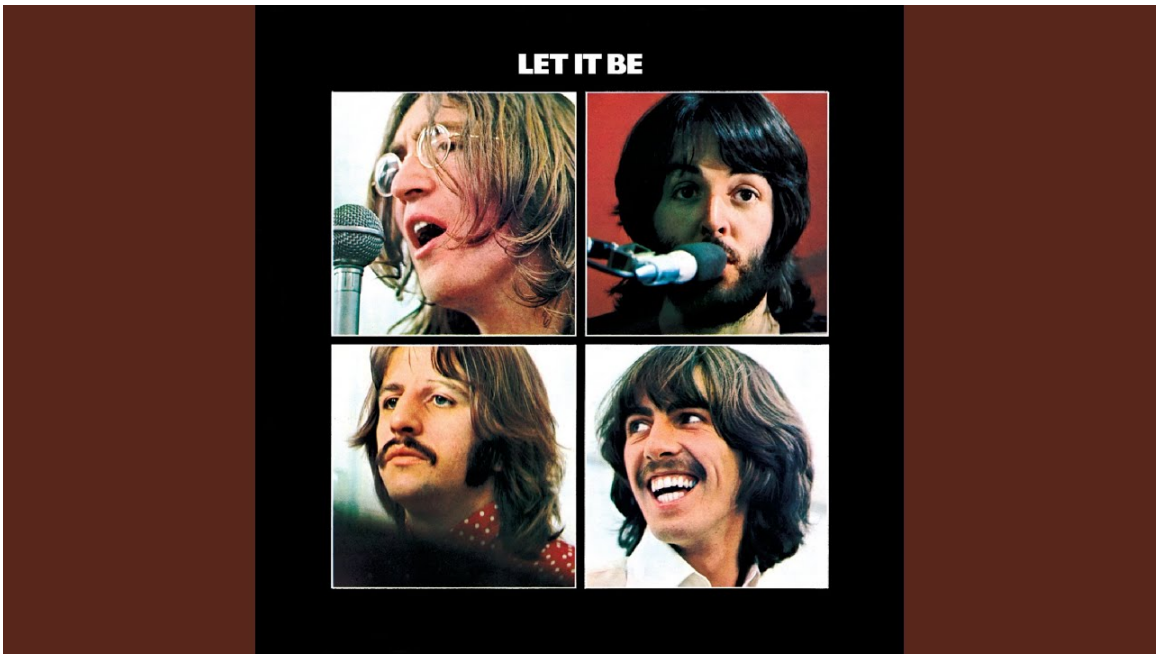
A470 PROJECT 1

Post-Session Documentation



Heoliny Jung

INDIANA UNIVERSITY
JACOBS SCHOOL OF MUSIC
Bloomington

Project Information Document

(Use Adobe Acrobat to complete)

Artist/Band Name: Impromptu Beatles

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
Let It Be	The Beatles

Musician	Instrument
Maya Toffler	Bass & Vocals
Alec Lubin	Piano & Synth
Kunal Pendse	Drums
Garrett Treanor	Electric Guitar

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

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

Session Preparation Form

Engineers: Heoliny Jung Session date: 02/15/2020
Artist: Impromptu Beatles Song title: Let It Be
Instrumentation: Drums, Bass, Guitar, Vocals

start time		end time	description
6:00 pm	until	7:00 pm	engineers arrive and set up mics/headphones
7:00 pm	until	7:30 pm	band arrives
7:00 pm	until	8:30 pm	get sounds/ set-up headphone mixes
8:30 pm	until	9:30 pm	start recording basic tracks
9:30 pm	until	10:00 pm	overdub
10:00 pm	until	10:30 pm	overdub
10:30 pm	until	11:15 pm	rough mix/ band tears down and loads out
11:15 pm	until	11:59 pm	studio cleaned and empty/ board cleared

Mic input list

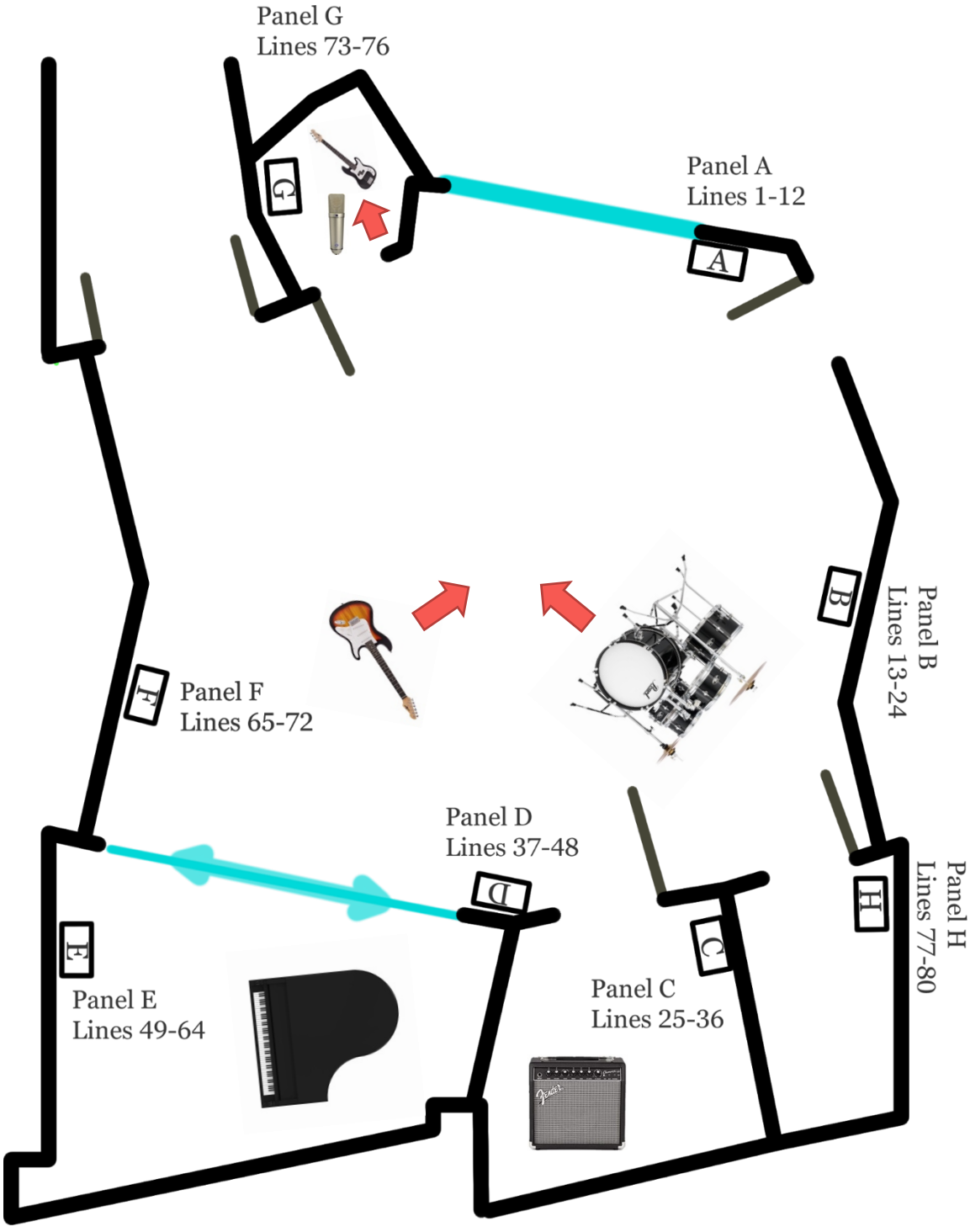
Mic Pocket	Preamp	Room	Mic	Instrument	Outboard	Basic /OD	PT input#
13	Neve 1	Live	D12 VR	Kick In		B	Line 1
14	Neve 2	Live	RE20	Kick Out		B	Line 2
15	API 1	Live	2247SE	Kick One	525 1	B	Line 13
16	Neve 3	Live	SM57	Snare Top A		B	Line 3
17	API 2	Live	NT5	Snare Top B		B	Line 14
18	Neve 4	Live	M160	Snare Bot		B	Line 4
19	API 3	Live	M160	Hi Hat		B	Line 15
20	API 4	Live	MD421	Rack Tom		B	Line 16
21	API 5	Live	MD421	Floor Tom		B	Line 17
22	API 6	Live	KSM141	WURST	Distressor 2	B	Line 18
23	API 7	Live	TLM170?	OH Hat		B	Line 19
24	API 8	Live	TLM170?	OH Ride		B	Line 20
37	AEA 1	Live	AEA N8	OH Mono	Distressor 1	B	Line 9
38	TT 1	Live	P67/2247	Butt	525 2	B	Line 8
1	API 9	Live	C414	Room Floor Hat	33609 L	B	Line 21
2	API 10	Live	C414	Room Floor Ride	33609 R	B	Line 22

49	TT 1	Piano	TLM 107	Piano Lo	Pultec 1 - LA2A 1	B	Line 23
50	TT 2	Piano	TLM 107	Piano Hi	Pultec 2 - LA2A 2	B	Line 24
51	AEA 3	Piano	R121	Piano Room L		B	Line 11
52	AEA 4	Piano	R121	Piano Room R		B	Line 12
	Matrix 5	CR	JDI	Synth L		OD	Mic 5
	Matrix 6	CR	JDI	Synth R		OD	Mic 6
3	Neve 5	Live	TD-100	Bass DI	RND 1	B	Line 6
25	Matrix 7	Drum	Pro48	Gtr 1 DI		B/O	Mic 7
26	Neve 7	Drum	LCT 940	Gtr 1 A	1176 1	B/O	Line 7
27	Matrix 3	Drum	AEA N8	Gtr 1 B		B/O	Line 19
73	Neve 6	Vocal	U47	Vox	RND 2	OD	Line 5
74	AEA 2	Vocal	AEA R84	Vox Dbl/Harm	1176	OD	Line 10
73	Matrix 9	Live	Beta 56	Scratch Vox		B	Mic 9

Aviom Assignments

1-2	3-4	5-6	7-8	9	10	11	12	13	14	15	16
Drums	Bass	Piano	Synth	Gtr 1	Gtr 2	Vox	BGV				TB

Session Layout:



Session Details:

Date: 02/15/2020

Start time: 6:00 pm

End time: 11:59 pm

- *Tracking*
- *Overdub*
- *Editing*
- *Mixing*
- *Mastering*

Notes:

- *Tracking with full group*
- *Recorded all basics and overdubs*
- *Bounced first rough mix*

Session Details:

Date: 02/17/2020

Start time: 1:30 pm

End time: 2:30 pm

- *Tracking*
- *Overdub*
- *Editing*
- *Mixing*
- *Mastering*

Notes:

- *Edited Tom Tracks to reduce bleed*
- *Made basic delay compensation adjustments*
- *Applied preliminary to most outstanding tracks*

Session Details:

Date: 02/20/2020

Start time: 12:00 pm

End time: 1:00 pm

- *Tracking*
- *Overdub*
- *Editing*
- *Mixing*
- *Mastering*

Notes:

- *Fine-tuned piano, vocal, and guitar sounds with DSP*
- *Comped Guitar takes*
- *Applied bus compression and reverb to drums, guitars, piano and master*

Session Details:

Date: 02/24/2020

Start time: 10:00 am

End time: 1:00 pm

- *Tracking*
- *Overdub*
- *Editing*
- *Mixing*
- *Mastering*

Notes:

- *Comped vocal takes*
- *Re-did all DSP on vocal*
- *Adjusted drum compression and reverb*

Session Details:

Date: 02/27/2020

Start time: 2:00 pm

End time: 3:30 pm

- *Tracking*
- *Overdub*
- *Editing*
- *Mixing*
- *Mastering*

Notes:

- *Added automation*
- *Beatmapped for tambourine, only to find there were no audio samples on the Joshi PC (did I miss something?)*
- *Bounced first final mix*

JACOBS SCHOOL OF MUSIC
Audio Engineering and Sound Production
INDIANA UNIVERSITY
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Session Reflection

Engineer: Heoliny Jung
Artist: Impromptu Beatles
Session date: 02/15/2020
Song title: Let It Be

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 to cut the second guitar part, and we did not have time to record any background vocals. I also had to put the bassist in the vocal booth since she was also the vocalist and we were tracking drums in the main room (that was obvious but it slipped my mind during planning). Lastly, I axed a lot of my outboard processing and changed a few preamps.

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

I could have cut some of the drumset mics that ended up being redundant, but I knew this would happen and put them up just as experiments. I also made a mistake in my PT inputs and had to reorganize them all mid-setup. If I had more time to plan I would have looked more into researching Beatles' piano micing techniques and such.

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.*

Yes! They knew it would be pretty shaky since the group was formed and music decided upon literally the night before, but they performed well and were satisfied with the sounds. All of them are seasoned studio musicians so they knew the process and were enthusiastic about the end product.

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 really liked my Piano tracks, especially how the Piano L and R combined with the Piano Rooms to get a nice balance between the swishy ambience of room mics but still have the articulation and pumping of compressed close mics.

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

I didn't love either of my vocal sounds. As we talked about in class, both mics were placed too close to the window in the vocal booth and I was too heavy on the compression on the way in to PT. Also the compressors I used were probably not the best choice for the style of music, and I drove both of the pre-amps gains pretty hard.

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

I would not compress it as heavily as I did or use different compressors, and definitely record a dry signal into PT as well. Also, I would change the position of the vocal mics and drive the pre-amp gain a bit less.

8. What did you learn from this session?

I need to get my session planning and running a bit speedier so that I can more properly place and adjust all my mics, especially when working with vocals. I also should downsize my mic lists or send more thing to overdubs since even with a few people helping me it was still a bit crunched for time.

Tracking Photos & Descriptions:

Drums: Various angles of the kit set in its full glory. The main points of interest here are the mono drum OH AEA N8 and the Butt mic (featured immediately above). Both were compressed going in to PT.

I also tried the floor 414 rooms technique done by Stucker during the first masterclass!

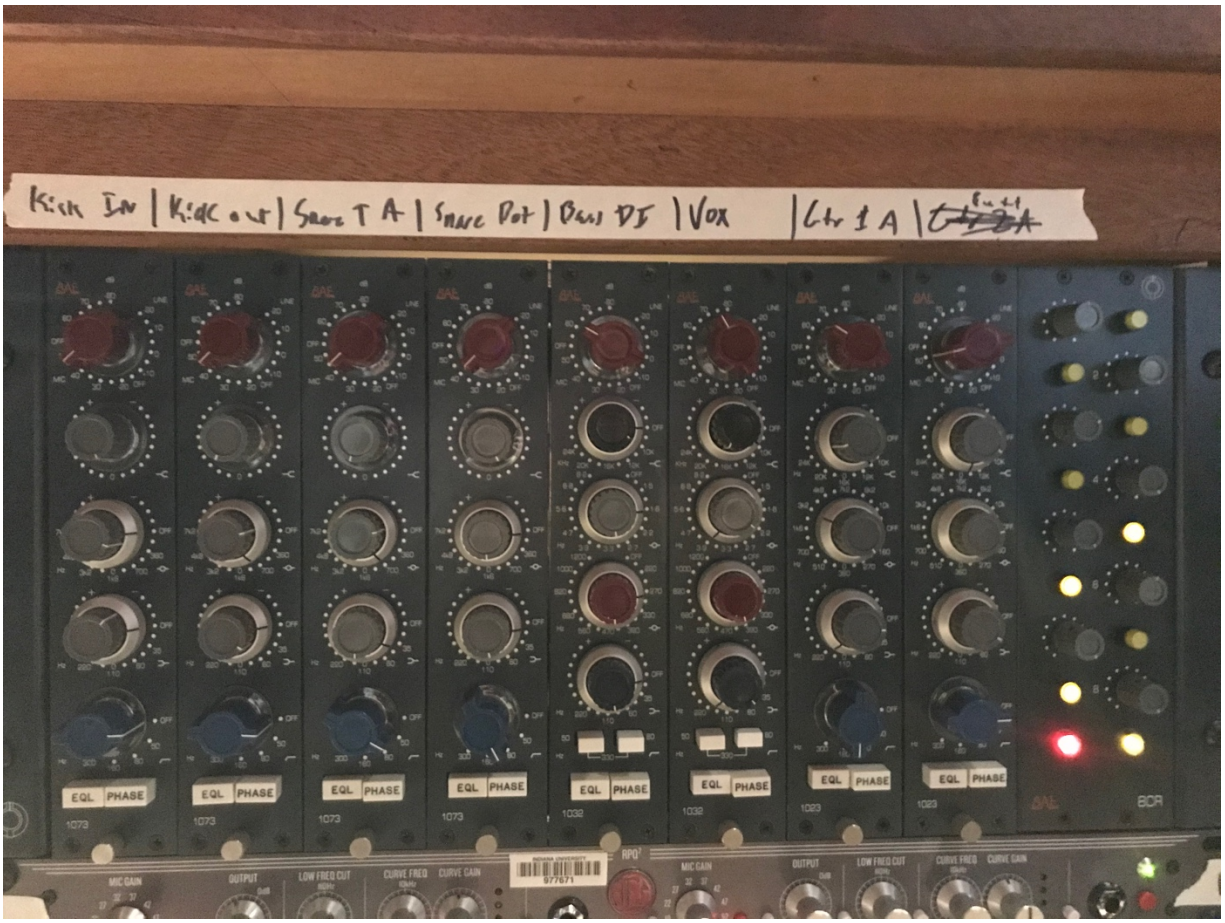
Piano: I chose close mics to try and get that saloon-y attack tone, but also added room mics in blumlein to give a nice sense of space, but still be phase coherent in case I wanted to mono the piano later and for fun. The blumlein pair was moved closer to the open side of the piano and angled downwards during sound check after I listened in the CR and they didn't sound great.

Guitar: Not much specific theory behind these other than the fact that I wanted both a condenser and a ribbon mic to choose from. The LCT was all the way to the tube side.

Bass/Vocals: Unfortunately, I couldn't get a picture of the lead vocals while overdubbing, but pictured below is the scratch vocal mic position with the bass. The bass was only going in to a DI, not being amped.

Tracking Notes:

I used all of the outboard pre-amps and some matrix pres as well, and did a decent amount of compression going into PT. I didn't take a picture of the API pre amps because I did not use the EQ on them. Some points of interest are the Kick Out and Snare Top which both have a cut at around 700, since I felt there was a bit of a resonance at that frequency between the two, and the vocal which I really drove on the gain then trimmed down to get levels. This, along with the compression from the RND 543, made the track just a little bit too distorted and harsh on the way in to PT.



Session Preparation Form

Engineers: Heejun Jung
Artist: TBA
Instrumentation: Drums, Bass, Guitar, Vocals

Session date: 2/16/2020
Song title: Let It Be

Here you can see my compression on the room floor mics, Gtr 1 A, Vox B, Piano Lo and Piano Hi. I really liked the sound I got from the LA2As, and the needle was moving decently large amounts on both units. I think I was a bit heavy on the Vocal B compression, but it wasn't necessarily terrible, just didn't give me much flexibility when mixing.

Mixing Notes:

I listened to the 2009 and 2015 remastered versions of the original track (my reference material) and liked both sounds. I felt the 2009 was a bit more creative and sonically interesting, but the 2015 was much cleaner and balanced. In general, I tried to make my sounds edge towards even more modern than the 2015 remaster, but I also wanted to include some of the originality of the 2009 version.

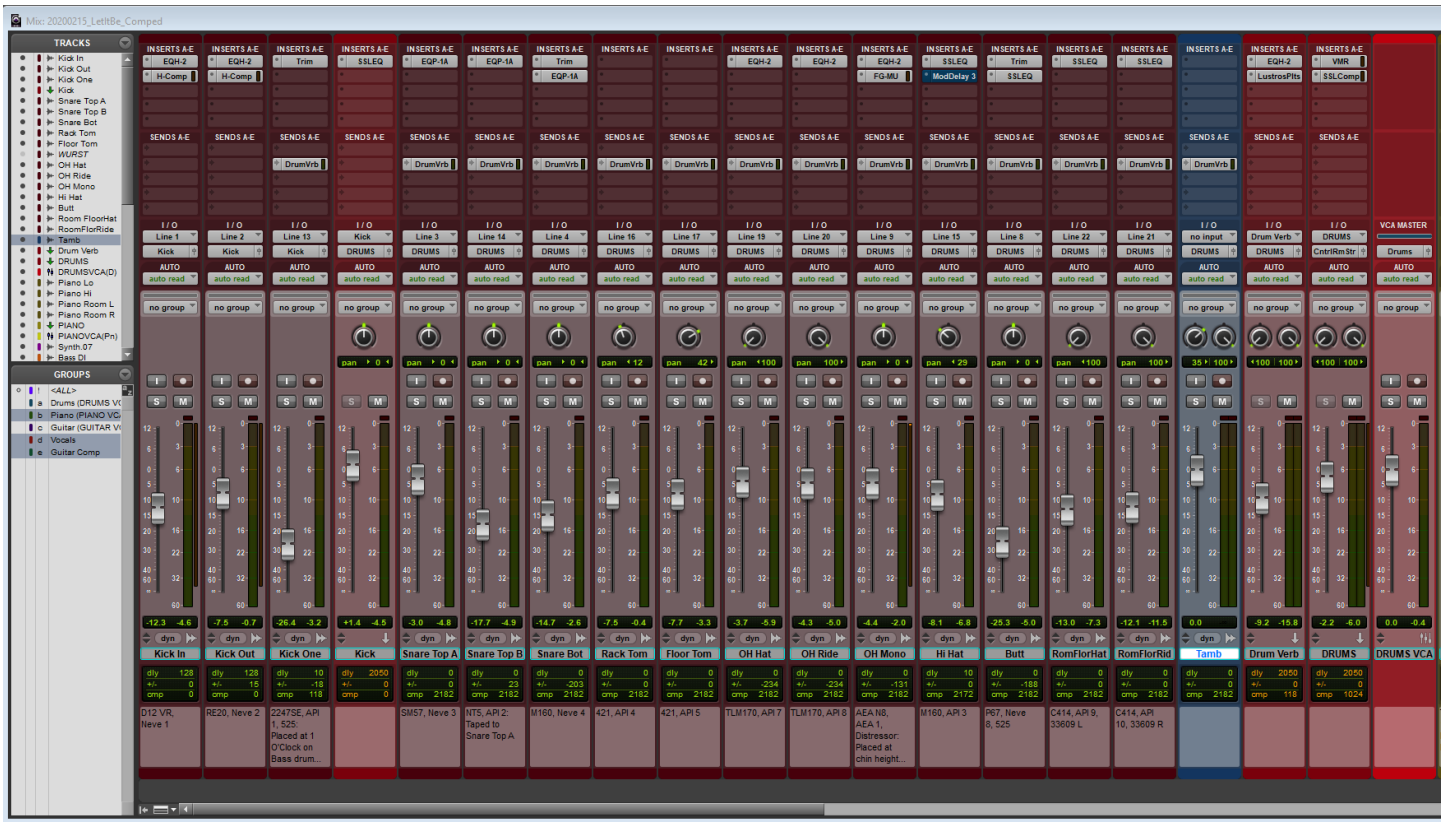
This can be seen a bit in my **master bus** chain as seen here:

I used the FG-MU along with the tape saturation to give a vintage color and glue the track together a bit. In order to let the transients through I went with a slow attack and fast-ish release.

I had the same concept in mind when compressing the **drum bus** as seen here:

I used the SSL EQ to brighten the drums up a bit then compressed the drums with the SSL buss compressor so that the max amount of dB reduction was around 2-3 dB.

Diving into the drums a bit more, here are all the tracks routed to the drum bus:



The **Tamb** track was going to be a tambourine sample, but I couldn't find any samples on the Joshi computer. I tried opening up the soundbase and there weren't any files in the sound libraries. Other than that, the **WURST** from the original planning sheet was cut from the mix because it was overcompressed and did not fit the style of the song.

I added a simple ModDelay III to the **Hi Hat** track and automated it so it was bypassed after the intro hat hits:

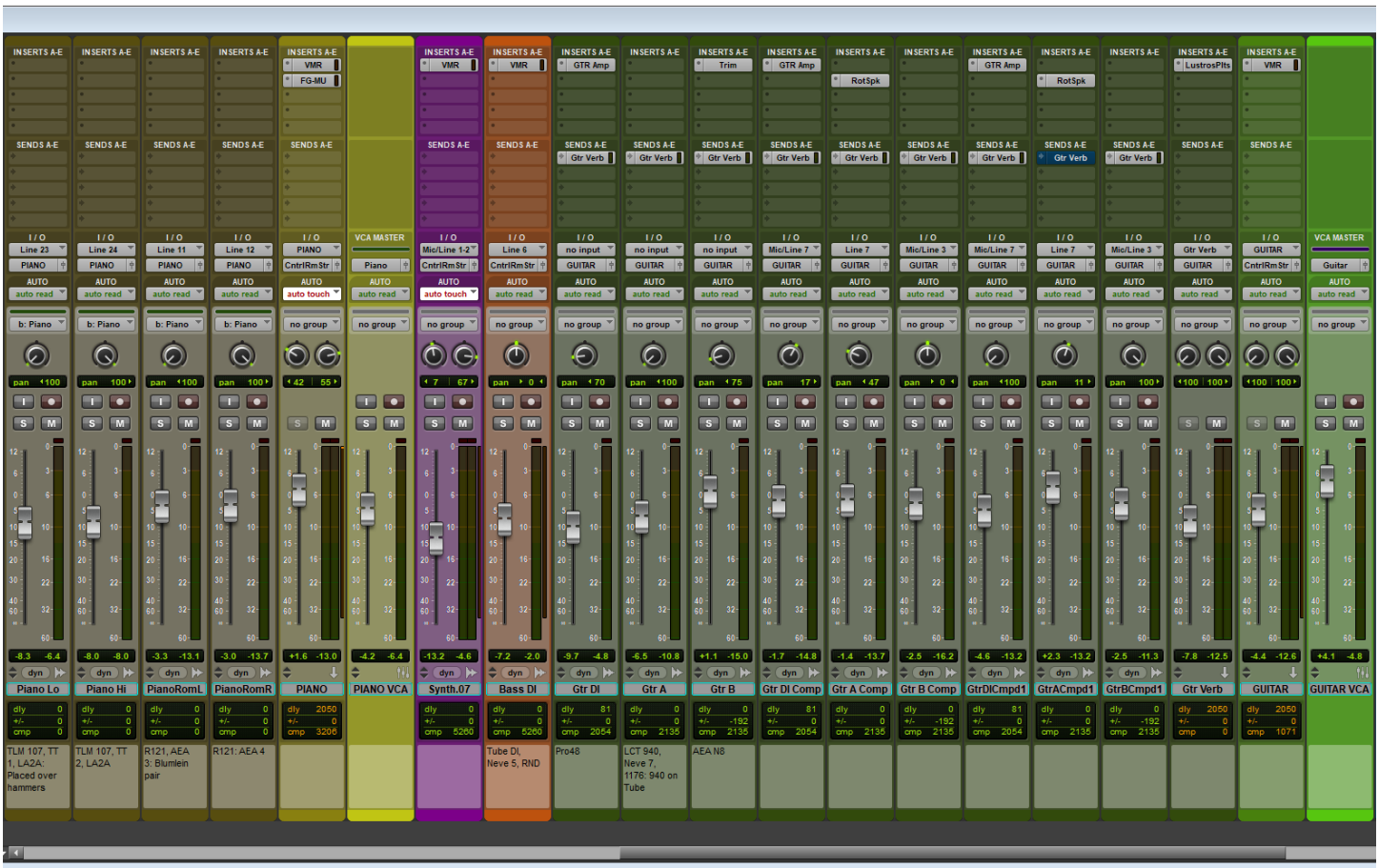
This was a callback to the 2009 remaster where the delayed hi hat was prominent in the intro. Interestingly, that effect was cut in the 2015 remaster.

I also took Jake's advice and added a FG-MU to the **OH Mono** track as well with pretty heavy compression. I found the sound really nice and very similar to the classic Beatles sound. When doing my modulation, I mainly pushed up the OH Mono track during solos to bring out the punchy toms and cymbal hits.

I also put a bit of compression on each of my kick mics, then routed them all to a **Kick** bus. I mainly was looking to get more click out of the kick sound as a whole, hence the high frequency boosts.

My **Drum Verb** was not doing too much as I got a lot of my room tone from my **Room Floor** mics and somewhat distant **OH Hat** and **OH Ride**, but it helped fit the spot mics with the OH and Room mics a bit better.

Moving on, here is the mix window view for bass, synth, piano, and guitars:



On the **Piano Bus**, I wanted that pumping sound like on the original tracks, so I put on another FG-MU.

I also tried out the Slate Virtual MixBuss & Channel Strip on this and many other tracks. I didn't hear much difference unless I really drove the input, but I think with more experimentation I could probably make better use of these in a different mix.

Not pictured here, the **Synth** track VMR had the same virtual channel strip on it as well as some light compression. In that case, I pushed the input of the virtual strip pretty hard to give it some edge.

The **Bass** track was also treated pretty tamely, just with a decent amount of compression with a slightly slow-ish attack and fast release in order to increase the sustain of the notes as seen here:

There was also a bit of buzz so I tried to take that out a but by taking out some of the high frequencies before compression.

The **Gtr DI** and **Gtr DI Comp** tracks both had amp plug-ins since I wanted to get a cleaner tone out of the tracks to go along with the more distorted sounds from the amp mics. I also used the Roto Speaker on the solo guitar mic A and double A tracks for fun.

Finally, I had a **Gtr Verb** routed along with all the dry signals into the **Gtr Bus** with the VMR signal chain seen below:

The first Neve EQ was used to take out most of the low-end to make room for the bass and kick (it was a very dark guitar tone while tracking) and the Distressor and Monster were there to just smush everything together and bring out the rhythm a bit while the solos were not playing. I realize that the last Neve EQ on the VMR isn't doing anything, I had it there just in case but I ended up liking the tone and just neglected to remove it.

Last, but certainly not least, is the **Vocal Comp B** signal chain, as seen in mix window view to the right with the plug-in chain below. In the VMR I have the virtual channel strip first, which I liked the sound of in concept, however because I overcompressed my vocals on the way in, they had a lot of harmonic distortion which I found very grating, so I had to tone that effect down as any more distortion would be very unpleasant. Next, the Neve EQ was useful in taking out some especially annoying frequency ranges from the track and helped me control the compressor a bit more, but in reality the Distressor was doing very little and only really became active at the very peaks of her dynamics. Lastly, I used one more Neve EQ to do final adjustments to the overall frequency content before it hit the Sibilance de-esser.

To finish it off, I had a send from the vocal to both a tape delay and a reverb to give it interest and a sense of space. On the delay I went for a more slappy delay time and for the reverb I tried for a somewhat long decay time but with a darker sound.

Automation:

I used automation on the drum bus, piano bus, synth, bass, guitar bus, and vocal tracks. I mainly tried to build excitement when transitioning from verse to chorus by bringing up the piano, synth, and bass during choruses. I also brought the guitar bus up during the break when he solos, and brought the drums up during fills. Also mentioned before, for the drum fills I liked using some automation on the OH Mono to bring out the full kit feel and bring it a bit more center.