

**SCHOOL OF TECHNOLOGY FOR THE ARTS
DIPLOMA IN SONIC ARTS**

AY2020 SEMESTER 1

**T219 LIVE SOUND FUNDAMENTALS
GRADED ASSIGNMENT SUBMISSION**

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Date of Submission: 4th August 2020

T219 GRADED ASSIGNMENT AY2020 Sem 1

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Module	T219 LIVE SOUND FUNDAMENTALS
Date of Submission:	4th August 2020
Declaration: Please note that plagiarism will result in immediate failure. In such an event, the graded assignment will be awarded an F grade.	I declare that my submission is my original work and effort. Signature: Samuel Leong <hr/> Name: Leong Zhi Cheng Samuel

Live Sound Reinforcement Production Planning & Documentation for DoVID20**<HillV2 Central Plaza Atrium >****A. Equipment & packing list**

No	Item	Quantity	Remarks
1	Sennheiser, E914 (MPY10759)	1	HI Hat Mic (SDC)
2	AKG, D112 MK2 (AMP18324)	1	Kick Out Mic
3	Sennheiser MD 421 ii (MPY11279)	1	Floor Tom Mic
4	Sennheiser, E904 (MPY10747), (AMP10748)	2	Rack Toms Mic
5	Shure, Beta 57A (AMP11246)	1	Snare Mic
6	Rode, NT5 (AMP18322,) (AMP18323)	2	Overhead Pair (SDC)
7	Country Man, DI box (AMP10855), (AMP10856), (AMP10860)	3	Electric Guitar, Bass DI + 1 SPARE
8	Marshall Gold Series Guitar Combo Amplifier MG101GFX (MPY18486)	1	Electric Guitar Amp
9	Hartke Hydrive 5210C Bass Combo (MPY18464)	1	Electric Bass Guitar Amp
10	Palmer PAN04 Stereo Passive DI Box (AMP17876), (AMP17875)	2	Keys DI. 1 spare
11	Roland Keyboard Amplifier KC600 (MPY18475)	1	Keys Amp STORE A
12	Shure, SM58 (AMP18271), (AMP18269)	2	change to MPY18539/1 TalkBack (FOH)

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			change to MPY18539/4 Spare
13	Shure, SM58A (AMP11253)	1	Vocal Mic
14	12XT - L-Acoustic (STA10659), (STA10658), (STA10663), (STA10656),	8	FOH (4), Monitors (4)
15	SB118 - L-Acoustic bass (STA10668), (STA10667), (STA10666), (STA10665),(STA10660),(STA10662),(STA10657),(STA10661)	4	Subwoofers (4)
16	TASCAM CD-RW901	1	#03 TASCAM CDRW901 (CD 2000)
17	4 WAY GANG POWER STRIP TO 13 AMP HEAD (extension cable)	10	8 New + 2 Old(Spare)
18	Power extension Drum	4	-
19	16 AMP CEEFORM TO 4 WAY GANG POWER STRIP	8	8 new 6+2 Spare
20	POWERCON TYPE (B) TO POWERCON TYPE (W)	9	-
21	CEEFORM TO 3 PIN	5	5 New
22	CEEFORM (Y) CABLE	5	-
23	CANARE SNAKE CABLE	3	2 short, 1 Long
24	Multicore Cable	6	-
25	Junction Box	3	8 channel. 2+1 spare.
26	K&M 213 Speaker Stand w/Crank Gear (AMP18532),(AMP18533),(AMP18534),(AMP18535)	4	-
27	Whirlwind Qbox (AMP10399),(AMP10400)	2	1 with Zhong. Cable Tester

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28	Audio Technica Headphone (AMP17708),(AMP17709)	2	-
29	Stage Pass	10	8 + 2 spare
30	XLR (MALE) TO XLR (FEMALE)	15	-
31	XLR (MALE) TO XLR (MALE)	9	Long
32	1/4 inch TO XLR (MALE) convertors	5	-
33	¼ inch TS TO ¼ inch TS	6	-
34	¼ inch TRS TO ¼ inch TRS	6	-
35	LA4X Amplified Controller with PFC 4X1000 (STA11661),(STA11659),(STA11660),(STA11658)	4	3+1 Spare
36	Guitar stand (MPY12131),(MPY12126)	2	Bass and electric Guitar stands
37	Music Stand	3	Stands for Drums, Keyboard and Guitar if needed.
38	ATLAS TEB-E Tall stand	5	2 Short, 3 Tall
39	Sennheiser Tall microphones stand	7	Drum Mic stands
40	Yamaha LS9 16 Mixer	1	Main Mixer console
41	NL4 SPEAKON CABLE	16	10 Long, 6 short

B. Crew list with task assignment

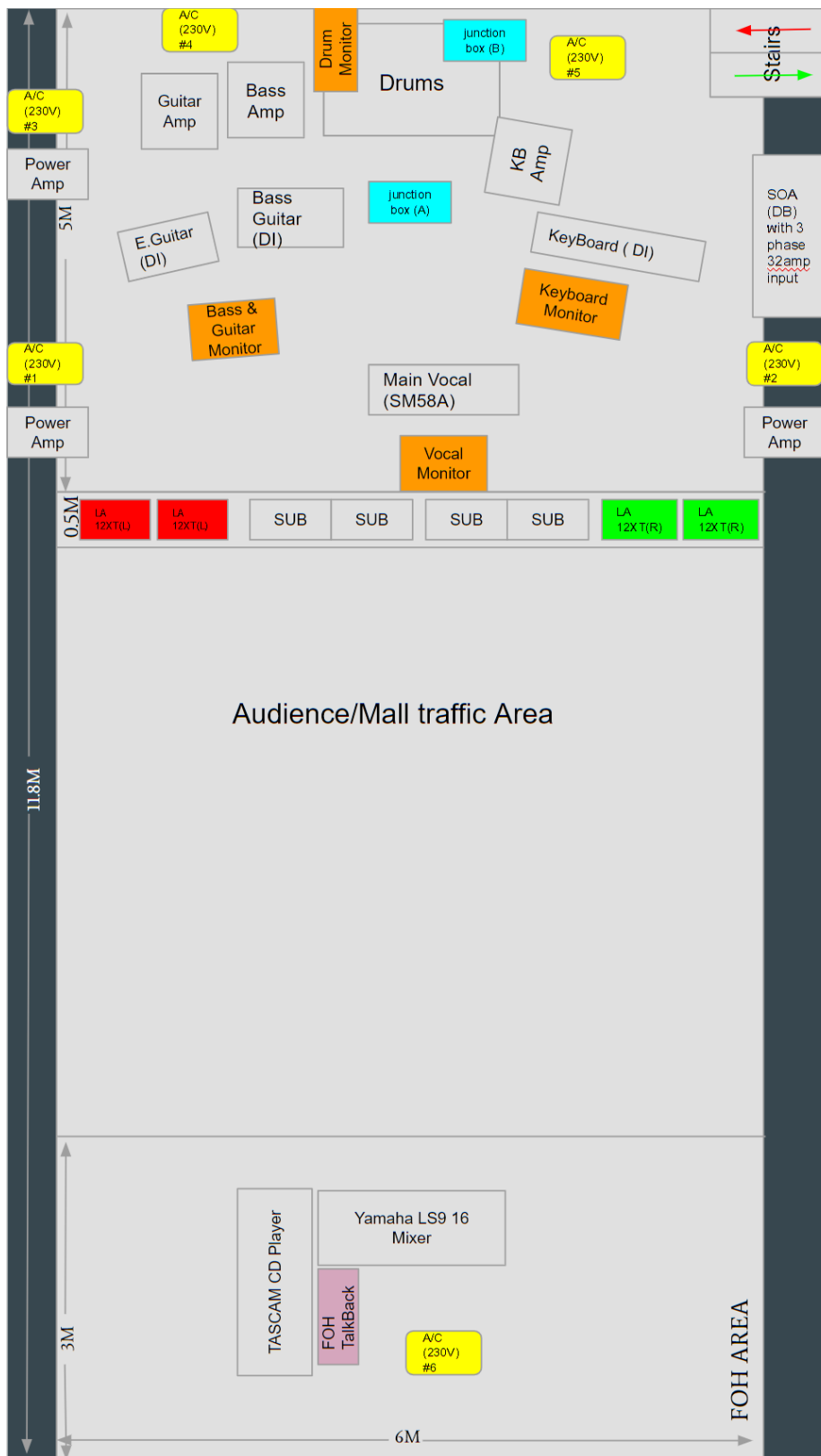
No	Task	Crew role	Remarks
1	Makes sure transport, clearances are done properly. Configuration of everything tuning such as mixer and speakers.	Production Manager & System Engineer	A1 Name: Samuel Leong Safety OIC
2	Responsible for sound to performers. Prevent Feedback and Set the Levels right. Responsible for what audience hear on shows. Balances out the band	FOH/Monitor Engineer	A2 Name: Chua Tze Lai
3	Help unload and load. Setting up the artist's or bands instrument correctly.	Stage/Instrument Tech & Hands	General Labour Name: Tan Jin Swee

C. Production schedule

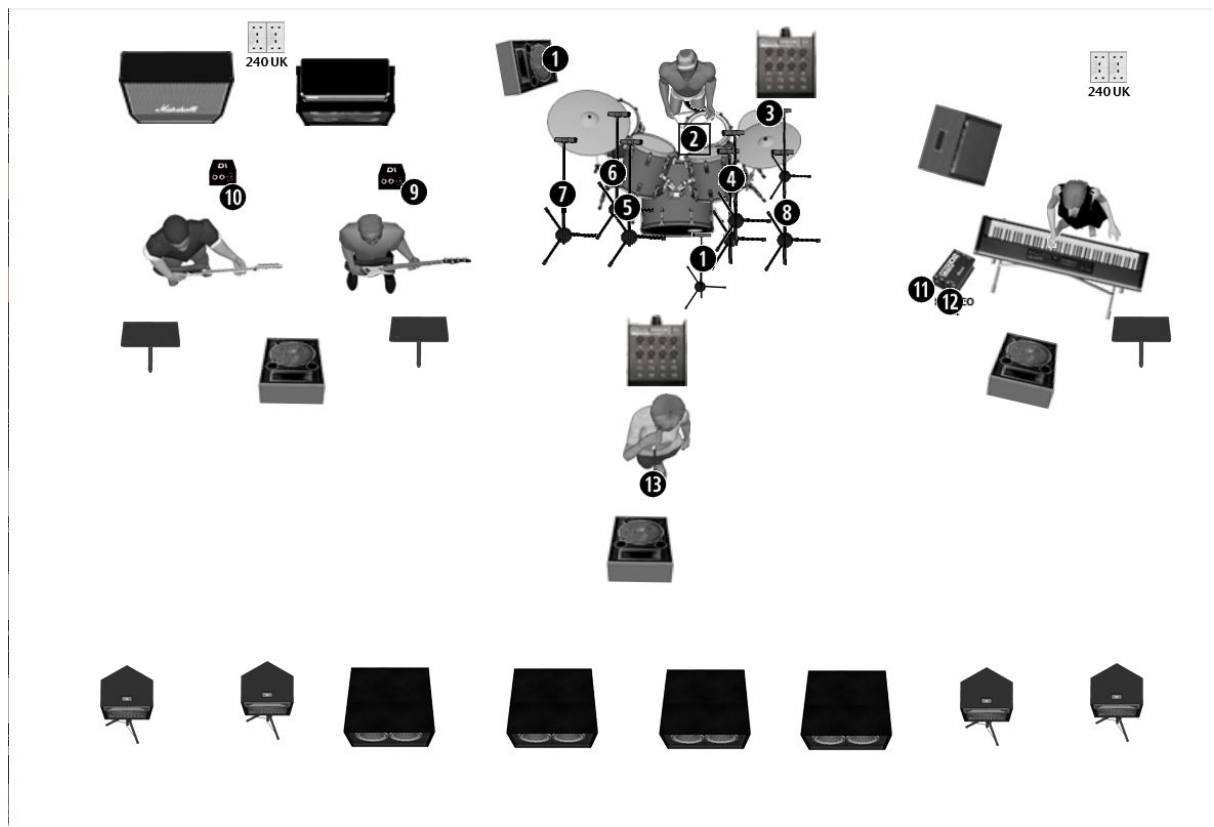
Time	Task	Crew	Remarks
0800-1000	Unload gear at venue loading bay	All	Meet at loading bay at 0750hrs
1000-1100	Travel to location	All	Plan for transport
1100-1300	BUMP IN <ul style="list-style-type: none"> - Speakers - Mixers - Equipment - Stage - Cable Tests 	All	Venue should be setup.
1300-1400	Lunch Break	All	Buy own food
1400-1600	Setup of venue Part 2 <ul style="list-style-type: none"> - Cable Tests - Ringing out 	All	Test speakers and calibrate them - Samuel
1600-1700	Band setup <ul style="list-style-type: none"> - Monitor setup - Equipment setup 	All	Bring Band in and setup
1700-1730	Sound check	All	Try 2 to 3 songs at least
1730 -1830	Dinner Break	All	Buy own food
1830-1900	Warm up and sound check <ul style="list-style-type: none"> - Check Final monitor Mix - Final Balancing of FOH 	All	-
1900-2030	Band LIVE Performance	All	-
2030-2200	BUMP OUT <ul style="list-style-type: none"> - Arrange transport to be at location by 2150 	All	-
2200-2300	Return and unload equipment for storage	All	-

D. Stage and system layout diagram

Venue layout

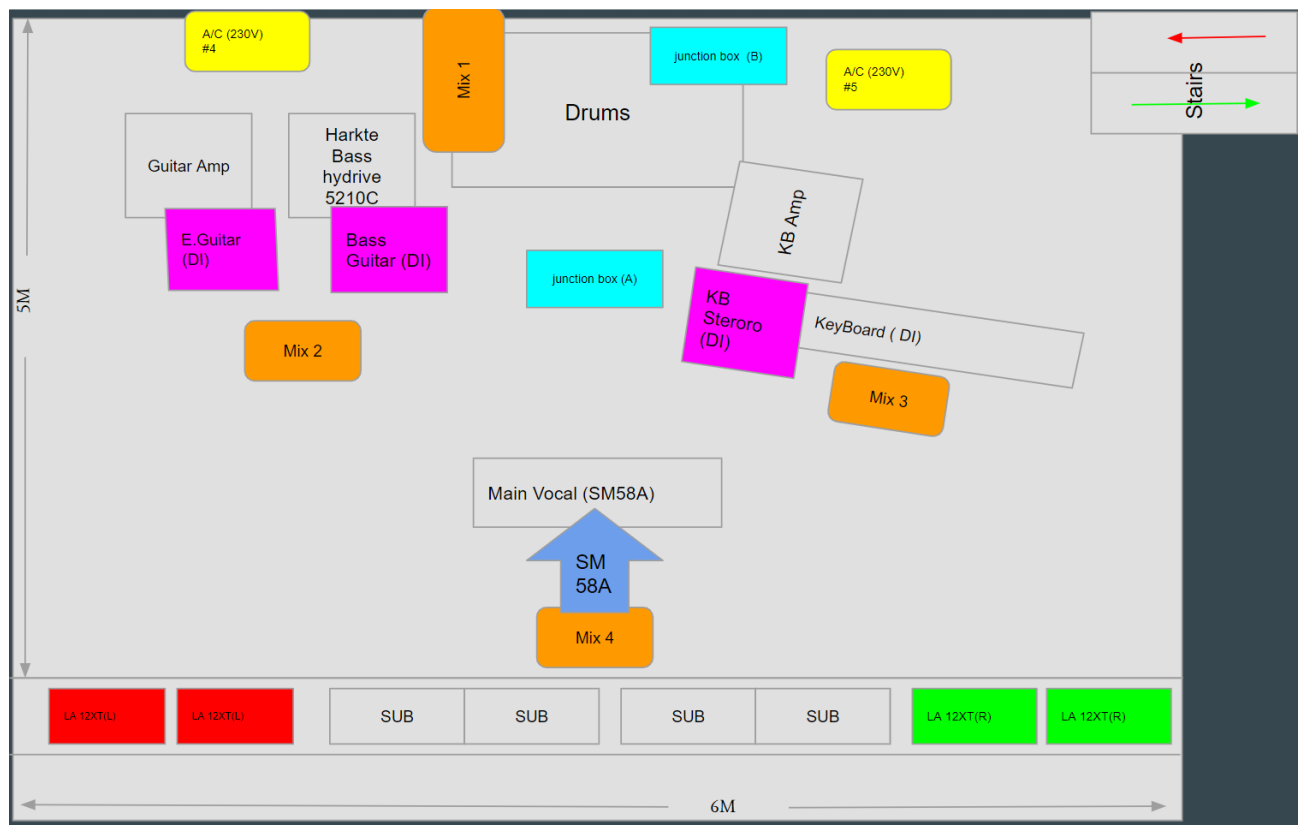


Note: AC#1 to 3 are off stage. ALL Power amps are off stage also.

Stage Plot

INPUT	10. Electric Guitar DI
1. Kick	11. KB L
2. Snare	12. KB R
3. High Hat	13. Vocal
4. Tom 1	14. CD L
5. Tom 2	15. CD R
6. Floor Tom	16. FOH Talkback Mic
7. OH L	
8. OH R	
9. Bass DI	

1. Kick	9. Bass DI	OMNI 1 – Drum Monitor
2. Snare	10. Electric Guitar DI	OMNI 2 – Bass & Guitar Monitor
3. High-Hat	11. KB DI (L)	OMNI 3 – KB Monitor
4. Tom 1	12. KB DI (R)	OMNI 4 – Vocal Monitor
5. Tom 2	13. Vocal	OMNI 5 – FOH L
6. Floor Tom	14. CD (L)	OMNI 6 – SUB L
7. Overhead L	15. CD (R)	OMNI 7 – FOH R
8. Overhead R	16. FOH Talkback	OMNI 8 – SUB R



E. Input & output patch lists

INPUTS						
MIXER CH	SNAKE CH	SOUND SOURCE	TRANSDUCER	ACCESSORY	INSERTS	REMARKS
CH 1	1 Junction Box A 1(A)	Kick Drum	AKG D112	Short mic stand w boom	EQ, Gate, Compressor	Place inside the drum port hole pointing to the beater
CH 2	2 Junction Box A 2(A)	Snare drum	Beta 57A	Short mic stand w boom/ Clip On?	EQ, Gate, Compressor. Reverb	Point it to the centre of the drumhead. Aiming it at the rim.
CH 3	3 Junction Box A 3(A)	High Hat	Sennheiser, E914	Tall Mic stand with Boom	EQ, Compressor	Mic is placed further from the Crash. Halfway between the bell and edge of top cymbal pointing down. Face Mic in opposite direction if too much bleed occurs. 48V HPF 500hz
CH 4	4 Junction Box A 4(A)	Rack Tom1	Sennheiser, E904	Tall mic stand w boom/ Clip On?	EQ, Compressor	6 inches above drumhead. Over rim pointing centre of drum. Hear the attack of

						the stick. If push toward Rim Get lesser Decay.
CH 5	5 Junction Box A 5(A)	Rack Tom 2	Sennheiser, E904	Tall mic stand w boom/ Clip On?	EQ, Gate, Compressor	6 inches above drumhead. Over rim pointing centre of drum. Hear the attack of the stick. If push toward Rim Get lesser Decay.
CH 6	6 Junction Box A 6(A)	Floor Tom	Sennheiser MD 421 ii	Tall mic stand w boom/ Clip On?	EQ, Gate, Compressor	6 inches above drumhead. Over rim pointing centre of drum. Hear the attack of the stick. If push toward Rim Get lesser Decay.
CH 7	7 Junction Box A 7(A)	Overhead Left	Rode, NT5	Tall mic stand w boom	EQ, Compressor	-10dB, HPF. 24inches high with the mic pointed to the bell of the cymbal. Make sure its equidistant from the kick 48V
CH 8	8 Junction Box A	Overhead Right	Rode, NT5	Tall mic stand w boom	EQ. Compressor	-10dB, HPF. 24inches high with the mic

	8(A)					<p>pointed to the bell of the cymbal. Make sure its equidistant from the kick.</p> <p>48V</p> <p>Channel Job then link both OH L and R together.</p>
CH 9	<p>9</p> <p>Junction Box B</p> <p>1(B)</p>	Bass Guitar (DI)	CountryMan DI Box	TS Cables, XLR male to Female	EQ, Compressor	<p>Pad if signal too loud. Choose impedance with the lowest humm/noise.</p> <p>Route Short TS into bass Amp.</p> <p>Place DI closest to the Amp.</p> <p>48V for DI box (active)</p>
CH 10	<p>10</p> <p>Junction Box B</p> <p>2(B)</p>	Electric Guitar (DI)	CountryMan DI Box	TS Cables, XLR male to Female	EQ, Compressor	<p>Pad if signal too loud. Choose impedance with the lowest humm/noise.</p> <p>Route Short TS into Guitar Amp.</p> <p>Place DI closest to the Amp.</p> <p>48V for DI box (active)</p>

CH 11	11 Junction Box B 3(B)	Keyboard/Synth Left (DI)	Palmer PAN04 Stereo Passive DI Box	TS Cables, XLR male to Female	EQ, Compressor	Place DI closest to the Amp.
CH 12	12 Junction Box B 4(B)	Keyboard/Synth Right (DI)	Palmer PAN04 Stereo Passive DI Box	TS Cables, XLR male to Female	EQ, Compressor	Place DI closest to the Amp.
CH 13	13 Junction Box B 5(B)	Vocal	SM58A	XLR male to Female	EQ, Compressor, reverb	HPF Use a Mic stand
CH 14	14	CD Player (L)	TASCAM CD-RW901	-	-	CD Player
CH 15	15	CD Player (R)	TASCAM CD-RW901	-	-	CD Player
CH 16	16	Talkback (FOH)	SM58	XLR male to Female	-	Talkback Mic FOH
ST 1	-	Effects 1 return (Stereo)	-	-	-	LS9 16 internal effects rack.
ST 2	-	Effects 2 return (Stereo)	-	-	-	LS9 16 internal effects rack.
ST 3	-	Effects 3 return (Stereo)	-	-	-	LS9 16 internal effects rack. Click layer 17 – 32 to access ST 3
ST 4	-	Effects 4 return (Stereo)	-	-	-	LS9 16 internal effects rack.

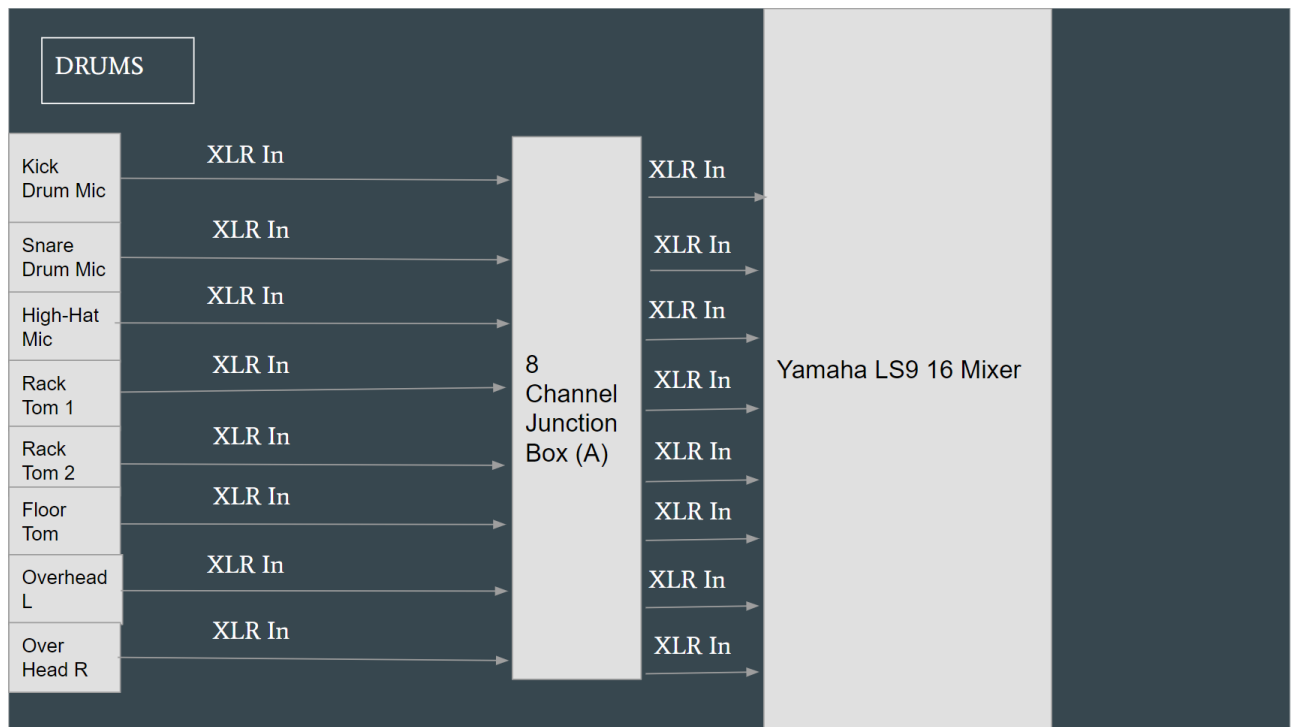
						Click layer 17 – 32 to access ST 4
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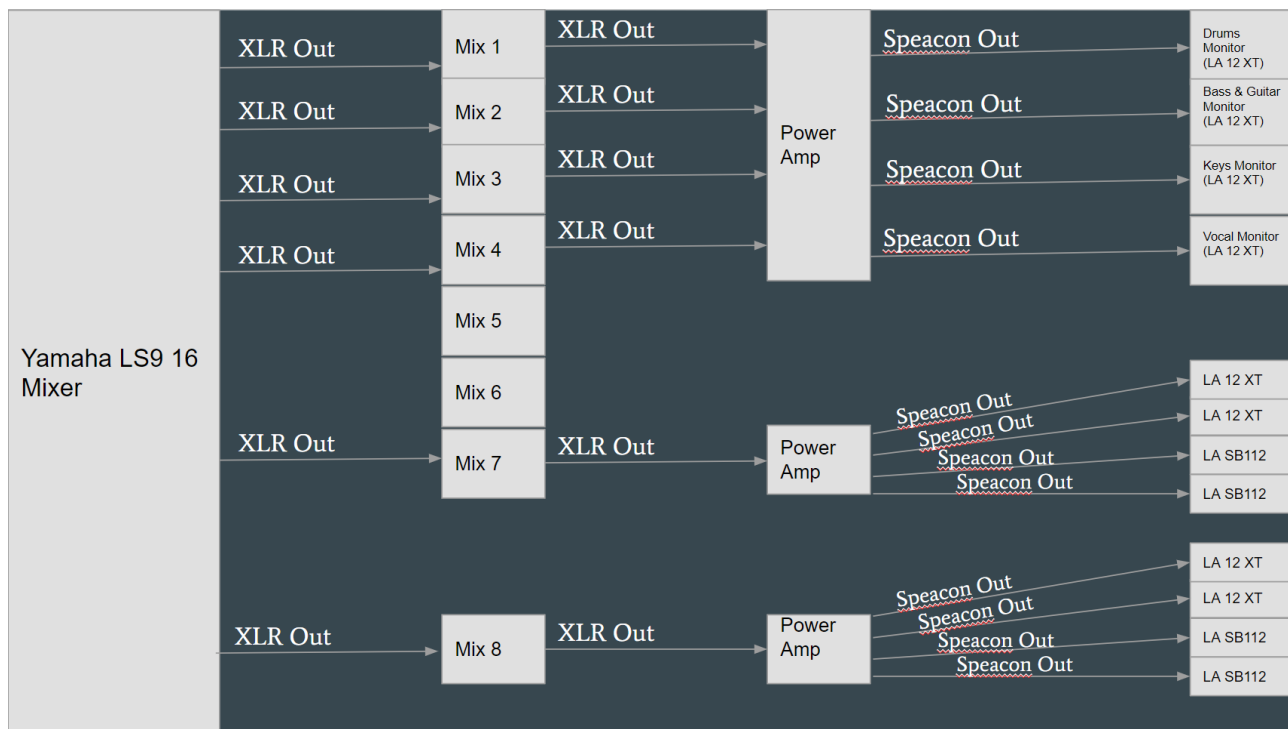
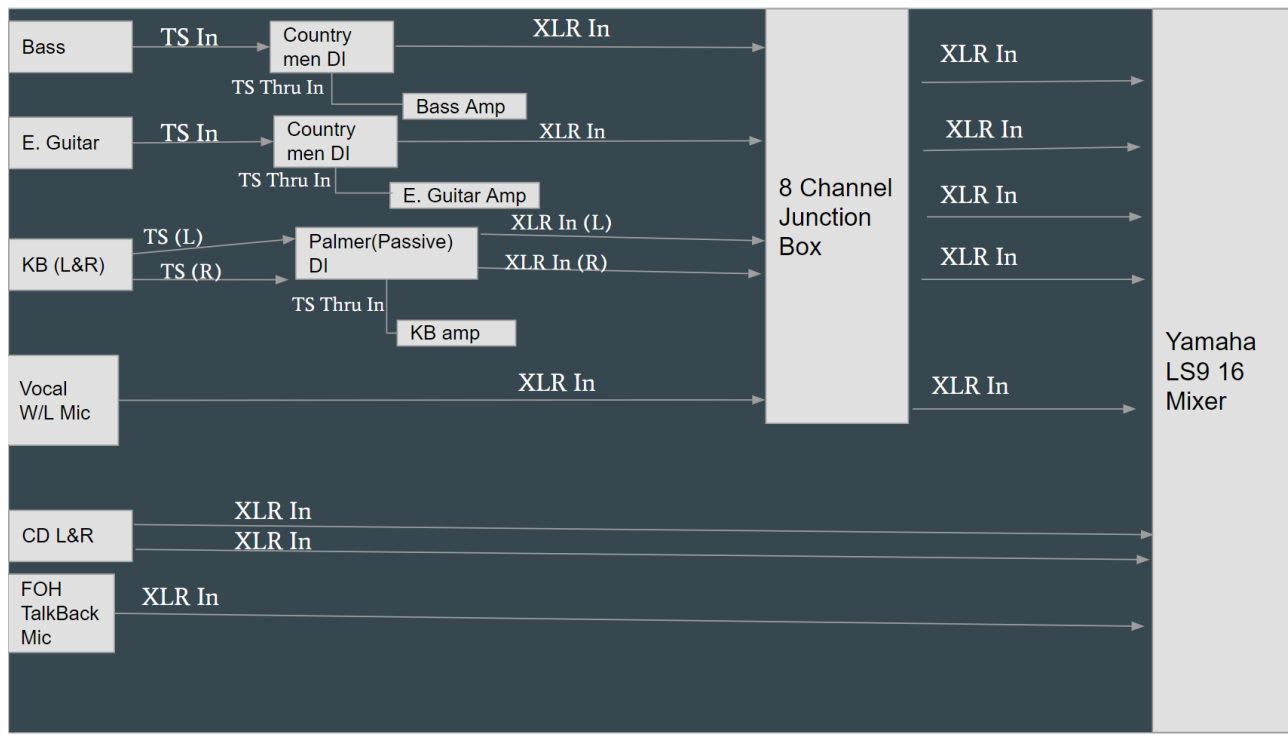
OUTPUTS

CH	Mixer output	Destination	Inserts	Transducer	Remarks
Mix 1	Omni 1	Drums Monitor (IEM)	-	LA12XT Wedge	Drums Monitor on Mix 1. Patch the into the wedge using speacon. Prefader
Mix 2	Omni 2	Bass & Guitar monitor (IEM)	-	LA12XT Wedge	Bass and Guitar on Mix 2. Bass and Guitar sharing. Patch the into the wedge using speacon. Prefader
Mix 3	Omni 3	Keys Monitor (IEM)	-	LA12XT Wedge	Keys Monitor on Mix 3. Patch the into the wedge using speacon. Prefader
Mix 4	Omni 4	Vox monitor	-	LA12XT Wedge	Vocal Monitor in Mix 4. Patch the into the wedge using speacon. Prefader
Mix 5	Omni 5	-	-	-	-
Mix 6	Omni 6	-	-	-	-
Master stereo (L)	Omni 7	LA12XT (2) (FOH L)	GEQ	FOH (L). 2 LA12XT speakers SB118Subs (L) (2)	Main (L) FOH (2)and subs(2)
Master stereo (R)	Omni 8	LA12XT (2) (FOH L)	GEQ	FOH (R). 2 LA12XT speakers	Main (L) FOH (2)and subs(2)

				SB118Subs (R) (2)	
Mix 9	Omni 9	-	-	-	-
Mix 10	Omni 10	-	-	-	-
Mix 11	Omni 11	-	-	-	-
Mix 12	Omni 12	-	-	-	-
Mix 13	Omni 13	Stereo Master	-	LS9 16	Snare Reverb
Mix 14	Omni14	Stereo Master	-	LS9 16	Vocal Reverb
Mix 15	Omni 15	Stereo Master	-	LS9 16	Reverb Unit
Mix 16	Omni 16	Stereo Master	-	LS9 16	Delay Unit

F. Signal flow diagram





G. Electric power distribution plan and diagrams

