sent almost all the drums besides the kick to a drum verb, which was set to wood room on the VerbSuite Classics unit, a recommendation from mentoring that helped immensely.

I took some of the lows out of the verb because I felt it was muddying up the mix too much, and I wanted the drums to be more shimmery than big.

Finally, all that went through an SSL bus compressor. I aimed to have the gain reduction only peak at around -3dB.

Bass:

I split the bass take into two sets of tracks: verse and chorus. He changed his tone up quite a bit between the two with pedals, so I wanted to have the control to process them differently. You can see that for the verses the bass tone was a bit louder overall, so I brought that down a bit and added in the DI in the chorus. The chorus tone was much more buzzy and less deep than the verse, so I had the DI bring back in some of that low-end.

For the verses, I bumped up some low-end and took out some honkyness from the tone, hoping to leave space for the guitar. I also took out some high end for the same purpose.

The bass chorus was treated much differently, as I wanted to keep in that gritty distortion while bringing back some of the lost low-end.

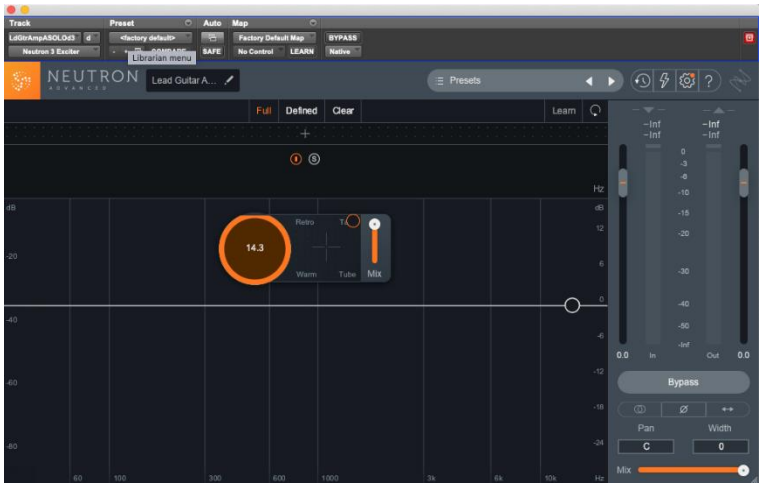
Lead Guitar:

Like the bass, I used multiple tracks to split up the verse, chorus, and solo sounds, as the tones change between them. I also tried to thicken some of the tones up by duplicating and distorting them through a guitar amp plugin, which worked pretty well, but in hindsight I should have just forced the band to do doubles (they are always adamite about not doing them!!! I don't know why but I didn't want to offend them).

To the immediate left is the verse processing. Each track in the verse had basically this signal chain as they were just a duplicate of the original. As you can see, there was some significant resonances that I had to take out pretty surgically. I liked how they sounded after these drastic EQ's but I think they maybe could have been more easily solved with a better mic placement. I tried accentuating the upper harmonics here without overpowering the vocal.

Below is the lead guitar chorus processing, which every lead guitar track had, with the addition of the Neutron to attempt to thicken it up just a little bit.

The guitar solo had the original amp tone plus two distorted duplicates. In this case the duplicate distortion was actually a welcome change since it let the solo pop and scream a bit harder without taking away from the feeling of a single voice.



I landed on some nice tones for the solo that let it feel stronger while keeping the idea of the original.

Lastly, all lead guitar tracks besides the solo went into this lead guitar bus for some larger-scale control of the tone.

Rhythm Guitar:

The rhythm guitar was treated similarly. One tone from the amp was used in the verse with a slight distortion added, then the chorus brought in a distorted/re-amped DI and some heavier tones.

I only had to do some minor EQ to the rhythm guitar verse tracks, to make room for the bass and vocal/lead guitar clarity. The distortion was there to help it match the lead a bit more in tone so that the ideas meshed a bit better.

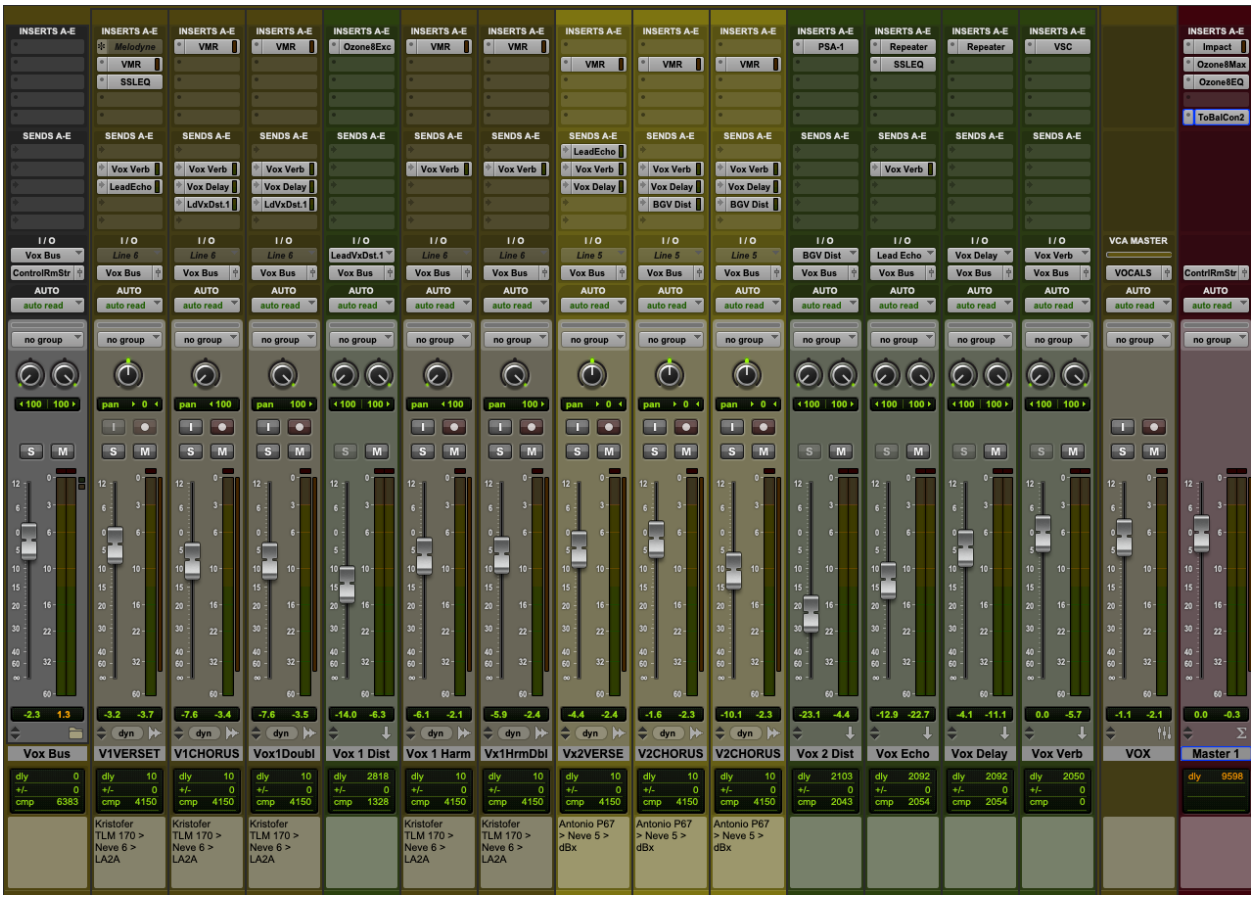
The chorus tracks didn't have any EQ, but I did utilize the amp distortion to bring out different tones and try to thicken it up.

All the rhythm guitar tracks went into a rhythm guitar bus with some limiting and EQ.

I then had all the guitars, rhythm and lead sent into an echo and reverb.

The reverb was just for a bit of added space, but the echo helped to fill up some of the empty space in the mix, especially in the verses and pre-chorus. I automated it down during choruses to try and keep it a bit cleaner, then brought it back in at the end of choruses to fill out some of that lost volume.

Vocals:



There was a lot to do with these vocals, and the track order went through a few iterations, but I landed on this one as it made the most sense in my head.

First was vocalist “B” (a.k.a. Vox 1) ‘s verses since they were the lead in those sections. (Yes, the vocalist track names are kind of backwards. It was a mistake I regretted later).

Lots of compression, slow attacks for clarity of sibilance, and taking out around 1-1.5kHz to get rid of some honkyness.

Next in line was that vocalist's choruses, where they are the harmony.

Some extra compression here, and small changes in EQ to try to place it behind the lead vocal at this point, Vox A (a.k.a. Vox 2).

I then put the parallel distortion aux for those tracks, then the undistorted pre-chorus harmony tracks.

The harmony tracks were treated very similarly to the verse track, but they had a little less boost in the high-end on the EQ.

I added in a small echo throw to the verses to fill in the space left between lines. The band liked the addition, and it was definitely the most creative mix processing I did on the whole mix.

Vocal “A” (Vox 2) was a bit higher in pitch and part, but was performed quite similarly. It was also processed similarly, with the verse, chorus, and doubles in separate tracks.

Similar ideas on the verse track, as they only come in during the pre-choruses, and support the build into the chorus.

Above, the chorus track can be seen with some extra compression and slight EQ differences to help it pop out a bit more in the dense chorus.

I also duplicated the chorus and put a small amount of specialization on that duplicate for a bit of stereo effect. I wanted the chorus to sound a bit more like a choir or group, but wasn't able to get multiple tracks of the chorus performance, so I tried bringing this in very lightly. It worked decently well.

I put the Sans-amp in as parallel compression, and dialed it in for a higher, shinier tone, then brought it in the mix just until it got annoying, then brought it down.

Finally, all the vocals had some amount of reverb and delay. They were small amounts, but were able to put all the vocals in a space rather than dead close and center.

Master:

My master chain included some compression and limiting, and then I tried the iZotope Tonal Balance Control with the Rock preset combined with the Ozone EQ. I liked using the Tonal Balance Control, especially after a longer mix session later in the day, I often felt ear fatigue and liked the reassurance of the algorithm to know I was in the ballpark for the most part.

AUTOMATION

Most of my time automating was in the build to the choruses and the choruses themselves. I did runs trying to build energy into choruses and have solo moments pop, like the lead guitar riff the was a response to the main vocal line, “no running, no, no more running”.

I used a lot of clip gain to somewhat normalize levels between the tone changes in the bass and guitars for the verses and choruses, as well as normalize levels going into my compressors.

Finally, I did vocal rides to even out the performances and make sure they fit right in at all times. I think that overall I was pleased with my automation work, but there was always a push-pull where sometimes I just needed to put more oomph into them and others I needed to dial myself back and make more subtle movements.