

# ***Service Manual***

**MODEL: AMX 220FX-USB**

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## 1. INTRODUCTION

- 8 MIC input channels with gold plated XLR and balanced LINE inputs
- 4 stereo input channels with balanced TRS jacks
- Ultra-low noise discrete MIC pre-amps with +48V Phantom Power
- Extremely high headroom offering more dynamic range
- Insert on each of mono input channels
- Switchable Low-cut filter on each mono channel
- +4dBu/-10dBV selector on each stereo channel
- Warm, natural 4-band fixed frequency EQ on each stereo channel
- Peak LED on each channel
- Mute/ALT 3-4, SOLO function on each channel
- 2 AUX Returns for additional functionality
- Control room and Phone outputs
- 2-Track inputs assignable to Main Mix, Control Room/Phones outputs
- Highly accurate 12-segment bar graph meters
- 24 bit digital effect processor
- 256 effects (16 presets\*16 variations)
- Effect on/off by means of MUTE switch or a footswitch connected to the DFX

### FOOTSWITCH

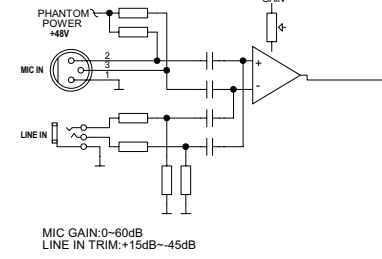
- 16 Bit 32~48KHz ADC/DAC USB input and output with selectable track
- No software drivers are need with windows XP or Mac OSX
- Performance and excellent noise figures
- Adjust the input sensitivity on each stereo channels
- Stereo USB input and output with selectable track
- Manufactured under ISO9001 certified management system

## 2. TECHNICAL SPECIFICATION

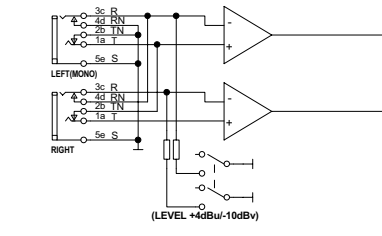
Mono input channels	Microphone input	Electronically balanced ,discrete input configuration
	Frequency response	10Hz to 55KHz, $\pm 3$ dB
	Distortion (THD&N)	0.005% at +4dBu, 1KHz
	Gain range	0dB to 44dB(MIC)
	SNR (Signal Noise Rated)	115dB
	Line input	Electronically balanced
	Frequency response	10Hz to 55KHz, $\pm 3$ dB
	Distortion (THD&N)	0.005% at +4dBu, 1KHz
	Sensitivity range	+15dBu to -45dBu
Stereo input channels	Line input	Balanced
	Frequency response	10Hz to 55KHz, $\pm 3$ dB
	Distortion (THD&N)	0.005% at +4dBu, 1KHz
Impedance	Microphone input	1.4K ohm
	Channel insert return	2.5K ohm
	All other inputs	10Kohm or greater
	Tape out	1K Ohm
	All other output	120 ohm
Equalization	Hi shelving	$\pm 15$ dB @ 12KHz
	Mid sweep	$\pm 15$ dB @ 100Hz~8KHz
	HI-MID	$\pm 15$ dB @ 3KHz
	MID-Low	$\pm 15$ dB @ 500Hz
	Low shelving	$\pm 15$ dB @ 80Hz
DSP SECTION	A/D and D/A converters	24 bit
	DSP resolution	24 bit
	Type of effects	Hall, Room, Vocal & Plate REVERBS Mono & Stereo DELAY (max DELAY TIME 650ms) Chorus, Flanger & Reverb MODULATIONS REVERB+DELAY, REVERB+CHORUS REVERB+FLANGER combinations
	Presets	256
	Controls	16-position PRESET Selector 16-position VARIATION selector PEAK LED MUTE SWITCH with LED indicator
USB SECTION	ADC / DAC	16 Bit 32~48KHz
	Fully Compliant with USB 1.1 specification	
	No software drivers are need with windows XP or MAC OSX	
Main Mix Section	Noise (Bus noise )	Fader 0 dB, channels muted:-100.0dBr (ref.:+4dBu)
		Fader 0 dB,all input channels assigned and set to UNITY gain:-90dBr(ref.:+4dBu)
	Max output	+22dBu balanced XLR,
		+22dBu unbalanced, 1/4" jacks
	AUX Return gain range	OFF to +15dB
AUX Sends max out	+22dBu	
Power supply (AC/AC Adaptor)	Main voltage	USA/ Canada 100-120V~,60Hz
		Europe 210-230V~,50Hz
		U.K/Australia 240V~,50Hz
Power Consumption	36watts	
Physical	Dimension (WxDxH)	420mmx440mmx43mm(16.54"x17.3x1.69")
	Net weight	4.86Kg

# AMX-220FX USB

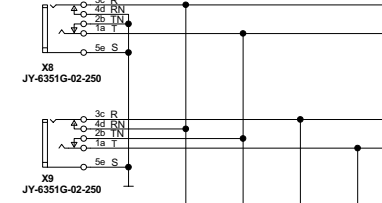
### MONO INPUT CHANNELS (1-8)



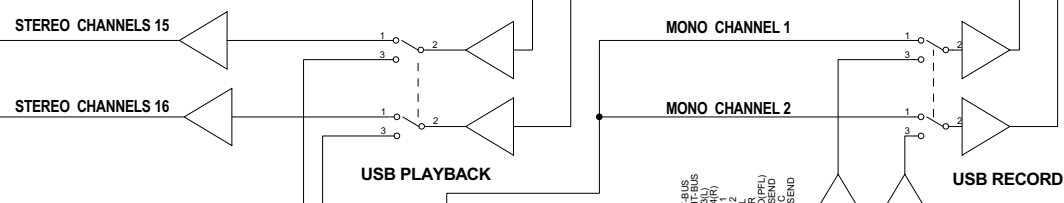
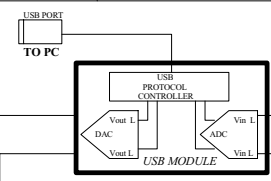
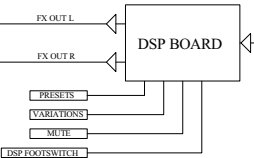
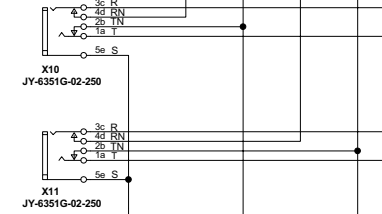
### STEREO INPUT CHANNELS (9-16)



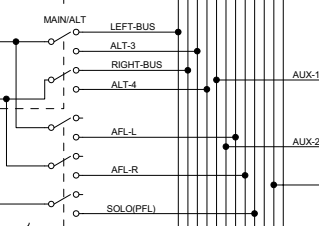
### STEREO AUX RETURN 1



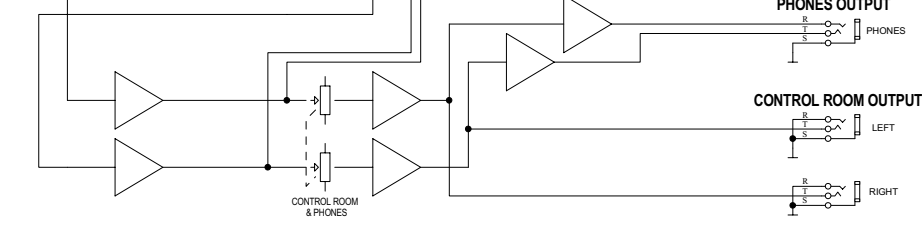
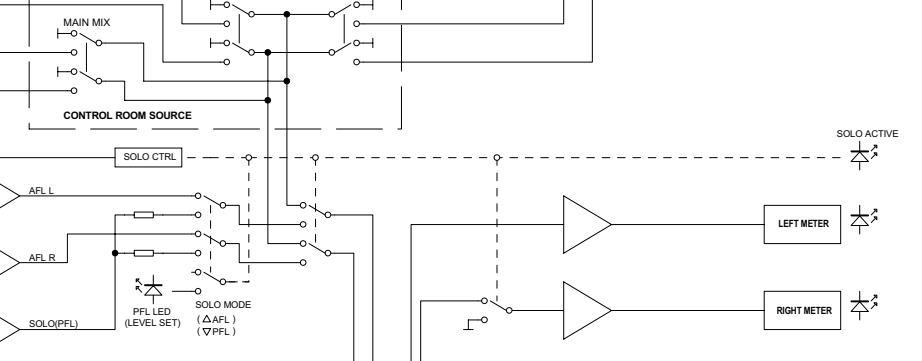
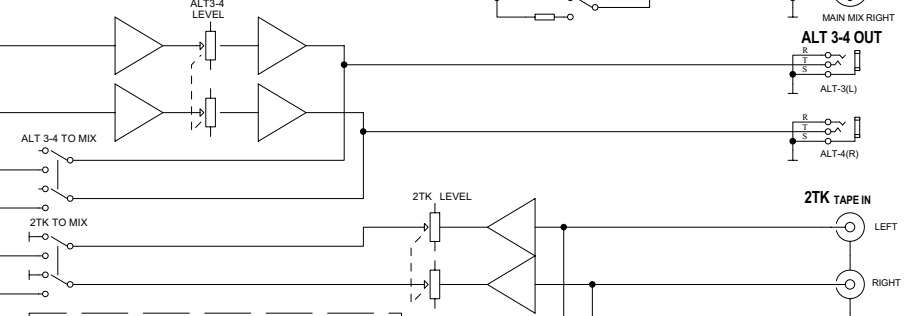
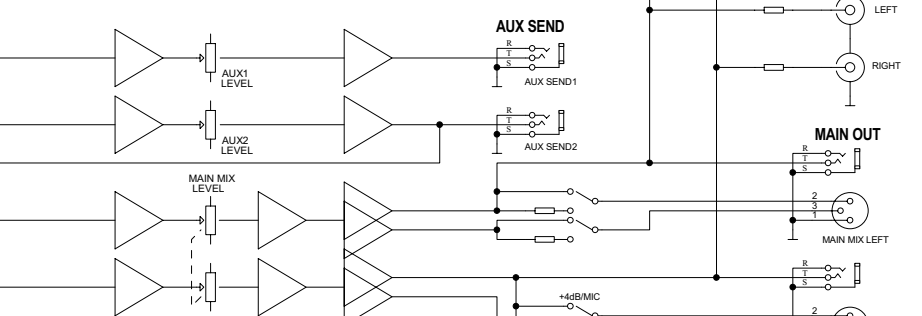
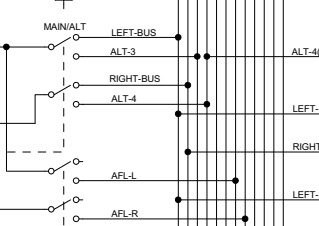
### STEREO AUX RETURN 2



### MUTE/ALT3-4 LED

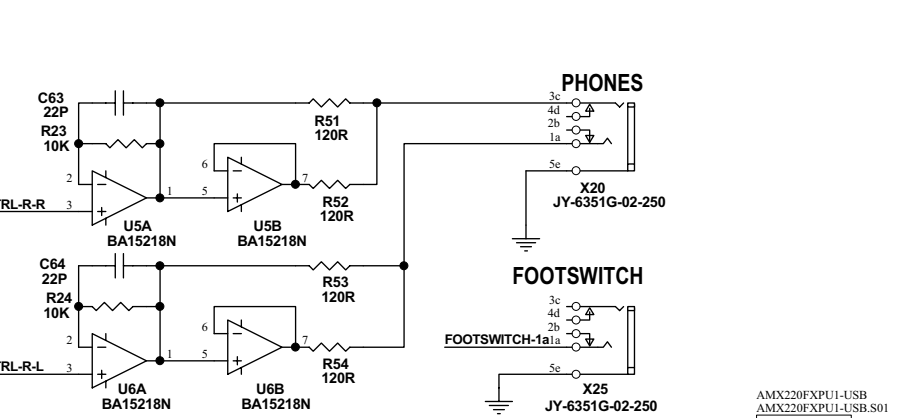
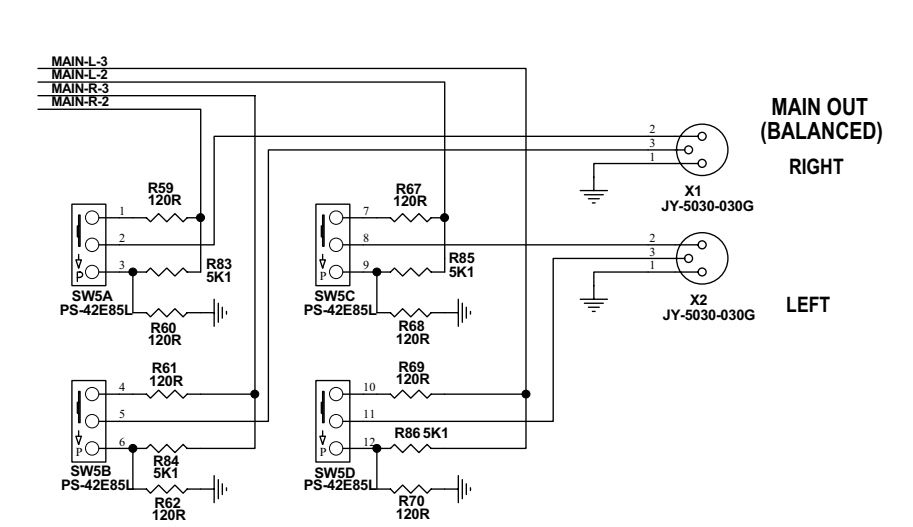
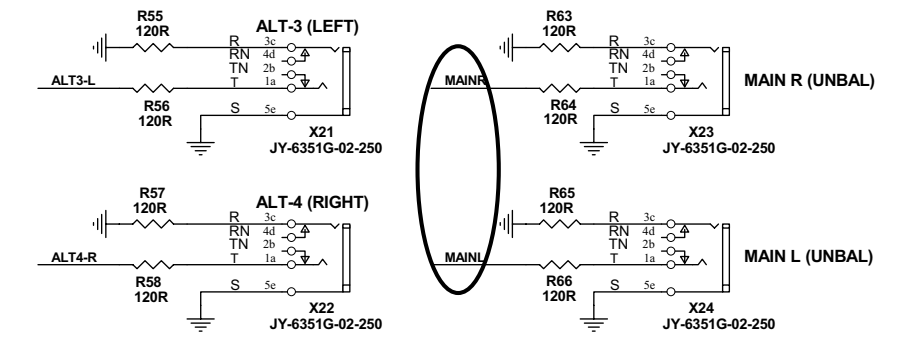
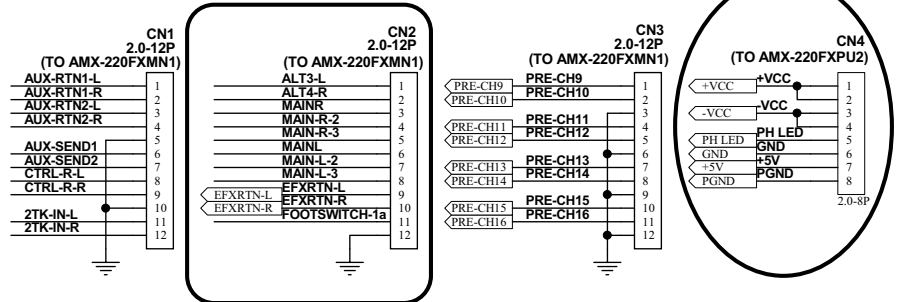
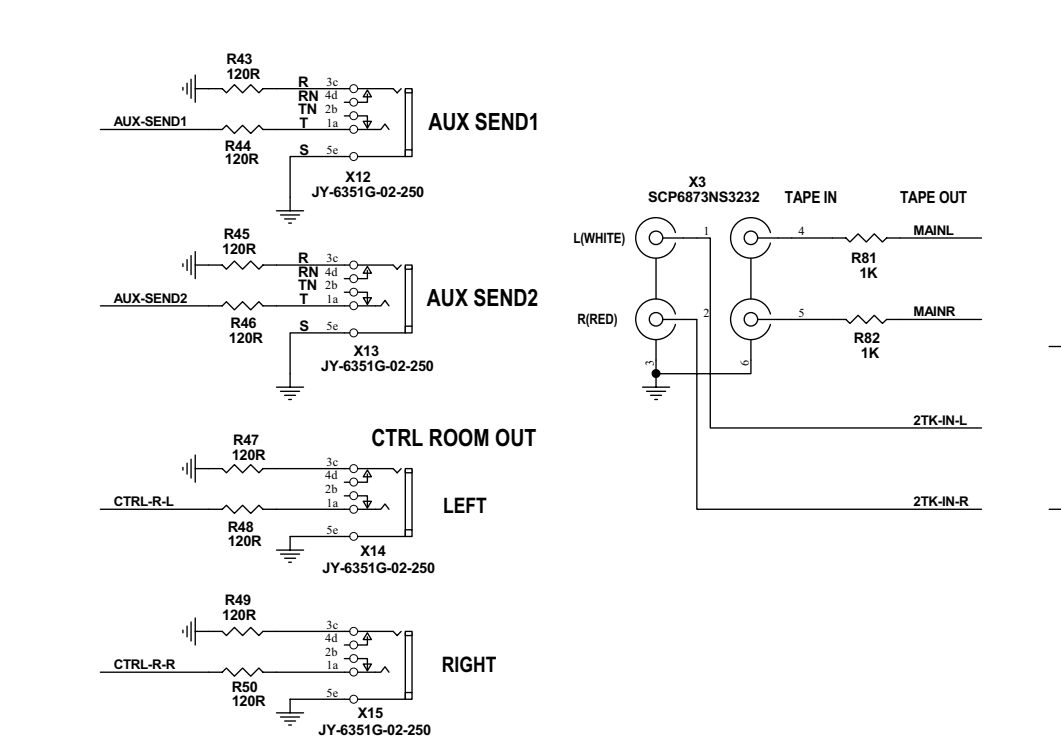
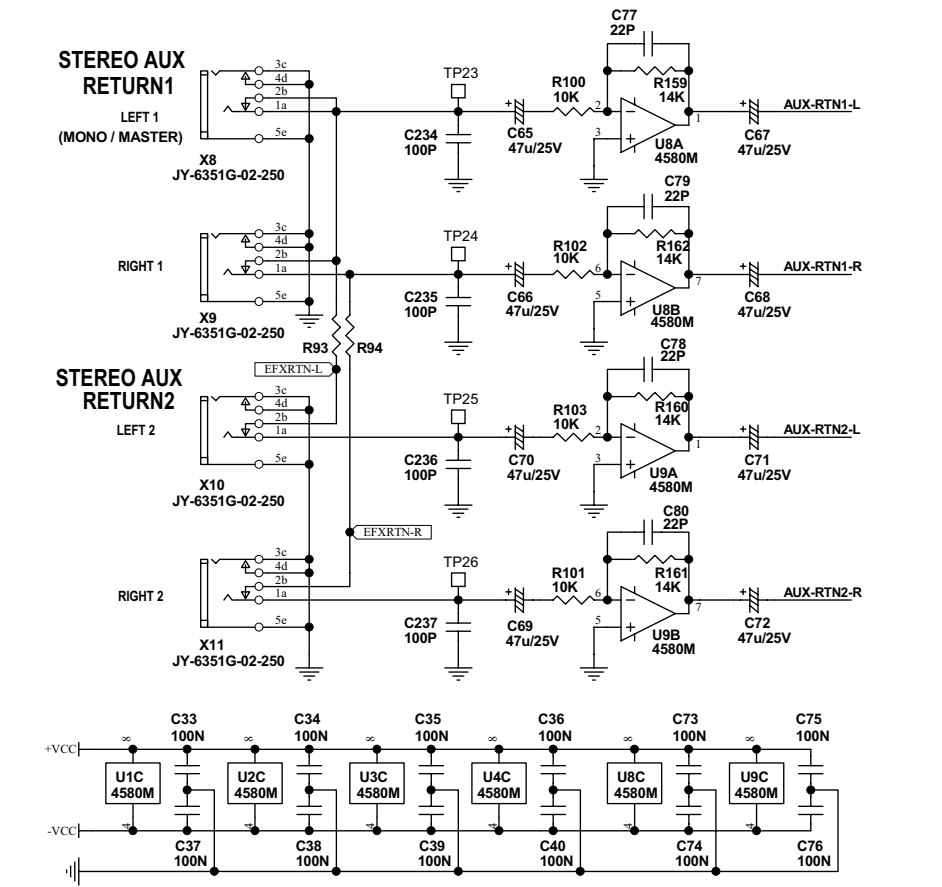
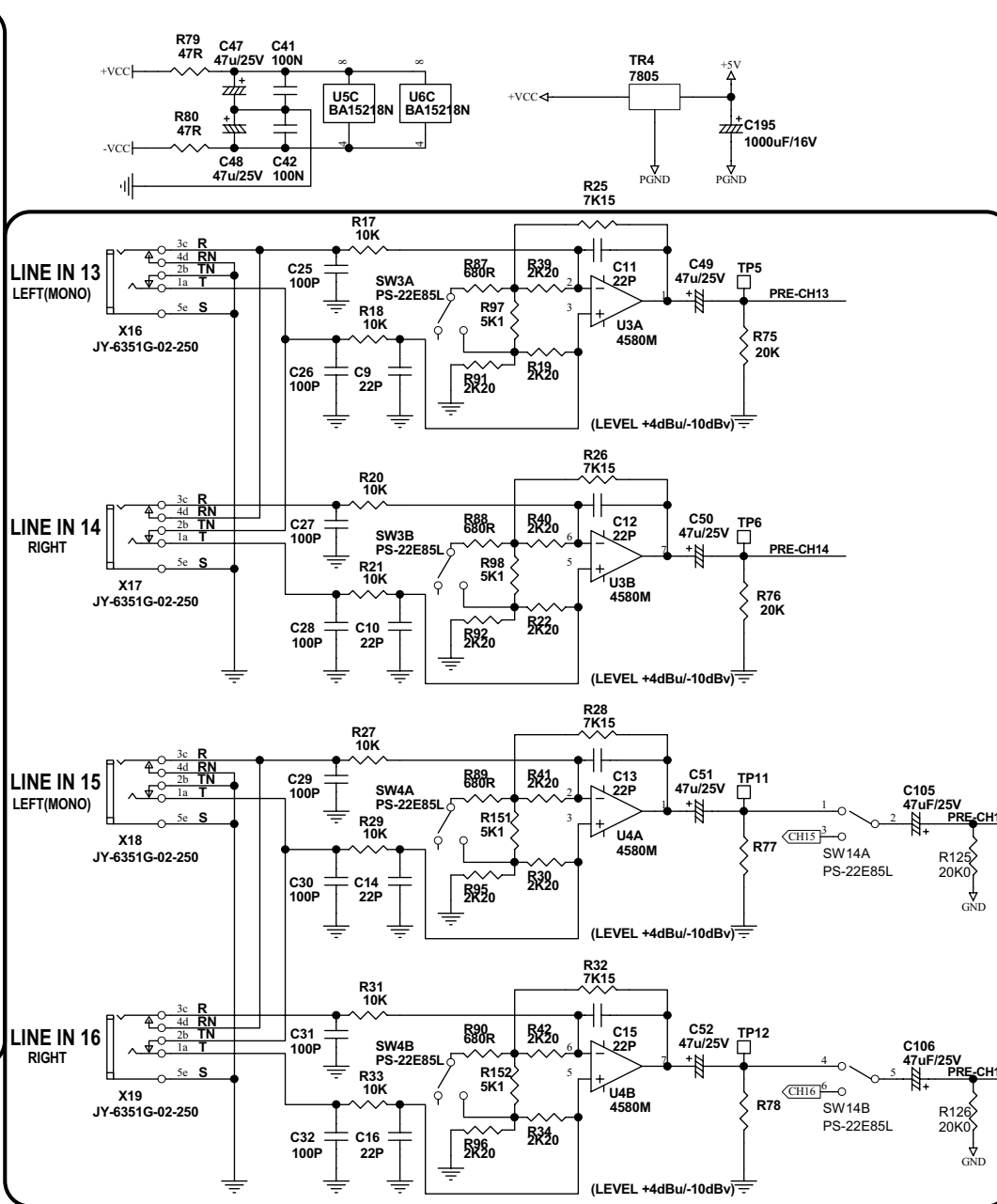
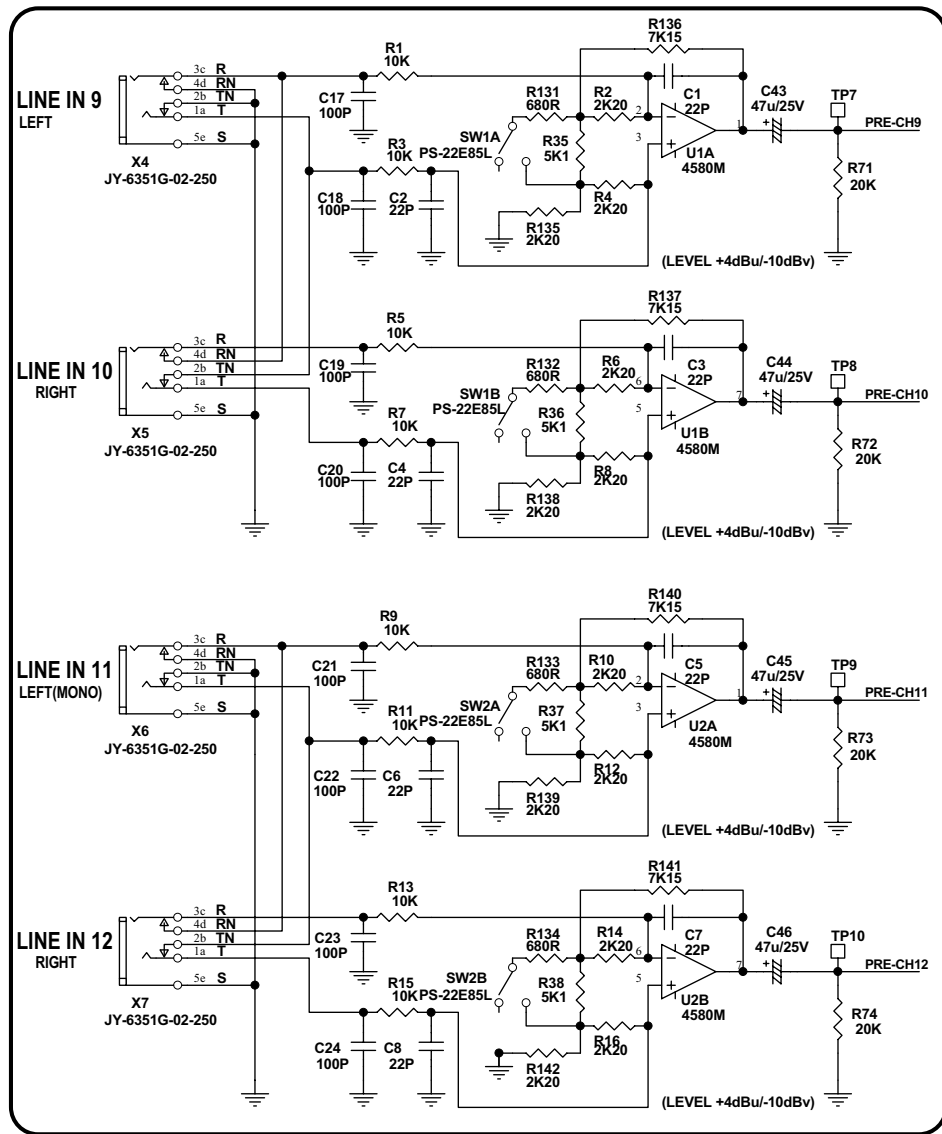


### MUTE/ALT3-4 LED



LEFT-BUS  
RIGHT-BUS  
ALT-3(L)  
ALT-3(R)  
AUX-1  
AUX-2  
AFL-L  
AFL-R  
SOLO(PFL)  
SOLO (V ON)  
ISO SEND  
DEF SEND

AMX-220FXPU1-USB(1/2)

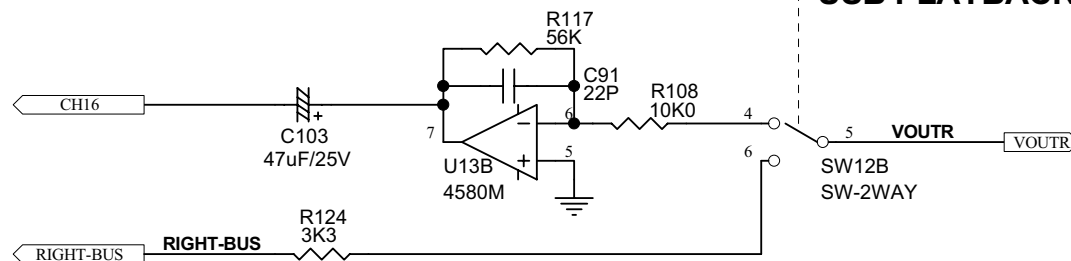
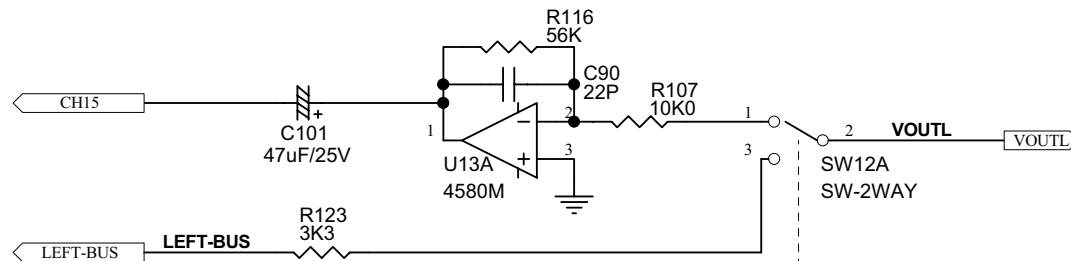
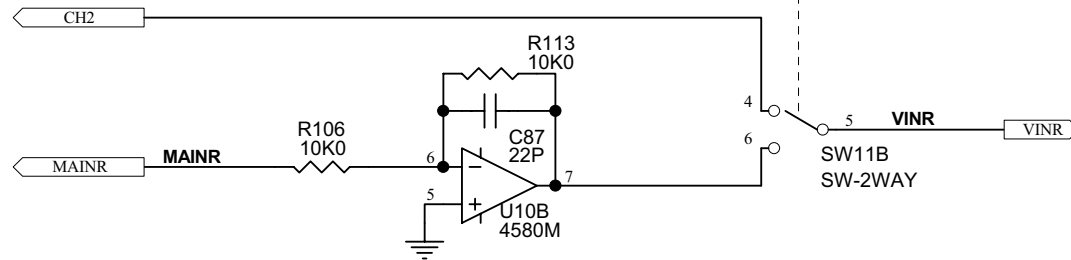
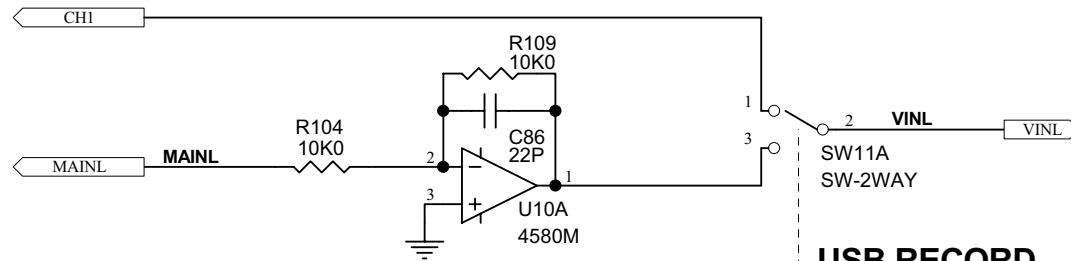


AMX220FXPU1-USB  
AMX220FXPU1-USB.S01

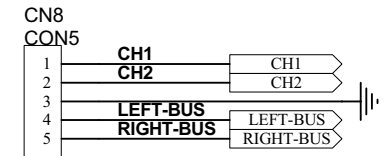
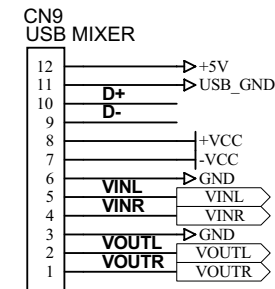
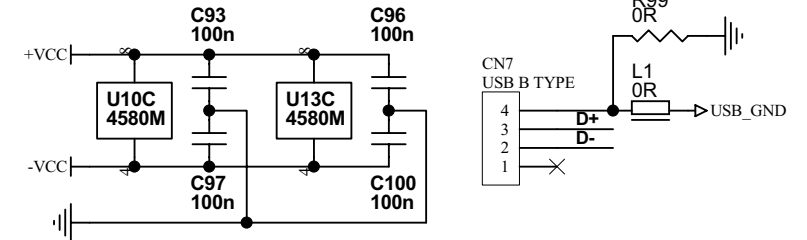
NEW

# USB MIXER

## AMX-220FXPU1-USB(2/2)

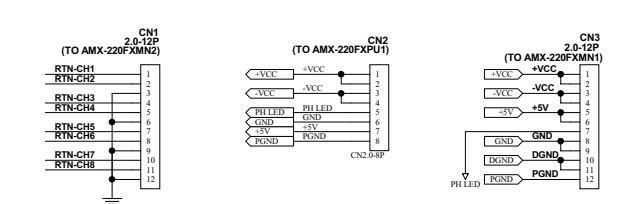
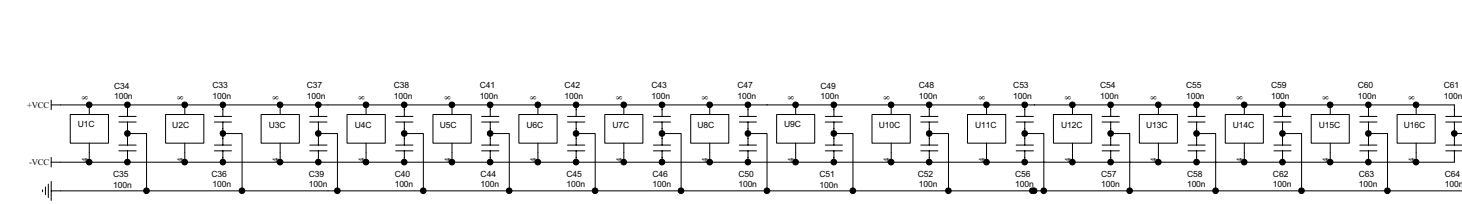
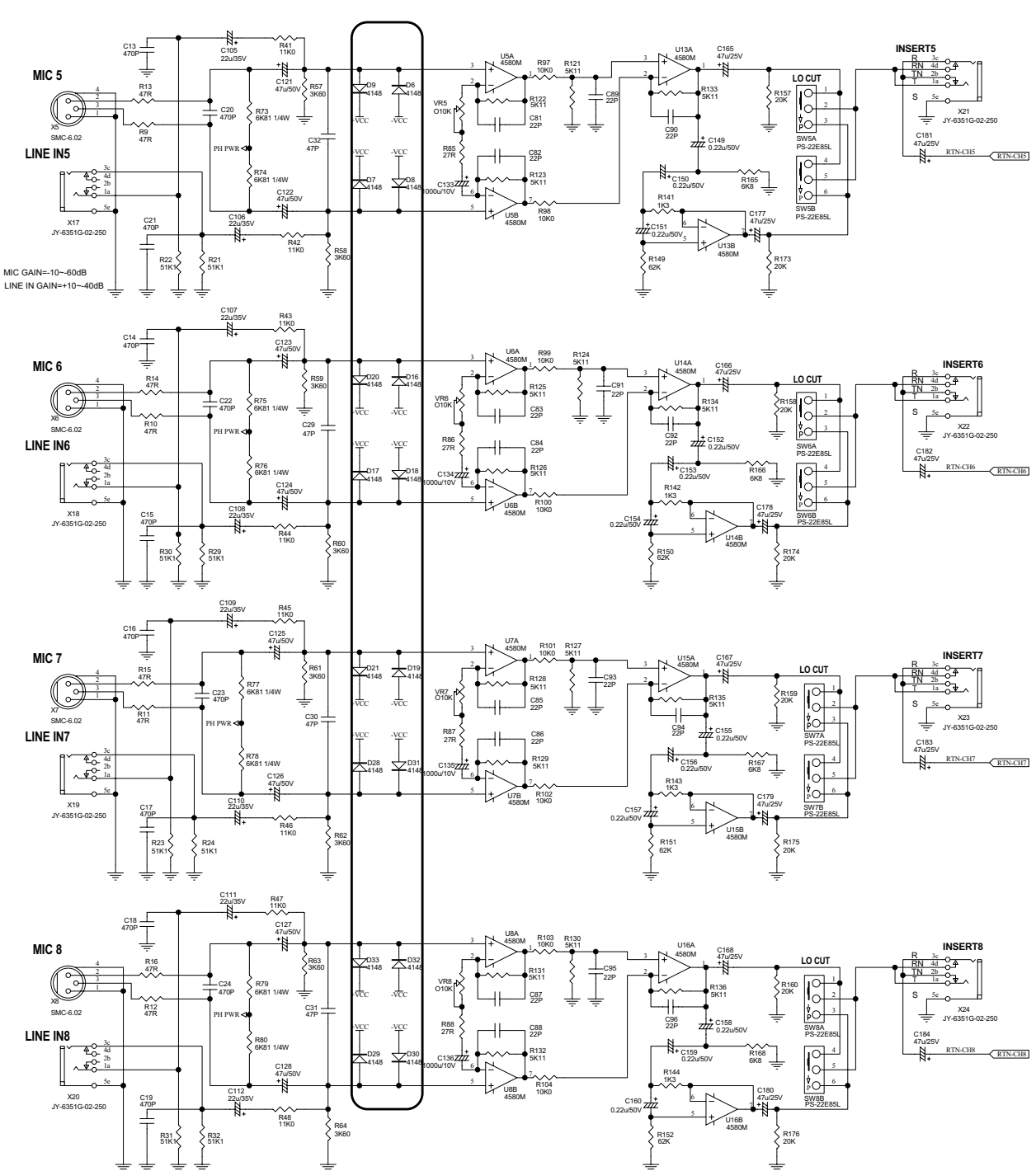
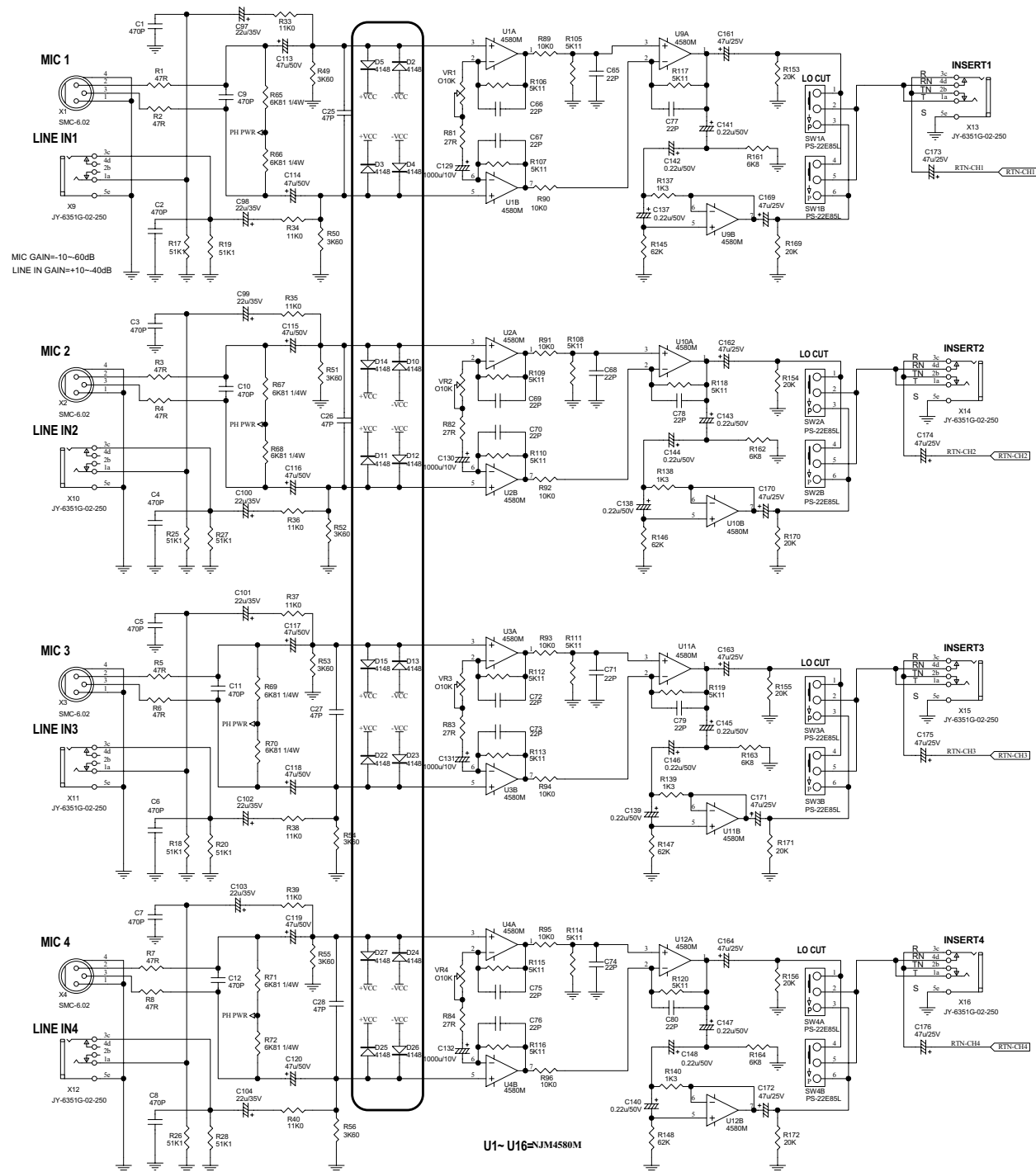


### USB RECORD



### USB PLAYBACK

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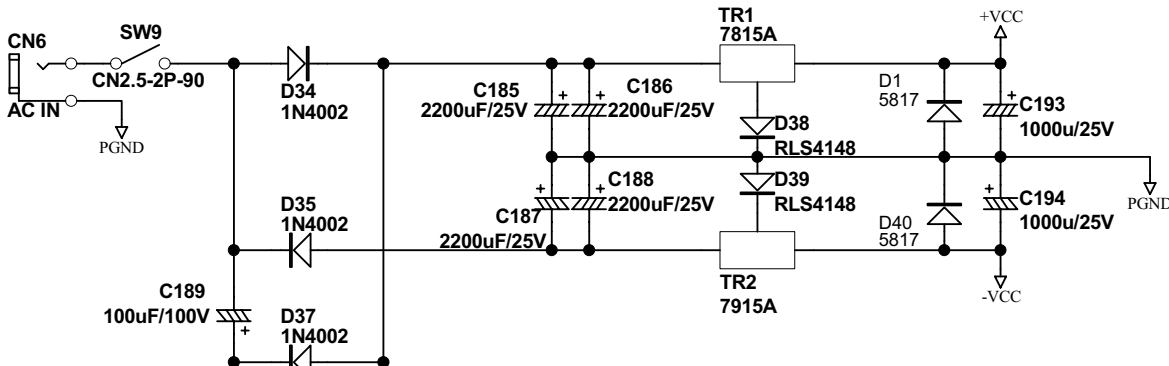


AMX220FXPU2-USB  
AMX220FXPU2-USB

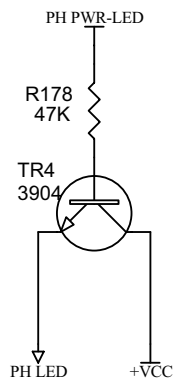
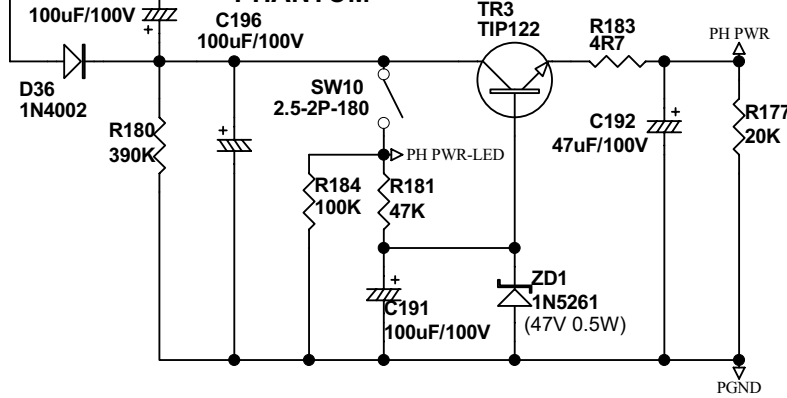


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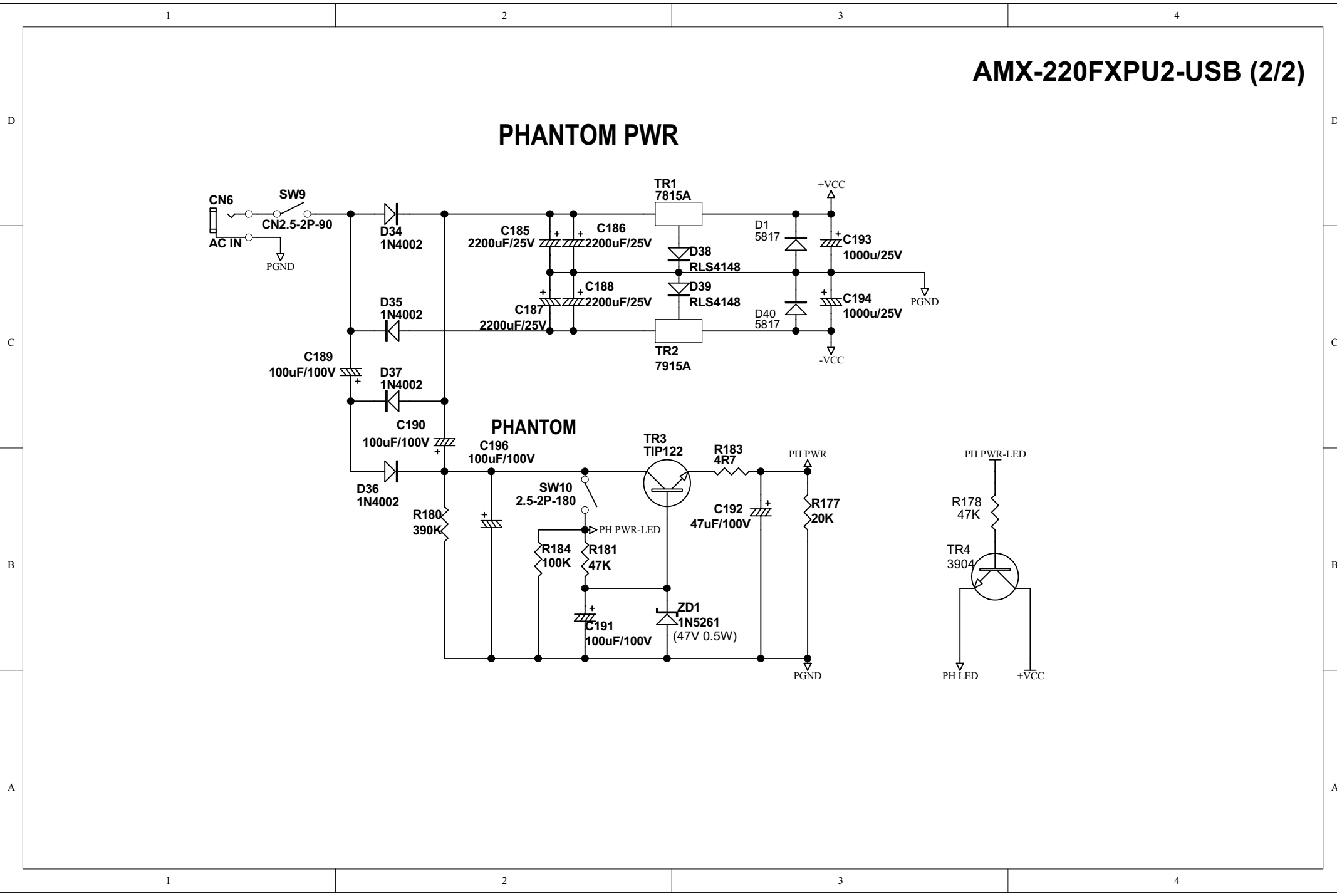
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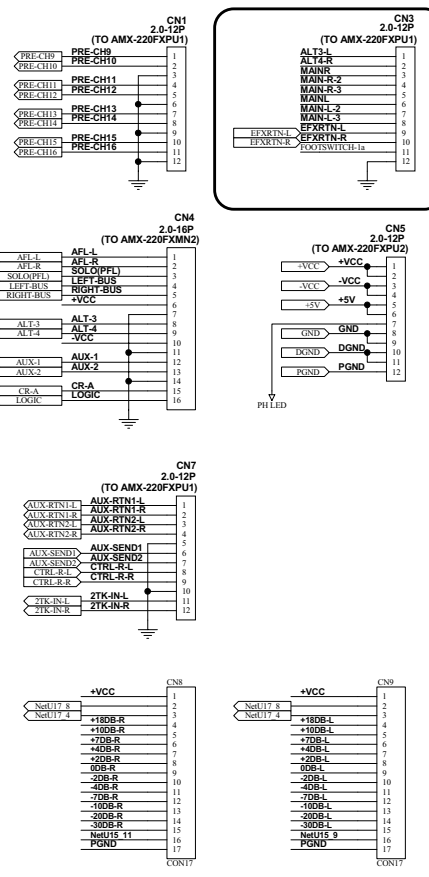
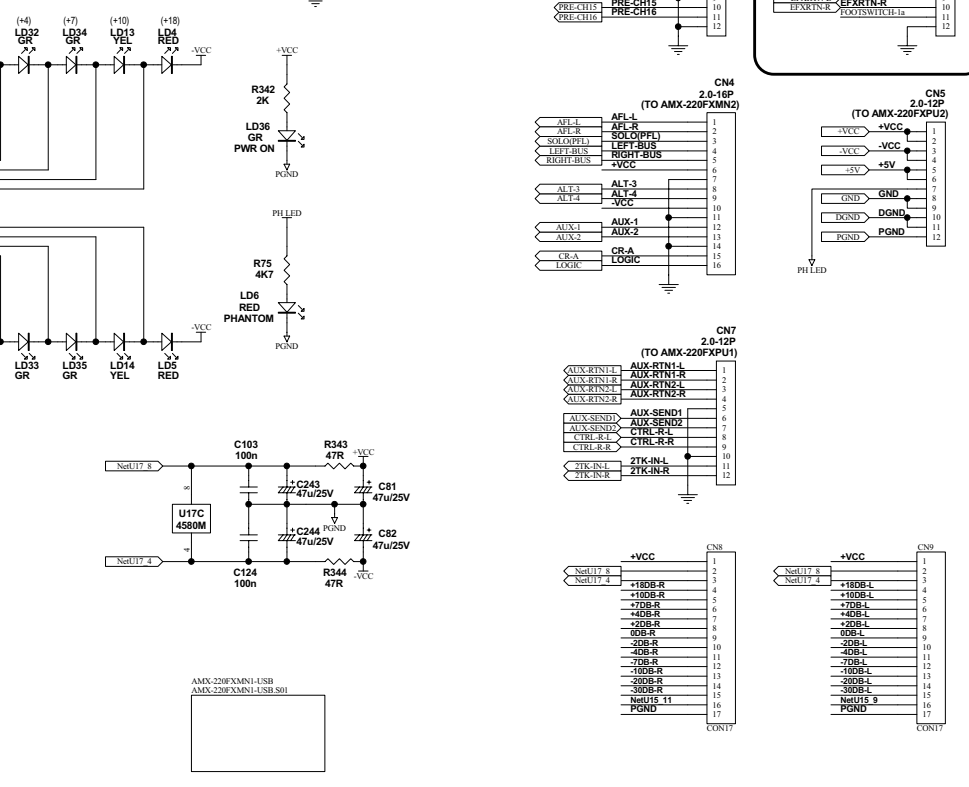
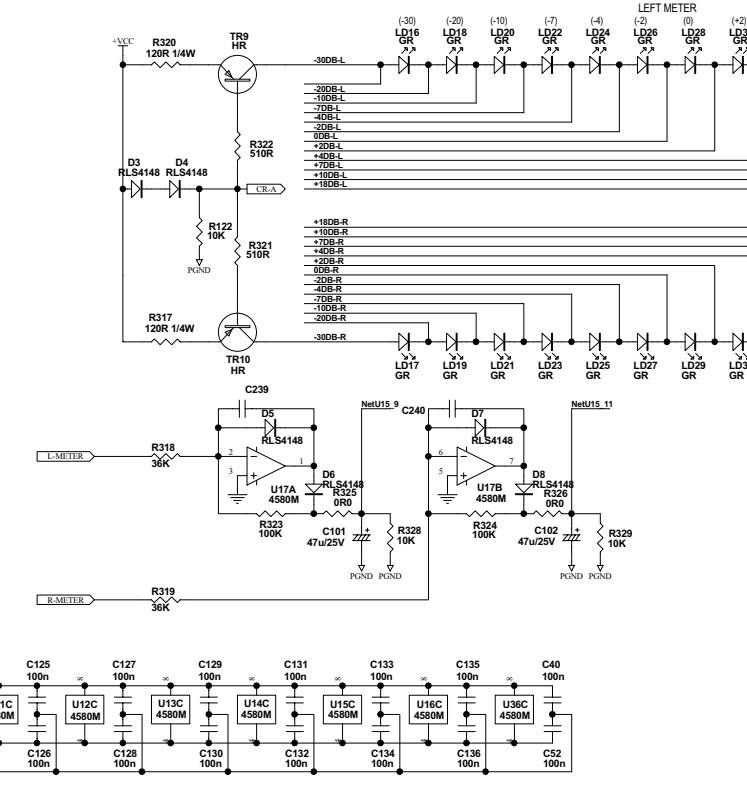
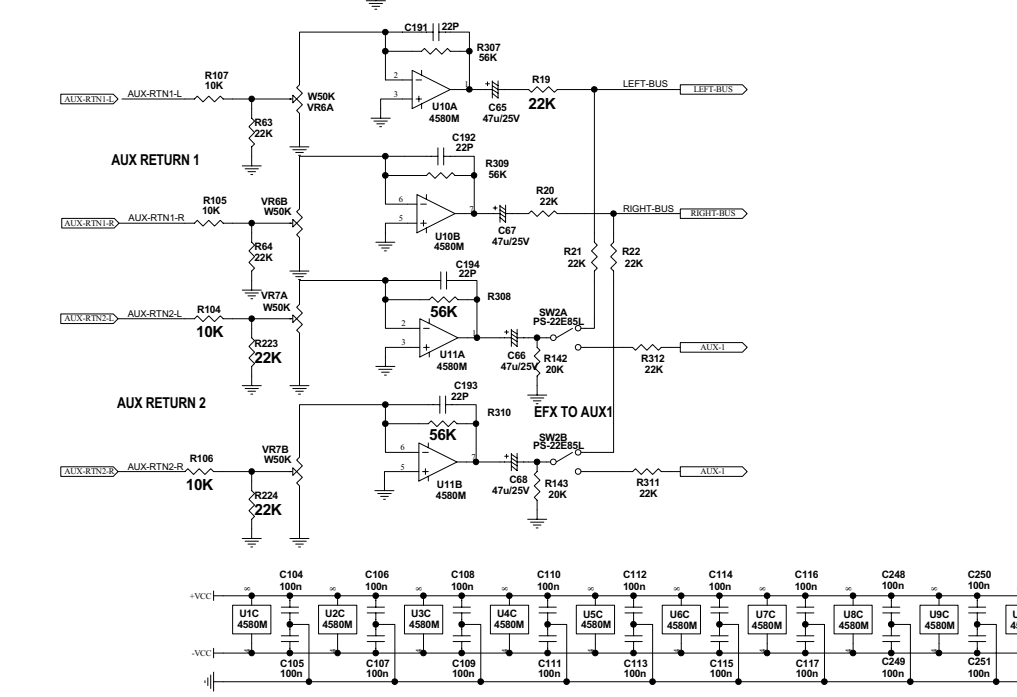
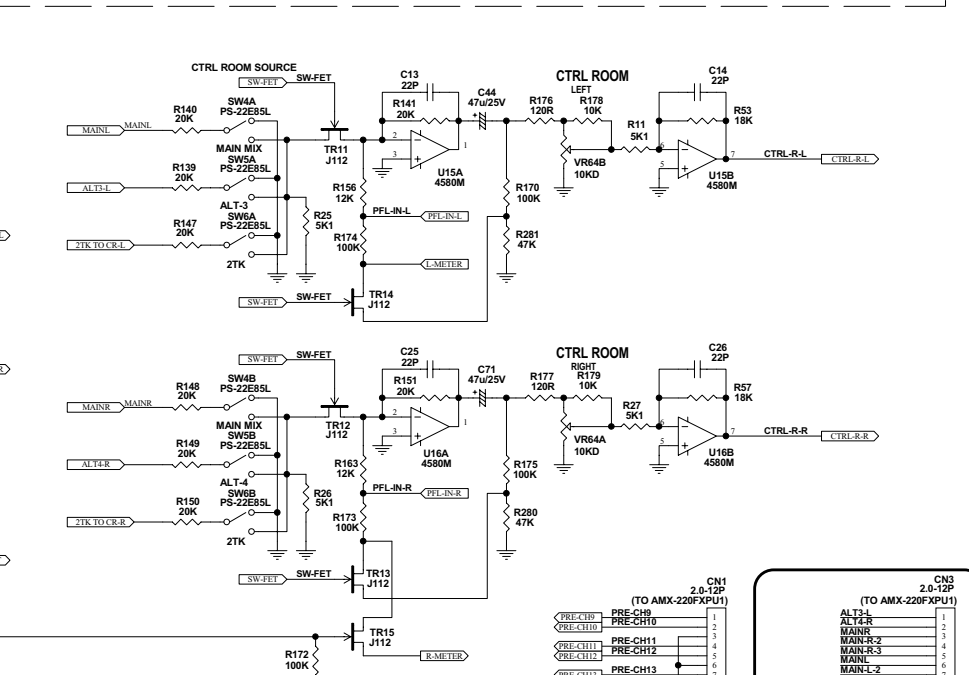
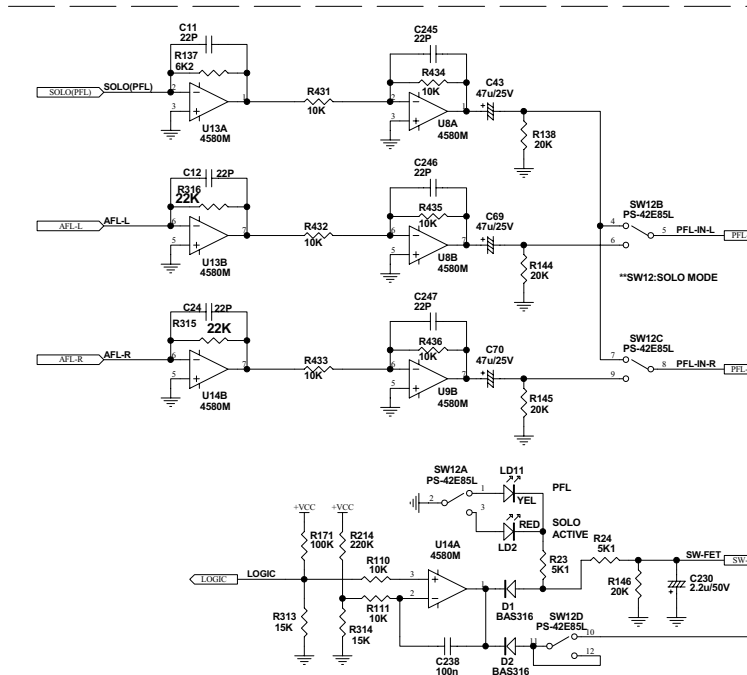
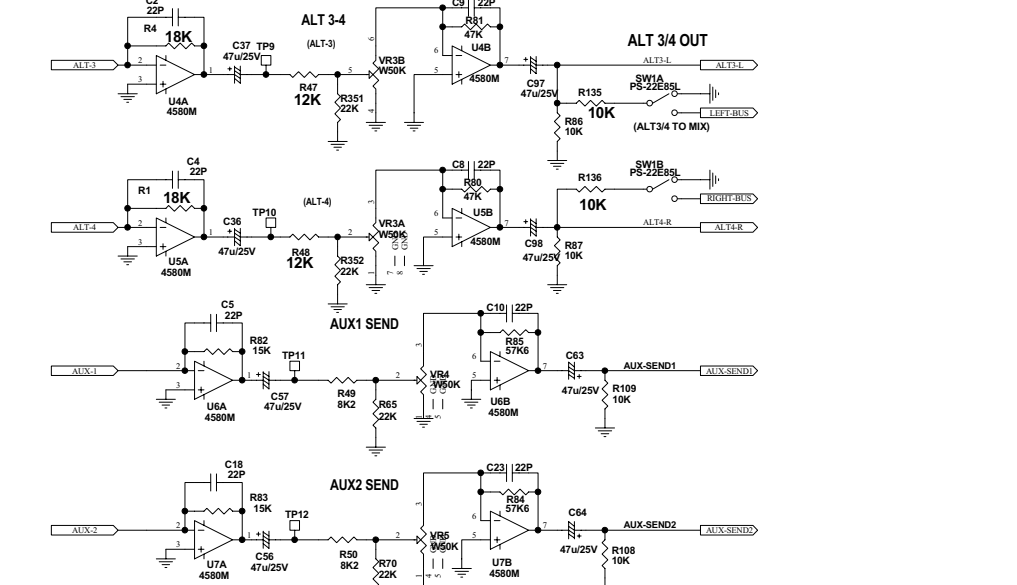
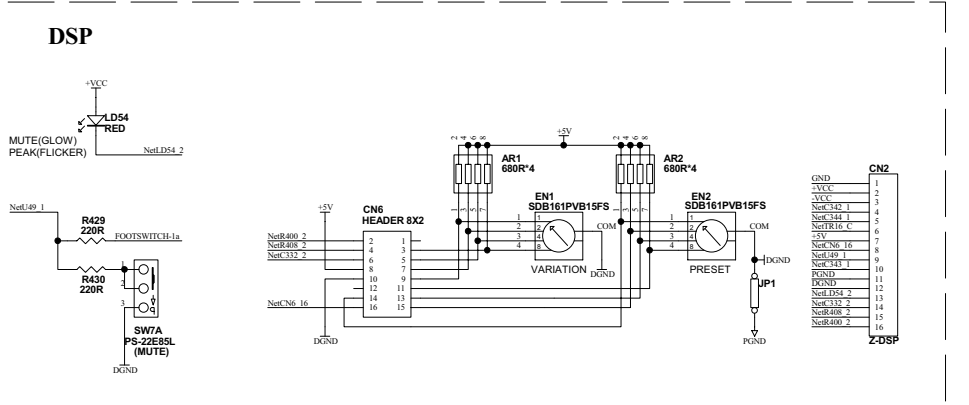
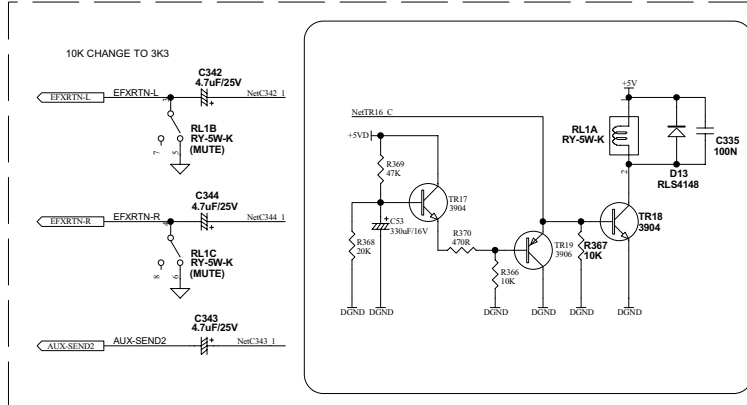
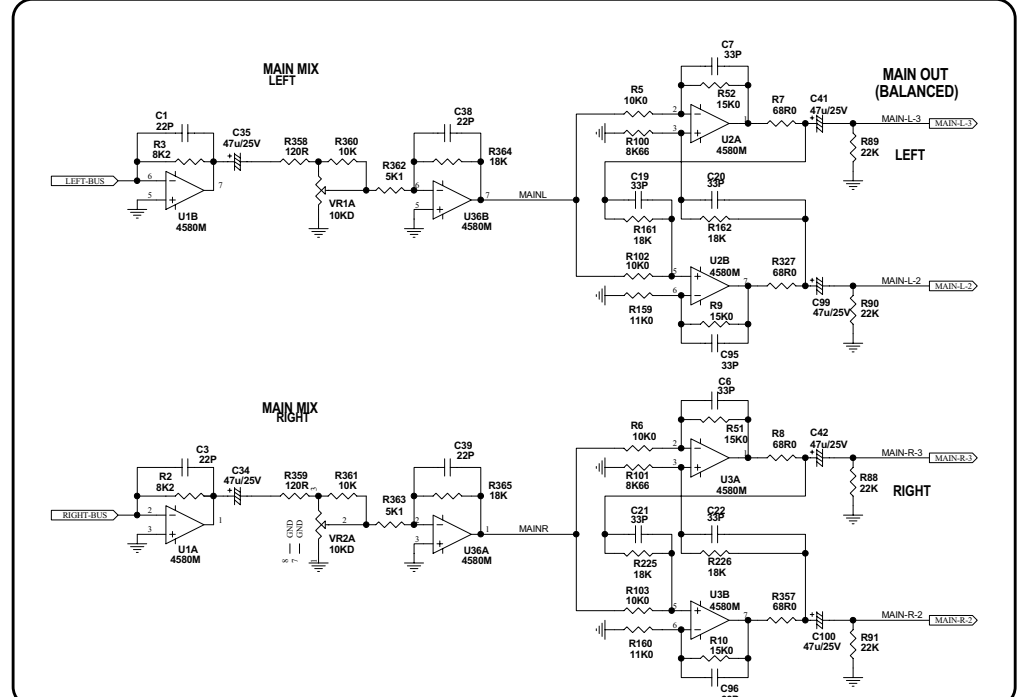


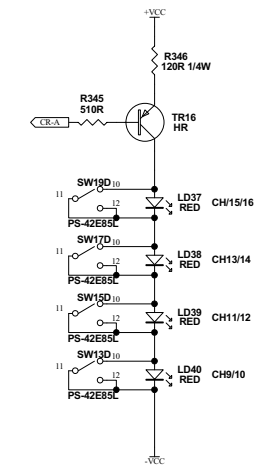
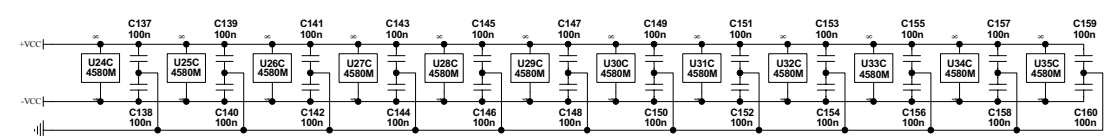
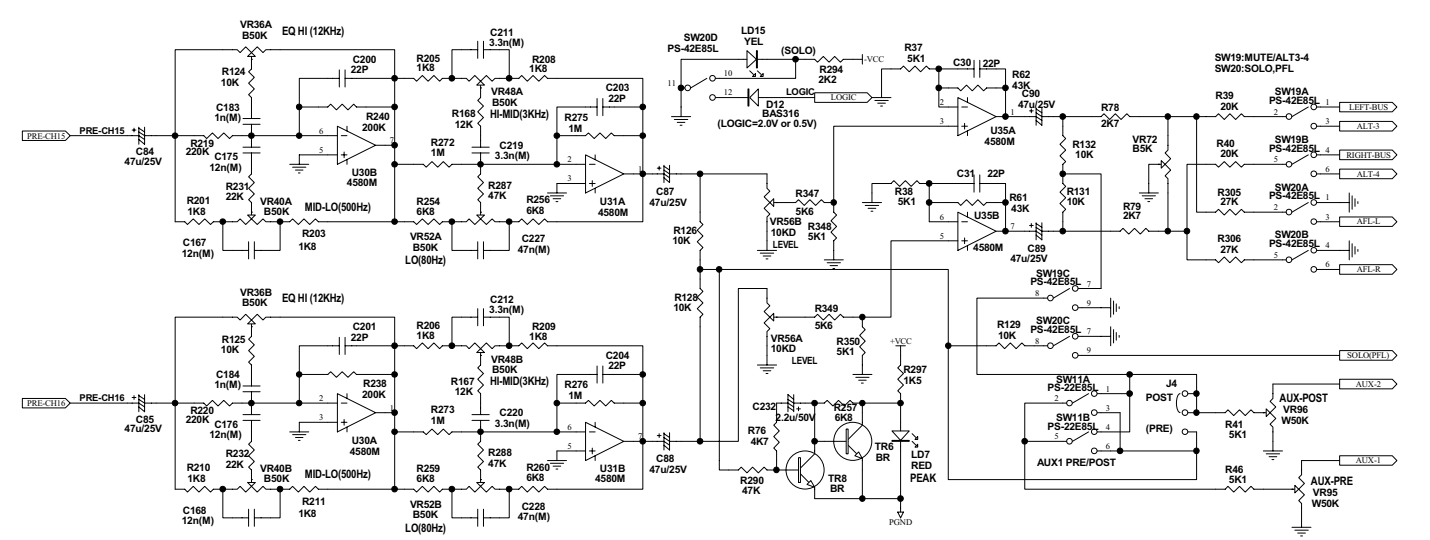
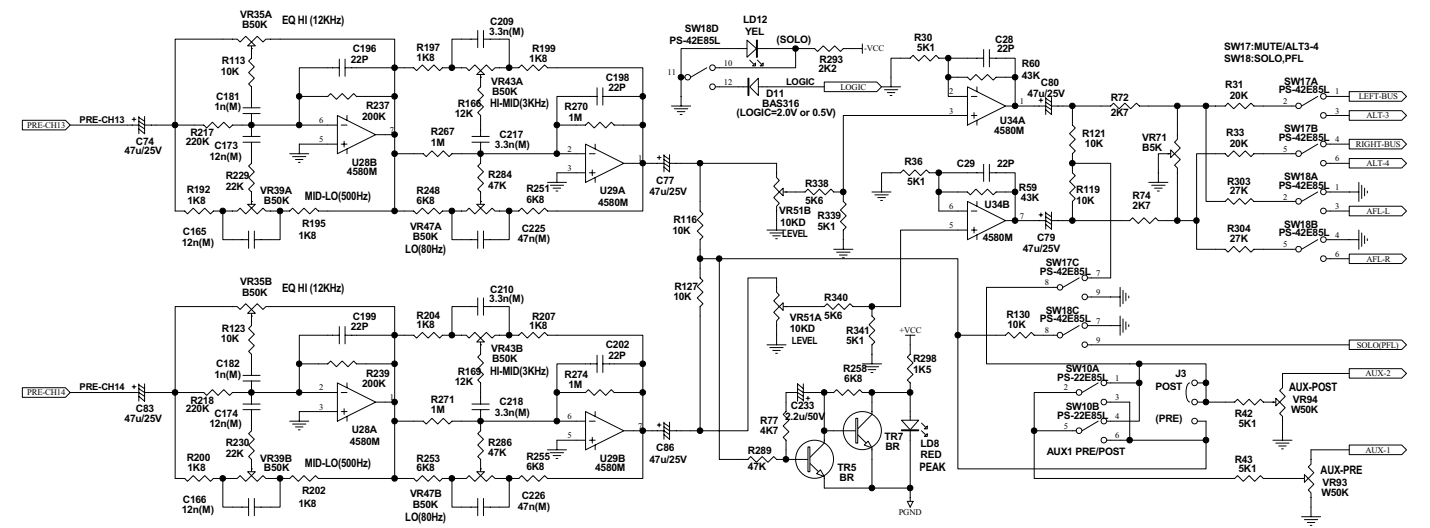
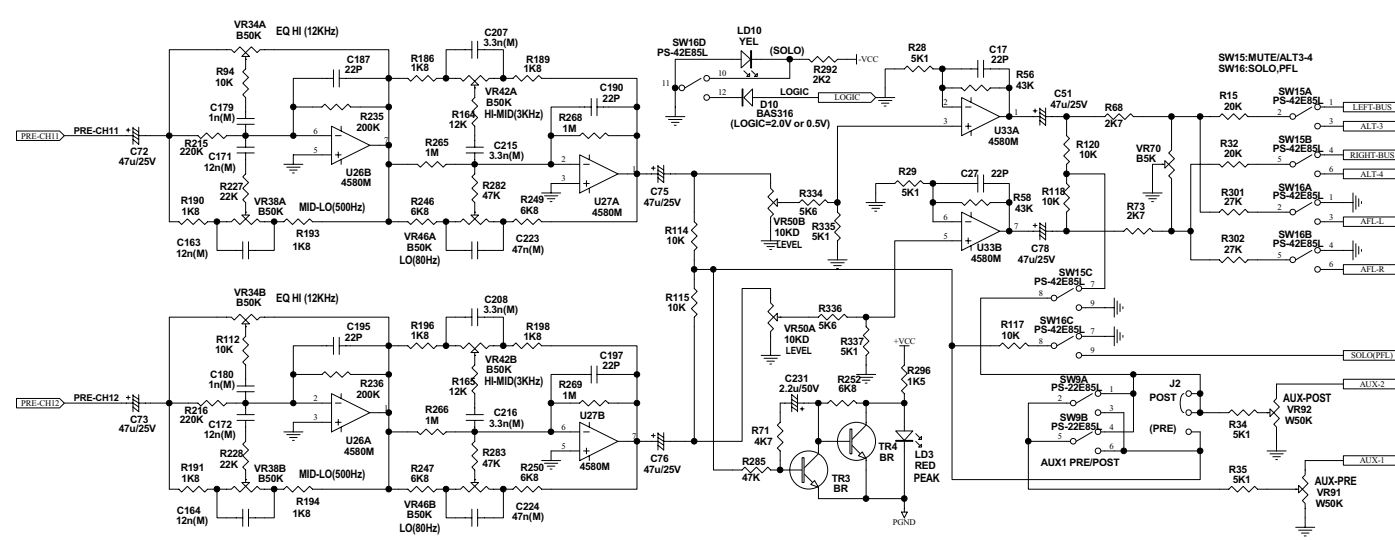
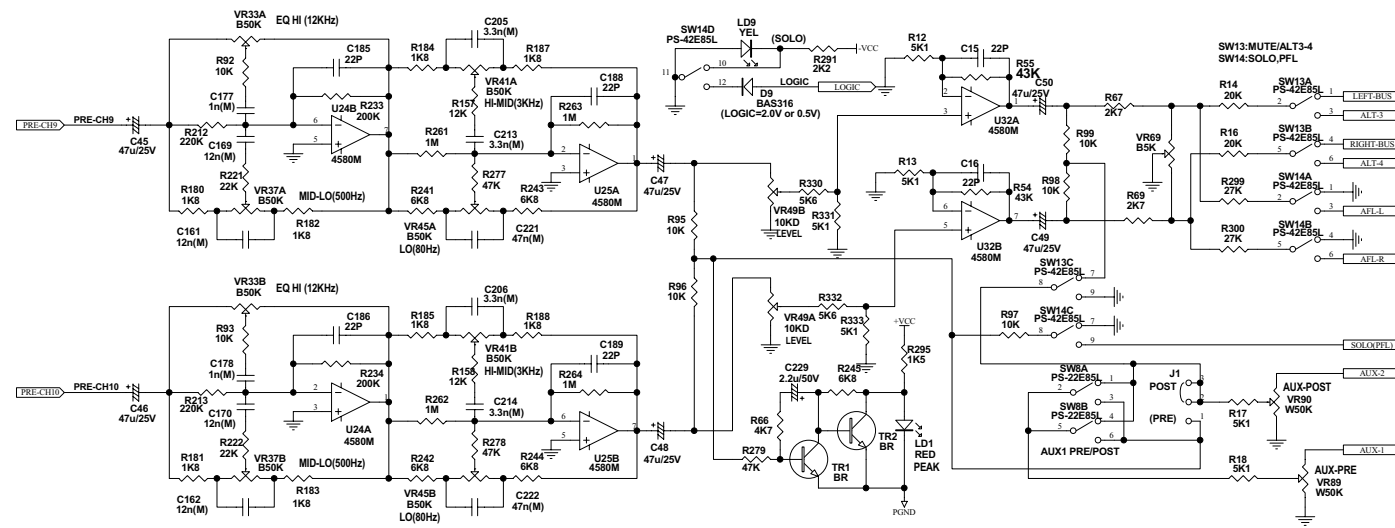
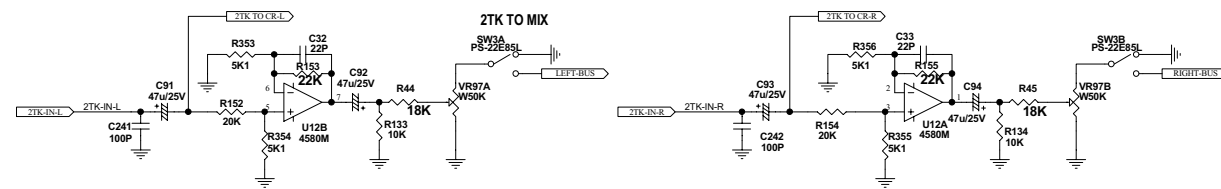
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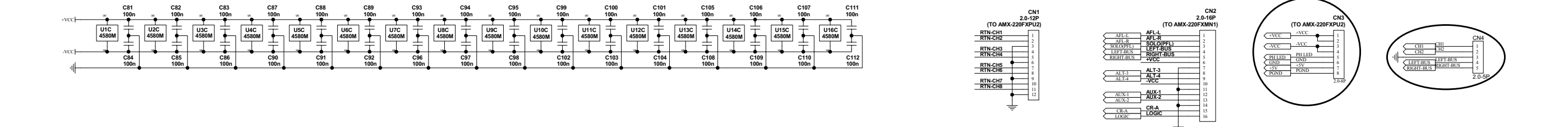
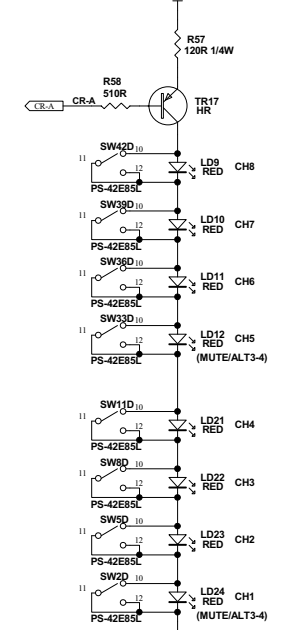
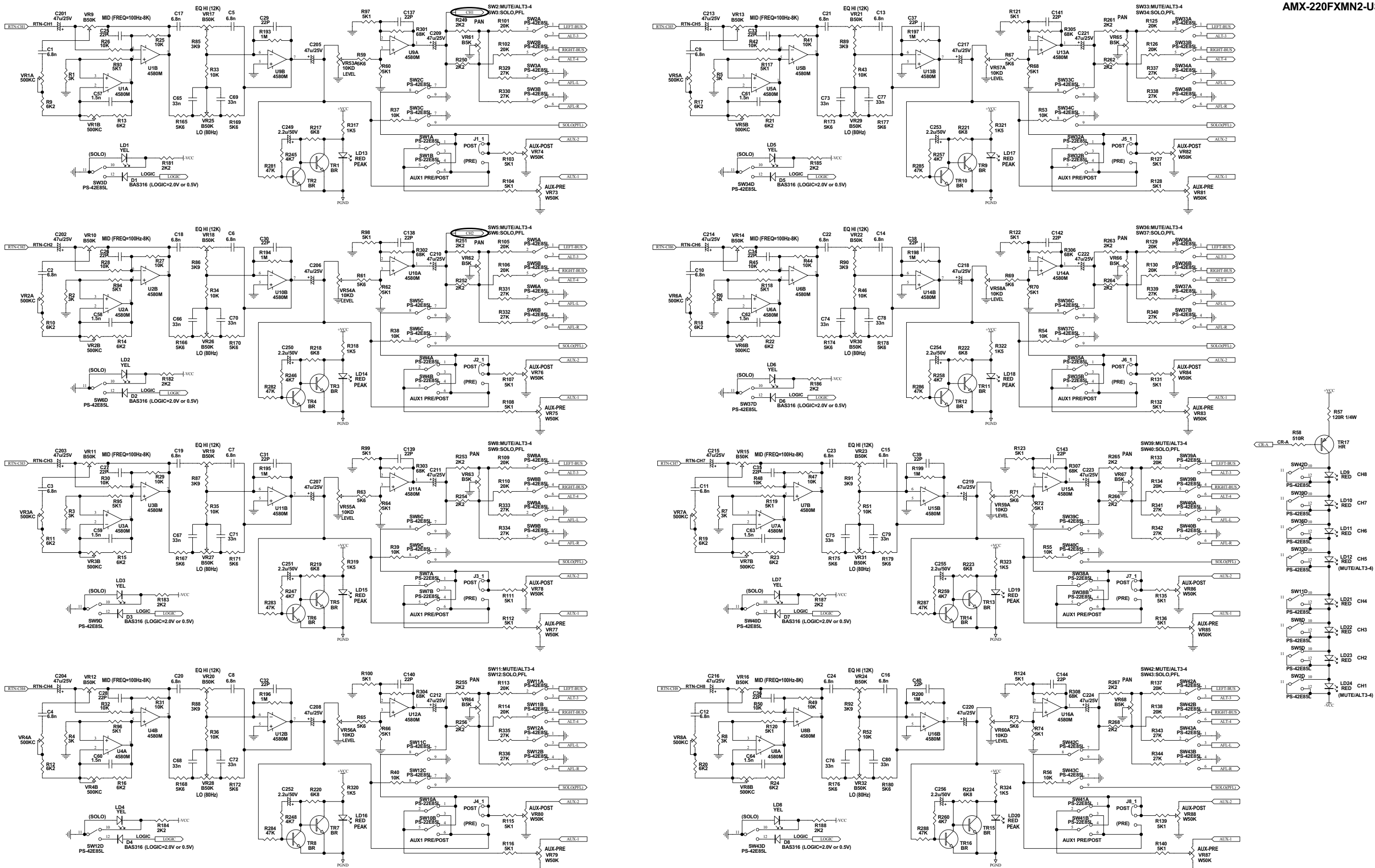


- 7 -



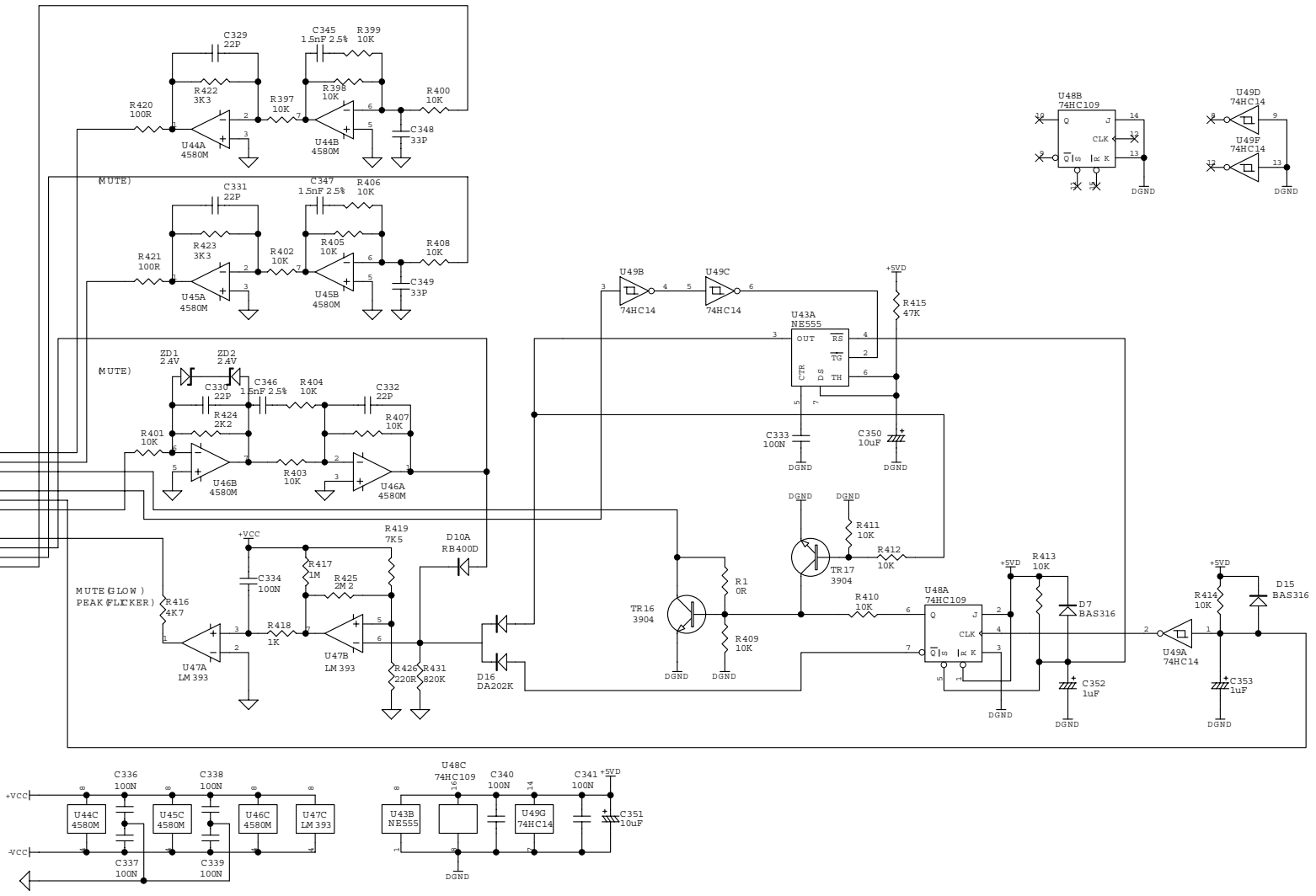






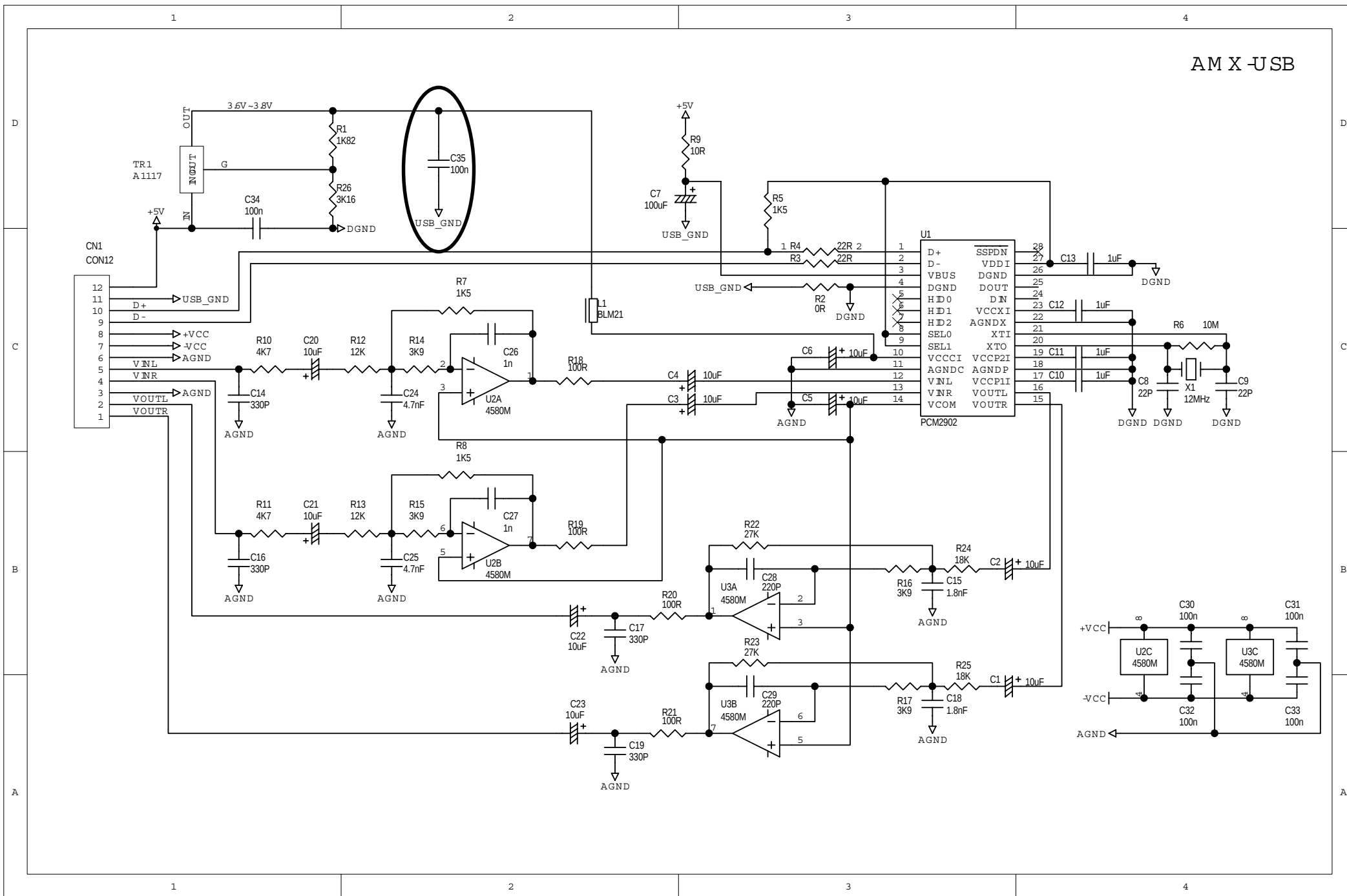
DSP-PRF

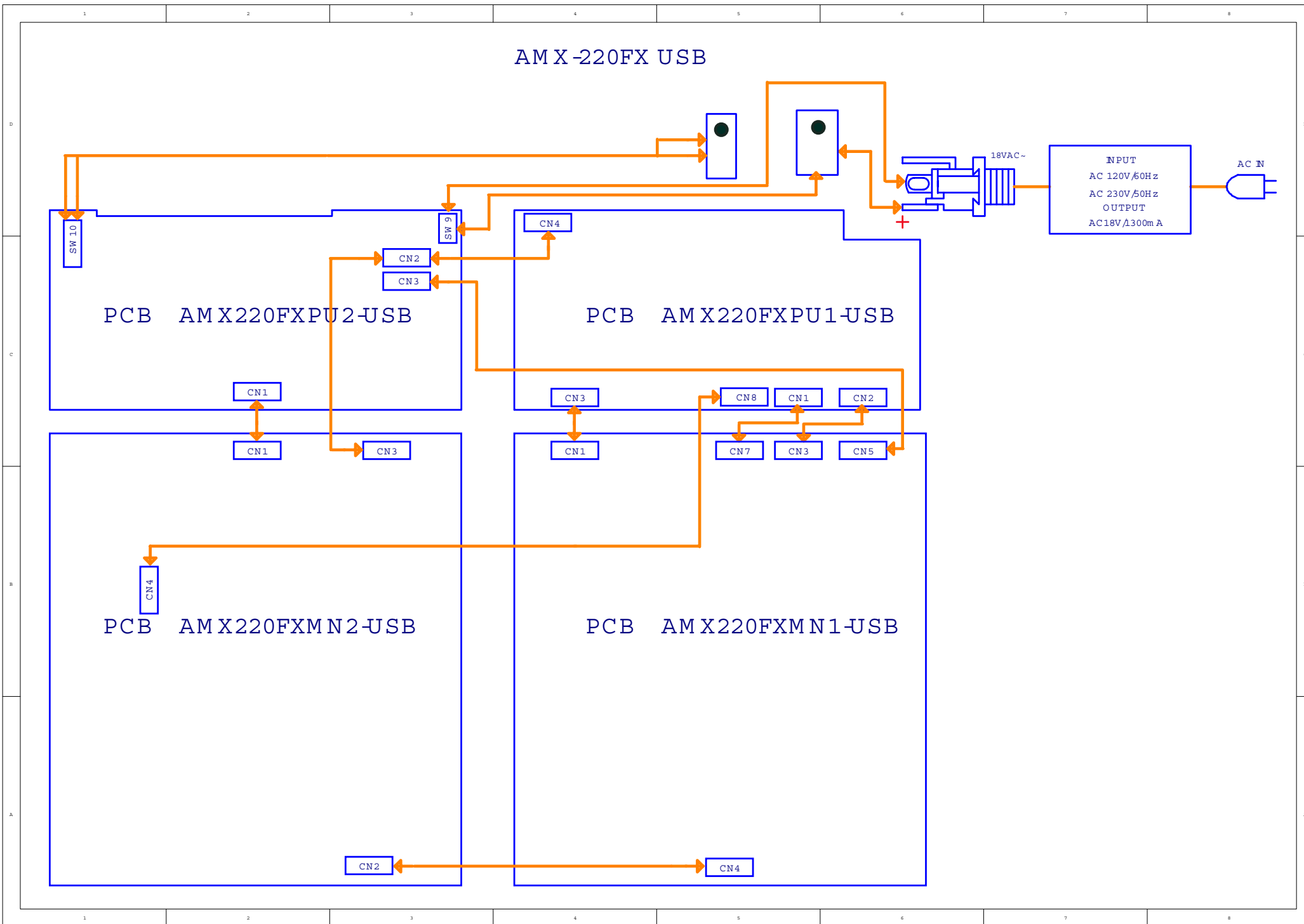
- CN1
- 1 GND
- 2 +VCC
- 3 NMC342 1
- 4 NMC344 1
- 5 NMC346 C
- 6 +5VD
- 7 NMC346 16
- 8 NMC49 1
- 9 NMC343 1
- 10 GND
- 11 DGND
- 12 NGLD54 2
- 13 NMC352 2
- 14 NBR408 2
- 15 NBR408 2
- 16 NBR408 2



- 11 -

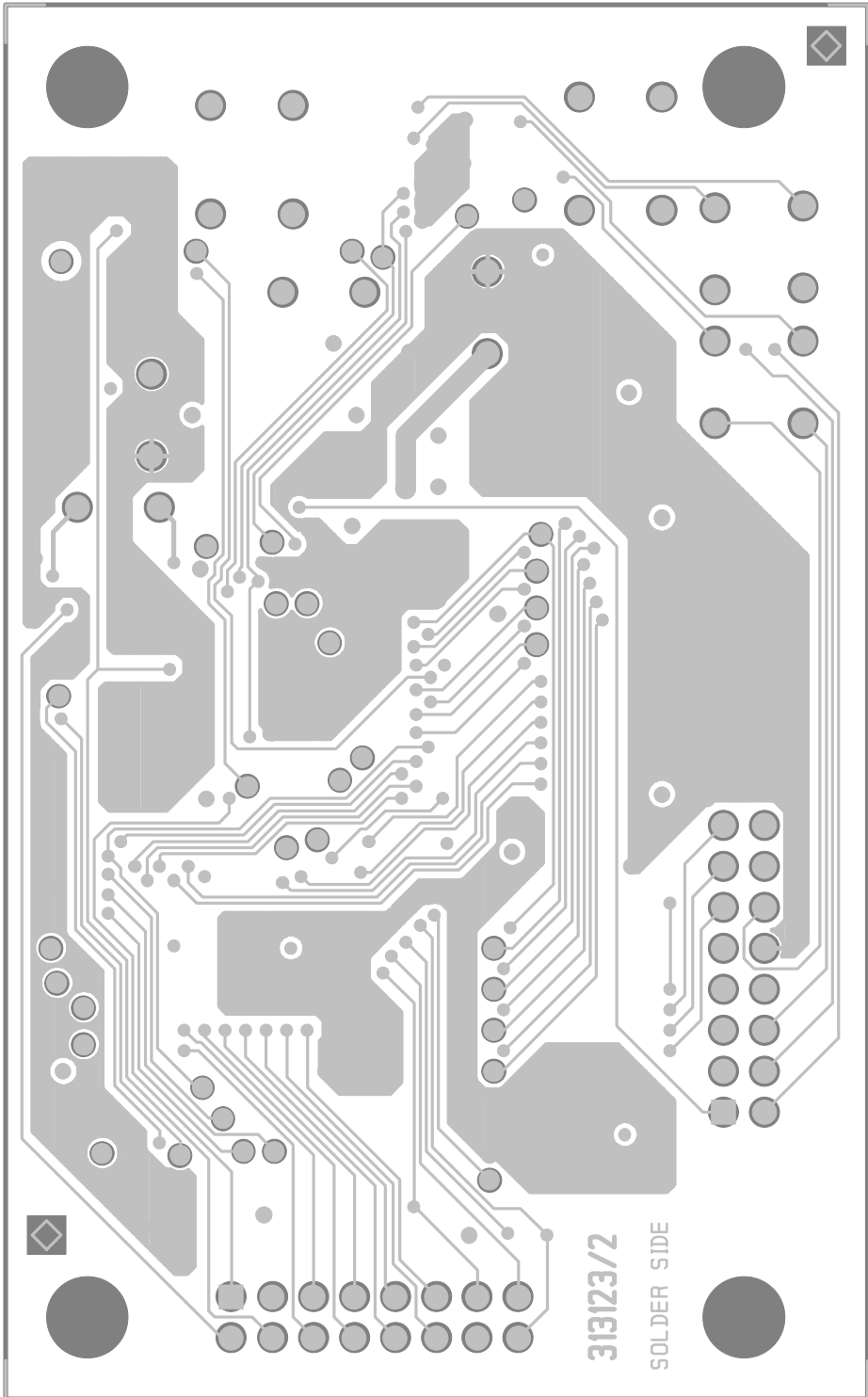
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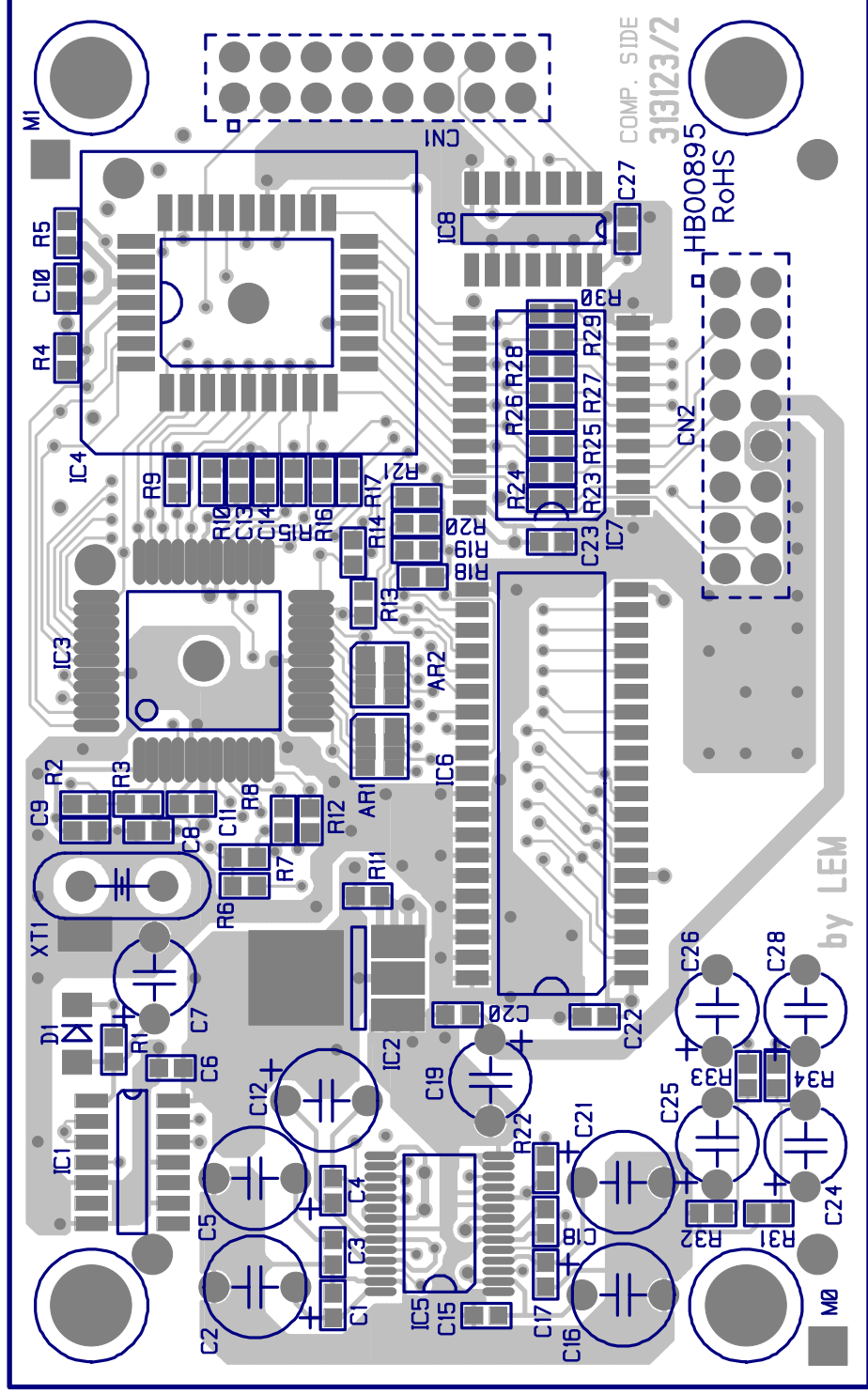


6. PCB LAYOUT

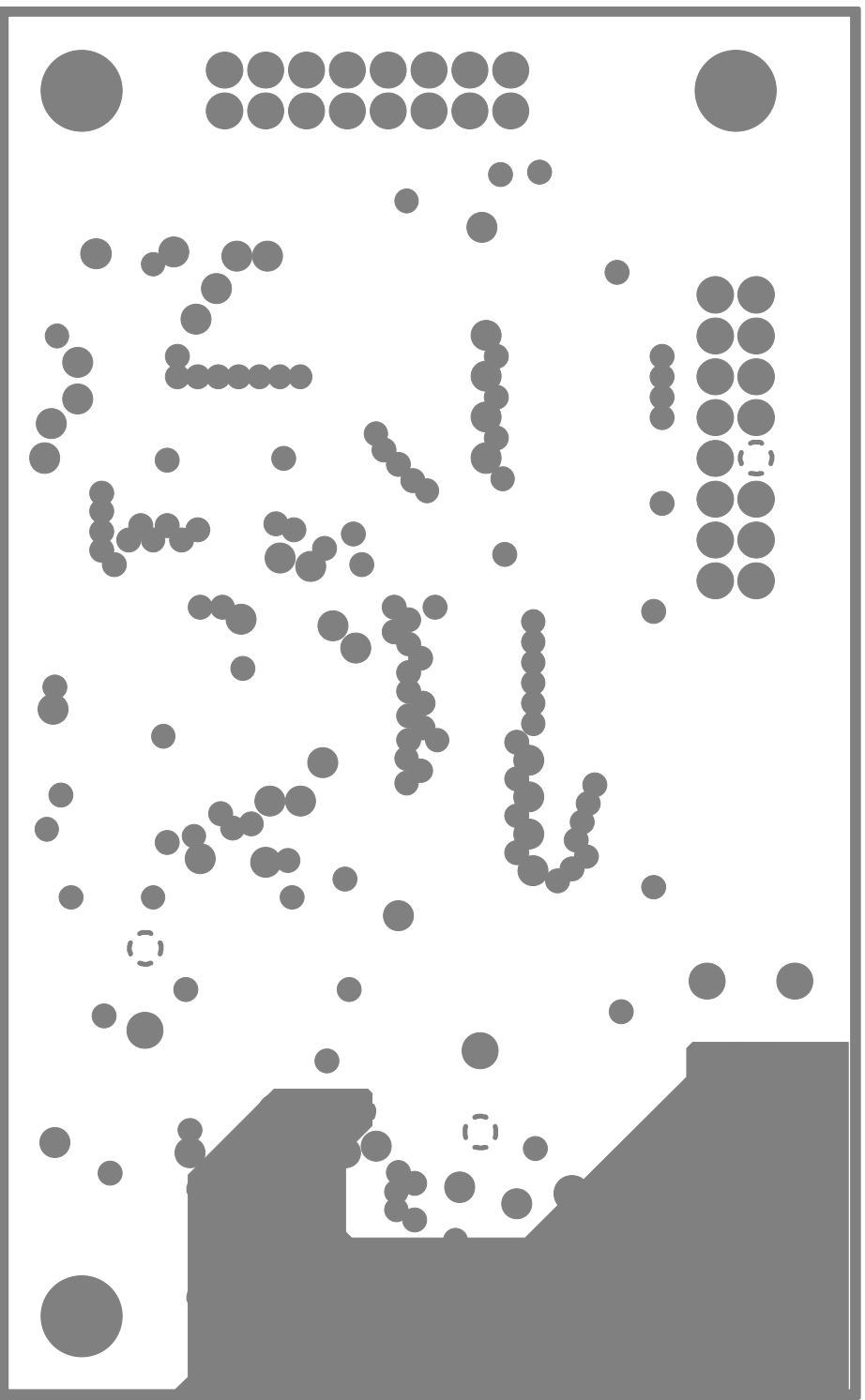
313123/2 SOLDER RESIST SOLDER SIDE



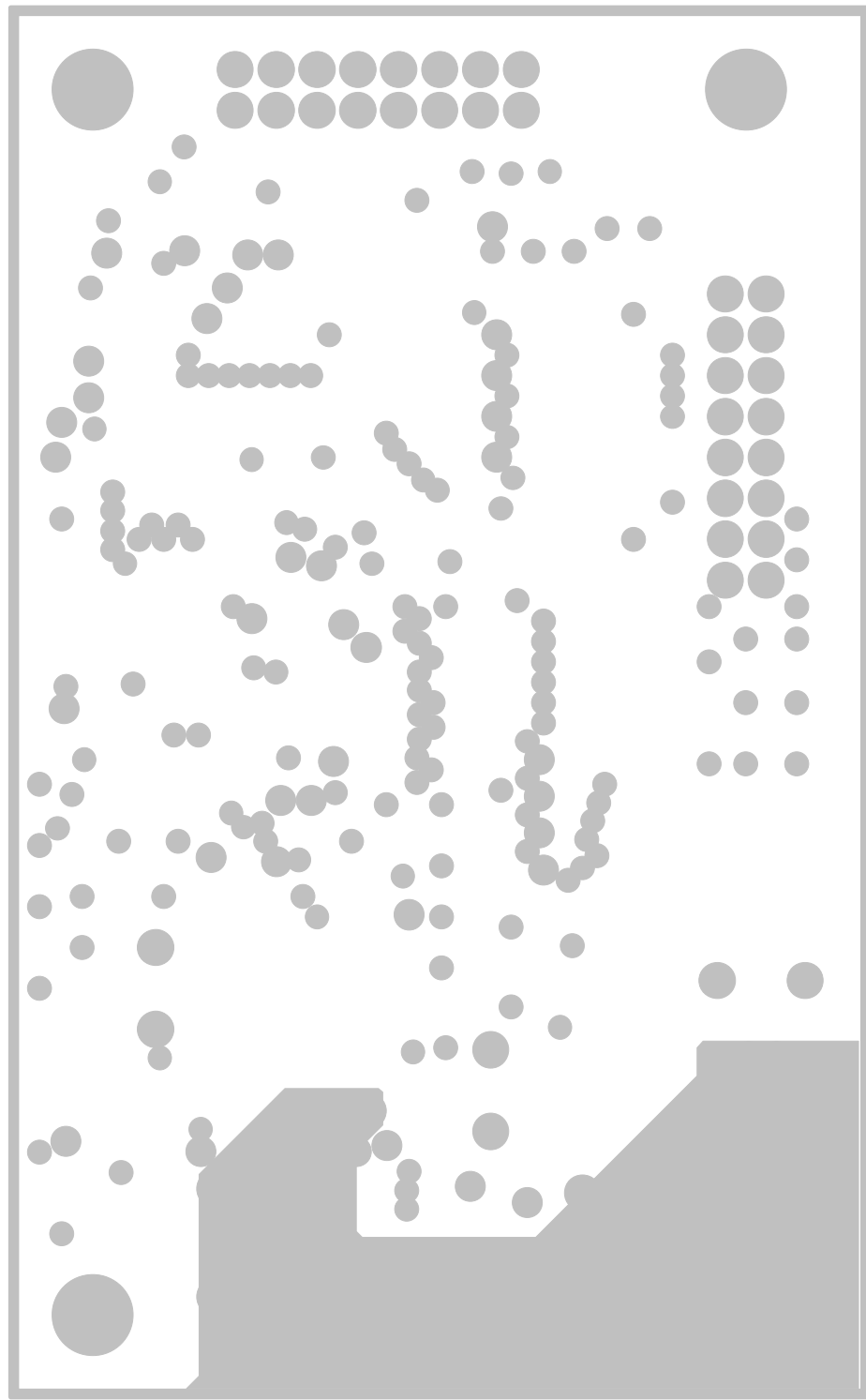
313123/2 SOLDER RESIST COMP. SIDE



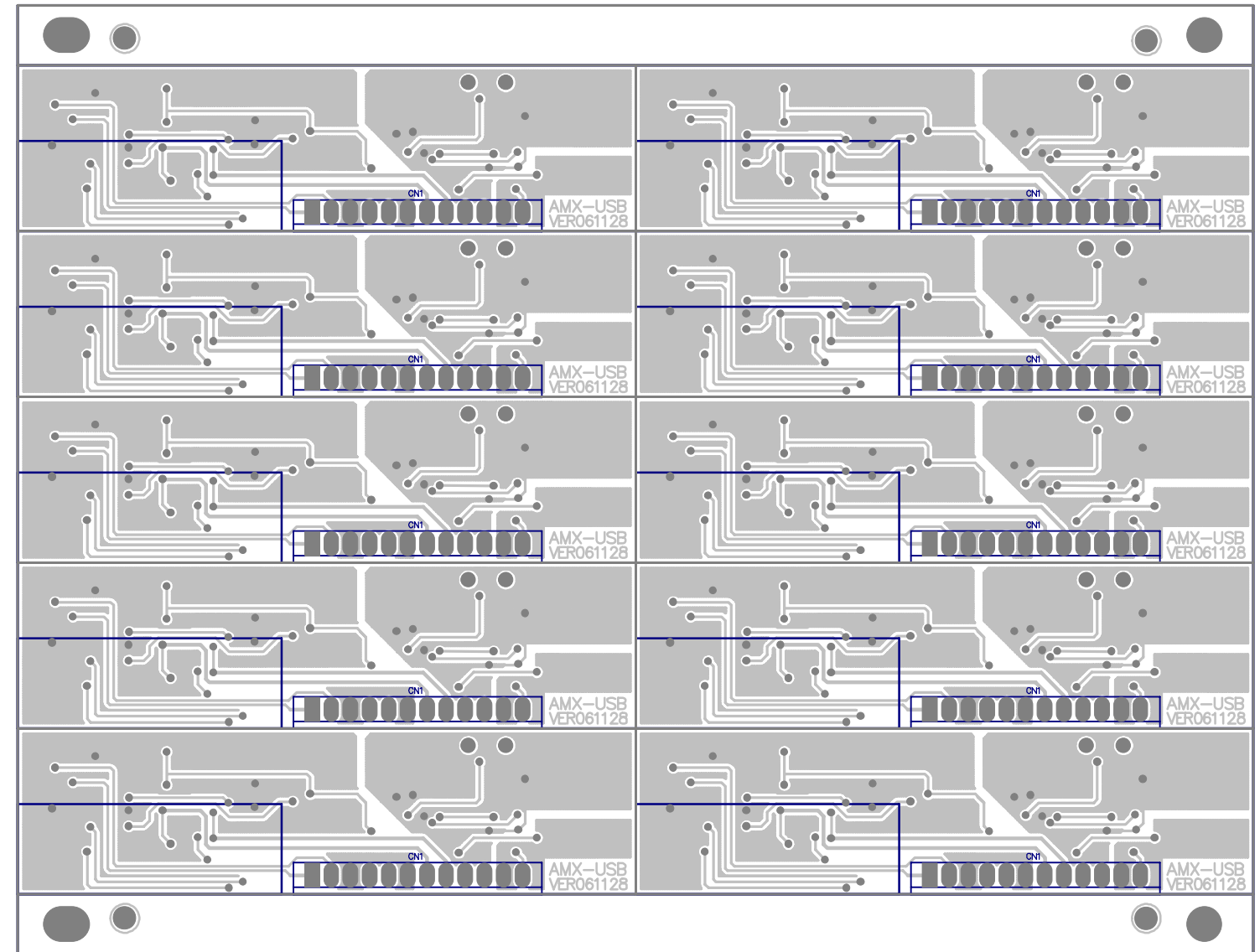
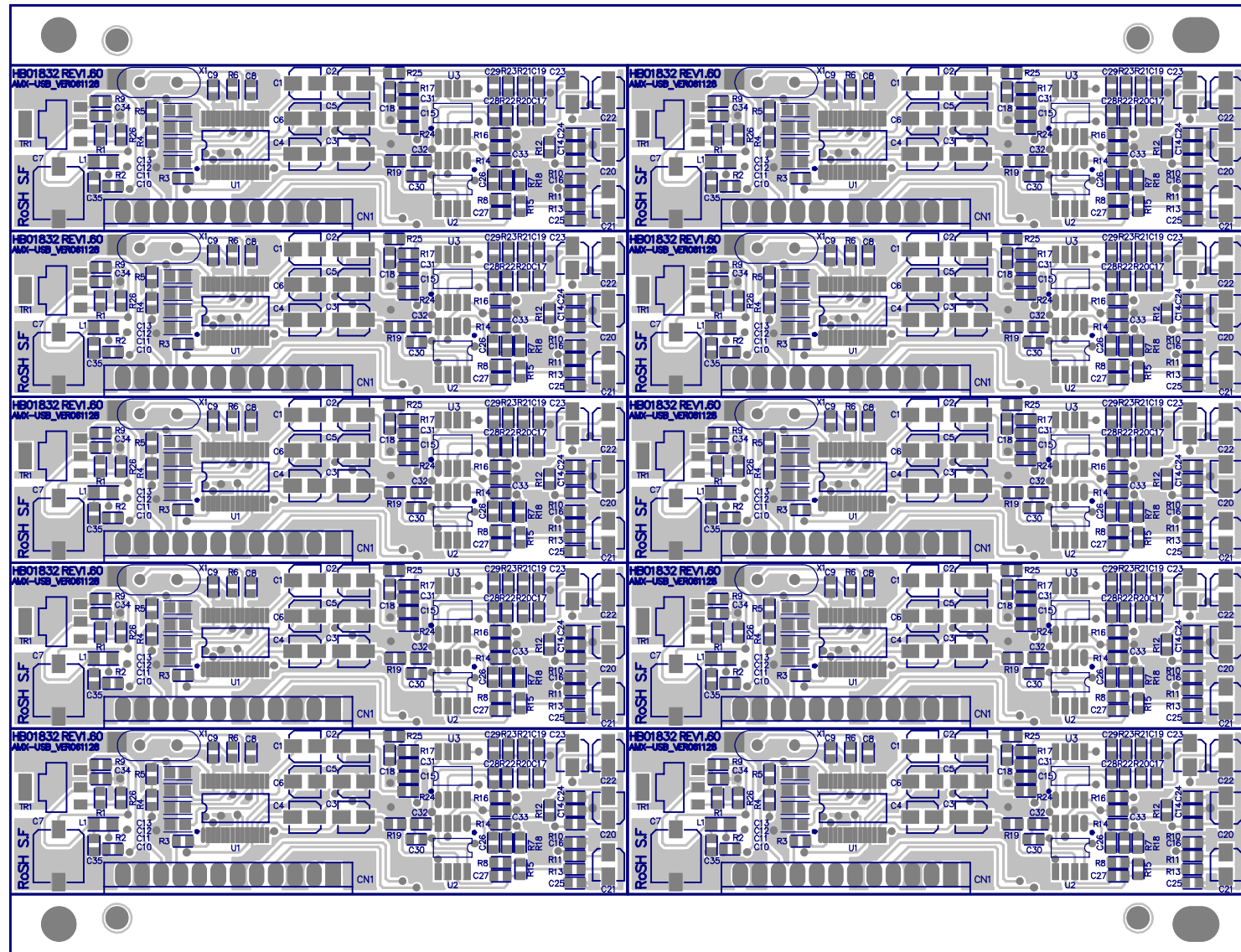
313123/2 I<sup>1</sup> INTERNAL LAYER GND

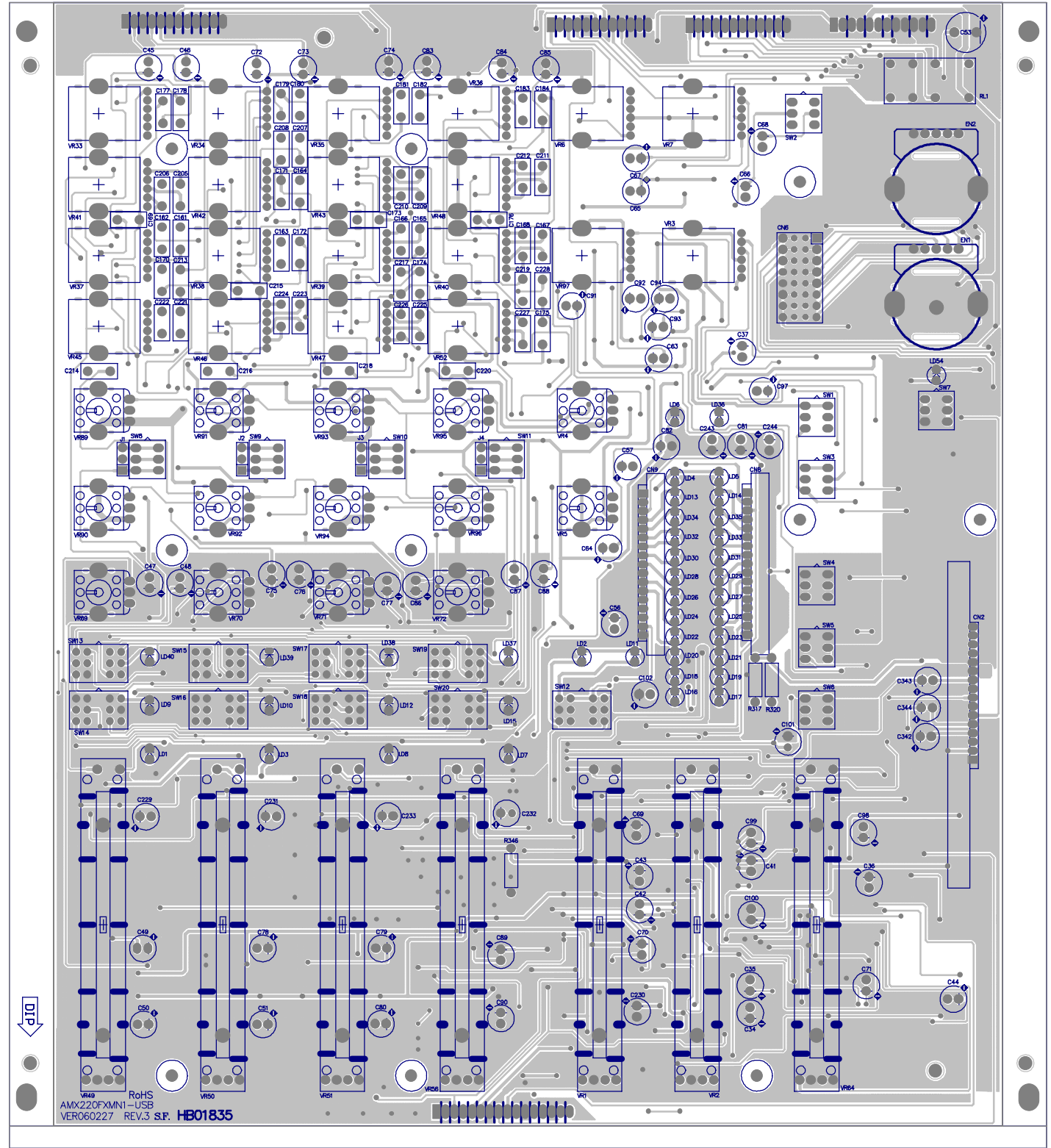
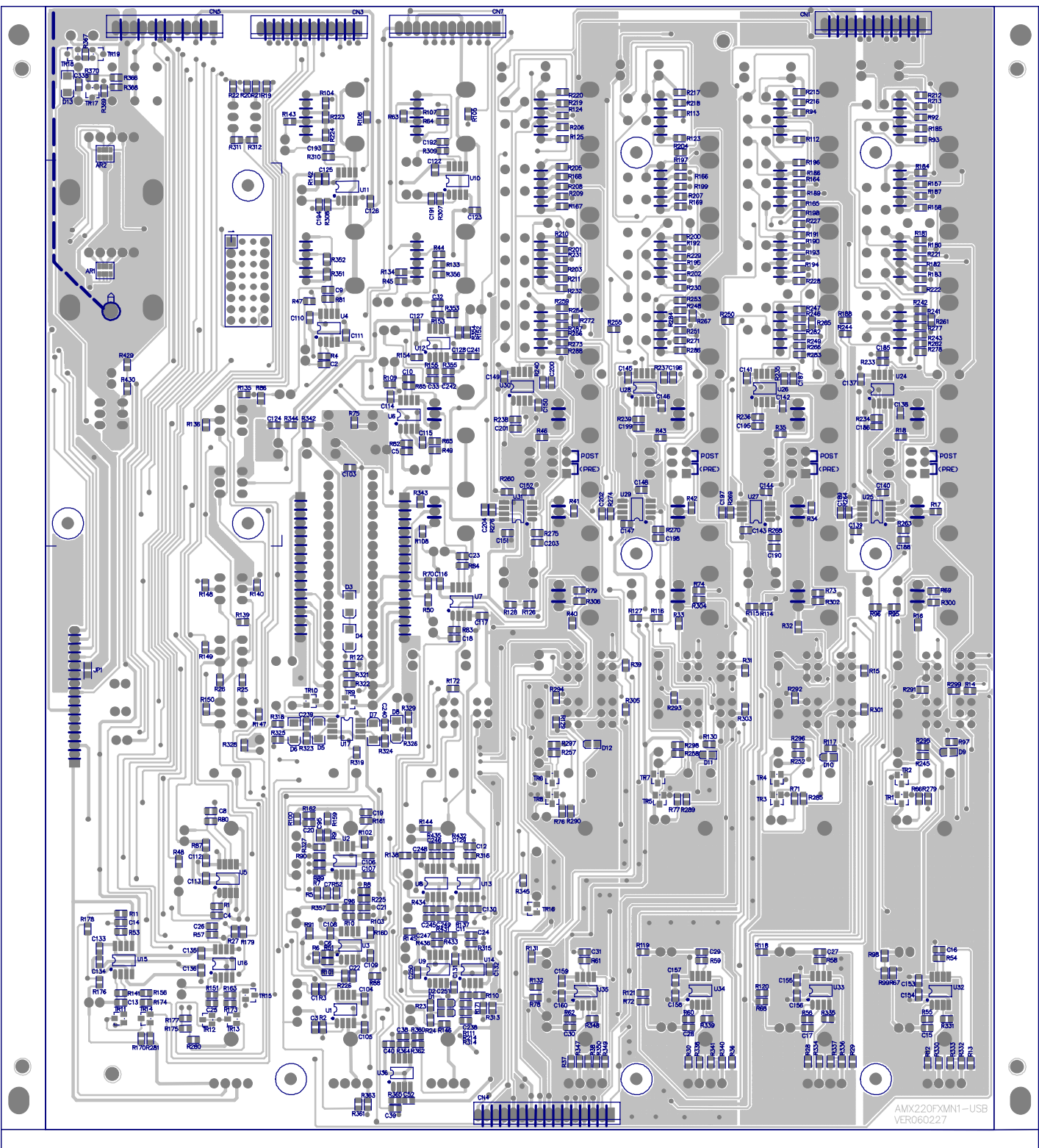


313123/2 I<sup>2</sup> INTERNAL LAYER VCC

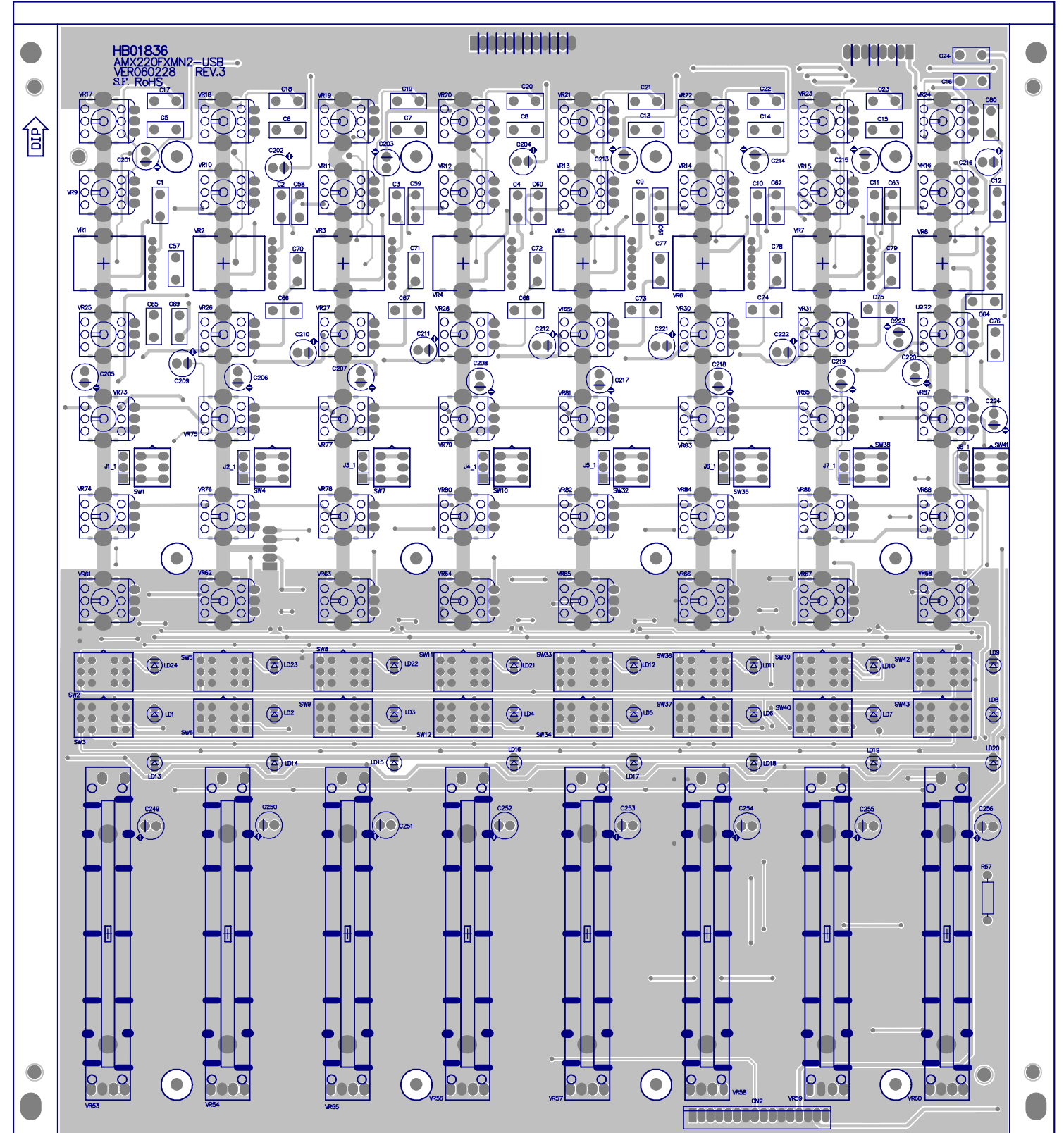
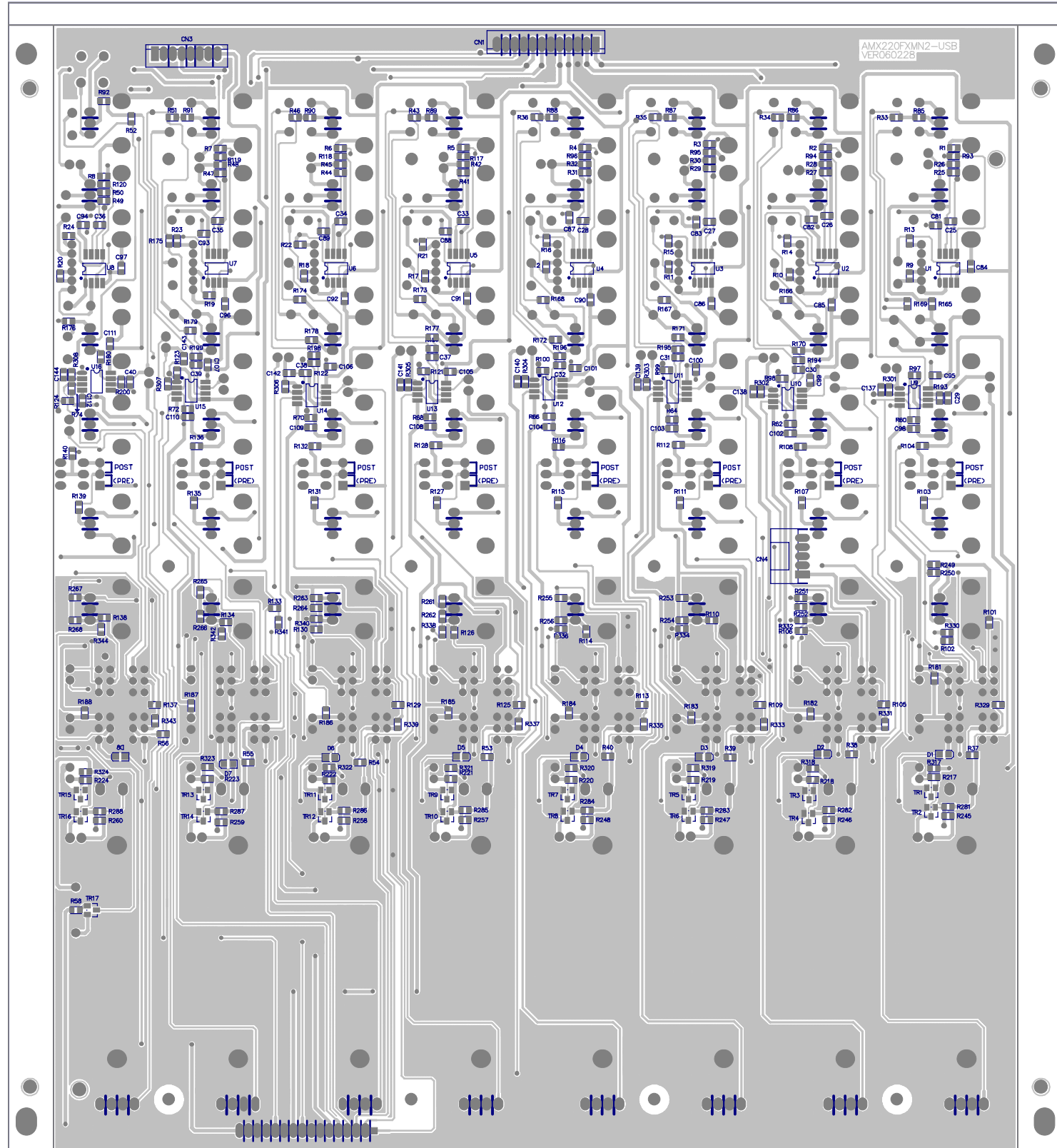


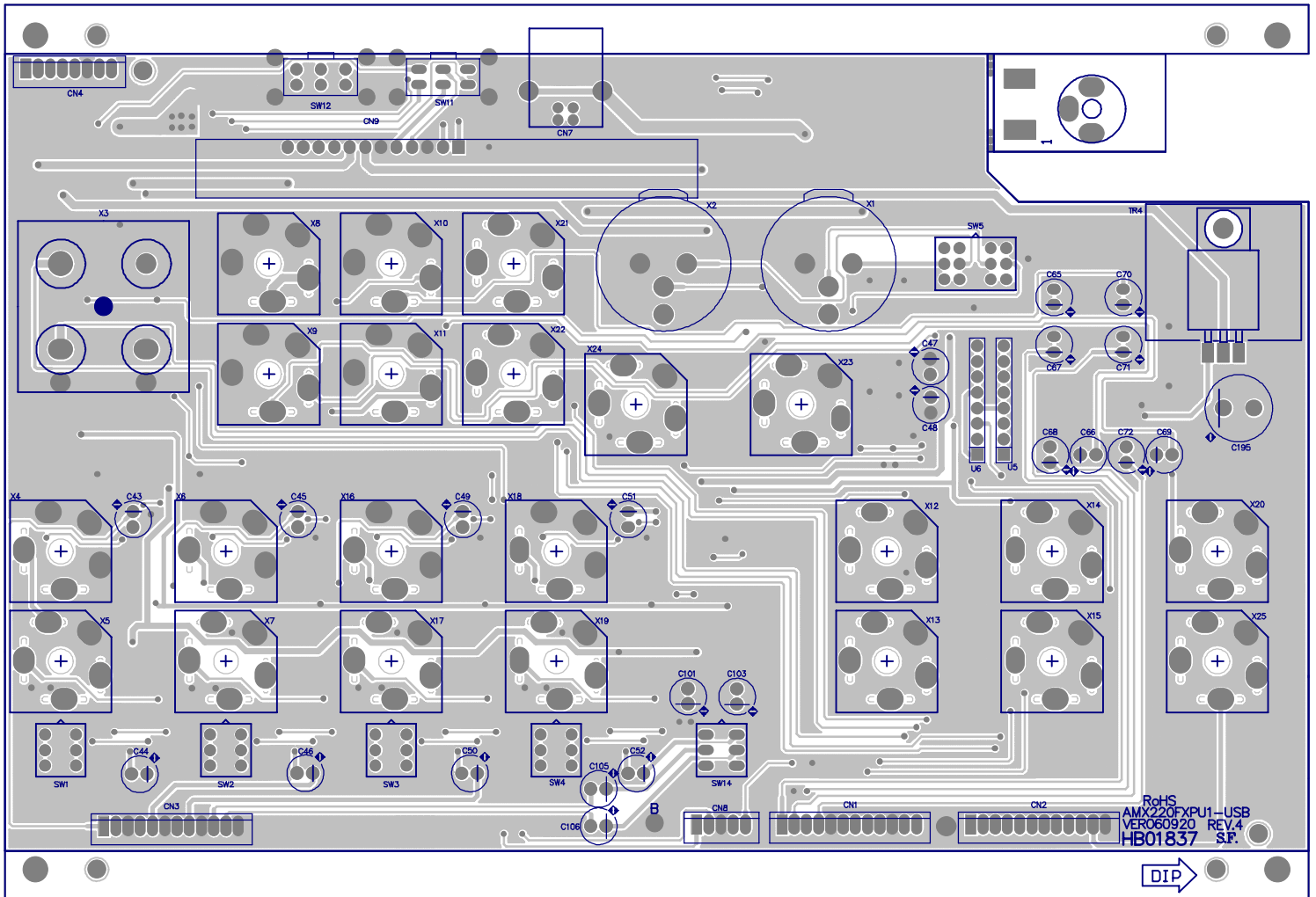
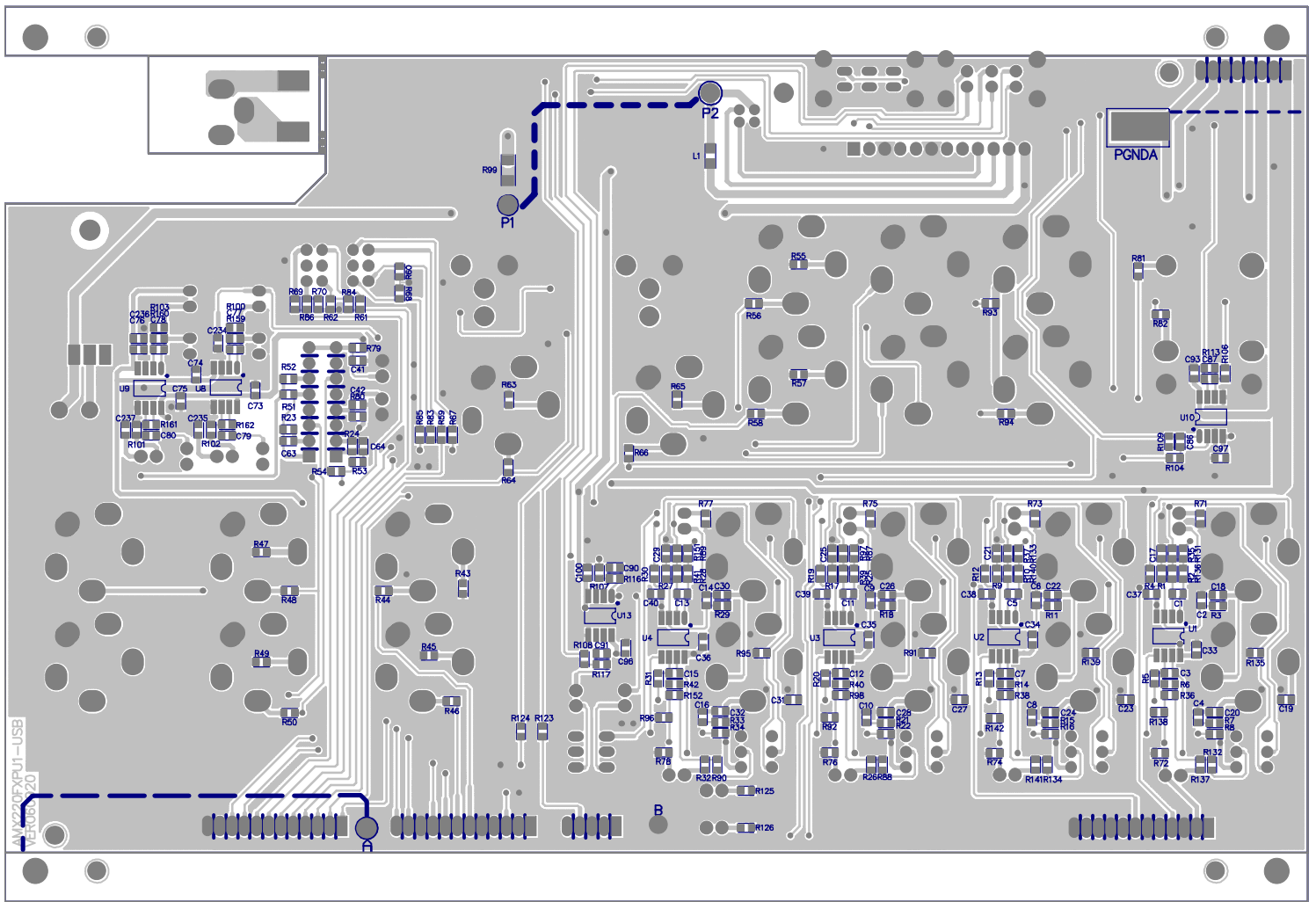


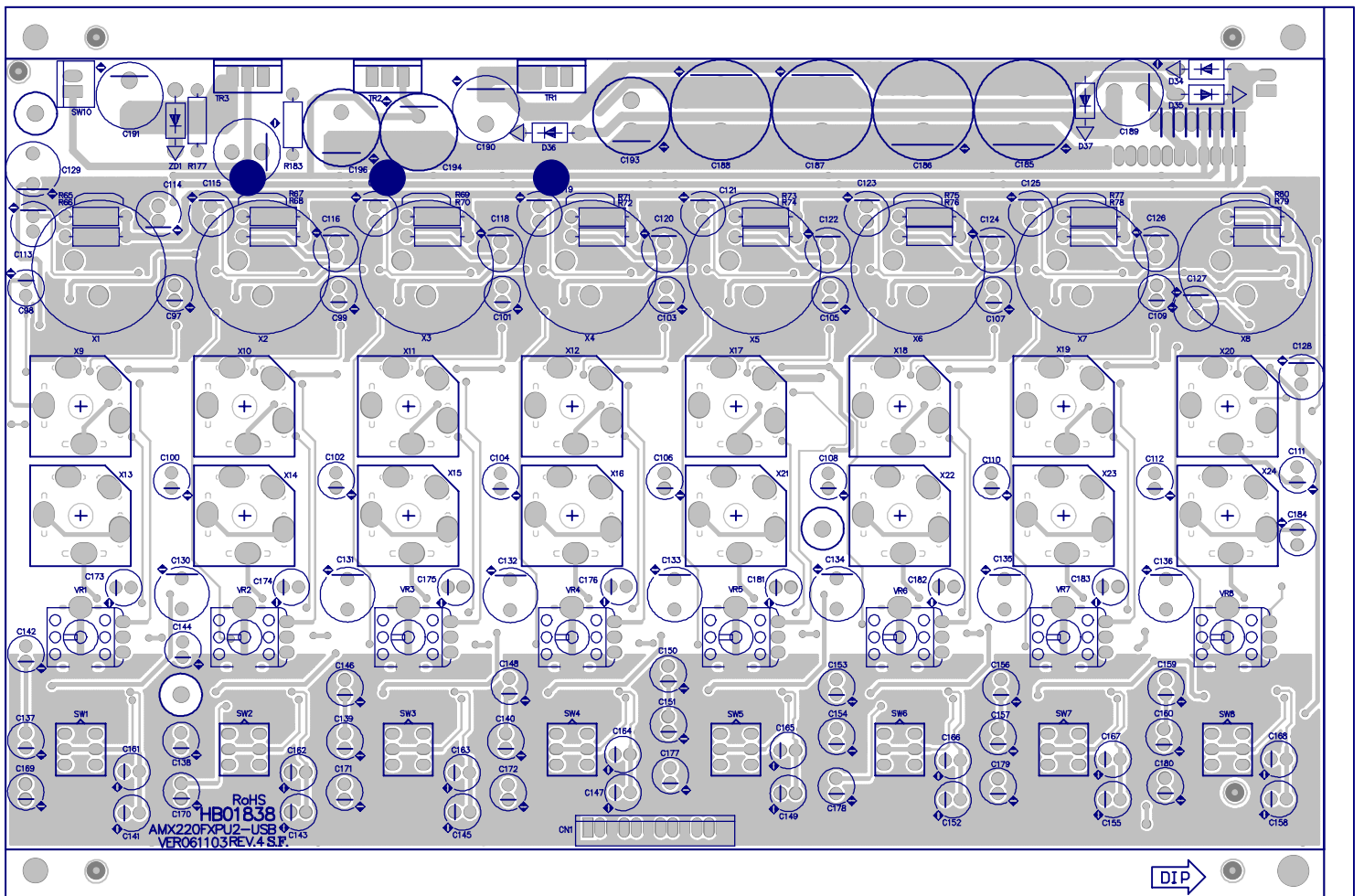
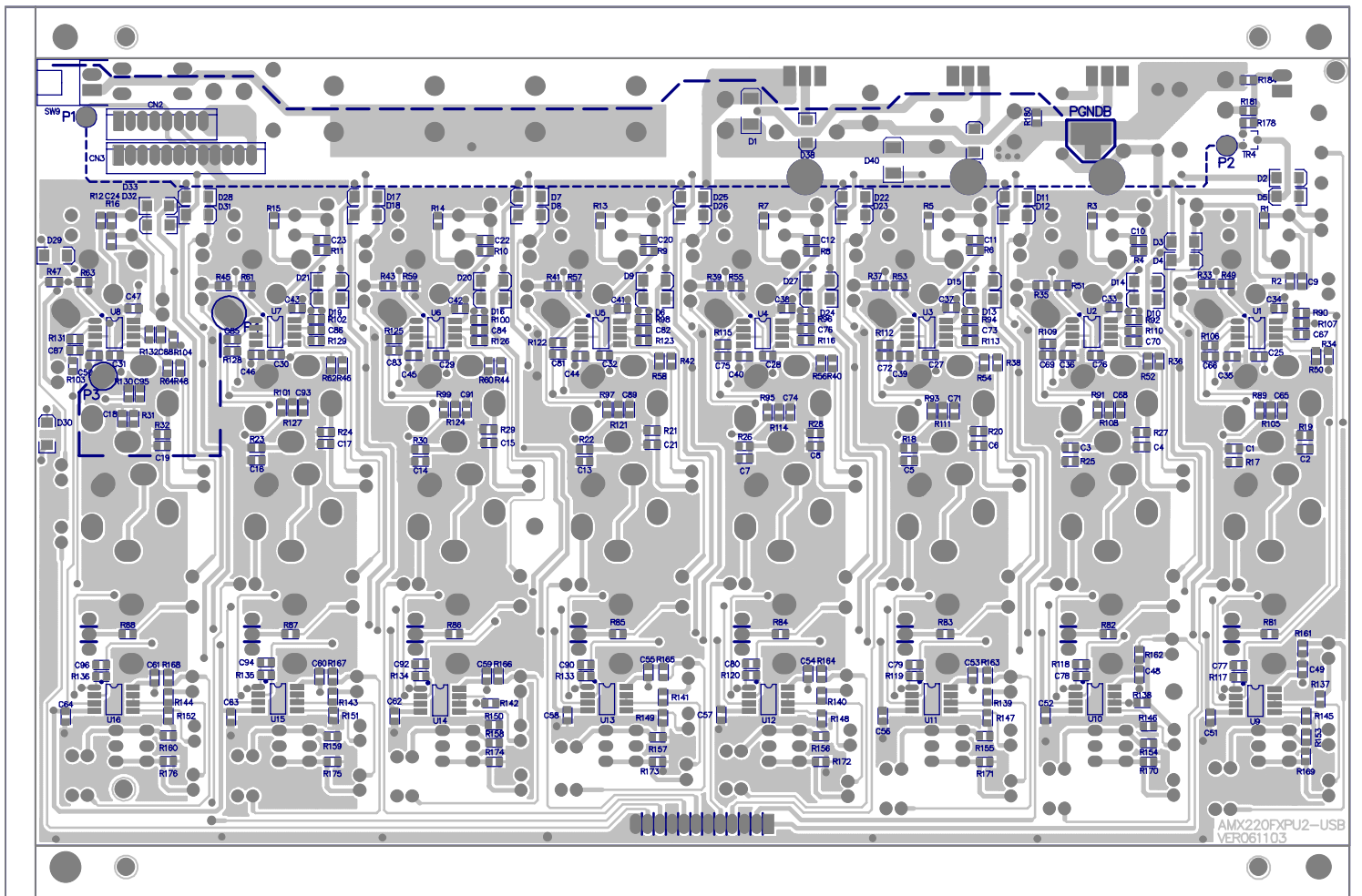




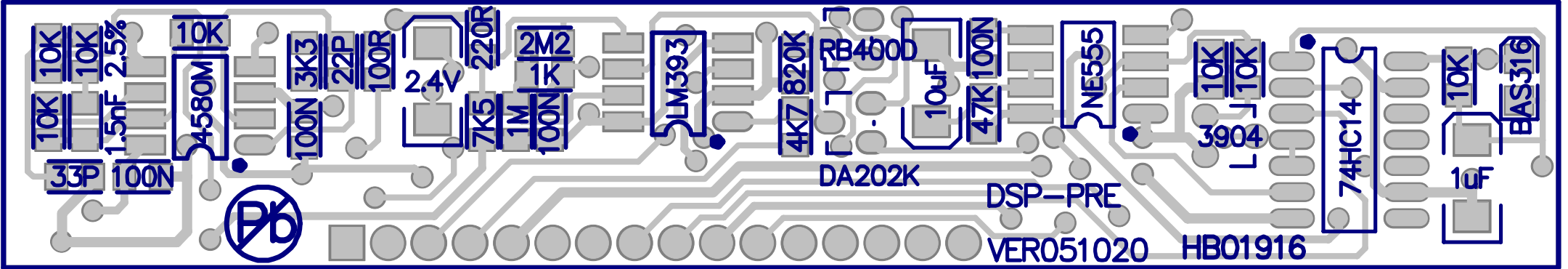
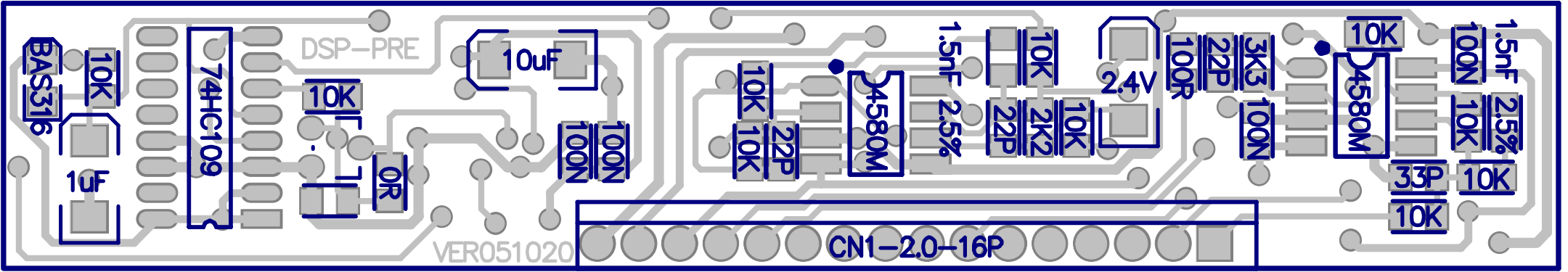












## 7. TEST PROCEDURE

### 1. Instruments:

- 1). AP (Audio Precision)
- 2). Dual oscillograph
- 3). Voltmeter
- 4). USB line

### 2. Instruments Setting:

- 1). AP output: 0dBu 1KHz SINE waveform, Load out 40Ω Bal-Gnd or Load out 20Ω Unbal-Gnd.
- 2). AP input: Load 100KΩ BNC-Float or Load 100KΩ XLR-Bal BW: 22Hz~22KHz. Fltr: A-Weighting (12017).



### 3. Visual Check:

Check the surface of AMX-220FX and be sure it is OK; the potentiometer knob has no friction.

### 4. Functional Test:

- 1). After the surface checking is OK, input proper AC power voltage, open the POWER switch and the PWR led will light up. Then open the PHANTOM switch, the PH led will light, the second and third pin of MIC1~8 input socket has 48V voltage which has been tested by voltmeter, and close this switch (note: this switch should be closed for the following test, or the instruments will be damaged).
- 2). Set the MAIN MIX LEVEL, PHONES/CONTORL ROOM, EQ, PAN, BAL knob to 0, the

TRIM, AUX1, AUX2, AUX SENDS, AUX RTN1, AUX RTN2 (DFX), 2TK IN, ALT3-4 to min, and turn the entire keys to OFF.

(Turn the LEVEL on CH1~16 to max when this channel should be tested)

- 3). Input 0dBu to AP, connect the balanced input to MIC1~8 respectively,
  - a. Connect balanced output to MAIN MIX OUTPUT, the output is +11dBu ( $\pm 2$ dB) THD+N<0.005%.
  - b. Press the MAIN OUTPUT LEVEL key, and the output is -21dBu ( $\pm 2$ dB) THD+N<0.005%.
  - c. Connect the unbalanced output to MAIN MIX OUTPUT, and the output is +6dBu ( $\pm 2$ dB) THD+N<0.005%.
  - d. Connect the unbalanced output to CTRL ROOM OUTPUT, press the MAIN MIX TO CTRL ROOM key, and the output is +6dBu ( $\pm 2$ dB) THD+N<0.005%.
  - e. Connect the unbalanced output to ALT OUTPUT, press the MUTE/ALT 3-4 key, and rotate the ALT3-4 to 0, the output is +10dBu ( $\pm 2$ dB) THD+N<0.005%; at the moment connect the unbalanced output to CTRL ROOM OUTPUT, press the ALT 3-4 TO CTRL ROOM key, and the output is +10dBu ( $\pm 2$ dB) THD+N<0.005%, however, the unbalanced MAIN MIX OUTPUT has no output, and press the ALT 3-4 TO MAIN MIX key, the output is +5dBu ( $\pm 2$ dB) THD+N<0.005%.  
(Release the entire keys after testing, and rotate the ALT3-4 to min)
- 4). Input -30dBu to AP, connect the unbalanced input to LINE IN 1~8, the unbalanced output to INSERT, rotate the TRIM to max, and the output is 0dBu ( $\pm 2$ dB).  
(Rotate the TRIM to min after testing).
- 5). Input +4dBu to AP, connect the unbalanced input to LINE IN 9/10~15/16, the balanced output to MAIN MIX OUTPUT respectively, and the output is +12dBu ( $\pm 2$ dB) THD+N<0.005%.
- 6). Input -10dBV to AP, connect the unbalanced input to LINE IN 9/10~15/16, and press the LEVEL +4dBu/-10dBV; connect the unbalanced output to MAIN MIX OUTPUT, the output is +12dBu ( $\pm 2$ dB) THD+N<0.005%.  
(Release the entire keys after testing)
- 7). Input +4dBu to AP, connect the unbalanced input to STEREO AUX RETURN1 (2), connect the unbalanced output to MAIN MIX OUTPUT, rotate the AUX RTN1 (2) to 0, and the output is +1dBu ( $\pm 2$ dB) THD+N<0.005%. When rotate the AUX RTN1 (2) to max, the output is +16dBu ( $\pm 2$ dB) THD+N<0.005%.  
(Rotate the AUX RTN1 (2) to min after testing)
- 8). Input +4dBu to AP, connect the RCA terminal to TAPE IN on 2-TRACK IN/OUT,
  - a. Press the 2TK TO MAIN MIX key, connect the unbalanced output to MAIN MIX OUTPUT, rotate the 2TK IN to 0, and the output is +1dBu ( $\pm 2$ dB) THD+N<0.005%; connect the unbalanced output to TAPE OUT, the output is +1dBu ( $\pm 2$ dB)



- THD+N<0.005%; when rotate the 2TK IN to max, the output is +11dBu ( $\pm 2$ dB)  
THD+N<0.005%.
- b. Release the 2TK TO MAIN MIX, connect the unbalanced output to CONTROL ROOM, press the 2TK TO CONTROL ROOM, and the output is +4dBu ( $\pm 2$ dB)  
THD+N<0.005%.  
(Release the entire keys after testing, and rotate the 2TK IN to min).
- 9). Input +15dBu to AP, connect the unbalanced input to LINE IN1~8 respectively,
- a. Connect the unbalanced output to CTRL ROOM OUTPUT, press SOLO key, the output is 0dBu ( $\pm 2$ dB) THD+N<0.005%.
- b. Connect the unbalanced output STEREO line to PHONES, press SOLO key, the output is 0dBu ( $\pm 2$ dB) THD+N<0.005%; and press the SOLO MODE key, the output is -9dBu ( $\pm 2$ dB) THD+N<0.005%. (Release the entire keys after testing)
- 10). Input +4dBu to AP, connect the unbalanced input to LINE IN 9~16,
- a. Connect the unbalanced output to CTRL ROOM OUTPUT, press SOLO key, the output is 0dBu ( $\pm 2$ dB) THD+N<0.005%.
- b. Connect the unbalanced STEREO output line to PHONES, press the SOLO key, the output is 0dBu ( $\pm 2$ dB) THD+N<0.005%; press the SOLO MODE key, the output is -5dBu ( $\pm 2$ dB) THD+N<0.005%. (Release the entire keys after testing)
- 11). Input +15dBu to AP, connect the unbalanced input to LINE IN1~8, the unbalanced output to AUX SENDS1, rotate the AUX1 and AUX SENDS1 to 0, and the output is +11dBu ( $\pm 2$ dB) THD+N<0.005%; press the POST/PRE key, the output is 0dBu ( $\pm 2$ dB) THD+N<0.005%; and rotate the AUX1 to max, the output is +14dBu ( $\pm 2$ dB) THD+N<0.005%.
- 12). Input +4dBu to AP, connect the unbalanced input to LINE IN9~16, the unbalanced output to AUX SENDS1, rotate the AUX1 and AUX SENDS1 to 0, the output is +7dBu ( $\pm 2$ dB) THD+N<0.005%; press the POST/PRE key, the output is -1dBu ( $\pm 2$ dB) THD+N<0.005%; rotate the AUX1 to max, the output is +12dBu ( $\pm 2$ dB) THD+N<0.005%. (Release the entire keys after testing, and rotate the AUX1 and AUX SENDS1 to min).
- 13). Input +15dBu to AP, connect the unbalanced input to LINE IN1~8, the unbalanced output to AUX SENDS2, rotate the AUX2 and AUX SENDS2 to 0, the output is +10dBu ( $\pm 2$ dB) THD+N<0.005%.
- 14). Input +4dBu to AP, connect the unbalanced input to LINE IN9~16, the unbalanced output to AUX SENDS2, rotate the AUX2 and AUX SENDS2 to 0, the output is +6dBu ( $\pm 2$ dB) THD+N<0.005%.
- 15). Input +15dBu to AP, connect the unbalanced input to LINE IN1~8, the unbalanced output to MAIN MIX OUTPUT, press the MAIN MIX TO CONTROL ROOM, adjust the MAIN MIX LEVEL to min, at the moment, the LED LEVEL will be decreased, push the

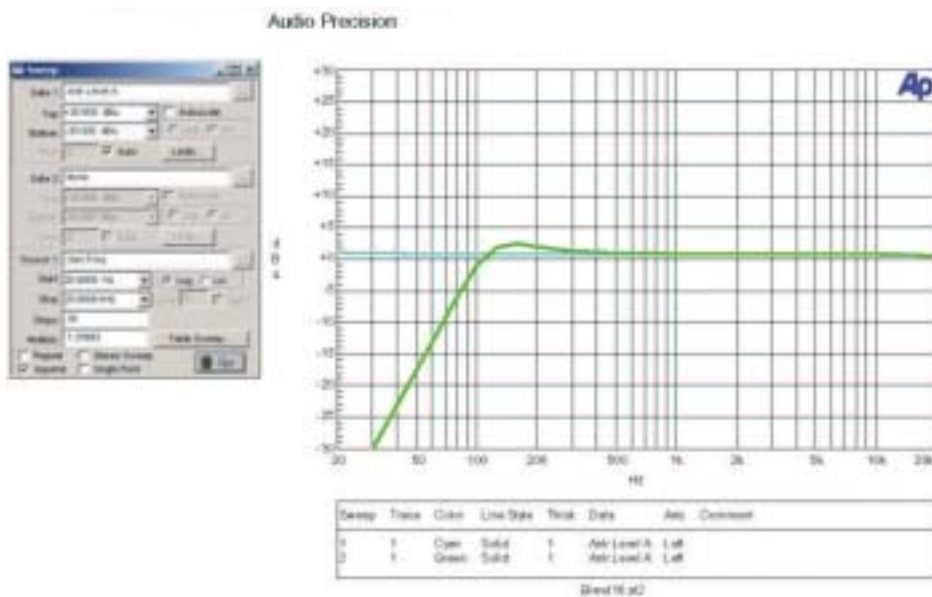
MAIN MIX LEVEL potentiometer to max, the LED LEVEL will light up in return, the output of MAIN MIX OUTPUT will match with the LED LEVEL. (Whenever the LED point at which level, it will appear the corresponding level value).

b. Rotate the TRIM knob in clockwise; the PEAK led will light up (red)

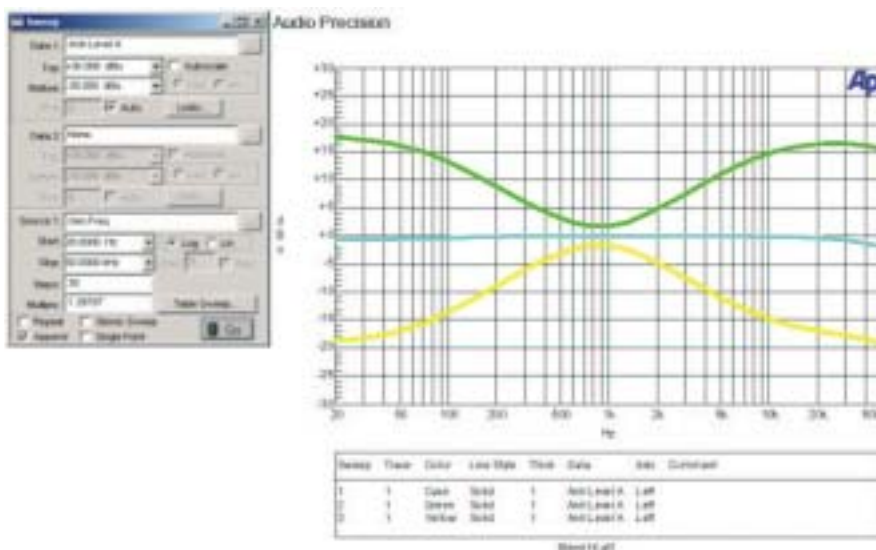
c. Input +15dBu to AP, connect the unbalanced input to LINE IN9~16, press the LEVEL +dBu/-10dBV key, the PEAK led will light up (red).

5. Frequency Response Test:

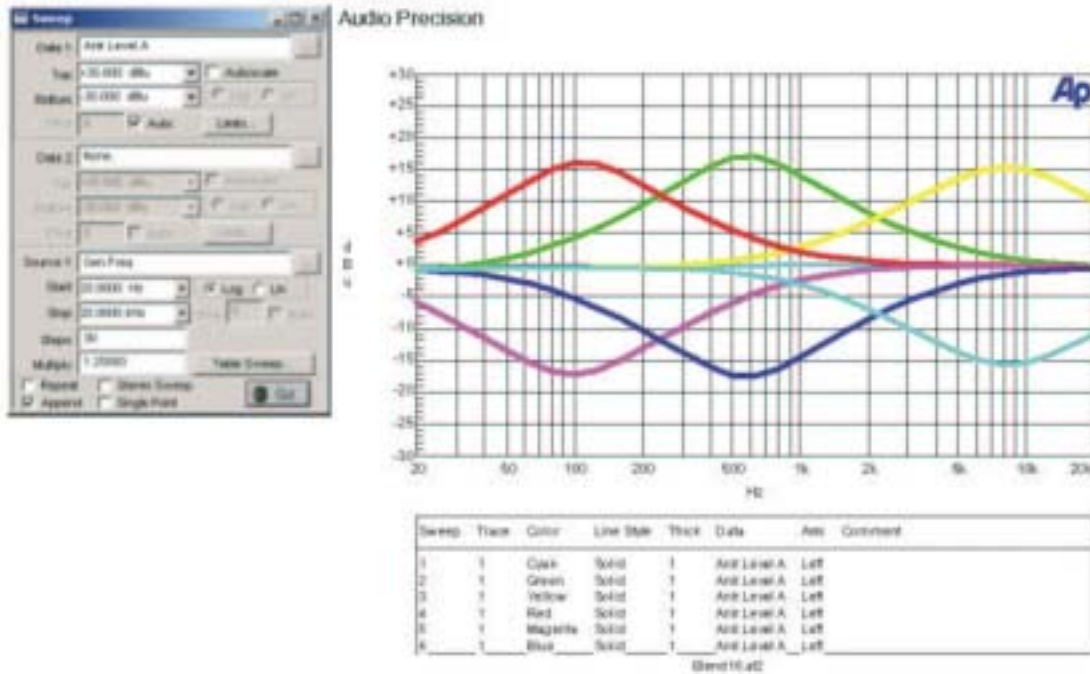
1). Input +15dBu to AP, connect the unbalanced input to LINE IN1~8, the unbalanced output to INSERT, please see the following picture about the variation of ON and OFF on LOW CUT.



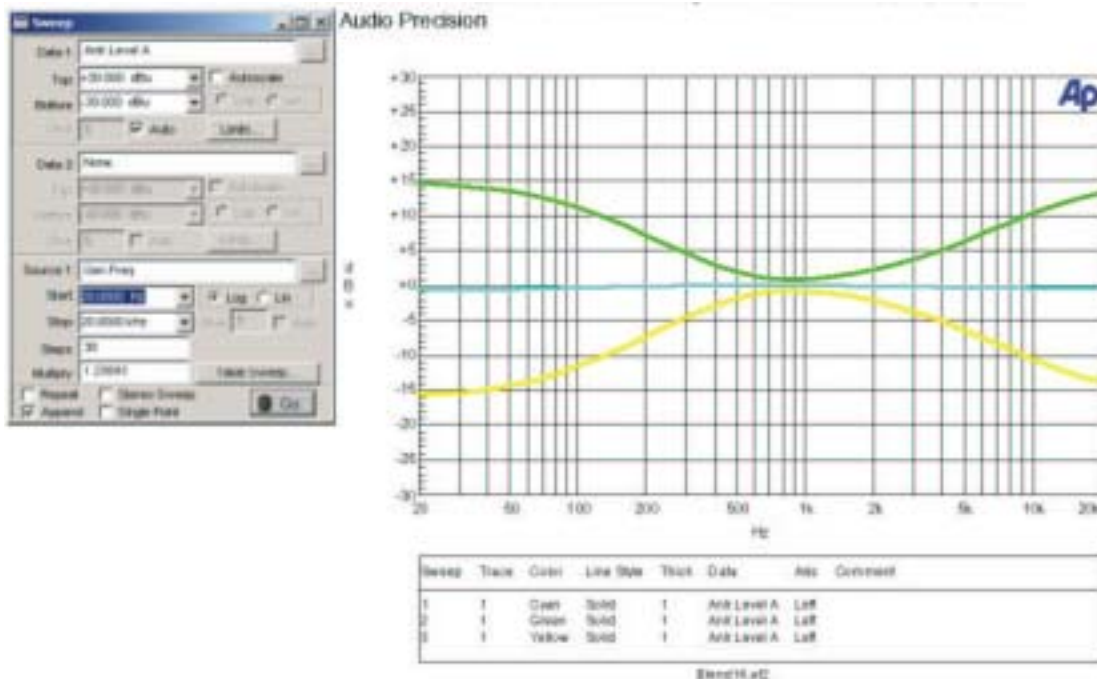
2). Input +15dBu to AP, connect the unbalanced input to LINE IN1~8, the unbalanced output to MAIN MIX OUTPUT, push the CH LEVEL to 0, we can see the max and min variation about HI and LOW on EQ,



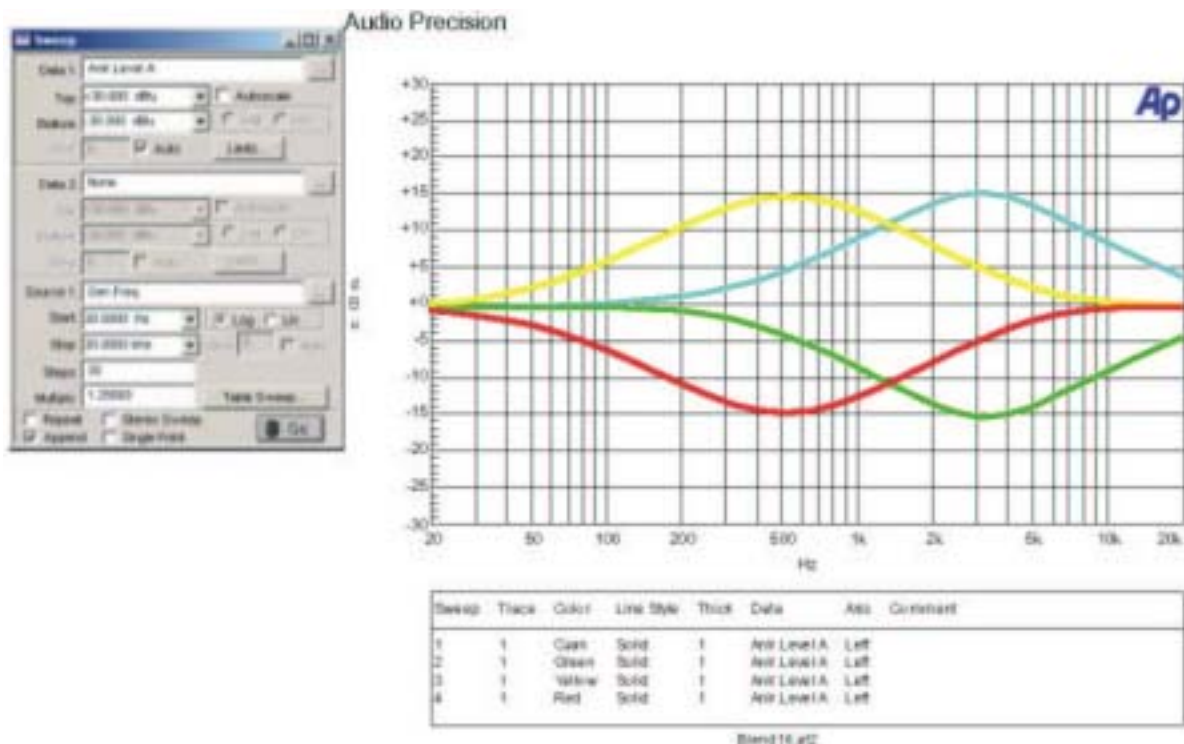
3). Input +15dBu to AP, connect the unbalanced input to LINE IN1~8, the unbalanced output to MAIN MIX OUTPUT, push the CH LEVEL to 0, we can see the max and min variation about MID and PREQ on EQ.



4). Input +4dBu to AP, connect the unbalanced input to LINE IN9~16, the unbalanced output to MAIN MIX OUTPUT, push the CH LEVEL to 0, we can see the max and min variation for HI and LOW on EQ:



5). Input +4dBu to AP, connect the unbalanced input to LINE IN 9~16, the unbalanced output to MAIN MIX OUTPUT, push the CH LEVEL to 0, we can see the max and min variation about HI MID and MID LOW on EQ:



6. The effect for testing the DSP:

Input signal from MIC1 to MIC8, LINE IN9/10 to 15/16, output signal from AUX SENDS1, rotate the AUX2, AUX SENDS2, AUX RTN2 (DFX) to max, rotate AUX1 to min, press the DFX TO AUX1, rotate PRESETS and ARATIONS knob, it will appear the signal which has been processed by DSP, if the INPUT signal is larger, the PEAK led will light up (red), press the DFX MUTE key, it will appear the BYPASS signal.

7. The test for USB function:

- 1). Set the MAIN MIX LEVEL, PHONE/CONTROL ROOM, EQ, PAN, BAL knob to 0, the TRIM, AUX1, AUX2, AUX RTN1, AUX RTN2, 2TK IN, ALT3-4, AUX SENDS to min, rotate the PAN on CH1 to LEFT, rotate the PAN on CH2 to RIGHT, and turn all the entire keys to OFF.
- 2). Input 0dBu to AP, connect the balanced input to MIC1 MIC2, and rotate the LEVEL on CH1 CHA2 to max, connect the unbalanced output to MAIN MIX OUTPUT, the output is +10dBu ( $\pm 2\text{dB}$ ) THD+N<0.005%.

- 3). Switch the USB RECORD to CH1/2, the USB PLAYBACK to MAIN MIX, connect the USB line to PC, and open the recorder to tape for 60 seconds.



- 4). Take off the input signal, and the output is +5dBu ( $\pm 2$ dB) THD+N<1%.
- 5). Input 0dBu to AP, connect the balanced input to MIC1 MIC2, and adjust the LEVEL on CH1 CH2 to max; connect the unbalanced output to MAIN MIX OUTPUT, the output is +10dBu ( $\pm 2$ dB) THD+N<0.005%.
- 6). Switch the USB RECORD to MAIN MIX, the USB PLAYBACK to CH15/16, connect the USB line to PC, and open the recorder to tape for 60 seconds.



- 7). Take off the input signal, press the LINE/USB on CH15/16, push the CH LEVEL to 0, and press the playing key, the output is +2dBu ( $\pm 2$ dB) THD+N<2%.



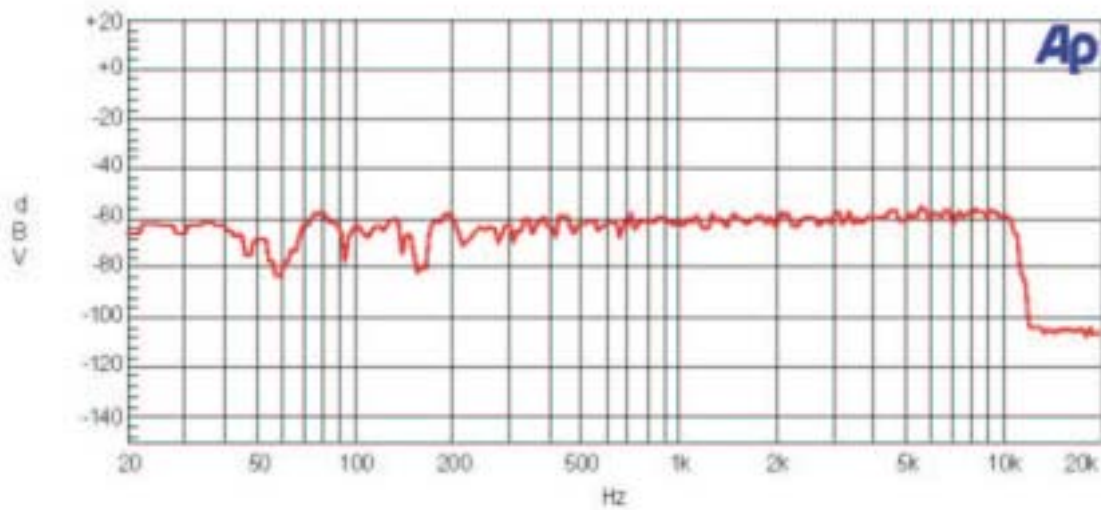
8). Open the C:\Apwin\S2\A-a\A-A FFT. At2 and set as following:



9). Do not input signal, connect the unbalanced output to MAIN MIX OUTPUT, and switch the USB RECORD to MAIN MIX, the USB PLAYBACK to MAIN MIX, connect the USB line to PC, and open the recorder to tape for 60 seconds.



10). Press the playing key after recording, the AP will start to scan, and the waveform has no special changing, connect the high quality amplifier and speaker to listen if it appear the high frequency noise:



Sweep	Trace	Color	Line Style	Thick	Data	Axis	Comment
1	1	Red	Solid	1	FF.Ch.1.Ampl	Left	

Requires DSP. Analog Analyzer input is A/D converted and analyzed with the FFT Digital analyzer. Signal source may be internal or external. Click "Reset SpectrumMeasurement" icon to return to switch between frequency and A-AFFT.g2

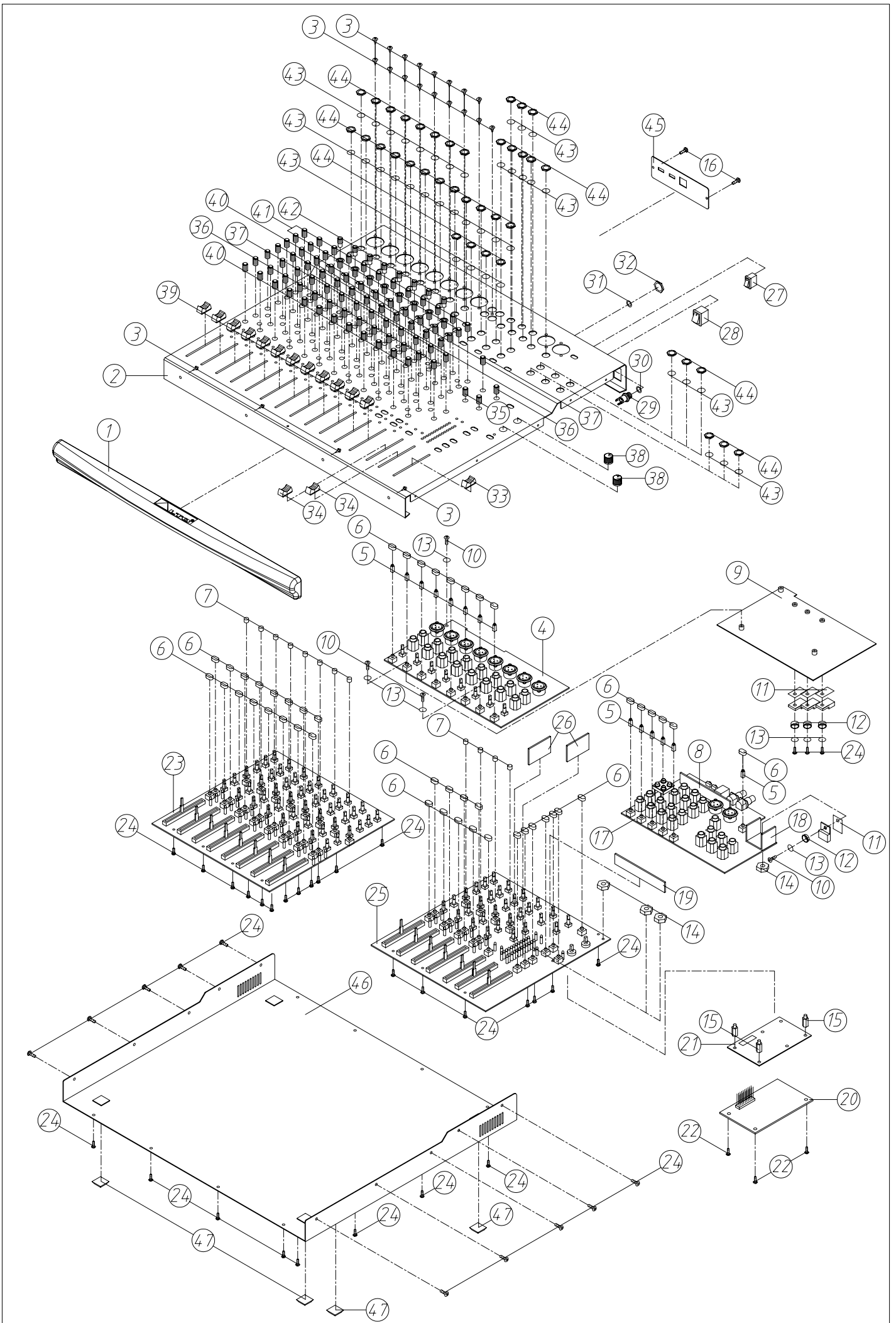
8. Selecting Check:

Connect the AMX-220FX USB to high quality amplifier and speaker, and listen to it if it appear abnormal sounding.

9. Factory Preset:

Rotate the entire volume control knob to min, the other control knob to mid, and turn the entire switch OFF.

# 8. EXPLODED VIEW & PARTS LIST





## PARTS LIST

No.	Part No.	Description	Specification	Pcs
1	NI01947	ZC-handle	AMX-220; 220FX-V1.0	1
2	MA05706	ZC-board	AMX-220FX USB ALTO-V1.3	1
3	MG00061	screw-RS	M3*10	25
4	HK06417	K-PC board	P-AMX220FXPU2-USB-DIP	1
5	NI01862	knob-RS-C	5.5*5.5*14.5-V1.1	14
6	NI01863	key-RS	φ5.5*W10*7.5 black	46
7	NI02377	key-RS-C-ABS	φ5.5*7.5mm (3.3*3.3mm) black	12
8	HK06381	K-PC board	AMX-USB-DIP	1
9	MI03271	ZD-heat sink-AMX220FX.USB-03	AMX220FX.USB 1t*120*175-V1.0	1
10	MG00162	nickle screw-RS	M3*8	4
11	NC00005	sheet mica-RS0	SB-9500DSP 18*13*0.1t-V1.0	4
12	NI02249	insulator-RS	TW-1 (TO-220)	4
13	MF00037	spring washer	φ3.2*φ5.5*1t	7
14	ME00015	color nut-RS	3mm	4
15	MG00243	copper pillar-RS	M3*5*0.5PH	3
16	MG00326	screw-RS	M3*4	2
17	HK06414	K-PC board	P-AMX220FXPU1-USB-DIP	1
18	MI01953	ZD-heat sink-AMX100FX-02	AMX-100FX 1.5t*24*21*20.5mm	1
19	HK06352	K-PC board	P-DSP-PRE-DIP	1
20	HK01409	K-PC board	P-313123-DIP (AMX-140FX	1
21	NI02620	ZD-insulator clip-L8-04	1*86.5*53 L-8	1
22	MG00036	screw-RS	M3*4	3
23	HK06423	K-PC board	P-AMX220FXMN2-USB-DIP	1
24	MG00041	screw-RS	M3*6	41
25	HK06420	K-PC board	P-AMX220FXMN1-USB-DIP	1
26	HK04376	K-PC board	P-12VMETER-DIP (AMX-220)	2
27	HI00026	power switch-RS	RA12KKATOF 2P	1
28	HI00171	power switch-RS	R612KKATOF 2	1
29	HC00601	DC socket -RS	SCD554CCS00300	1
30	NI00378	plastic washer-RS-C	φ9*φ13 used to PU socket	1
31	NC00037	ZD-cushion-XM1602-07	1t*φ8*φ12.5mm X,1602-V1.0	1
32	ME00143	nickle nut-HC00601	10 5/6**32w	1
33	NI02353	slide key-RS-C-ABS	24*11.5*11	1
34	NI02352	slide key-RS-C-ABS	24*11.5*11	2
35	NI02817	plastic knob-RS-C	φ10.5*18mm dual	2
36	NI02633	plastic knob-RS-C	φ10.5*18mm dual	14
37	NI02081	plastic knob-RS-C	φ10.5*18mm dual	14
38	NI02386	plastic knob-RS-C	φ14*13mm dual	2
39	NI02309	slide key-RS-C-ABS	24*11.5*11-V1.1	12
40	NI02082	plastic-RS-C	φ10.5*18 dual	20
41	NI02083	plastic-RS-C	φ10.5*18 dual	40
42	NI02741	plastic-RS-C	φ10*13.5 dual	8
43	MF00061	washer	φ9.6*φ13*0.5t	38
44	ME00060	MIC jack nut-HC00125	JY-6351G-02-250	38
45	MJ01319	ZC-fixed board	AMX-220FX USB-V1.2	1
46	MB04416	ZB-chassis	AMX-220FX.USB-V1.0	1
47	NI00468	self-adhere cushion-RS	12.7*7*6mm (SF-005)	4

## 9. BOM

No.	Part No.	Description	Specification	Remark
1	NI00498	self-adhere foot cushion	12.7*7*6mm(SF-005)	
2	NI00271	sleeve	φ7*20mm	
3	NI00270	sleeve	φ7*1000mm	
4	NI00378	plastic washer	9*13 used to PU socket	
5	NI00218	cable tie	ALT-102SB	
6	NI02714	knob	φ10*13.5mm	
7	NI02377	knob-RS	φ5.5*7.5(3.3*3.3mm)_V1.2	
8	NI02633	knob	φ10.5*18	
9	NI02386	konb	φ14*13mm	
10	NI01863	key-RS	φ5.5*W10*7.5	
11	NI01862	key	5.5*5.5*14.5_V1.1	
12	NI02817	knob	φ10.5*18mm	
13	NI02309	knob	24*11.5*11_V1.1	
14	NI02352	knob	24*11.5*11	
15	NI02353	knob	24*11.5*11	
16	NI02081	knob	φ10.5*18mm	
17	NI02083	knob	φ10.5*18mm	
18	NI02082	knob	φ10.5*18mm	
19	ND00233	dustproof cloth	0.35t*402*79mm	
20	NI01947	handle	AMX-220;220FX_V1.0	
21	NI02960	handle	442*33*26mm AMX-220 black	
22	MB04416	rear board	AMX-220FX.USB_V1.0	
23	MB04415	rear board	AMX-220FX.USB 1t*43*402*442_V1.0	
24	MJ00058	single light board	1*2135*1220 20.45kg	
25	AE00343	solvent	No.003	
26	AE00177	paint-RS	4866	
27	MJ01319	fixed board	AMX-220FX USB_V1.2	
28	MJ01298	fixed board-RS	AMX-140FX.USB	
29	AE00177	paint-RS	4866	
30	MJ01297	fixed board-RS	AMX-140FX.USB 0.8t*33*103.5_V1.0	
31	MJ00068	iron board	0.8*2135*1220 16.35kg	
32	NE15394	lable	AMX-220FX USB_V1.0	
33	NI00014	membrane	0.035*1M	
34	NH00012	bond paper	0.04*1M	
35	NC00080	washer	φ3.17*φ8.2*1	
36	NC01112	black foil white board	1.0t*65mm(+0.1)*60M	
37	MJ00808	fixed clip	WL3-32T	
38	NF00061	assurance card	ALTO	
39	NE05004	label	ALTO	
40	NH00334	cone paper	0.040*1m	
41	NB03030	inner case-RS	AMX-220/220FX/220FX USB ALTO_V1.1	
42	NB03029	carton	AMX-220/220FX ALTO_V1.0	
43	NB03168	cushion	AMX-220 left_V1.0	
44	NB03167	cushion	AMX-220 right_V1.0	
45	MI02097	fixed bracket	AMX-220 left_V1.0	
46	MI02096	fixed bracket-RS-ACT	AMX-220 1.5t*428*25*20.5(left)_V1.3	
47	MJ00088	single light board	1.5*2135*1220 30.67kg	
48	MI02099	fixed bracket	AMX-220 right_V1.0	
49	MI02098	fixed bracket	AMX-220 1.5t*428*25*20.5(right)_V1.2	
50	MJ00088	single light board	1.5*2135*1220 30.67kg	
51	NA00279	clip-chain bag	0.04t*100*150mm_V1.0	
52	NA00136	PE bag	0.05t*820*540mm	
53	MG00041	screw	M3*6	
54	MG00036	screw	M3*4	
55	MG00061	screw-RS	M3*10	
56	ME00015	color nut	3m/m	

No.	Part No.	Description	Specification	Remark
57	MG00326	screw	3*4	
58	MF00061	MIC jack	φ9.6*φ13*0.5t	
59	ME00143	nut	5/6"x32w	
60	ME00060	MIC jack	JY-6351G-02-250	
61	MG00243	copper pillar	M3*5*0.5PH	
62	HI00171	power switch-RS	R612KKAT0F1	
63	HJ00006	dessicant	30g	
64	HI00026	power switch-RS	RA12KKATOF 2P	
65	HA01413	row-wire connecting wiring-RS	2P 450mm UL1007 24AWG	
66	HA00387	wire	210mm black L5R5	
67	HA01835	wire-RS	70mm brown L5R5	
68	HA00382	wire-RS	150mm black L5R5	
69	HA01531	wire-RS	2P 250mm UL1007 24AWG	
70	TG00205	transformer-RS	230V/50Hz-AC18V/2000mA-EI57	
71	HK06417	PC board	P-AMX220FXPU2-USB-DIP	
72	RC00356	potentiometer	Z10KΩ RD09F1130042-10KZ(SAS1);30F	VR1,VR2,VR3,VR4,VR5,VR6,VR7,VR8
73	SD00079	integrated circuit	L7915CV(TO220)/(ST)	TR2
74	SD00077	integrated circuit-RS	L7815CV(TO220)/(ST/MOROCCO)	TR1
75	SB00043	transistor-RS-ACT	TIP122(TO220)/(ST)	TR3
76	NI02249	plastic washer	TW-1(TO-220)	
77	NC00005	mica	SB-9500DSP 18*13*0.1t_V1.0	
78	MG00024	screw	M3*7 0.5PH	
79	MF00037	washer	φ3.2*φ5.5*1t	
80	ME00015	color nut	3m/m	
81	MG00041	screw	M3*6	
82	HI00236	push-button switch-RS	2 6P PS-92 26A(SELF-LOCK)	SW1,SW2,SW3,SW4,SW5,SW6,SW7,SW8
83	HC00076	connector(male)	2P 2.5mm 180°	SW10
84	HC00126	balance MIC jack-RS	JY-5042-030G female plug 180°	X1,X2,X3,X4,X5,X6,X7,X8
85	HC00125	MIC jack-RS	JY-6351G-02-250	X9,X10,X11,X12,X13,X14,X15,X16,X17,X18,X19,X20,X21,X22,X23,X24
86	HC00259	connector(male)	8P 2.0mm 180°	CN2
87	HC00065	connector(male)	2P 2.5mm 90°	SW9
88	CB00256	electrolytic capacitor	1000uF/25V φ10*20mm 5mm	C193,C194
89	CB00082	electrolytic capacitor	2200uF/25V φ16*21mm	C185,C186,C187,C188
90	HA00366	wire	40mm black L5R5	
91	HA00239	wire	240mm white L3R3	
92	CB00279	electrolytic capacitor	100uF/100V φ10*20mm	C189,C190,C191,C196
93	HA03128	wire-RS	12P(male)-12P(female) 60mm UL1007 28AWG	CN1
94	HA04413	wire-RS	12P-12P 360mm UL1007 28AWG red/white	CN3
95	HK06419	PC board	P-AMX220FXPU2-USB-SMD	
96	RD00224	SMD precise resistor 1/10W	100KΩ ±1% 0603	R184
97	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C33,C34,C35,C36,C37,C38,C39,C40,C41,C42,C43,C44,C45,C46,C47,C48,C49,C50,C51,C52,C53,C54,C55,C56,C57,C58,C59,C60,C61,C62,C63,C64
98	RD00214	SMD precise resistor 1/10W	10.0KΩ ±1% 0603	R89,R90,R91,R92,R93,R94,R95,R96,R97,R98,R99,R100,R101,R102,R103,R104
99	RD00334	SMD precise resistor 1/10W	11.0KΩ ±1% 0603	R33,R34,R35,R36,R37,R38,R39,R40,R41,R42,R43,R44,R45,R46,R47,R48
100	RD00351	SMD fixed resistor 1/10W	1.3KΩ ±5% 0603	R137,R138,R139,R140,R141,R142,R143,R144
101	RD00219	SMD precise resistor 1/10W	20.0KΩ ±1% 0603	R153,R154,R155,R156,R157,R158,R159,R160,R169,R170,R171,R172,R173,R174,R175,R176
102	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C65,C66,C67,C68,C69,C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C80,C81,C82,C83,C84,C85,C86,C87,C88,C89,C90,C91,C92,C93,C94,C95,C96
103	RD00265	SMD fixed resistor 1/10W	27Ω ±5% 0603	R81,R82,R83,R84,R85,R86,R87,R88
104	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR4

No.	Part No.	Description	Specification	Remark
105	RD00345	SMD fixed resistor 1/10W	390KΩ ±5% 0603	R180
106	RD00406	SMD precise resistor 1/10W	3.60KΩ ±1% 0603	R49,R50,R51,R52,R53,R54,R55,R56,R57,R58,R59,R60,R61,R62,R63,R64
107	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D2,D3,D4,D5,D6,D7,D8,D9,D10,D11,D12,D13,D14,D15,D16,D17,D18,D19,D20,D21,D22,D23,D24,D25,D26,D27,D28,D29,D30,D31,D32,D33,D38,D39
108	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U1,U2,U3,U4,U5,U6,U7,U8,U9,U10,U11,U12,U13,U14,U15,U16
109	CI00063	SMD ceramic capacitor 0603	470PF/50V NPO ±5%	C1,C2,C3,C4,C5,C6,C7,C8,C9,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20,C21,C22,C23,C24
110	RD00339	SMD precise resistor 1/10W	47.0KΩ ±1% 0603	R178,R181
111	CI00055	SMD ceramic capacitor 0603	47PF/50V C0G±5%(C1608C0G1H470JT)/TDK	C25,C26,C27,C28,C29,C30,C31,C32
112	RD00298	SMD precise resistor 1/10W	47.0Ω ±1% 0603	R1,R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,R12,R13,R14,R15,R16
113	RD00371	SMD precise resistor 1/10W	51.1KΩ ±1% 0603	R17,R18,R19,R20,R21,R22,R23,R24,R25,R26,R27,R28,R29,R30,R31,R32
114	SE00048	SMD Schottky barrier diode	1A/20V PRL15817(SOD87)/(PHI)	D1,D40
115	RD00210	SMD precise resistor 1/10W	5.11KΩ ±1% 0603	R105,R106,R107,R108,R109,R110,R111,R112,R113,R114,R115,R116,R117,R118,R119,R120,R121,R122,R123,R124,R125,R126,R127,R128,R129,R130,R131,R132,R133,R134,R135,R136
116	RD00113	SMD fixed resistor 1/10W	62KΩ ±5% 0603	R145,R146,R147,R148,R149,R150,R151,R152
117	RD00097	SMD fixed resistor 1/10W	6.8KΩ ±5% 0603	R161,R162,R163,R164,R165,R166,R167,R168
118	AE00449	solder material without lead	9308/Sn Ag Cu	
119	HK06418	PC board	P-AMX220FXPU2-USB-AI	
120	CB00238	electrolytic capacitor	0.22uF/50V φ5*11mm	C137,C138,C139,C140,C141,C142,C143,C144,C145,C146,C147,C148,C149,C150,C151,C152,C153,C154,C155,C156,C157,C158,C159,C160
121	CB00255	electrolytic capacitor	1000uF/10V φ8*11mm 5mm	C129,C130,C131,C132,C133,C134,C135,C136
122	SA00094	rectifier diode	1N4002/100V	D34,D35,D36,D37
123	SA00127	zener diode	1/2W 47V 1N5261	ZD1
124	RA01115	fixed resistor 1/4W	20KΩ	R177
125	CB00242	electrolytic capacitor	22uF/35V φ5*11mm	C97,C98,C99,C100,C101,C102,C103,C104,C105,C106,C107,C108,C109,C110,C111,C112
126	CB00194	electrolytic capacitor	47uF/25V φ5*11mm	C161,C162,C163,C164,C165,C166,C167,C168,C169,C170,C171,C172,C173,C174,C175,C176,C177,C178,C179,C180,C181,C182,C183,C184
127	CB00254	electrolytic capacitor	47uF/100V φ10*12mm 5mm	C192
128	RA01325	fixed resistor 1/8W	4.7Ω	R183
129	RA01262	precise resistor 1/4W	6.81KΩ	R65,R66,R67,R68,R69,R70,R71,R72,R73,R74,R75,R76,R77,R78,R79,R80
130	HB01838	PCB-RS	AMX220FXPU2-USB_VER061103	
131	CB00334	electrolytic capacitor-RS	47uF/50V φ6.3*11mm	C113,C114,C115,C116,C117,C118,C119,C120,C121,C122,C123,C124,C125,C126,C127,C128
132	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
133	MI03271	heat-sink-RS	AMX220FX.USB 1t*120*175_V1.1	
134	MJ00999	AL plate-RS	1*2000*1000 5.44kg	
135	ME00041	iron pillar	hexagon6.35*M3*6	
136	ME00166	iron pillar	M3*3_V1.0	
137	HK06420	PC board	P-AMX220FXMN1-USB-DIP	
138	RC00284	slide potentiometer	D10KΩ RF6011YP600F-10KD(SAS1)	VR1,VR2
139	SA00054	L.E.D	3m/m round(yellow)long foot 26	LD9,LD10,LD11,LD12,LD13,LD14,LD15
140	SA00052	L.E.D	φ3 round(green)long foot 26	LD16,LD17,LD18,LD19,LD20,LD21,LD22,LD23,LD24,LD25,LD26,LD27,LD28,LD29,LD30,LD31,LD32,LD33,LD34,LD35,LD36
141	SA00053	L.E.D	φ3 round(red)long foot 26mm	LD1,LD2,LD3,LD4,LD5,LD6,LD7,LD8,LD37,LD38,LD39,LD40,LD54
142	RC00285	slide potentiometer-dual unit	D10KΩ RF60112P600G-10KD*2(SAS1)	VR49,VR50,VR51,VR56,VR64
143	NI01782	LED spacer support	LEDS-11 11mm	

No.	Part No.	Description	Specification	Remark
144	HI00161	relay	RY-5W-K,5V	RL1
145	HI00195	rotary switch	SDB161PVB15.5F-1-4-16-16PC	EN1,EN2
146	HI00238	push-button switch-RS	2 6P PS-92 26A(NON-LOCK)	SW7
147	HI00236	push-button switch-RS	2 6P PS-92 26A(SELF-LOCK)	SW1,SW2,SW3,SW4,SW5,SW6,SW8,SW9,SW10,SW11
148	HI00237	push-button switch-RS	2 12P PS-13422 R(SELF-LOCK)	SW12,SW13,SW14,SW15,SW16,SW17,SW18,SW19,SW20
149	HC00473	connector-RS-ACT	2.45mm 180° 2*8P B25-2*8BG1(B)H=5mm	CN6
150	HC00505	connector(male)	16P 2.0mm 180°	CN4
151	HC00261	connector(male)	12P 2.0mm 180°	CN1,CN3,CN5,CN7
152	HK06422	PC board	P-AMX220FXMN1-USB-SMD	
153	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R325,R326
154	RD00224	SMD precise resistor 1/10W	100KΩ ±1% 0603	R170,R171,R172,R173,R174,R175,R323,R324
155	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C40,C52,C103,C104,C105,C106,C107,C108,C109,C110,C111,C112,C113,C114,C115,C116,C117,C122,C123,C124,C125,C126,C127,C128,C129,C130,C131,C132,C133,C134,C135,C136,C137,C138,C139,C140,C141,C142,C143,C144,C145,C146,C147,C148,C149,C150,C151,C152,C153,C154,C155,C1
156	CI00059	SMD ceramic capacitor 0603	100PF/50V NPO ±5%	C241,C242
157	RD00214	SMD precise resistor 1/10W	10.0KΩ ±1% 0603	R14,R15,R16,R31,R32,R33,R39,R40,R86,R87,R92,R93,R94,R95,R96,R97,R98,R99,R104,R105,R106,R107,R108,R109,R110,R111,R112,R113,R114,R115,R116,R117,R118,R119,R120,R121,R122,R123,R124,R125,R126,R127,R128,R129,R130,R131,R132,R133,R134,R178,R179,R328,R329,R360,R36
158	RD00334	SMD precise resistor 1/10W	11.0KΩ ±1% 0603	R159,R160,R47,R48
159	RD00069	SMD fixed resistor 1/10W	120Ω ±5% 0603	R176,R177
160	RD00102	SMD fixed resistor 1/10W	12KΩ ±5% 0603	R156,R157,R158,R163,R164,R165,R166,R167,R168,R169
161	RD00218	SMD precise resistor 1/10W	15.0KΩ ±1% 0603	R313,R314,R9,R10,R51,R52
162	RD00473	SMD precise resistor 1/10W	18.0KΩ ±1% 0603	R44,R45,R53,R57,R161,R162,R225,R226,R364,R365
163	RD00420	SMD precise resistor 1/10W	19.1KΩ±1% 0602	R135,R136,R315,R316
164	RD00085	SMD fixed resistor 1/10W	1.5KΩ ±5% 0603	R295,R296,R297,R298
165	RD00086	SMD fixed resistor 1/10W	1.8KΩ ±5% 0603	R180,R181,R182,R183,R184,R185,R186,R187,R188,R189,R190,R191,R192,R193,R194,R195,R196,R197,R198,R199,R200,R201,R202,R203,R204,R205,R206,R207,R208,R209,R210,R211
166	RD00292	SMD precise resistor 1/10W	1.00MΩ ±1% 0603	R261,R262,R263,R264,R265,R266,R267,R268,R269,R270,R271,R272,R273,R274,R275,R276
167	RD00318	SMD precise resistor 1/10W	200KΩ ±1% 0603	R233,R234,R235,R236,R237,R238,R239,R240
168	RD00219	SMD precise resistor 1/10W	20.0KΩ ±1% 0603	R1,R4,R138,R139,R140,R141,R142,R143,R144,R145,R146,R147,R148,R149,R150,R151,R152,R154,R368
169	RD00119	SMD fixed resistor 1/10W	220KΩ ±5% 0603	R212,R213,R214,R215,R216,R217,R218,R219,R220
170	RD00542	SMD precise resistance 1/10W	220Ω±1% 0603	R429,R430
171	RD00105	SMD fixed resistor 1/10W	22KΩ ±5% 0603	R19,R20,R21,R22,R63,R64,R65,R70,R88,R89,R90,R91,R221,R222,R223,R224,R227,R228,R229,R230,R231,R232,R351,R352
172	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C1,C2,C3,C4,C5,C8,C9,C10,C11,C12,C13,C14,C15,C16,C17,C18,C23,C24,C25,C26,C27,C28,C29,C30,C31,C32,C33,C38,C39,C185,C186,C187,C188,C189,C190,C191,C192,C193,C194,C195,C196,C197,C198,C199,C200,C201,C202,C203,C204,C245,C246,C247
173	RD00204	SMD precise resistor 1/10W	2.49KΩ ±1% 0603	R435,R436
174	RD00087	SMD fixed resistor 1/10W	2.0KΩ ±5% 0603	R342
175	RD00392	SMD precise resistor 1/10W	2.20KΩ ±1% 0603	R291,R292,R293,R294
176	RD00089	SMD fixed resistor 1/10W	2.7KΩ ±5% 0603	R67,R68,R69,R72,R73,R74,R78,R79
177	CI00053	SMD ceramic capacitor 0603	33PF/50V C0G±5%(C1608C0G1H330JT)/TDK	C6,C7,C19,C20,C21,C22,C95,C96
178	RD00407	SMD precise resistor 1/10W	36.0KΩ ±1% 0603	R318,R319
179	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR17,TR18,TR1,TR2,TR3,TR4,TR5,TR6,TR7,TR8
180	SF00053	transistor	MMBT3906(SOT23)/(PHI)	TR19,TR9,TR10,TR16
181	RD00107	SMD fixed resistor 1/10W	30KΩ ±5% 0603	R54,R55,R56,R58,R59,R60,R61,R62,R83
182	RD00108	SMD fixed resistor 1/10W	33KΩ ±5% 0603	R82

No.	Part No.	Description	Specification	Remark
183	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U1,U2,U3,U4,U5,U6,U7,U8,U9,U10,U11,U12,U13,U14,U15,U16,U17,U24,U25,U26,U27,U28,U29,U30,U31,U32,U33,U34,U35,U36
184	RD00078	SMD fixed resistor 1/10W	470Ω ±5% 0603	R370
185	RD00339	SMD precise resistor 1/10W	47.0KΩ ±1% 0603	R80,R81,R277,R278,R279,R280,R281,R282,R283,R284,R285,R286,R287,R288,R289,R290,R369
186	RD00290	SMD precise resistor 1/10W	47.5KΩ ±1% 0603	R311,R312
187	RD00298	SMD precise resistor 1/10W	47.0Ω ±1% 0603	R343,R344
188	RD00093	SMD fixed resistor 1/10W	4.7KΩ ±5% 0603	R66,R71,R75,R76,R77
189	RD00347	SMD fixed resistor 1/10W	510Ω ±5% 0603	R321,R322,R345
190	RD00112	SMD fixed resistor 1/10W	56KΩ ±5% 0603	R299,R300,R301,R302,R303,R304,R305,R306,R307,R308,R309,R310
191	RD00303	SMD precise resistor 1/10W	57.6KΩ ±1% 0603	R84,R85
192	RD00094	SMD fixed resistor 1/10W	5.1KΩ ±5% 0603	R11,R12,R13,R17,R18,R23,R24,R25,R26,R27,R28,R29,R30,R34,R35,R36,R37,R38,R41,R42,R43,R46,R331,R333,R335,R337,R339,R341,R348,R350,R353,R354,R355,R356,R362,R363
193	RD00095	SMD fixed resistor 1/10W	5.6KΩ ±5% 0603	R137,R330,R332,R334,R336,R338,R340,R347,R349
194	RE00011	SMD resistor networks 1/16W	680Ω*4 ±5% 8P 0603	AR1,AR2
195	RD00394	SMD precise resistor 1/10W	68.0Ω ±1% 0603	R7,R8,R327,R357
196	RD00097	SMD fixed resistor 1/10W	6.8KΩ ±5% 0603	R241,R242,R243,R244,R245,R246,R247,R248,R249,R250,R251,R252,R253,R254,R255,R256,R257,R258,R259,R260
197	RD00295	SMD precise resistor 1/10W	86.6KΩ ±1% 0603	R153,R155
198	RD00099	SMD fixed resistor 1/10W	8.2KΩ ±5% 0603	R2,R3
199	RD00328	SMD precise resistor 1/10W	8.66KΩ ±1% 0603	R100,R101
200	RD00446	SMD precise resistor 1/10W	9.76KΩ ±1% 0603	R49,R50
201	SE00028	SMD rectifier diode-RS-ACT	BAS316,115	D1,D2,D9,D10,D11,D12
202	SF00039	transistor	MMBFJ112(SOT23)/(FAIRCHILD)	TR11,TR12,TR13,TR14,TR15
203	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D3,D4,D5,D6,D7,D8,D13
204	AE00449	solder material without lead	9308/Sn Ag Cu	
205	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
206	HK06421	PC board	P-AMX220FXMN1-USB-AI	
207	RA01260	fixed resistor 1/4W	120Ω	R317,R320,R346
208	CF00138	metal-film capacitor MSC	0.012uF/63V ±5% CASE01	C161,C162,C163,C164,C165,C166,C167,C168,C169,C170,C171,C172,C173,C174,C175,C176
209	CF00146	metal-film capacitor	0.001uF/63V 5% CASE01	C177,C178,C179,C180,C181,C182,C183,C184
210	CB00248	electrolytic capacitor	2.2uF/50V φ4*5mm	C229,C230,C231,C232,C233
211	CF00148	metal-film capacitor	0.0033uF/100V 5% CASE01	C205,C206,C207,C208,C209,C210,C211,C212,C213,C214,C215,C216,C217,C218,C219,C220
212	CB00268	electrolytic capacitor	330uF/16V φ8*11mm 5mm	C53
213	CB00190	electrolytic capacitor	4.7uF/25V φ4*7mm	C342,C343,C344
214	CF00147	metal-film capacitor	0.047uF/100V 5% CASE01	C221,C222,C223,C224,C225,C226,C227,C228
215	CB00194	electrolytic capacitor	47uF/25V φ5*11mm	C34,C35,C36,C37,C41,C42,C43,C44,C45,C46,C47,C48,C49,C50,C51,C56,C57,C63,C64,C65,C66,C67,C68,C69,C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C80,C81,C82,C83,C84,C85,C86,C87,C88,C89,C90,C91,C92,C93,C94,C97,C98,C99,C100,C101,C102,C243,C244
216	HB01835	PCB-RS	AMX220FXMN1-USB_VER060227	
217	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
218	HK06352	PC board	P-DSP-PRE-DIP	CN2
219	HC00697	connector	2.0 90° 16P(gold-pated)2.5/9.5mm 2mm	CN1
220	HK06353	PC board	P-DSP-PRE-SMD	
221	HB01916	PCB-RS	DSP-PRE_VER051020	
222	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C329,C330,C331,C332
223	CI00053	SMD ceramic capacitor 0603	33PF/50V C0G±5%(C1608C0G1H330JT)/TDK	C348,C349
224	CI00129	SMD ceramic capacitor 0603	0.0015uF/50V X7R ±10%	C345,C346,C347
225	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C333,C334,C336,C337,C338,C339,C340,C341
226	CL00002	SMD tantalum capacitor-RS-ACT	1.0uF/16V case A	C352,C353

No.	Part No.	Description	Specification	Remark
227	CL00006	SMD tantalum capacitor-RS-ACT	10uF/16V case B2	C350,C351
228	RD00068	SMD fixed resistor 1/10W	100Ω ±5% 0603	R420,R421
229	RD00073	SMD fixed resistor 1/10W	220Ω ±5% 0603	R426
230	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R1
231	RD00083	SMD fixed resistor 1/10W	1.0KΩ ±5% 0603	R418
232	RD00088	SMD fixed resistor 1/10W	2.2KΩ ±5% 0603	R424
233	RD00091	SMD fixed resistor 1/10W	3.3KΩ ±5% 0603	R422,R423
234	RD00093	SMD fixed resistor 1/10W	4.7KΩ ±5% 0603	R416
235	RD00098	SMD fixed resistor 1/10W	7.5KΩ ±5% 0603	R419
236	RD00101	SMD fixed resistor 1/10W	10KΩ ±5% 0603	R397,R398,R399,R400,R401,R402,R403,R404,R405,R406, R407,R408,R410,R411,R412,R413,R414
237	RD00111	SMD fixed resistor 1/10W	47KΩ ±5% 0603	R415
238	RD00124	SMD fixed resistor 1/10W	820KΩ ±5% 0603	R431
239	RD00125	SMD fixed resistor 1/10W	1.0MΩ ±5% 0603	R417
240	RD00126	SMD fixed resistor 1/10W	2.2MΩ ±5% 0603	R425
241	SG00122	SMD integrated circuit-RS-ACT	NJM4580M-TE3(SOP8)/(JRC)	U44,U45,U46
242	SG00306	SMD integrated circuit	LM393DR(TI)/(MEXICO)	U47
243	SG00068	SMD integrated circuit	74HC14DT(SO14)/(PHI)	U49
244	SG00469	SMD integrated circuit-RS	SN74HC109DR(SO16)/(TI)	U48
245	SE00028	SMD rectifier diode-RS-ACT	BAS316,115	D7,D15
246	SE00009	SMD rectifier diode	DAN202K/T-146	D16
247	SE00007	SMD rectifier diode	RB400D(D3A)	D10
248	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR17
249	AE00449	solder material without lead	9308/Sn Ag Cu	
250	SE00085	SMD zener diode-RS	1/2W 2.4V ZMM55-C2V4	ZD1,ZD2
251	SG00243	SMD integrated circuit	NE555DR(SO8)/(TI)	U43
252	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
253	HK04376	PC board	P-12VMETER-DIP(AMX-220)	CN8,CN9
254	HC00698	connector	2.0 90° 17P(gold-pated)2.5/9.5mm 2mm	CN6
255	HK04377	PC board	P-12VMETER-SMD(AMX-220)	
256	HB01285	PCB	12VMETER(2*5)_VER040611	
257	RD00069	SMD fixed resistor 1/10W	120Ω ±5% 0603	R2
258	RD00076	SMD fixed resistor 1/10W	330Ω ±5% 0603	R4,R6
259	RD00078	SMD fixed resistor 1/10W	470Ω ±5% 0603	R3,R5,R7
260	RD00347	SMD fixed resistor 1/10W	510Ω ±5% 0603	R8
261	RD00348	SMD fixed resistor 1/10W	620Ω ±5% 0603	R9
262	RD00351	SMD fixed resistor 1/10W	1.3KΩ ±5% 0603	R10
263	RD00087	SMD fixed resistor 1/10W	2.0KΩ ±5% 0603	R11
264	RD00101	SMD fixed resistor 1/10W	10KΩ ±5% 0603	R12
265	RD00115	SMD fixed resistor 1/10W	82KΩ ±5% 0603	R13
266	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C1,C2
267	SG00210	SMD integrated circuit	LM339DT(ST)	U1,U2,U3
268	AE00449	solder material without lead	9308/Sn Ag Cu	
269	RD00346	SMD fixed resistor 1/10W	56Ω ±5% 0603	R1
270	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
271	RC00703	potentiometer-RS	W50KΩ XV09213YNPV30F-4BP50K CC	VR4,VR5,VR89,VR90,VR91,VR92,VR93,VR94,VR95,VR96
272	RC00669	potentiometer-RS	B50KΩ XV012313YGPV30F-3B50K C.C	VR33,VR34,VR35,VR36,VR37,VR38,VR39,VR40,VR41,VR4 2,VR43,VR45,VR46,VR47,VR48,VR52
273	RC00670	potentiometer-RS	W50KΩ XV012313YGPV30F-4B50K C.C	VR3,VR6,VR7,VR97
274	RC00700	potentiometer-RS	B5KΩ XV09213YNPV30F-1BP5K CC	VR69,VR70,VR71,VR72
275	HK06423	PC board	P-AMX220FXMN2-USB-DIP	
276	RC00284	slide potentiometer	D10KΩ RF6011YP600F-10KD(SAS1)	VR53,VR54,VR55,VR56,VR57,VR58,VR59,VR60
277	SA00054	L.E.D	3m/m round(yellow)long foot 26	LD1,LD2,LD3,LD4,LD5,LD6,LD7,LD8
278	SA00053	L.E.D	φ3 round(red)long foot 26mm	LD9,LD10,LD11,LD12,LD13,LD14,LD15,LD16,LD17,LD18,L D19,LD20,LD21,LD22,LD23,LD24
279	NI01782	LED spacer support	LEDS-11 11mm	

No.	Part No.	Description	Specification	Remark
280	HI00236	push-button switch-RS	2 6P PS-92 26A(SELF-LOCK)	SW1,SW4,SW7,SW10,SW32,SW35,SW38,SW41
281	HI00237	push-button switch-RS	2 12P PS-13422 R(SELF-LOCK)	SW2,SW3,SW5,SW6,SW8,SW9,SW11,SW12,SW33,SW34,SW36,SW37,SW39,SW40,SW42,SW43
282	HC00250	connector(male)	5P 2.0mm 180°	CN4
283	HC00259	connector(male)	8P 2.0mm 180°	CN3
284	HC00261	connector(male)	12P 2.0mm 180°	CN1
285	HA03123	wire-RS	16P-16P 230mmUL1007 28AWG	CN2
286	HK06425	PC board	P-AMX220FXMN2-USB-SMD	
287	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C81,C82,C83,C84,C85,C86,C87,C88,C89,C90,C91,C92,C93,C94,C95,C96,C97,C98,C99,C100,C101,C102,C103,C104,C105,C106,C107,C108,C109,C110,C111,C112
288	RD00214	SMD precise resistor 1/10W	10.0KΩ ±1% 0603	R25,R26,R27,R28,R29,R30,R31,R32,R33,R34,R35,R36,R37,R38,R39,R40,R41,R42,R43,R44,R45,R46,R47,R48,R49,R50,R51,R52,R53,R54,R55,R56
289	RD00085	SMD fixed resistor 1/10W	1.5KΩ ±5% 0603	R317,R318,R319,R320,R321,R322,R323,R324
290	RD00103	SMD fixed resistor 1/10W	15KΩ ±5% 0603	R301,R302,R303,R304,R305,R306,R307,R308
291	RD00292	SMD precise resistor 1/10W	1.00MΩ ±1% 0603	R193,R194,R195,R196,R197,R198,R199,R200
292	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C25,C26,C27,C28,C29,C30,C31,C32,C33,C34,C35,C36,C37,C38,C39,C40,C137,C138,C139,C140,C141,C142,C143,C144
293	RD00106	SMD fixed resistor 1/10W	27KΩ ±5% 0603	R329,R330,R331,R332,R333,R334,R335,R336,R337,R338,R339,R340,R341,R342,R343,R344
294	RD00392	SMD precise resistor 1/10W	2.20KΩ ±1% 0603	R181,R182,R183,R184,R185,R186,R187,R188
295	RD00090	SMD fixed resistor 1/10W	3.0KΩ ±5% 0603	R1,R2,R3,R4,R5,R6,R7,R8
296	RD00092	SMD fixed resistor 1/10W	3.9KΩ ±5% 0603	R85,R86,R87,R88,R89,R90,R91,R92
297	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U1,U2,U3,U4,U5,U6,U7,U8,U9,U10,U11,U12,U13,U14,U15,U16
298	RD00339	SMD precise resistor 1/10W	47.0KΩ ±1% 0603	R281,R282,R283,R284,R285,R286,R287,R288
299	RD00093	SMD fixed resistor 1/10W	4.7KΩ ±5% 0603	R245,R246,R247,R248,R257,R258,R259,R260,R249,R250,R251,R252,R253,R254,R255,R256,R261,R262,R263,R264,R265,R266,R267,R268
300	RD00347	SMD fixed resistor 1/10W	510Ω ±5% 0603	R58
301	RD00094	SMD fixed resistor 1/10W	5.1KΩ ±5% 0603	R60,R62,R64,R66,R68,R70,R72,R74,R93,R94,R95,R96,R97,R98,R99,R100,R101,R102,R105,R106,R109,R110,R113,R114,R117,R118,R119,R120,R121,R122,R123,R124,R125,R126,R129,R130,R133,R134,R137,R138
302	RD00095	SMD fixed resistor 1/10W	5.6KΩ ±5% 0603	R165,R166,R167,R168,R169,R170,R171,R172,R173,R174,R175,R176,R177,R178,R179,R180
303	RD00096	SMD fixed resistor 1/10W	6.2KΩ ±5% 0603	R9,R10,R11,R12,R13,R14,R15,R16,R17,R18,R19,R20,R21,R22,R23,R24
304	RD00288	SMD precise resistor 1/10W	6.81KΩ ±1% 0603	R103,R104,R107,R108,R111,R112,R115,R116,R127,R128,R131,R132,R135,R136,R139,R140
305	RD00097	SMD fixed resistor 1/10W	6.8KΩ ±5% 0603	R217,R218,R219,R220,R221,R222,R223,R224
306	SE00028	SMD rectifier diode-RS-ACT	BAS316,115	D1,D2,D3,D4,D5,D6,D7,D8
307	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR1,TR2,TR3,TR4,TR5,TR6,TR7,TR8,TR9,TR10,TR11,TR12,TR13,TR14,TR15,TR16
308	SF00053	transistor	MMBT3906(SOT23)/(PHI)	TR17
309	AE00449	solder material without lead	9308/Sn Ag Cu	
310	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
311	HK06424	PC board	P-AMX220FXMN2-USB-AI	
312	CF00143	metal-film capacitor MSC	0.0015uF/100V 5% CASE01	C57,C58,C59,C60,C61,C62,C63,C64
313	RA01260	fixed resistor 1/4W	120Ω	R57
314	CB00248	electrolytic capacitor	2.2uF/50V ψ4*5mm	C249,C250,C251,C252,C253,C254,C255,C256
315	CF00137	metal-film capacitor MSC	0.033uF/63V 5% CASE01	C65,C66,C67,C68,C69,C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C80
316	CB00194	electrolytic capacitor	47uF/25V φ5*11mm	C201,C202,C203,C204,C205,C206,C207,C208,C209,C210,C211,C212,C213,C214,C215,C216,C217,C218,C219,C220,C221,C222,C223,C224



No.	Part No.	Description	Specification	Remark
317	CF00141	metal-film capacitor MSC	0.0068uF/100V 5% CASE01	C1,C2,C3,C4,C5,C6,C7,C8,C9,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20,C21,C22,C23,C24
318	HB01836	PCB-RS	AMX220FXMN2-USB_VER060228	
319	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
320	RC00672	potentiometer-RS	B50KΩ XV09213YNPV30F-1B50K C.C	VR9,VR10,VR11,VR12,VR13,VR14,VR15,VR16,VR17,VR18,VR19,VR20,VR21,VR22,VR23,VR24,VR25,VR26,VR27,VR28,VR29,VR30,VR31,VR32
321	RC00703	potentiometer-RS	W50KΩ XV09213YNPV30F-4BP50K CC	VR73,VR74,VR75,VR76,VR77,VR78,VR79,VR80,VR81,VR82,VR83,VR84,VR85,VR86,VR87,VR88
322	RC00671	potentiometer-RS	C500KΩ XV012313YGPV30F-15C500K C.C	VR1,VR2,VR3,VR4,VR5,VR6,VR7,VR8
323	RC00700	potentiometer-RS	B5KΩ XV09213YNPV30F-1BP5K CC	VR61,VR62,VR63,VR64,VR65,VR66,VR67,VR68
324	HK06414	PC board	P-AMX220FXPU1-USB-DIP	
325	SD00074	integrated circuit	L7805CV(TO220)/(ST)	TR4
326	SD00007	integrated circuit	BA15218N(M5218L代用)(SIP8)/(ROHM)	U5,U6
327	NI02249	plastic washer	TW-1(TO-220)	
328	NC00005	mica	SB-9500DSP 18*13*0.1t_V1.0	
329	MG00166	screw	M3*10	
330	MF00037	washer	φ3.2*φ5.5*1t	
331	ME00015	color nut	3m/m	
332	HI00236	push-button switch-RS	2 6P PS-92 26A(SELF-LOCK)	SW1,SW2,SW3,SW4,SW14
333	HI00237	push-button switch-RS	2 12P PS-13422 R(SELF-LOCK)	SW5
334	HC00754	USB socket	CU02SAH0000 90°	CN7
335	HI00125	slide switch	SL20202-25Y-6mm	SW11,SW12
336	HC00403	RCA jack	SCP6873NS3232T2 4P	X3
337	HC00392	balance MIC jack-RS	JY-5030-030G 180°	X1,X2
338	HC00125	MIC jack-RS	JY-6351G-02-250	X4,X5,X6,X7,X8,X9,X10,X11,X12,X13,X14,X15,X16,X17,X18,X19,X20,X21,X22,X23,X24,X25
339	HA03132	wire-RS	5P(male)-5P(female) 350mm UL1007 28AWG	CN8
340	HA03124	wire-RS	8P-8P/8P 120/200mm UL1007 28AWG	CN4
341	HA03128	wire-RS	12P(male)-12P(female) 60mm UL1007 28AWG	CN1,CN2,CN3
342	HC00920	DC jack-RS	SCD554CCS103BB4G	
343	HK06416	PC board	P-AMX220FXPU1-USB-SMD	
344	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C33,C34,C35,C36,C37,C38,C39,C40,C41,C42,C73,C74,C75,C76,C93,C96,C97,C100
345	CI00059	SMD ceramic capacitor 0603	100PF/50V NPO ±5%	C17,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28,C29,C30,C31,C32,C234,C235,C236,C237
346	RD00214	SMD precise resistor 1/10W	10.0KΩ ±1% 0603	R1,R3,R5,R7,R9,R11,R13,R15,R17,R18,R20,R21,R23,R24,R27,R29,R31,R33,R100,R101,R102,R103,R104,R106,R107,R108,R109,R113
347	RD00069	SMD fixed resistor 1/10W	120Ω ±5% 0603	R43,R44,R45,R46,R47,R48,R49,R50,R51,R52,R53,R54,R55,R56,R57,R58,R59,R60,R61,R62,R63,R64,R65,R66,R67,R68,R69,R70
348	RD00217	SMD precise resistor 1/10W	14.0KΩ ±1% 0603	R159,R162,R160,R161
349	RD00282	SMD precise resistor 1/10W	1.00KΩ ±1% 0603	R81,R82
350	RD00219	SMD precise resistor 1/10W	20.0KΩ ±1% 0603	R71,R72,R73,R74,R75,R76,R125,R126
351	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C1,C2,C3,C4,C5,C6,C7,C8,C9,C10,C11,C12,C13,C14,C15,C16,C63,C64,C77,C78,C79,C80,C86,C87,C90,C91
352	RD00392	SMD precise resistor 1/10W	2.20KΩ ±1% 0603	R2,R4,R6,R8,R10,R12,R14,R16,R19,R22,R30,R34,R39,R40,R41,R42,R91,R92,R95,R96,R135,R138,R139,R142
353	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U1,U2,U3,U4,U8,U9,U10,U13
354	RD00298	SMD precise resistor 1/10W	47.0Ω ±1% 0603	R79,R80
355	RD00080	SMD fixed resistor 1/10W	680Ω ±5% 0603	R131,R132,R133,R134,R87,R88,R89,R90
356	RD00094	SMD fixed resistor 1/10W	5.1KΩ ±5% 0603	R35,R36,R37,R38,R83,R84,R85,R86,R97,R98,R151,R152
357	RD00366	SMD precise resistor 1/10W	7.15KΩ ±1% 0603	R25,R26,R28,R32,R136,R137,R140,R141
358	AE00449	solder material without lead	9308/Sn Ag Cu	
359	RD00112	SMD fixed resistor 1/10W	56KΩ ±5% 0603	R116,R117

No.	Part No.	Description	Specification	Remark
360	RD00091	SMD fixed resistor 1/10W	3.3K $\Omega$ $\pm$ 5% 0603	R123,R124
361	RD00002	SMD fixed resistor 1/8W	0.0 $\Omega$ $\pm$ 5% 0805	L1
362	RD00129	SMD fixed resistor 1/4W	0.0 $\Omega$ $\pm$ 5% 1206	R99
363	HK06415	PC board	P-AMX220FXPU1-USB-AI	
364	CB00253	electrolytic capacitor	1000uF/16V $\phi$ 5*16mm 5mm	C195
365	CB00194	electrolytic capacitor	47uF/25V $\phi$ 5*11mm	C43,C44,C45,C46,C47,C48,C49,C50,C51,C52,C65,C66,C67,C68,C69,C70,C71,C72,C101,C103,C105,C106
366	HB01837	PCB-RS	AMX220FXPU1-USB_VER060920	
367	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
368	MI01953	heat sink	AMX-100FX 1.5*24*21*20.5mm_V1.2	
369	MJ00092	AL plate-RS	1.5*2000*1000 8.16kg	
370	HK06381	PC board	P-AMX-USB-DIP	CN3
371	SC00003	crystal oscillator	12.000MHZ HC-49/US $\pm$ 20PPM	X1
372	HK06382	PC board	P-AMX-USB-SMD	
373	RD00309	SMD fixed resistor 1/10W	10M $\Omega$ $\pm$ 5% 0603	R6
374	RD00063	SMD fixed resistor 1/10W	22 $\Omega$ $\pm$ 5% 0603	R3,R4
375	RD00059	SMD fixed resistor 1/10W	0.0 $\Omega$ $\pm$ 5% 0603	R2
376	RD00085	SMD fixed resistor 1/10W	1.5K $\Omega$ $\pm$ 5% 0603	R5
377	RD00272	SMD precise resistor 1/10W	10.0 $\Omega$ $\pm$ 1% 0603	R9
378	RD00492	SMD precise resistor 1/10W	1.82K $\Omega$ $\pm$ 1% 0603	R1
379	RD00363	SMD precise resistor 1/10W	3.16K $\Omega$ $\pm$ 1% 0603	R26
380	SG00412	SMD integrated circuit-RS	AZ1117H-ADJ(SOT223)/(BCD)	TR1
381	SG00489	SMD integrated circuit-RS	PCM2900E(SSOP28)/(TI)	U1
382	CJ00005	SMD AL electrolytic capacitor	10uF/16V CASE4 $\phi$	C1,C2,C3,C4,C5,C6,C20,C21,C22,C23
383	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G $\pm$ 5%(C1608C0G1H220JT)/TDK	C8,C9
384	CI00030	SMD ceramic capacitor 0805	1uF/16V Y5V-0805(2012)	C10,C11,C12,C13
385	HB01832	PCB-RS	AMX-USB_VER061128	
386	CJ00012	SMD AL electrolytic capacitor-	100uF/16V CASE6.3 $\phi$	C7
387	AE00449	solder material without lead	9308/Sn Ag Cu	
388	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C34,C30,C31,C32,C33,C35
389	RD00068	SMD fixed resistor 1/10W	100 $\Omega$ $\pm$ 5% 0603	R18,R19,R20,R21
390	RD00106	SMD fixed resistor 1/10W	27K $\Omega$ $\pm$ 5% 0603	R22,R23
391	RD00104	SMD fixed resistor 1/10W	18K $\Omega$ $\pm$ 5% 0603	R24,R25
392	RD00102	SMD fixed resistor 1/10W	12K $\Omega$ $\pm$ 5% 0603	R12,R13
393	RD00093	SMD fixed resistor 1/10W	4.7K $\Omega$ $\pm$ 5% 0603	R10,R11
394	RD00092	SMD fixed resistor 1/10W	3.9K $\Omega$ $\pm$ 5% 0603	R14,R15,R16,R17
395	CO00006	SMD chip inductance-RS-ACT	BLM21A102SPT/(MURATA)	L1
396	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U2,U3
397	CI00090	SMD ceramic capacitor 0603	0.0047uF/50V X7R $\pm$ 10%	C24,C25
398	CI00066	SMD ceramic capacitor 0603	0.0018uF/50V X7R $\pm$ 10%	C15,C18
399	CI00065	SMD ceramic capacitor 0603	0.001uF/50V X7R $\pm$ 10%	C26,C27
400	CI00062	SMD ceramic capacitor 0603	330PF/50V NPO $\pm$ 5%	C14,C16,C17,C19
401	CI00061	SMD ceramic capacitor 0603	220PF/50V NPO $\pm$ 5%	C28,C29
402	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
403	HC00555	connector	2.54 90° 12P 6/14	CN1
404	HK06603	PC board	P-313123_2-V2-DIP	
405	SC00004	crystal oscillator	16.00MHZ	XT1
406	HC00484	connector	2.54 180° 2*8P(gold-plated) 13.5/19mm	CN2
407	SG00193	SMD integrated circuit	AT27LV010A-90JC/L-8	IC4
408	SG00168	SMD integrated circuit-RS	HT27LC010-90J(PLCC32)/(HOLTEK)	
409	NE11475	label	L-8	
410	NH00221	paper	0.055*1M	
411	NI00016	membrane	0.05*1M	
412	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
413	HK06604	PC board	P-313123_2-V2-SMD	
414	HB01963	PCB-RS	313123_2-V2	

No.	Part No.	Description	Specification	Remark
415	CI00049	SMD ceramic capacitor 0603	15PF/50V C0G±5%(C1608C0G1H150JT)/TDK	C8,C9
416	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C17,C15,C18,C6,C10,C22,C20,C13,C14,C1,C3,C4,C11
417	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R35,R36
418	RD00061	SMD fixed resistor 1/10W	10Ω ±5% 0603	R22
419	RD00068	SMD fixed resistor 1/10W	100Ω ±5% 0603	R12,R14,R7,R8,R34,R17,R13,R33
420	RD00073	SMD fixed resistor 1/10W	220Ω ±5% 0603	R3
421	RD00085	SMD fixed resistor 1/10W	1.5KΩ ±5% 0603	R16,R15,R21,R20,R4,R19,R10,R18,R9,R5
422	RD00088	SMD fixed resistor 1/10W	2.2KΩ ±5% 0603	R28,R27,R23,R24,R29,R30,R25,R26
423	RD00101	SMD fixed resistor 1/10W	10KΩ ±5% 0603	R32,R31,R1
424	RD00125	SMD fixed resistor 1/10W	1.0MΩ ±5% 0603	R2
425	CJ00013	SMD AL electrolytic capacitor-	100uF/6.3V CASE5φ	C19,C12,C5,C2,C24,C16,C21,C25,C26,C28,C7
426	RE00006	SMD resistor networks 1/16W	100Ω*4 ±5% 8P 0603	AR1,AR2
427	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D1
428	SG00068	SMD integrated circuit	74HC14DT(SO14)/(PHI)	IC1
429	SG00410	SMD integrated circuit	IC41LV16256-35KG(SOJ40)/(ICSI)	IC6
430	SG00166	SMD integrated circuit	TY-2 ALTO(GMCODE:105022)	IC3
431	SG00147	SMD integrated circuit	CHEF DSP(GMCODE:105022)	
432	SG00037	SMD integrated circuit	LD1117DT33C(TO252)/(ST)	IC2
433	HC00611	IC socket (SMD)	PLCC32 (AMP S/N:822516-7)	IC4
434	SG00016	SMD integrated circuit	UDA1345TS(SSOP28)/(PHI)	IC5
435	AE00449	solder material without lead	9308/Sn Ag Cu	
436	NC00037	cushion-RS-ACT	1t*φ8*φ12.5mm XM1602_V1.1	
437	NC01665	black foil white board-RS-CT	1.0t*65mm(+0.1)*60M 5.4kg	
438	MA05706	panel	AMX-220FX USB ALTO_V2.0	
439	MA05600	panel-RS	AMX-220FX USB	
440	MA05599	panel	AMX-220FX USB 1t*42*403*439.5_V1.1	
441	MJ00061	iron board	1*2135*1220 20.45kg	
442	AE00177	paint-RS	4866	
443	MG00304	copper pillar	M3*14*0.5PH	