

Service Manual

MODEL: AMX 180FX-USB

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1. INTRODUCTION

- 5 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
- +48dBu/-10dBV on each channel
- Warm, natural 3-band EQ on each channel
- Peak LED on each channel
- Mute/ALT 3-4, SOLO function on each channel
- 4 AUX returns for additional functionality
- Control room and headphone outputs
- 2-Track inputs assignable to main mix, control room/headphone 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

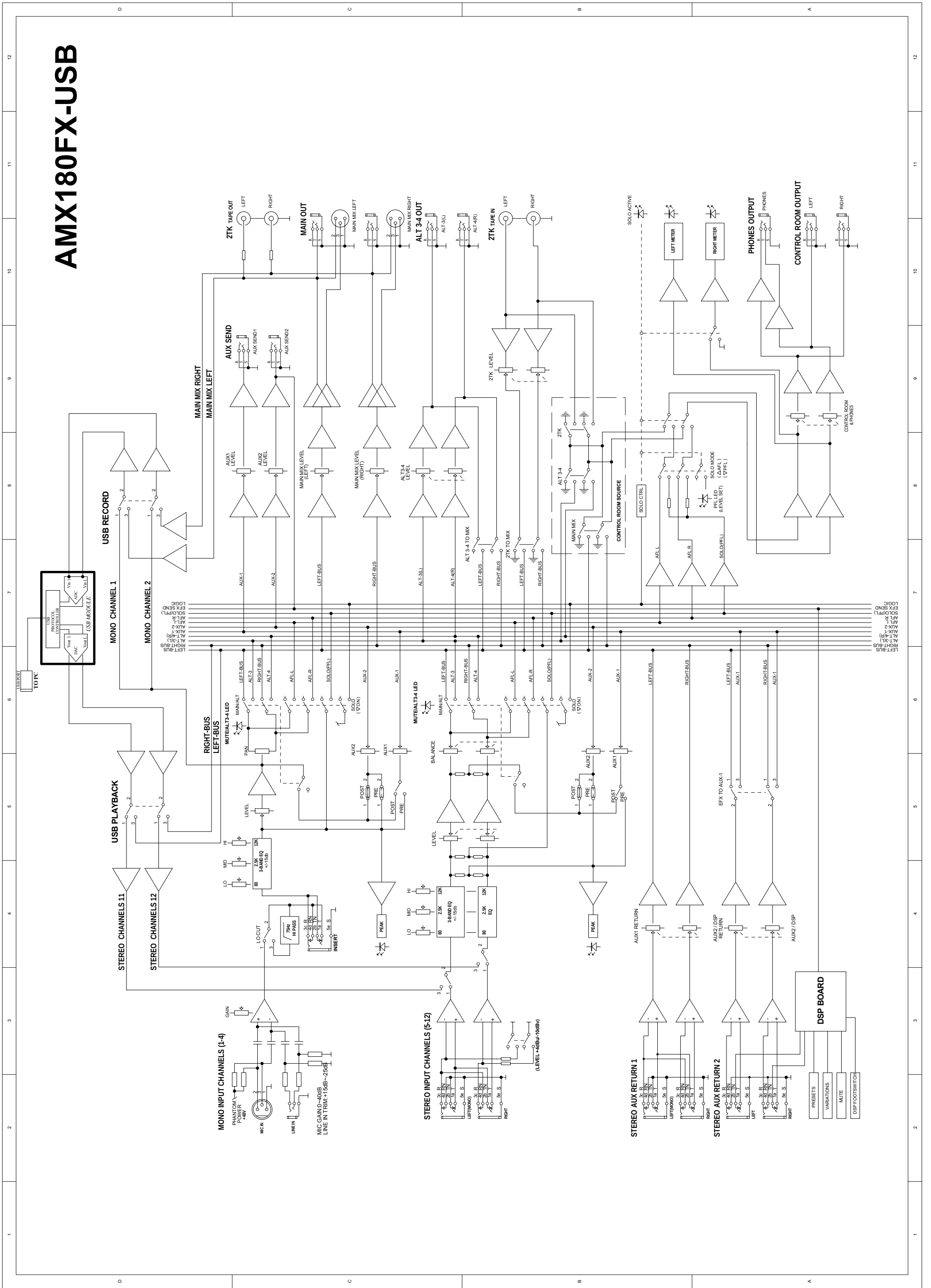
- 16 Bit 32~48KHz ADC/DAC USB input and output with selectable track
- No software drivers are need with windows XP or Mac OSX
- Performance and excellent noise figures
- Manufactured under ISO9001 certified management system

2. TECHNICAL SPECIFICATION

Mono input channels	Microphone input	Electronically balanced ,discrete input configuration
	Frequency response	10Hz to 55KHz, ± 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, ± 3 dB
	Distortion (THD&N)	0.005% at +4dBu, 1KHz
	Sensitivity range	+15dBu to -30dBu
Stereo input channels	Line input	Balanced
	Frequency response	10Hz to 55KHz, ± 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	± 15 dB @ 12KHz
	Mid bell	± 12 dB @ 2.5KHz
	Low shelving	± 15 dB @ 80Hz
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
	USB SECTION	ADC / DAC
	Fully Compliant with USB 1.1 specification	
	S/PDIF input and output interface	
	No software drivers or need with windows XP or Mac OS X	
Power supply (AC/AC Adaptor)	Main voltage	USA/ Canada 100-120V~,60Hz
		Europe 210-230V~,50Hz/60Hz
		U.K/Australia 240V~,50Hz
	Power Consumption	35watts
Physical	Dimension (WxDxH)	390mmx330mmx43mm
		15.35"x12.99"x1.69"
		Net weight

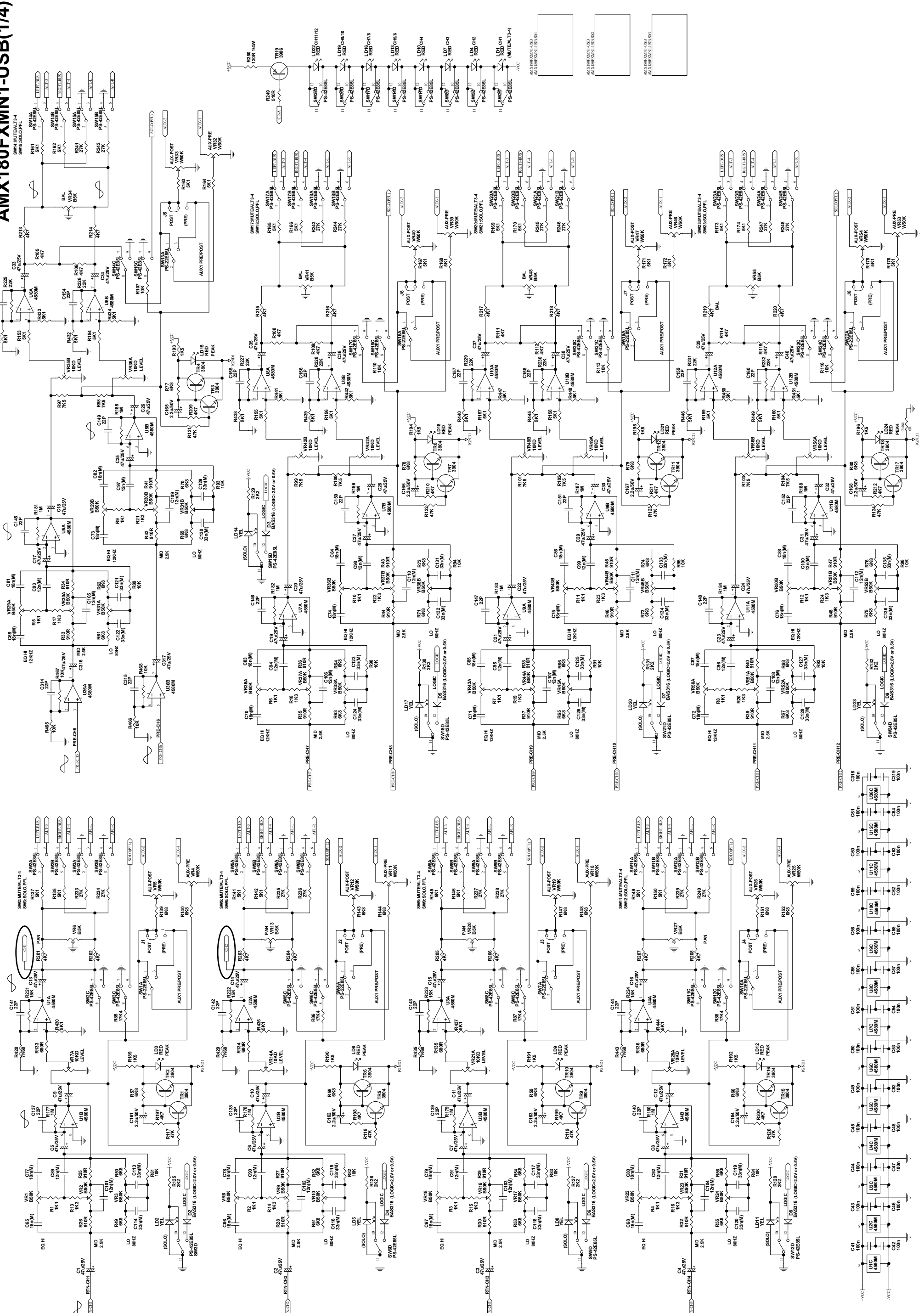
3. BLOCK DIAGRAM

AMX180FX-USB

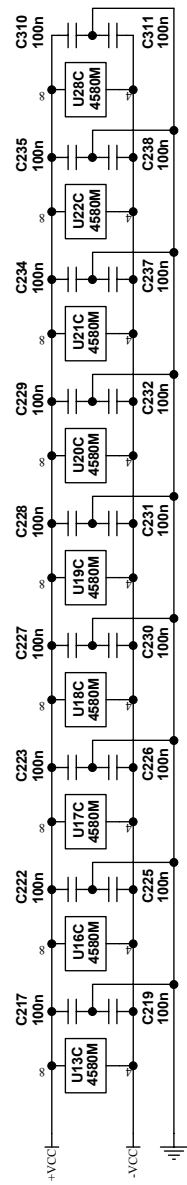
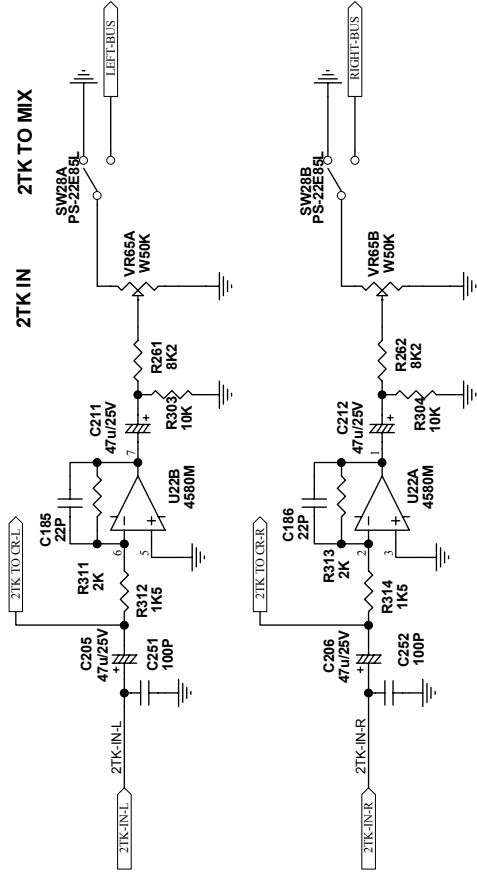
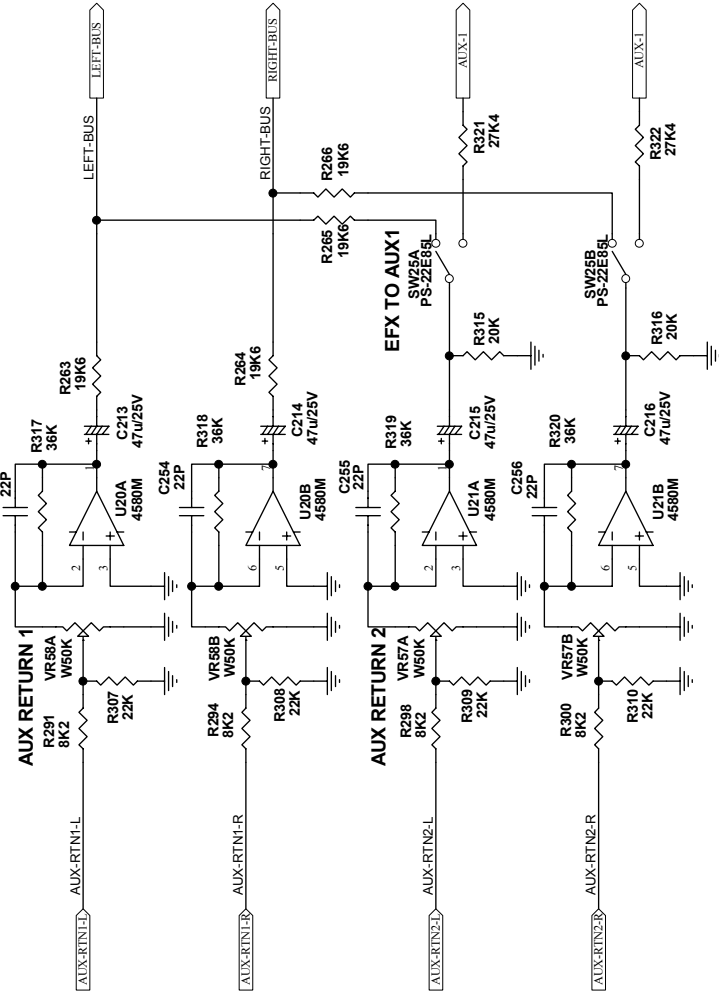
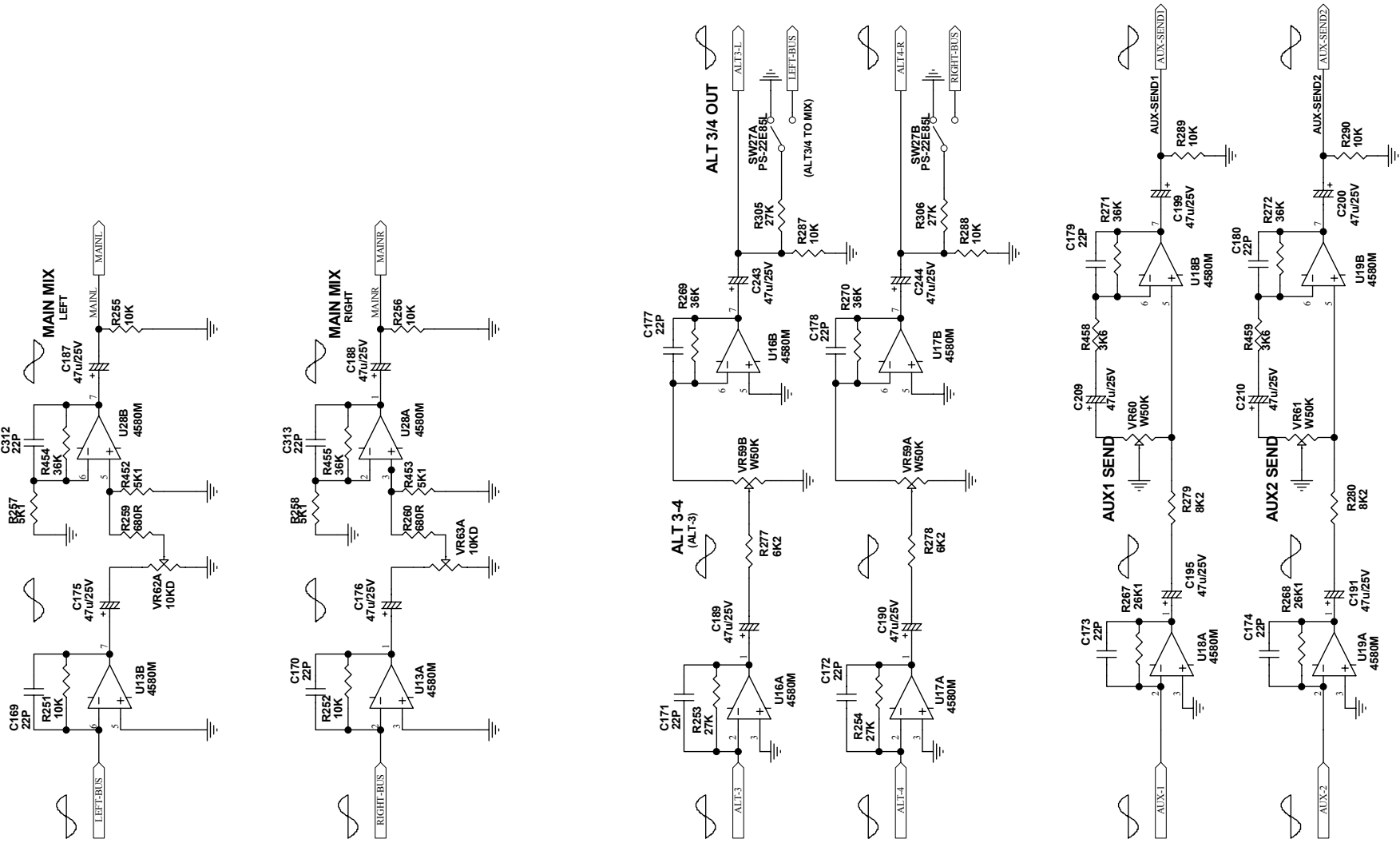


4. SCHEMATIC DIAGRAM

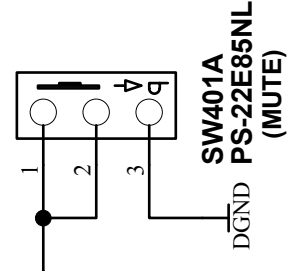
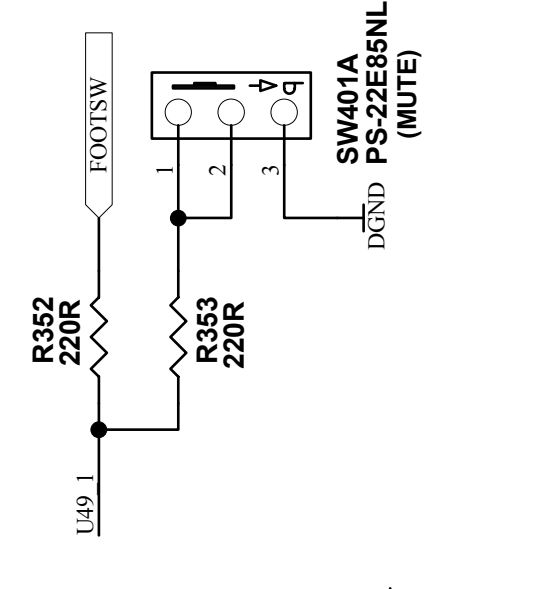
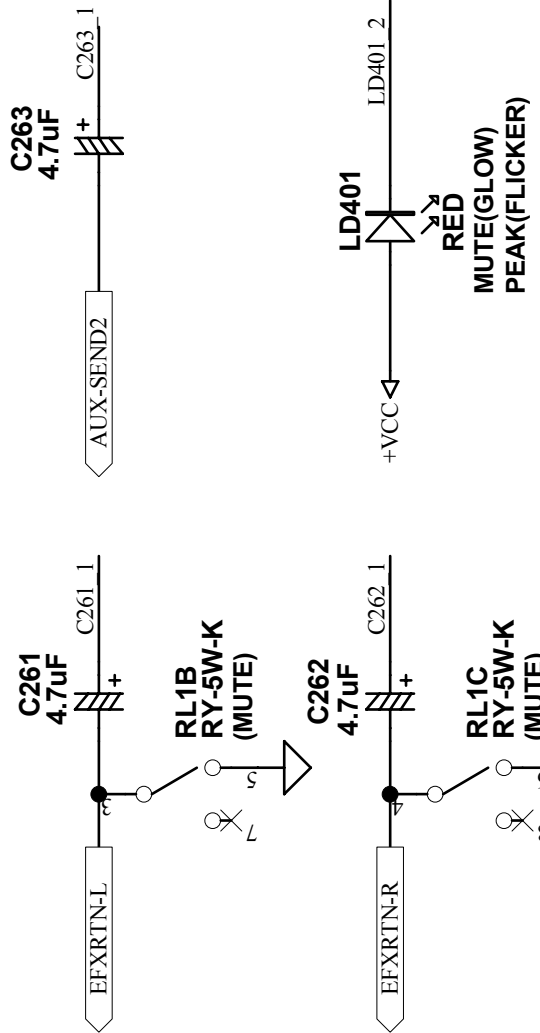
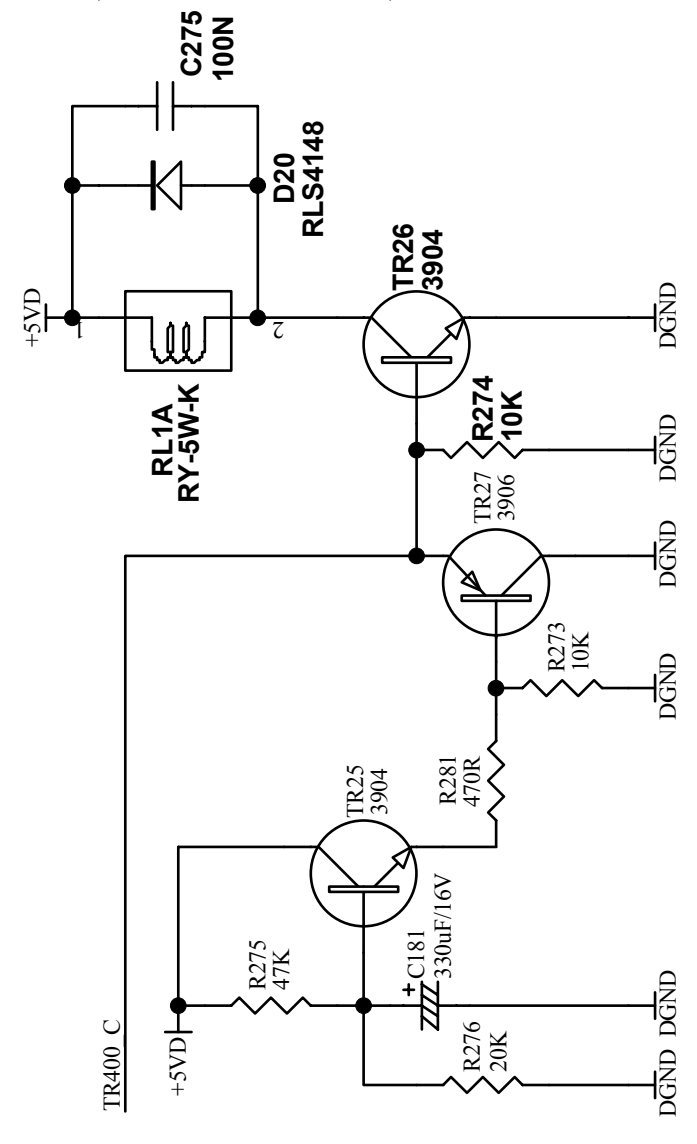
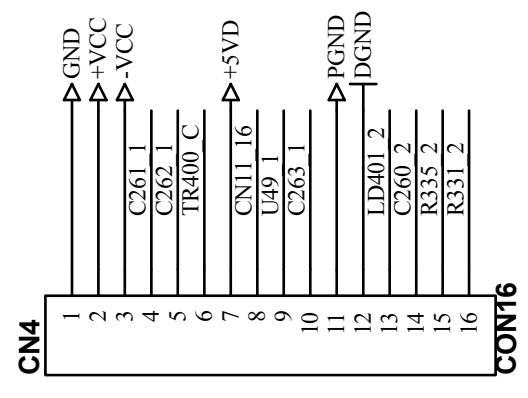
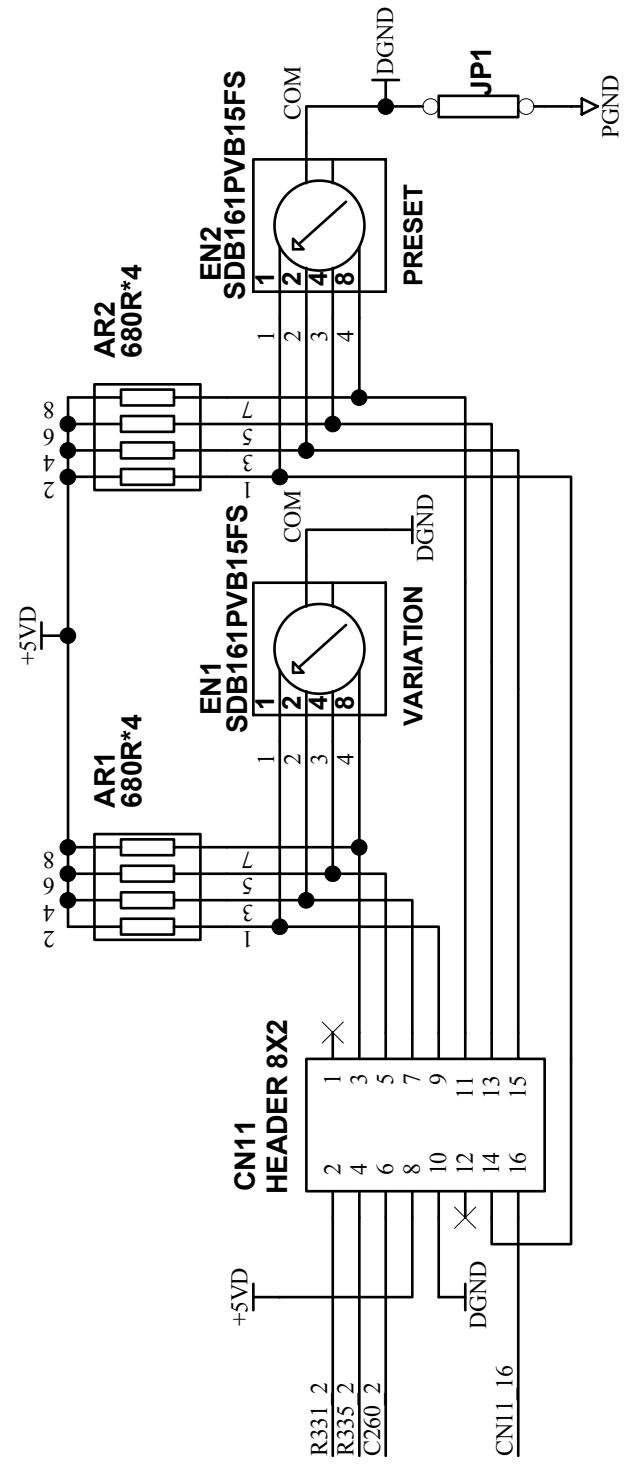
AMX180FXMN1-USB(1/4)



AMX180FXMN1-USB(2/4)



AMX180FXMN1-USB(4/4)



4

3

2

1

D

C

B

A

4

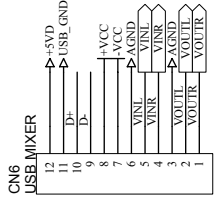
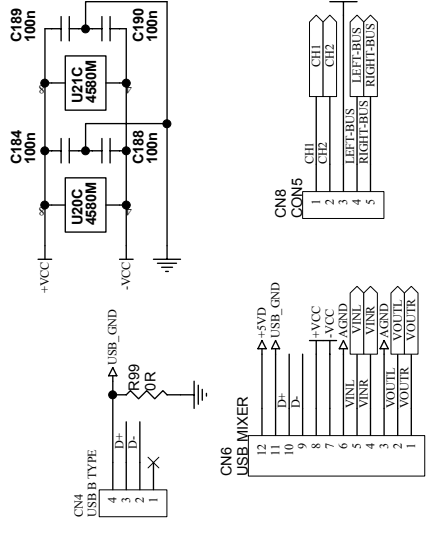
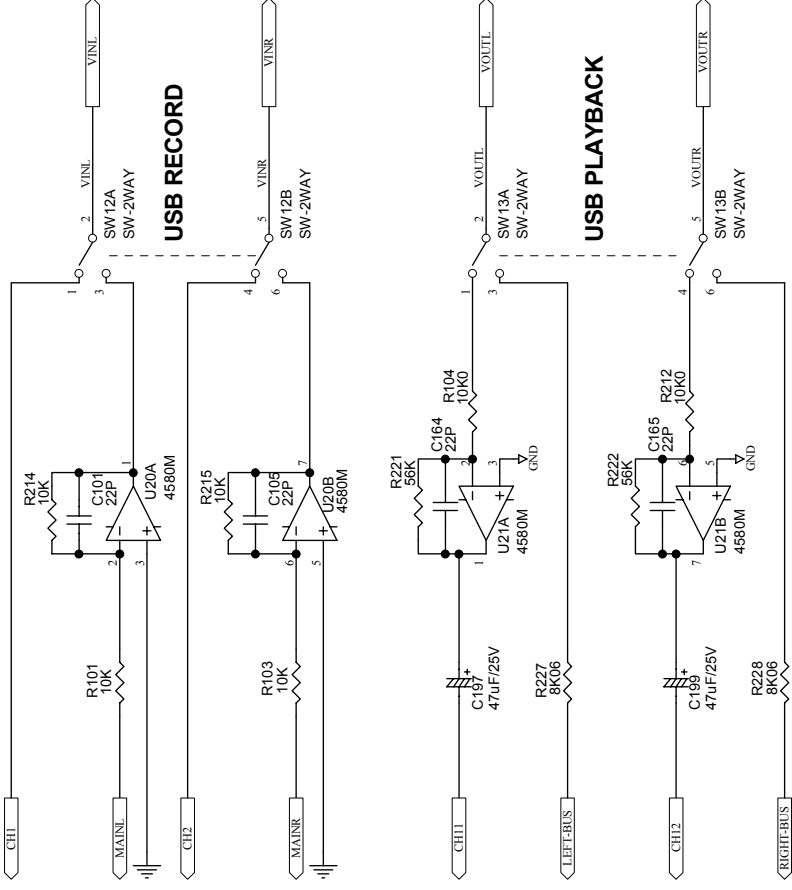
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2

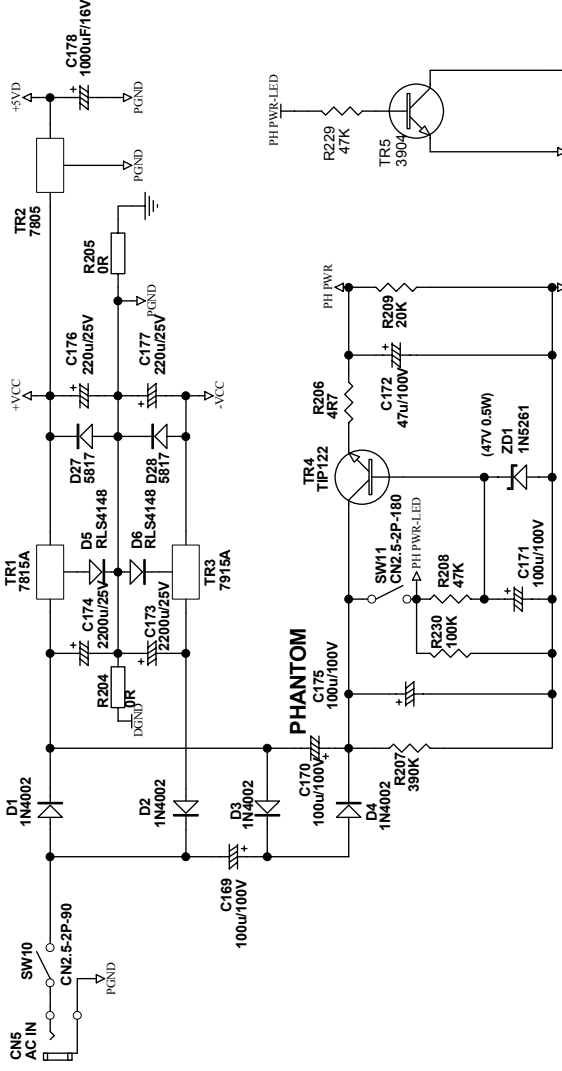
1

AMX180FXPU1-USB(1/2)

USB MIXER

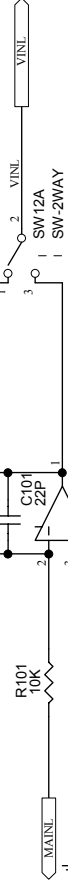


PHANTOM PWR

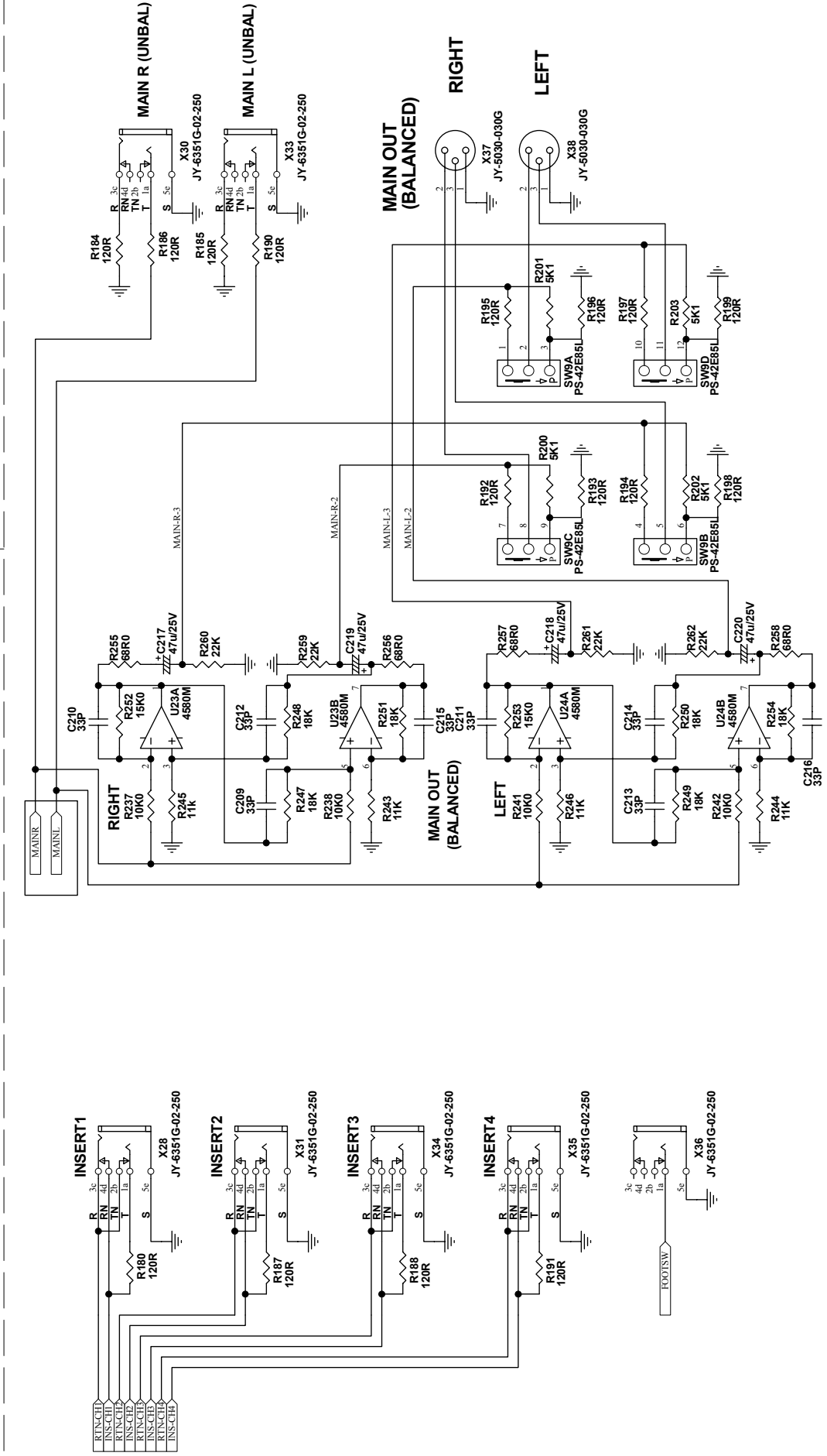
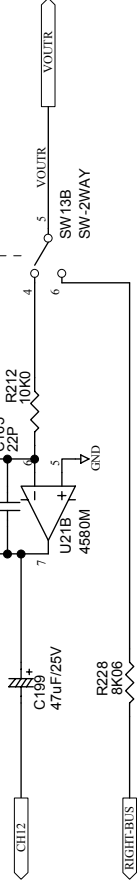


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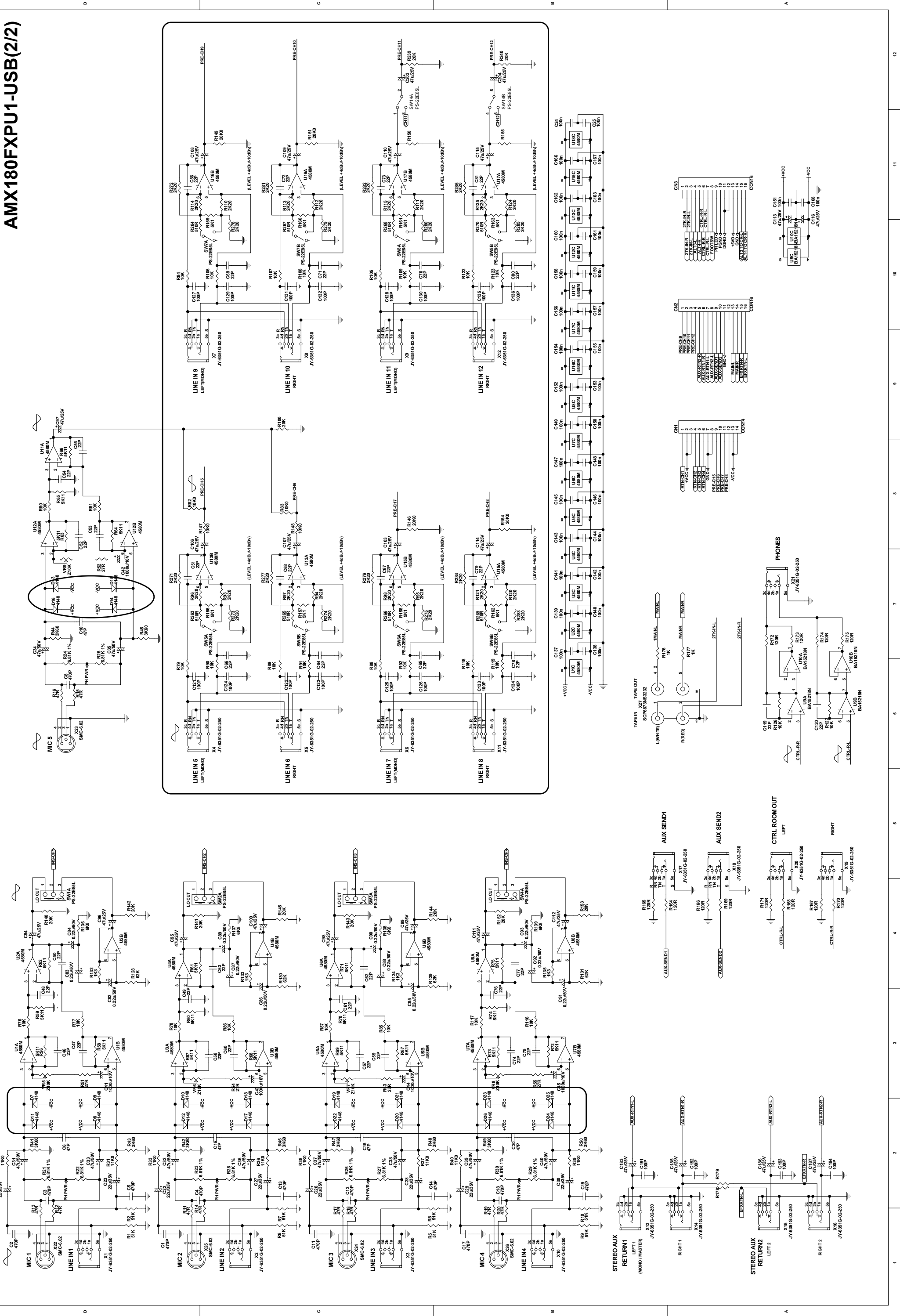
USB RECORD



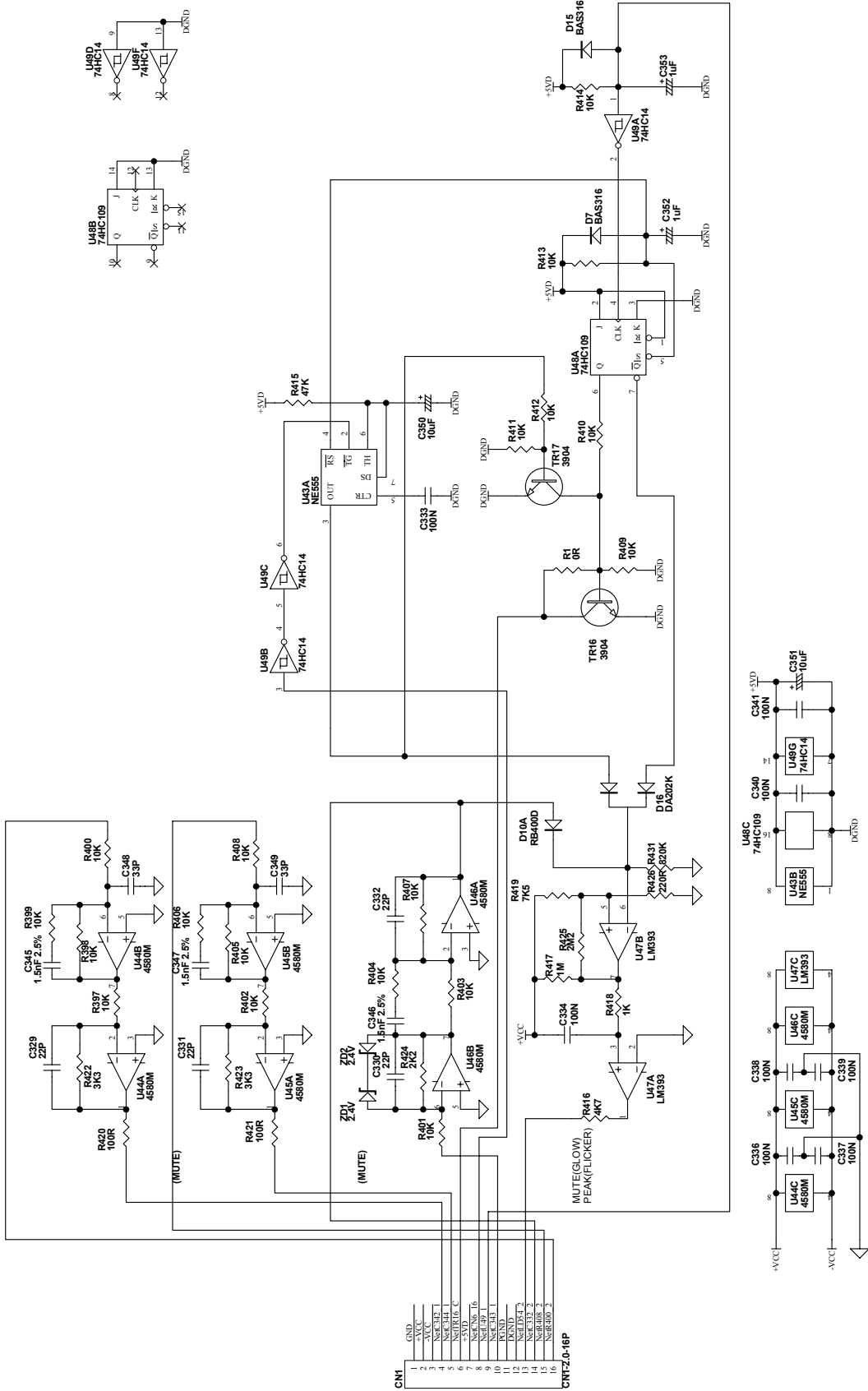
USB PLAYBACK



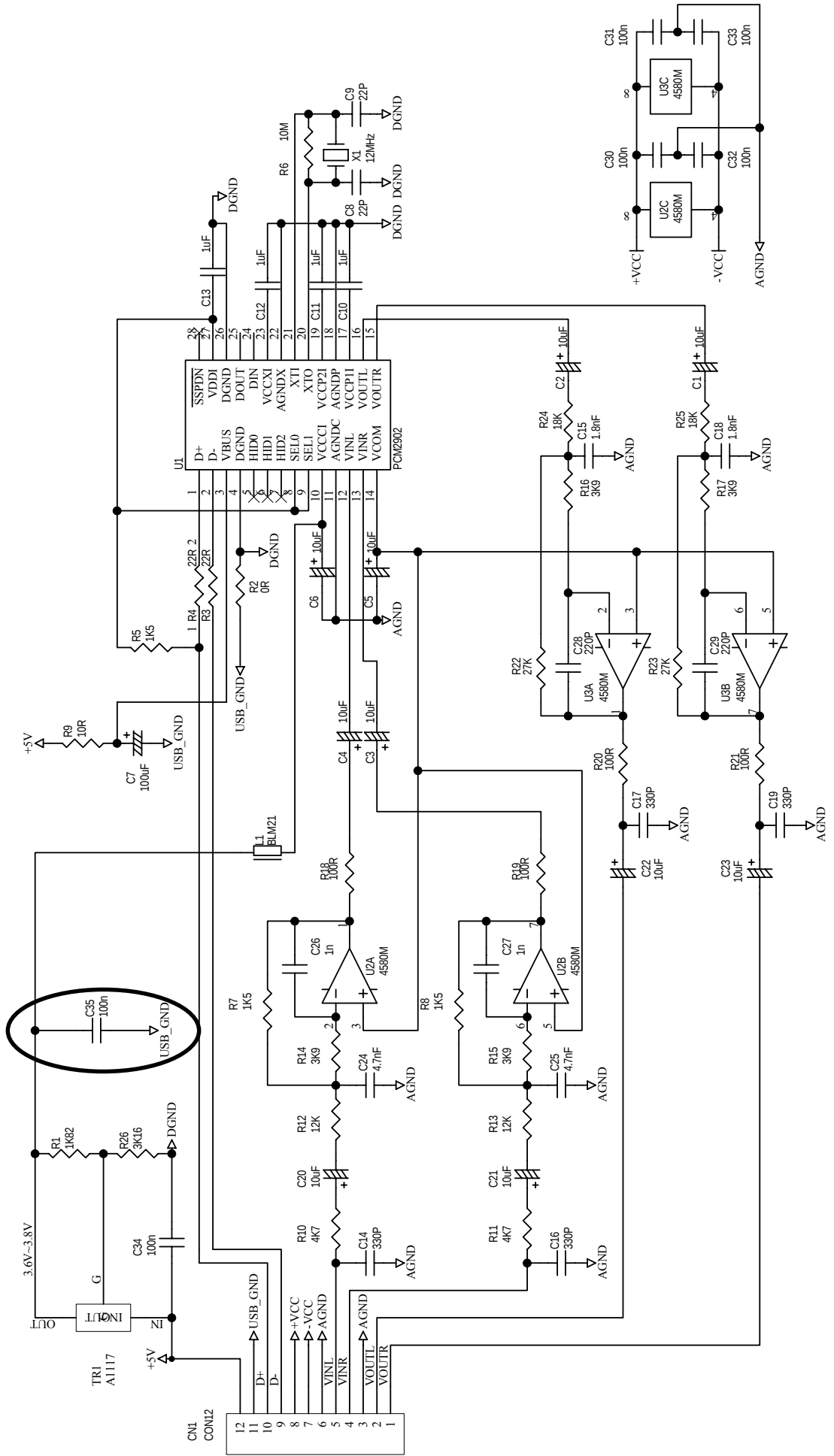
AMX180FXPU1-USB(2/2)



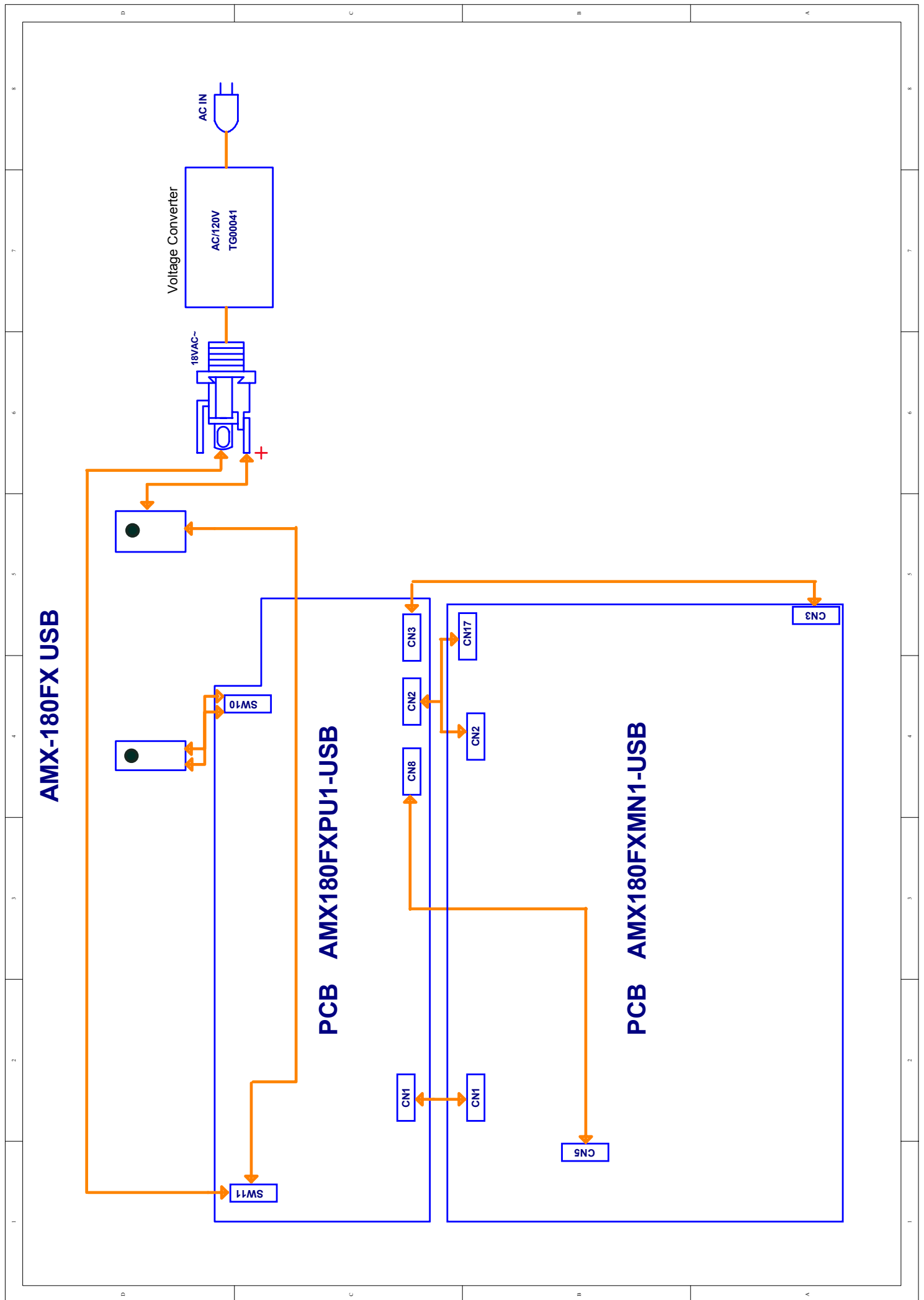
DSP-PRE



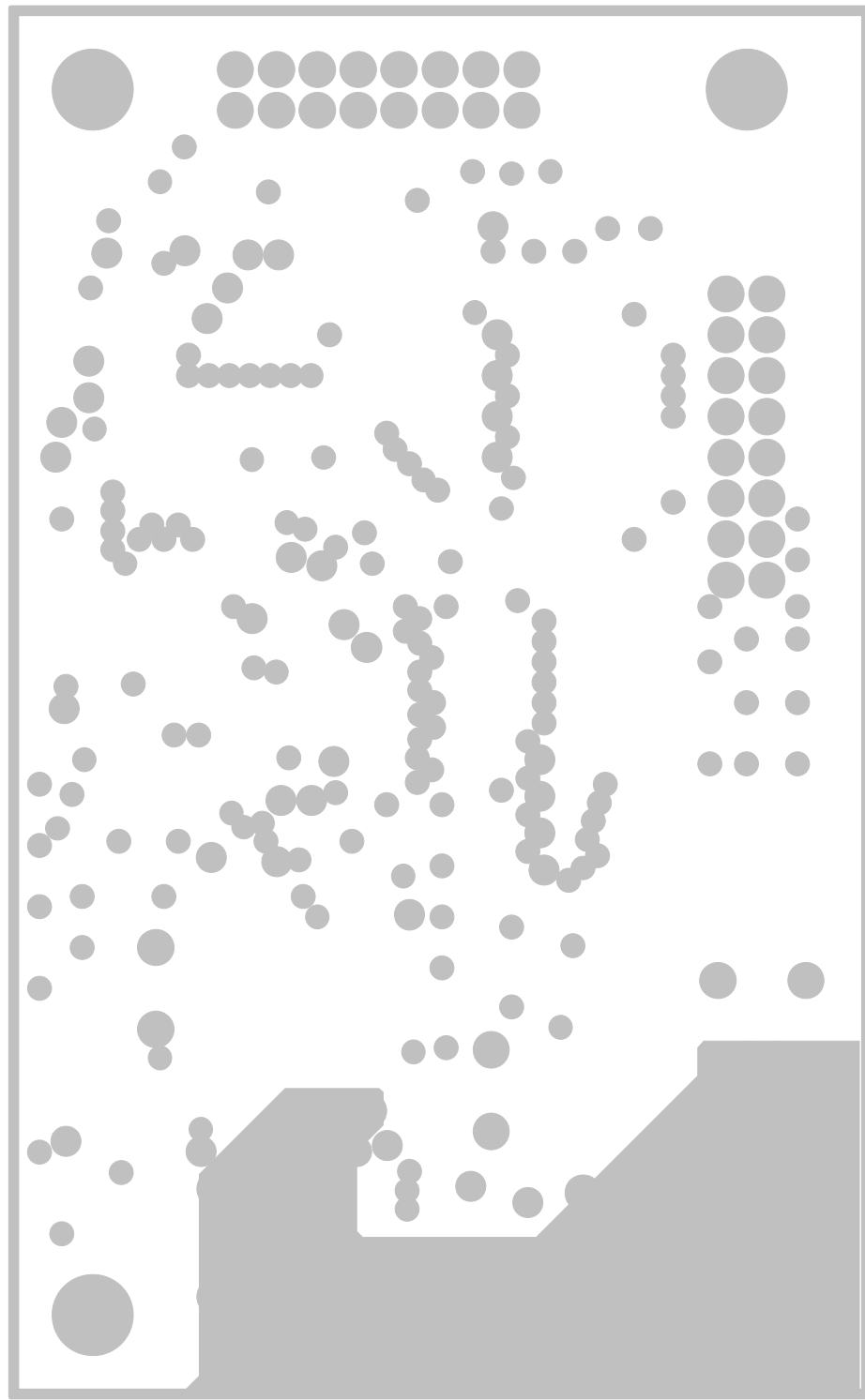
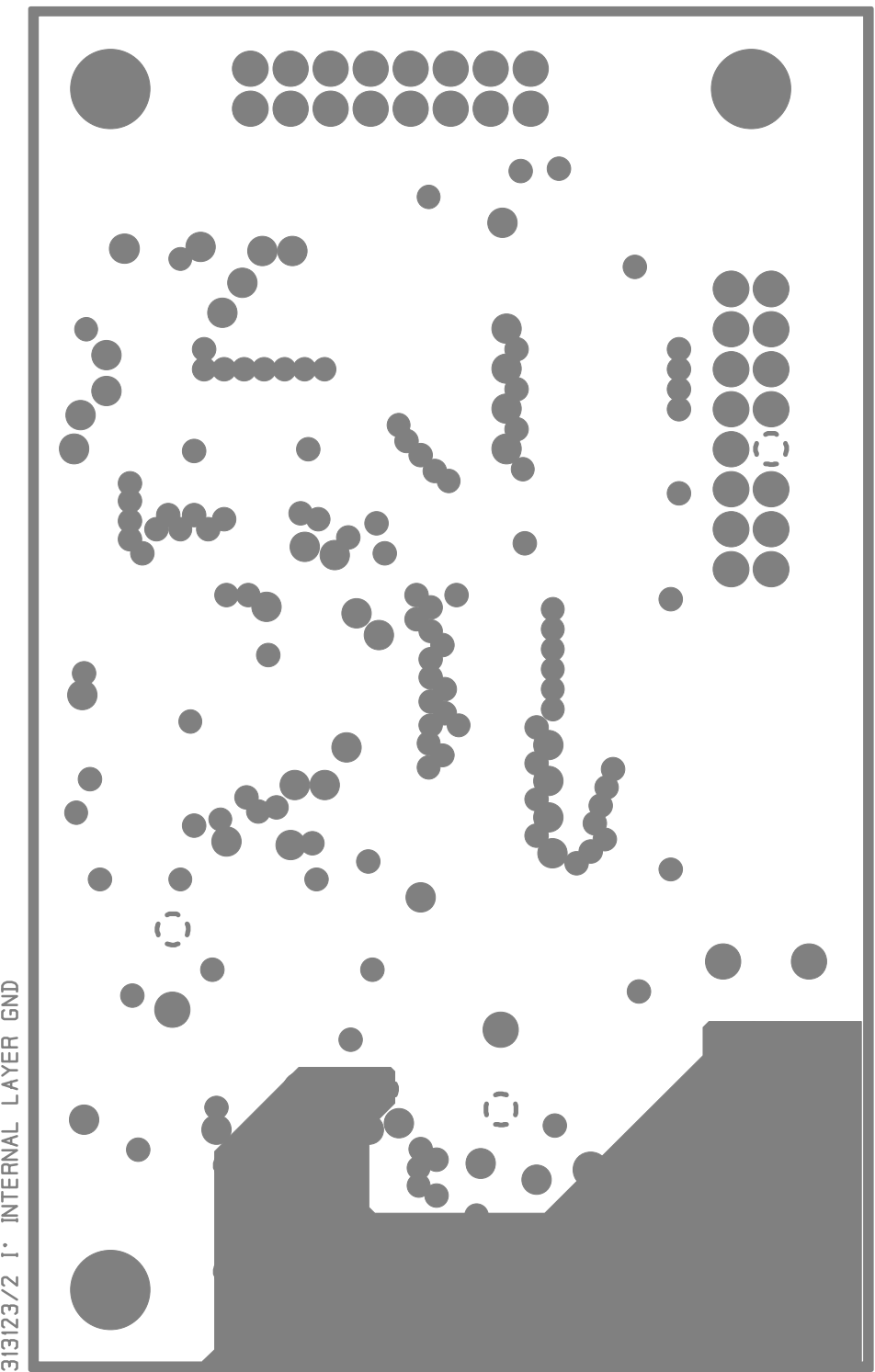
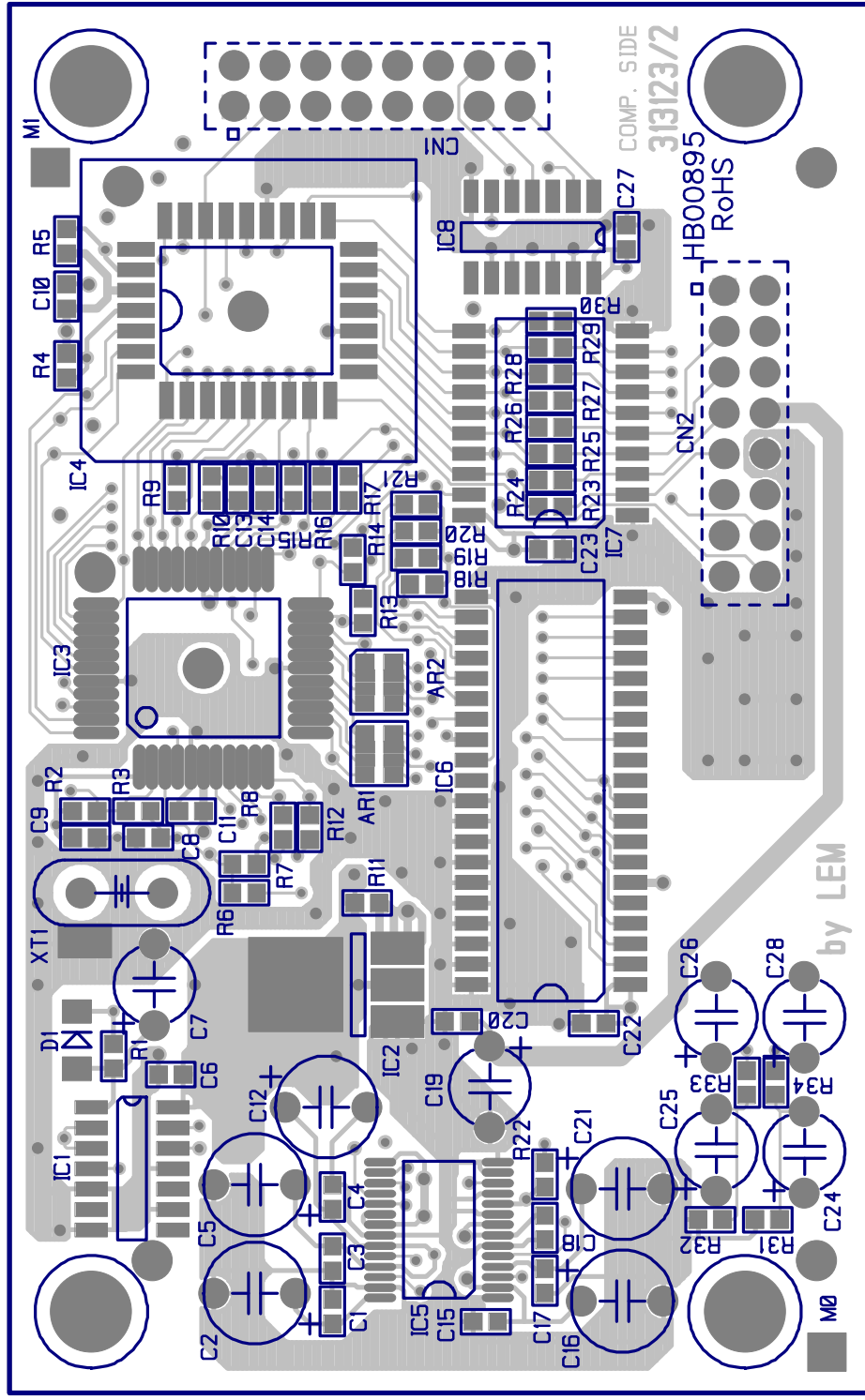
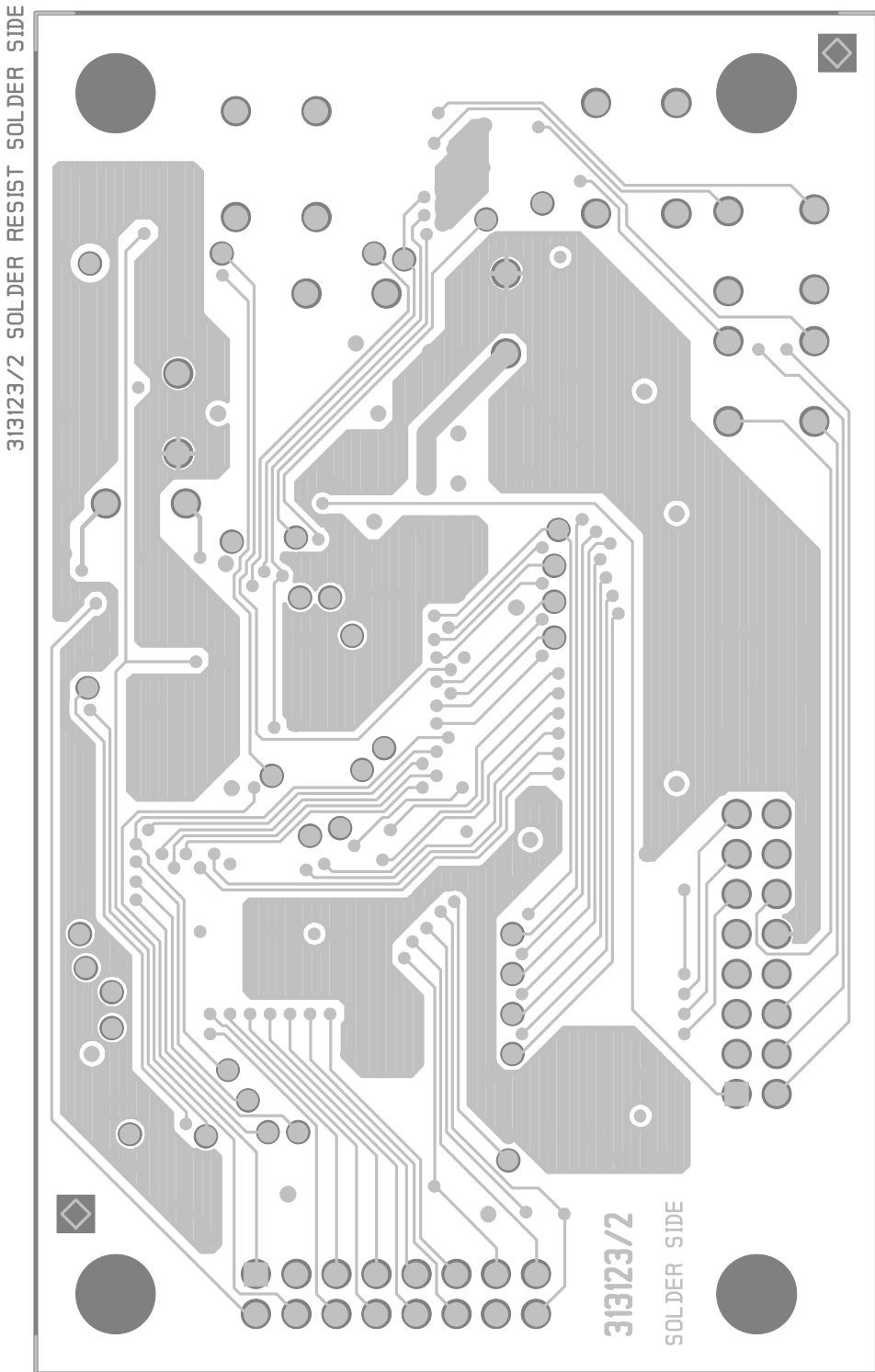
AMX-USB

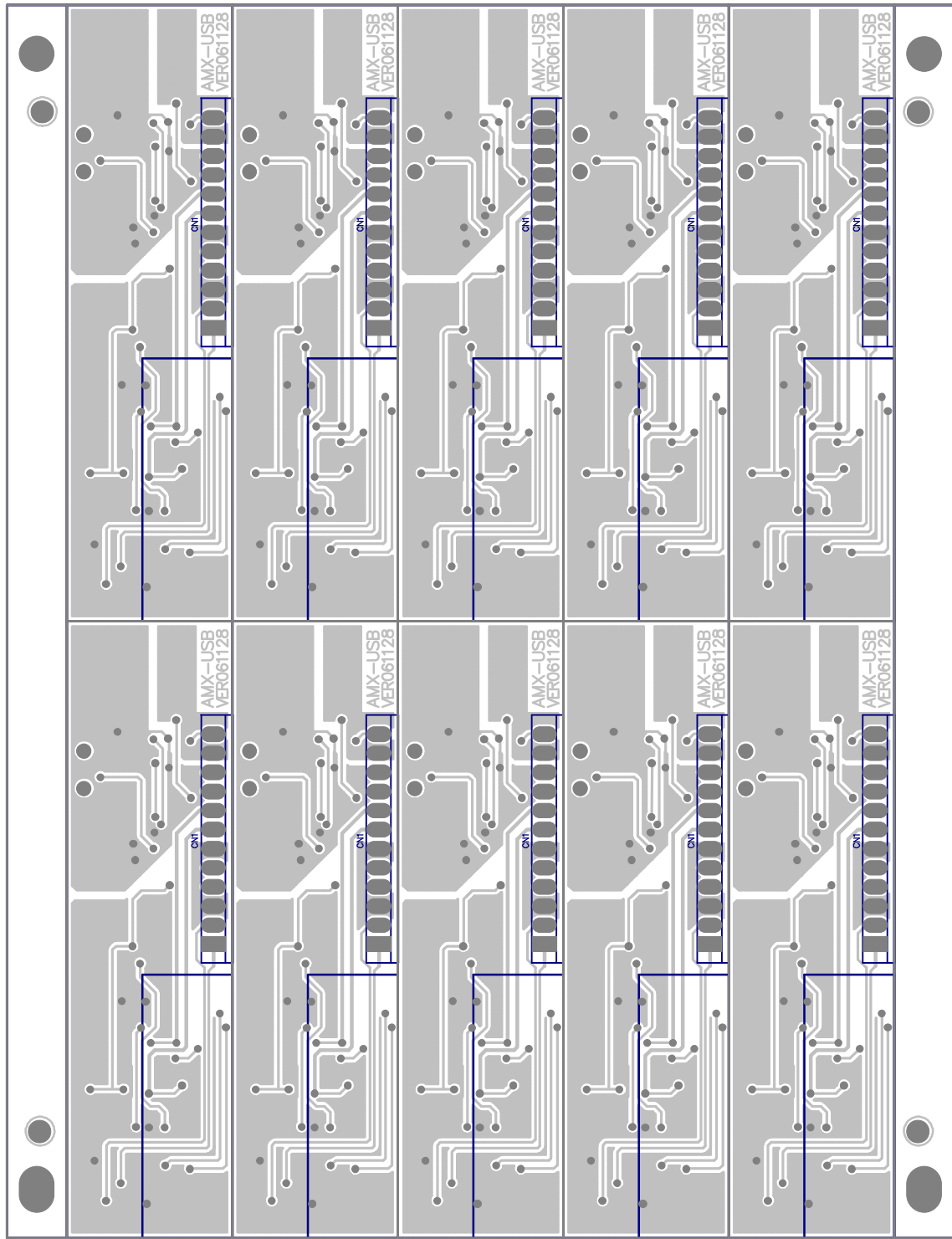
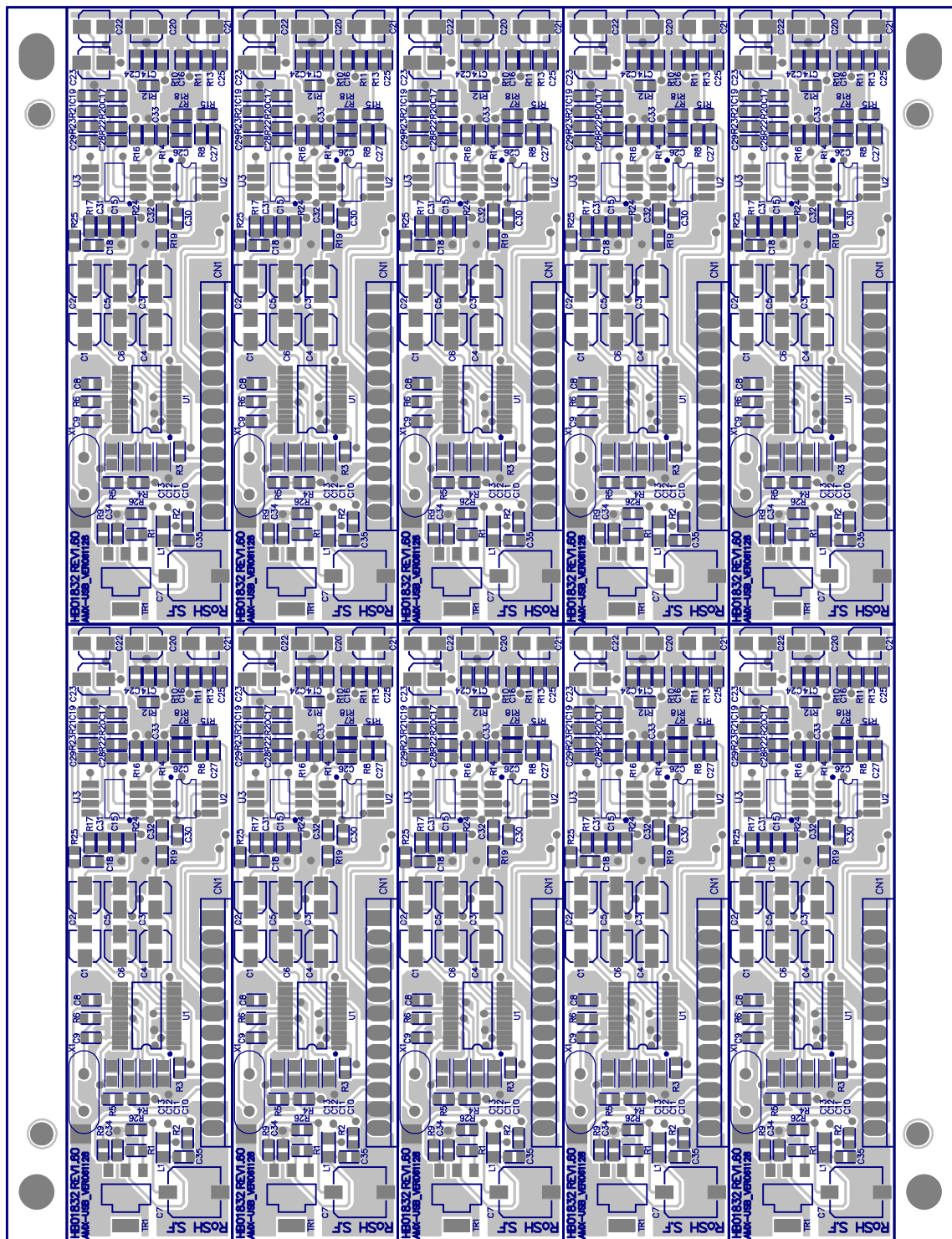


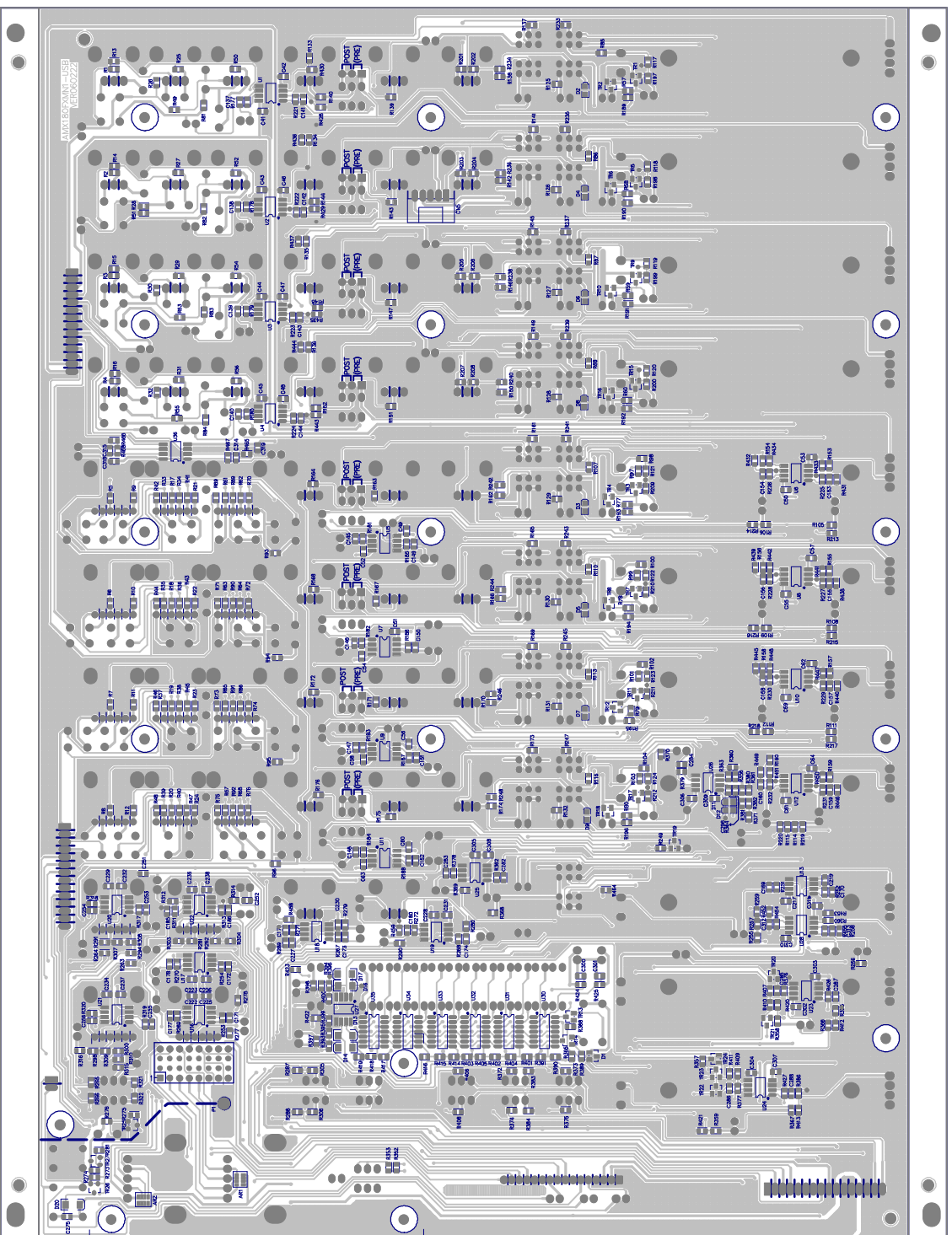
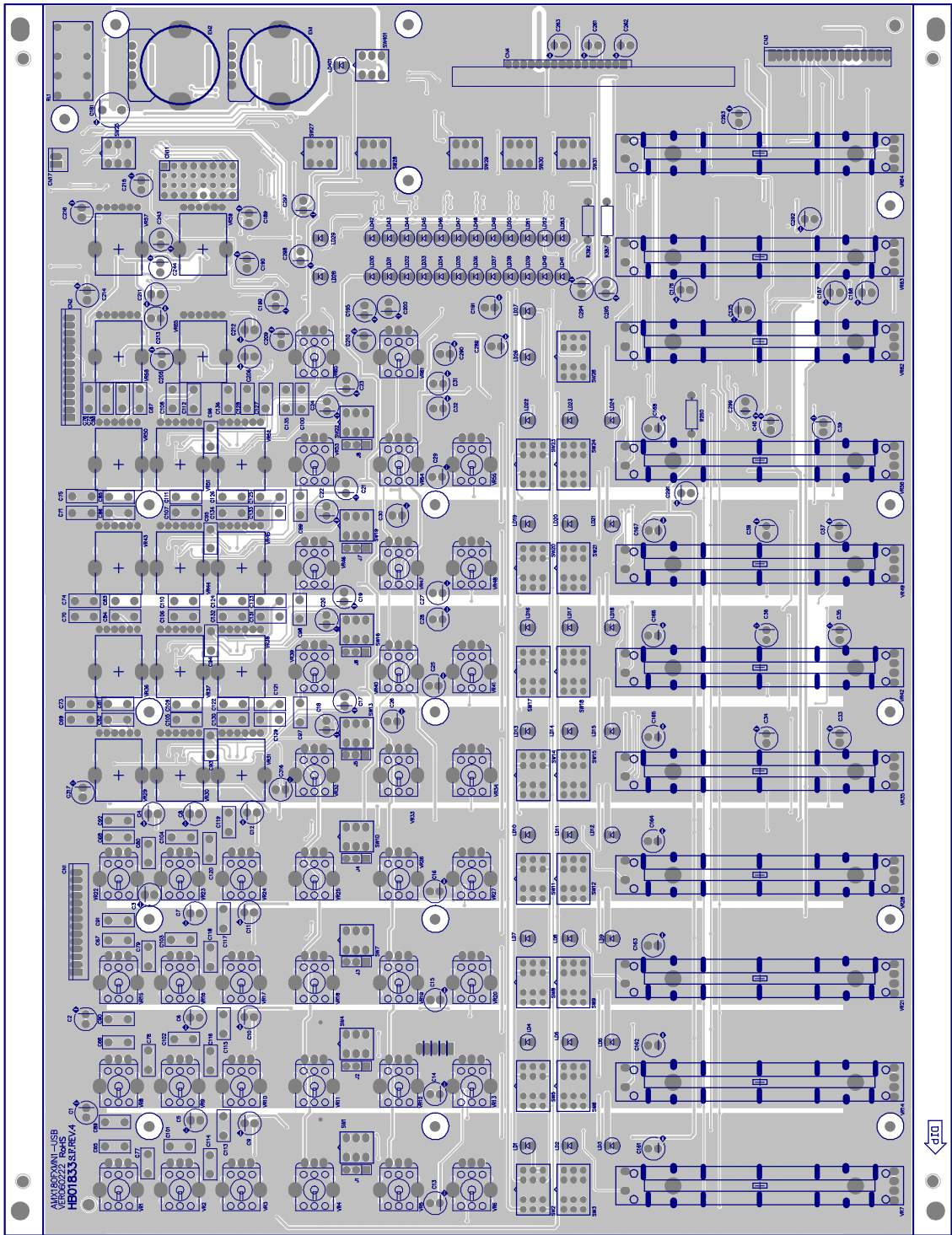
5. WIRING DIAGRAM

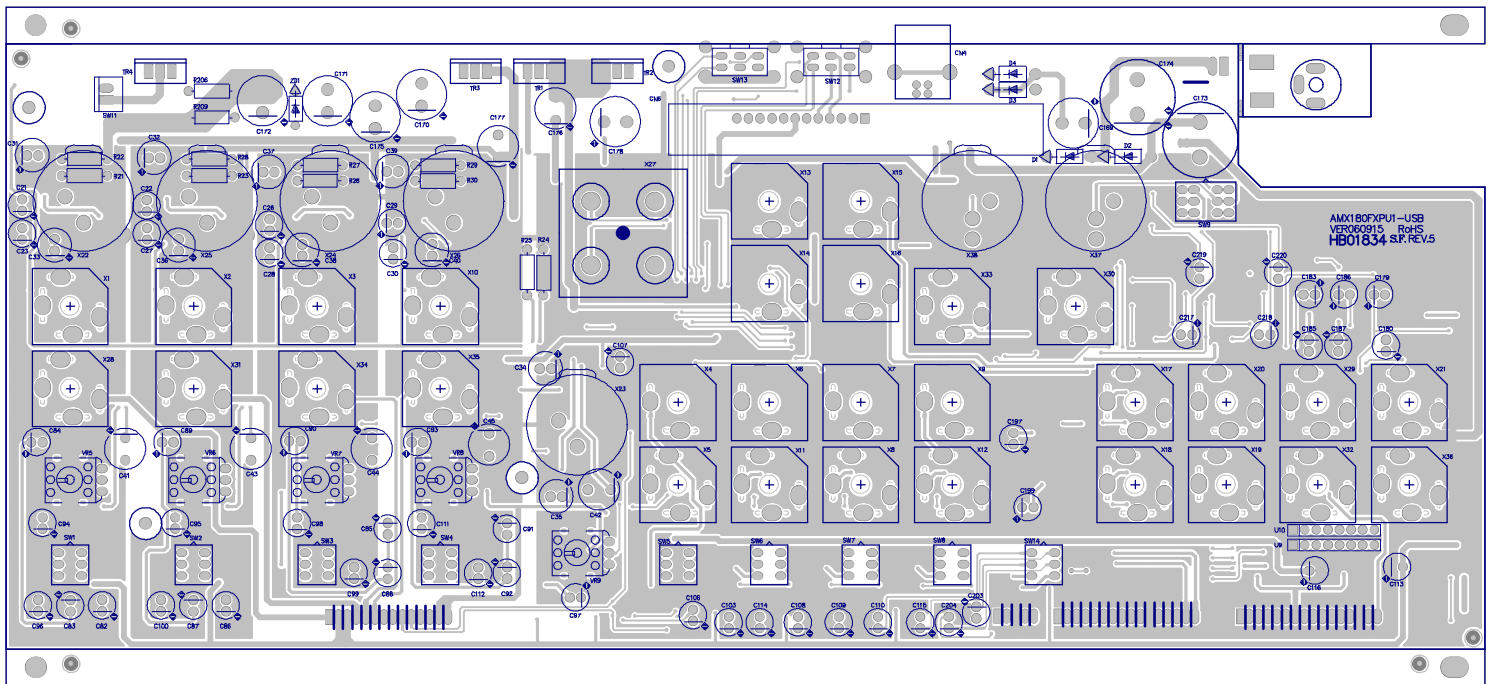
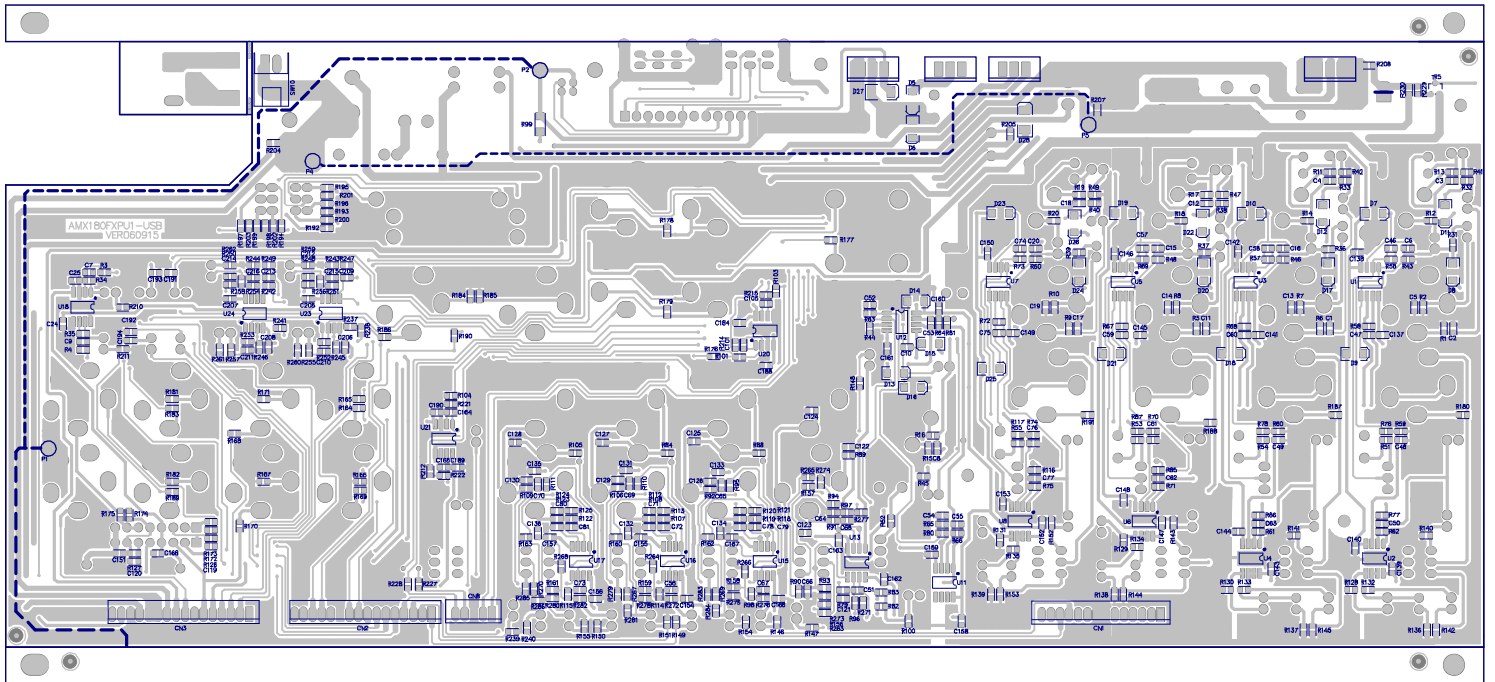


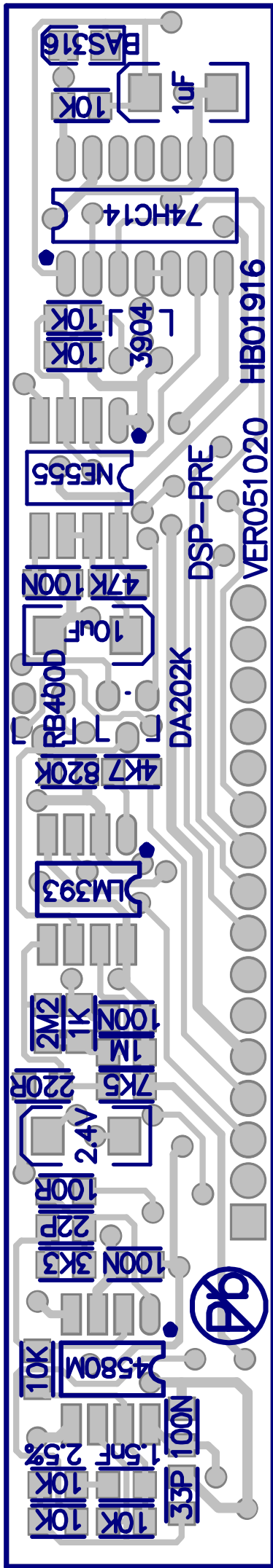
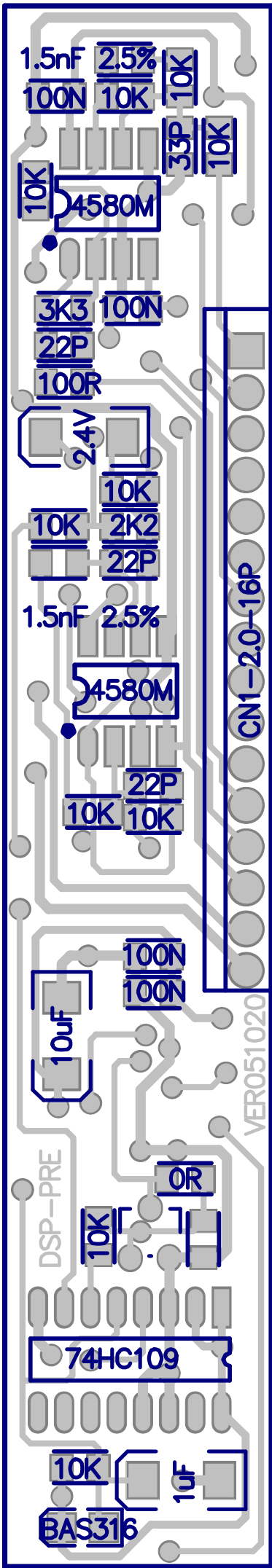
6. PCB LAYOUT











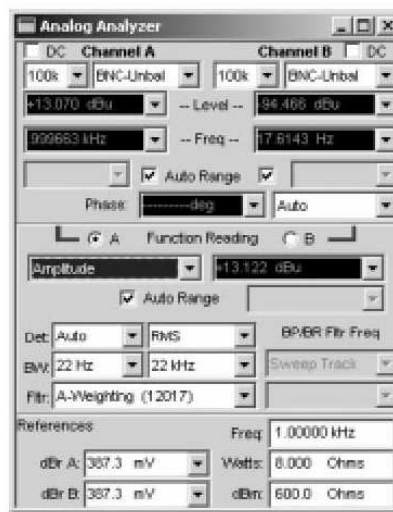
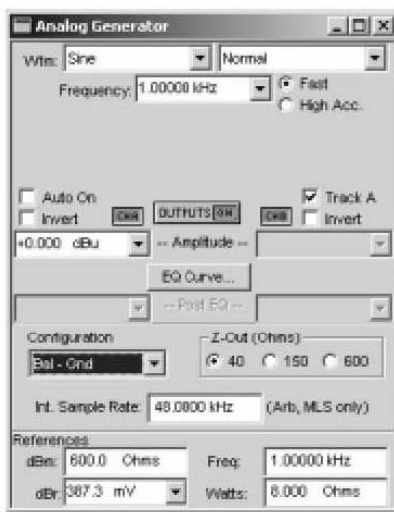
7. TEST PROCEDURE

1. Instruments:

- 1). AP (Audio precision)
- 2). Dual oscillograph
- 3). voltmeter
- 4).USB connector line

2. Instruments Setting:

- 1). AP output: 0dBu 1KHz SINE wave, 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 (1207).



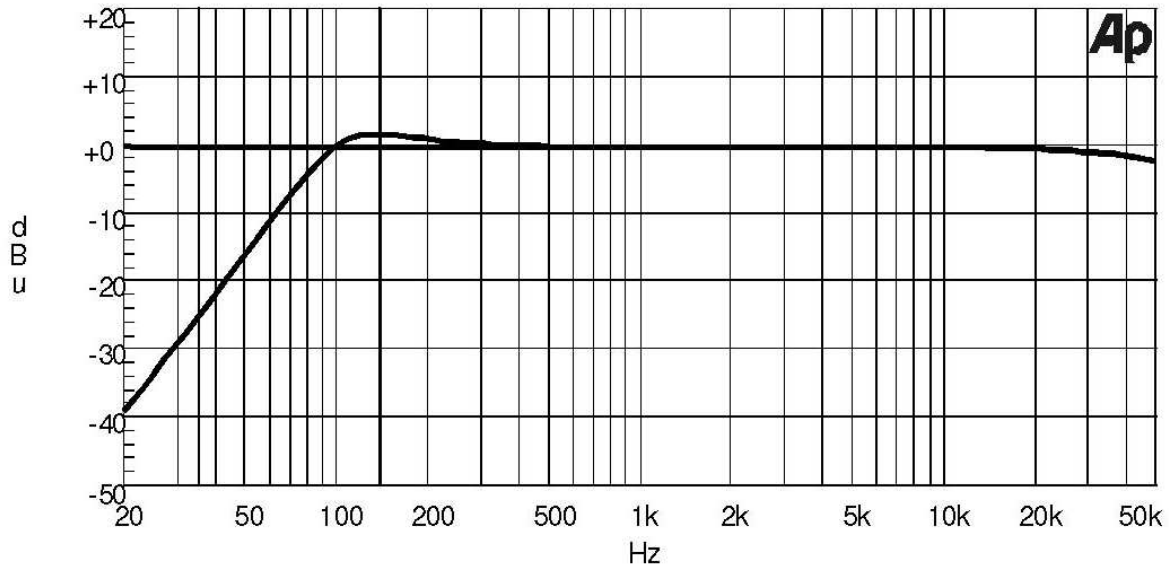
3. Visual Check: check the surface of the AMX-180FX, and be sure it is OK; check the potentiometer knob, and be sure it has no friction.

4. Functional Test:

- 1). After the surface check is OK, input the proper AC power voltage, open the main power switch, the POWER led will light up. Then open the PHANTOM switch, the PHANTOM led will light up. The second and third pin on each MIC output socket {MIC1, MIC2, MIC3, MIC4, MIC (MONO)} has 48V PHANTOM voltage which is tested by voltmeter, and close this switch (notice: we should close this switch for the following test , or the instrument will be damaged).
- 2). Put the MAIN MIX LEVEL, PHONES/CONTROL ROOM, EQ, AUX, PAN, and BAL knob in 0; put the TRIM, AUX RTN1 and AUX RTN2 in min, the entire keys is OFF. (when test the LEVEL of CH1~CH2, we should turn the LEVEL to max)
- 3). AP input 0dBu, connect the balanced input to MIC {MIC1, MIC2, MIC3, MIC4, MIC (MONO)} respectively; when the balanced output is in MAIN MIX OUTPUT, the output is +5dBu ($\pm 2\text{dB}$) THD+N<0.005%.

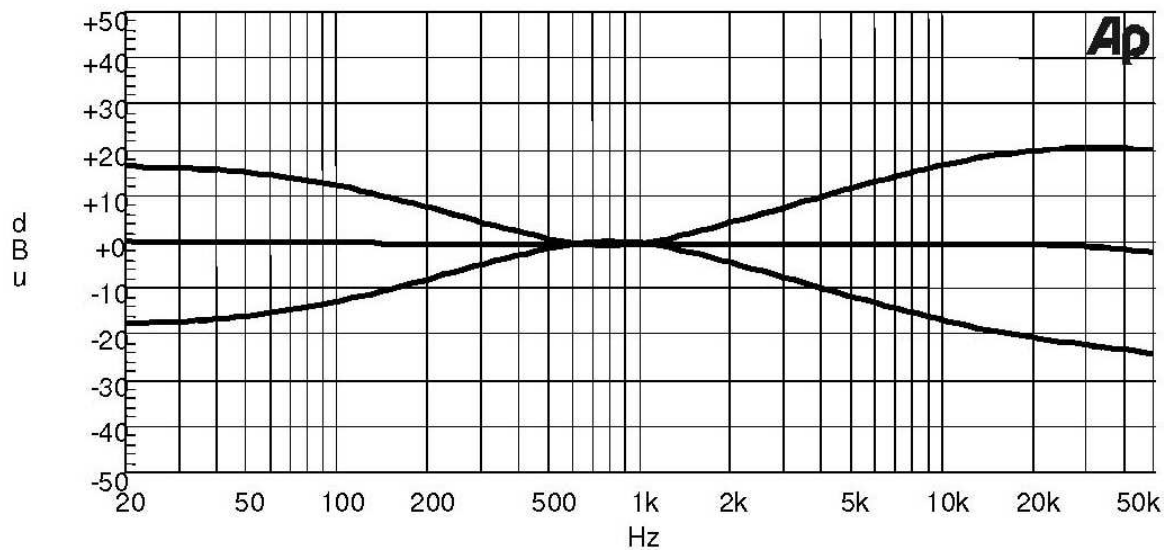
- 4). Connect the unbalanced input to AUX RETURN2 respectively, the unbalanced output (LEFT & RIGHT) of the MAIN MIX OUTPUT is 4dBu (± 2 dB) THD+N<0.005%.
 - 5). Connect the unbalanced input to AUX RETURN1 respectively, the balanced output (LEFT & RIGHT) of the MAIN MIX OUTPUT is 4dBu (± 1 dB) THD+N<0.003%.
 - 6). Connect the unbalanced input to AUX RETURN2 LEFT (MONO), press the EFX TO AUX1 switch, turn the AUX RTN2 to 0, and the output of AUX SEND1 is 0dB (± 1 dB) THD+N<0.005%.
 - 7). Connect the RCA terminal to L & R on TAPE IN respectively:
 - a. Once press the 2TK TO MIX, MAIN TO CONTROL ROOM key, we can test the unbalanced output (LEFT & RIGHT) of MAIN MIX OUTPUT and output of CONTROL ROOM, the output of PHONE (use the STEREO jack to test) is 0dBu (± 2 dB) THD+N<0.006%, the output of TAPE OUT is -3dBu (± 1 dB) THD+N<0.007%.
 - b. release the 2TK TO MIX, MAIN TO CONTROL ROOM key (OFF), when turn the 2TK IN to 0, the CONTROL ROOM has no output; when press the 2TK TO CONTROL ROOM, the output is -4dBu (± 2 dB) THD+N<0.002%.
 - 8). Input +15dBu 1KHz SINE wave (Load out 600 Ω BNC-Unbal) from LINE1, press the MAIN MIX TO CONTROL ROOM, turn the MAIN MIX LEVEL to min, the LED LEVEL will be decreased simultaneously; turn the MAIN MIX LEVEL potentiometer to max, the LED LEVEL will light up in return. The output level (LEFT & RIGHT) of MAIN MIX OUTPUT will match with the LED: whenever the LED point at which level, it will appear the corresponding output level value, and the max non-distortion is +15dBu (± 1 dB, THD+N<0.005%).
 - b. Turn the TRIM knob on CHANNEL1 in clockwise, the PEAK led will light up (red). Use the same way to test the knob on CHANNEL2~CHANNEL4, and to see if the PEAK led is in normal.
5. Frequency Response Test:
- According to the following procedure to test when the LINE1, LINE2, LINE3, LINE4, LINE5, and LINE6 is in input condition, and to test the output frequency response curve of MAIN MIX OUTPUT (LEFT & RIGHT). Set the entire knob and the functional testing to initialize: 4.2)).
- 1). Open the AMX-180FXRESP1.at1, we can test when press and release the LOW CUT switch, the curve is:

Audio Precision



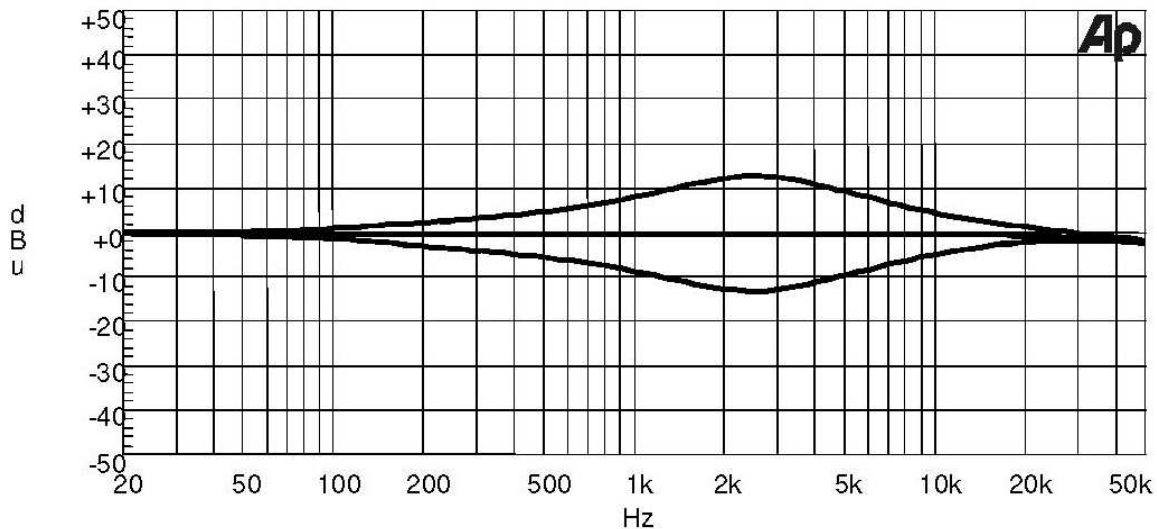
2). When put the EQ HI & LOW knob to max and min (EQ MID is mid), the frequency response curve is:

Audio Precision



3). Set the EQ MID knob to max and min (EQ HI & LOW is in mid) respectively, the frequency response curve is:

Audio Precision



Note: normal instrument frequency response test:

- 1). Input from each channel respectively; rotate the EQ LOW knob of the corresponding channel to max (± 15) in clockwise, and the output is +15dBu (± 2 dB); rotate the EQ LOW knob on this channel to min (-15) in counterclockwise, and the output is -15dBu (± 2 dB);
 - 2). Change the input frequency to 2.5KHz, rotate the EQ MID knob on corresponding channel to max (+12) in clockwise, and the output is +12dBu (± 2 dB), the output is -12dBu (± 2 dB) on the other hand;
 - 3). Change the input frequency to 12KHz, rotate the EQ HIGH knob on the corresponding channel to max (+15) in clockwise, the output is +15dBu (± 3 dB);
6. The effect for testing DSP:
Input signal from MIC1 to MIC4, input signal from AUX SENDS1, at the moment turn the AUX2, AUX2 SEND, AUX RTN2 (DFX) to max, and turn the AUX1 to min, rotate the 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), once press the DFX MUTE key, it will appear the BYPASS signal.
7. The test for USB function:
- 1). Set the MAIN MIX LEVEL, PHONES/CONTROL ROOM, EQ, PAN, BAL knob to 0, the TRIM, AUX1, AUX2, AUX RTN1, AUX RTN2, 2TK IN, ALT3-4, SENDS to min, rotate the PAN on CH1 to LEFT, and the PAN knob on CH2 to RIGHT, and set the entire key in OFF.
 - 2). AP input 0dBu, connect the balanced input to MIC1, MIC2, CH1, CH2 and rotate the LEVEL on these to max, set the unbalanced output in MAIN MIX OUTPUT, and the output is +10dBu (± 2 dB) THD+N<0.005%.

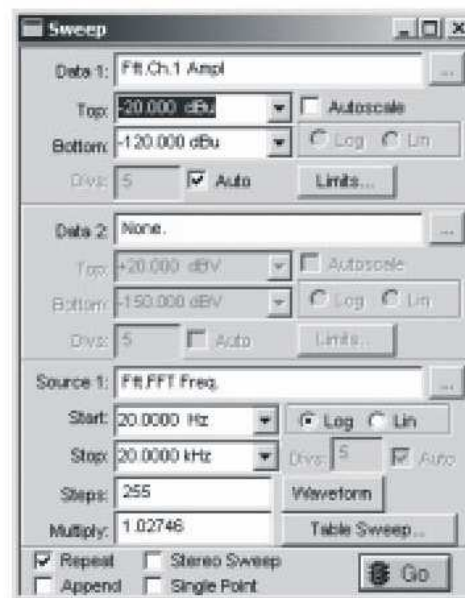
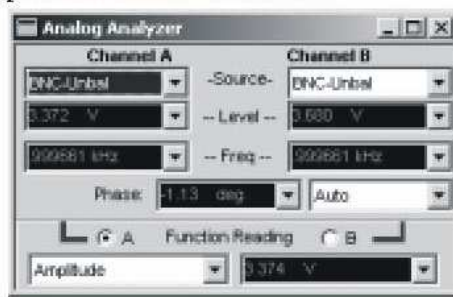
- 3). Switch the USB RECORD to CH1/2 and the USB PLAYBACK to MAIN MIX, connect the USB line to PC, and open the recorder to tape for 60 seconds.



- 4). Take off the input signal, and press the playing key, the output is 0dBu (± 2 dB) THD+N $<2\%$.
- 5). AP input 0dBu, connect the balanced input to MIC1, MIC2, CH1, CH2 and rotate the LEVEL on these to max, set the unbalanced output in MAIN MIX OUTPUT, and the output is +10dBu (± 2 dB) THD+N $<0.005\%$.
- 6). Switch the USB RECORD to MAIN MIX, the USB PLAYBACK to CH11/12, and connect the USB line to PC, open the recorder to tape for 60 seconds.



- 7). Take off the input signal, press the LINE/USB on CH11/12, push the CH LEVEL to 0, and then press the playing key, and the output is +4dBu (± 2 dB) THD+N<1%.
- 8). Open the C:\Apw in\S2\A-A FFT. at2 and set:

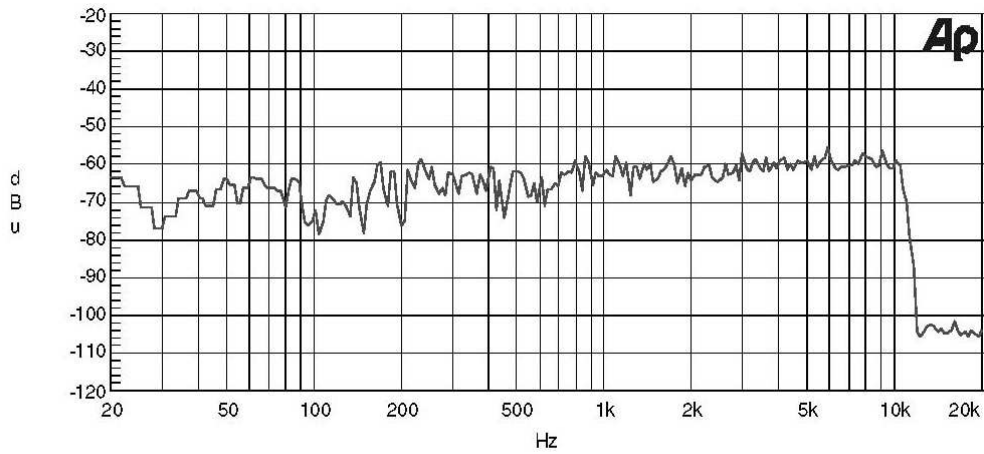


- 9). Do not input the signal, set the unbalanced output in MAIN MIX OUTPUT, switch the USB RECORD to MAIN MIX, the USB PLAYBACK to MAIN MIX, connect the USB line to PC, and open the recorder to tape for 60 seconds.



- 10). After recording, press the playing key, the AP will start to scan; the waveform has no special prominence, and then connects the high quality amplifier and speaker to listen if there has high frequency sounding.

Audio Precision A-A FFT SPECTRUM ANALYSIS

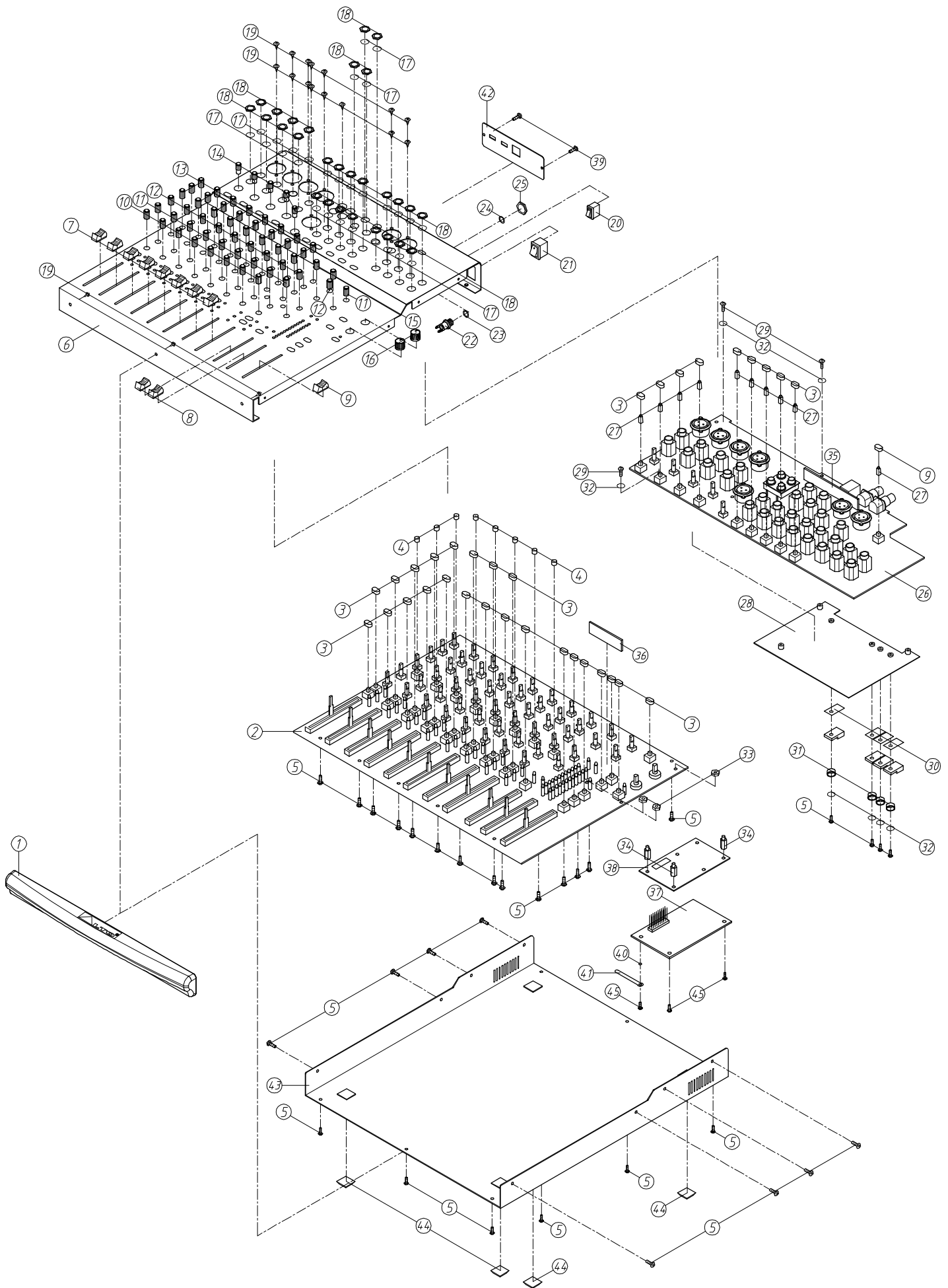


Sweep	Trace	Color	Line Style	Thick	Data	Axis	Comment
1	1	Red	Solid	1	Fit.Ch.1 Ampl	Left	

Requires DSP. Analog Analyzer input is A-D converted and analyzed with the FFT Digital analyzer. Signal source may be Generator or external. Click "Sweep Spectrum/Waveform" sweep button to switch between frequency and A-A FFT at2

8. Selecting Check: connect the AMX-180FX USB to high quality amplifier and speaker, and listen if there has abnormal noise.
9. Factory Preset: rotate the entire volume control knob to min, and the other control knob in mid, and close the entire switch in OFF.

8. EXPLODED VIEW & PARTS LIST



AMX-180FX USB

PARTS LIST

No.	Part No.	Description	Specification	Pcs
1	NI01945	ZC-handle	AMX-180; 180FX-V1.0	1
2	HK06386	K-PC board	P-AMX180FXMN1-USB-DIP	1
3	NI01863	key-RS	φ5.5*W10*7.5 black	34
4	NI02377	knob-RS-C-ABS	φ5.5*7.5mm(3.3*3.3mm) black	8
5	MG00041	screw-RS	M3*6	33
6	MA05705	ZC-panel	AMX-180FX USB ALTO-V1.3	1
7	NI02309	knob-RS	24*11.5*11-V1.1	8
8	NI02352	knob-RS	24*11.5*11	2
9	NI02353	knob-RS	24*11.5*11	1
10	NI02082	plastic knob-RS-C	φ10.5*18mm dual	8
11	NI02633	plastic knob-RS-C	φ10.5*18mm dual	10
12	NI02081	plastic knob-RS-C	φ10.5*18mm dual	10
13	NI02083	plastic knob-RS-C	φ10.5*18mm dual	24
14	NI02714	plastic knob-RS-C	φ10.5*18mm dual	5
15	NI02817	plastic knob-RS-C	φ10.5*18mm dual	2
16	NI02386	plastic knob-RS-C	φ14*13mm dual	2
17	MF00061	washer	φ9.6*φ13*0.5t	30
18	ME00060	MIC nut-HC00125	JY-6351G-02-250	30
19	MG00061	screw-RS	M3*10	18
20	HI00171	power switch-RS	R612KKATOF 1	1
21	HI00026	power switch-RS	RA12KKATOF 2P	1
22	HC00601	DC socket-RS	SCD554CCS003000	1
23	NI00378	plastic washer-RS-C	φ9*φ13 used to PU socket	1
24	NC00037	ZD-cushion-XM1602-07	1tφ8φ12.5mm XM1602-V1.0	1
25	ME00143	nickle nut-HC00601	10 5/6"*32w	1
26	HK06383	K-PC board	P-AMX-180FXPU1-USB-DIP	1
27	NI01862	key-RS-C	5.5*5.5*14.5-V1.1	10
28	MI03095	ZD-heat sink-AXM180FX.USB-0	AMX180FX.USB 1t*125*160-V1.	1
29	MG00162	nickle screw-RS	M3*8	3
30	NC00005	sheet mica-RS	SB-9500DSP 18*13*0.1t-V1.0	4
31	NI02249	insulator-RS	TW-1 (TO-220)	4
32	MF00037	spring washer	φ3.2*φ5.5*1t	7
33	ME00015	color nut-RS	3mm	3
34	MG00243	copper pillar -RS	M3*5*0.5PH	3
35	HK6381	K-PC board	AMX-USB-DIP	1
36	HK06352	K-PC board	P-DSP-PRE-DIP	1
37	HK01409	K-PC board	P-313123-DIP (AMX-140FX)	1
38	NI02620	ZD-insulator board-L8-04	1*86.5*53 L-8	1
39	MG00326	screw-RS	M3*4	2
40	NC00080	ZD-washer	1*φ3.17*φ8.2* black	1
41	MJ00808	power fixed clip-RS	WL3-32T	1
42	MJ01318	ZC-fixed board	AMX-180FX USB-V1.2	1
43	MB04414	ZB-chassis	AMX-180FX.USB-V1.0	1
44	NI00498	self-adhere cushion-RS	12.7*7*6mm (SF-005)	4
45	MG00036	screw-RS	M3*4	3

9. BOM

No.	Part No.	Description	Specification	Remark
1	NI00498	self-adhere foot cushion	12.7*7*6mm(SF-005)	
2	NI00252	sleeve	φ4*20mm	
3	NI00248	sleeve	φ4*1000mm	
4	MA05705	panel	AMX-180FX USB ALTO_V1.4	
5	MA05598	panel-RS	AMX-180FX.USB	
6	AE00343	solvent	No.003	
7	AE00177	paint-RS	4866	
8	MA05597	panel-RS	AMX-180FX.USB 0.8t*42*327.5*385_V1.2	
9	MJ00068	iron board	0.8*2135*1220 16.35kg	
10	MJ01318	fixed board	AMX-180FX USB_V1.2	
11	MJ01298	fixed board-RS	AMX-140FX.USB	
12	AE00177	paint-RS	4866	
13	MJ01297	fixed board-RS	AMX-140FX.USB 0.8t*33*103.5_V1.0	
14	MJ00068	iron board	0.8*2135*1220 16.35kg	
15	MG00061	screw-RS	M3*10	
16	ND00234	dustproof cloth	0.35t*294*80mm	
17	TG00204	transformer-RS	230V/50Hz-AC18V/1500mA-EI57	
18	NI00378	plastic washer	9*13 used to PU socket	
19	NI00218	cable tie	ALT-102SB	
20	NI02714	knob	φ10*13.5mm	
21	NI02377	knob-RS	φ5.5*7.5(3.3*3.3mm)_V1.2	
22	NI02633	knob	φ10.5*18	
23	NI02386	konb	φ14*13mm	
24	NI01863	key-RS	φ5.5*W10*7.5	
25	NI01862	key	5.5*5.5*14.5_V1.1	
26	NI02817	knob	φ10.5*18mm	
27	NI02309	knob	24*11.5*11_V1.1	
28	NI02352	knob	24*11.5*11	
29	NI02353	knob	24*11.5*11	
30	NI02081	knob	φ10.5*18mm	
31	NI02083	knob	φ10.5*18mm	
32	NI02082	knob	φ10.5*18mm	
33	NI01945	handle	AMX-180;180FX_V1.0	
34	NI02878	handle	330*33*26mm AMX-180 black	
35	NF00061	assurance card	ALTO	
36	NE05004	label	ALTO	
37	NH00334	cone paper	0.040*1m	
38	NB03165	cushion	AMX-180 right_V1.0	
39	NB03166	cushion	AMX-180 left_V1.0	
40	NF02622	user manual-RS	AMX-180FX USB ALTO_V1.0	
41	NE15393	lable	AMX-180FX USB_V1.0	
42	NI00014	membrane	0.035*1M	
43	NH00012	bond paper	0.04*1M	
44	NB03033	carton	AMX-180 ALTO_V1.0	
45	NA00279	clip-chain bag	0.04t*100*150mm_V1.0	
46	NA00135	PE bag	0.05t*610*500mm	
47	MJ00808	fixed clip	WL3-32T	
48	MG00041	screw	M3*6	
49	ME00015	color nut	3m/m	
50	MG00326	screw	3*4	
51	MF00061	MIC jack	φ9.6*φ13*0.5t	
52	ME00143	nut	5/6"x32w	
53	ME00060	MIC jack	JY-6351G-02-250	
54	MG00243	copper pillar	M3*5*0.5PH	
55	HI00171	power switch-RS	R612KKAT0F1	
56	HJ00006	dessicant	30g	

No.	Part No.	Description	Specification	Remark
57	HI00026	power switch-RS	RA12KKATOF 2P	
58	HA01388	wire-RS	2P 100mm UL1007 24AWG	
59	HA03524	wire-RS	2P 340mm UL1007 24AWG	
60	HK06386	PC board	P-AMX180FXMN1-USB-DIP	
61	RC00284	slide potentiometer	D10KΩ RF6011YP600F-10KD(SAS1)	VR7,VR14,VR21,VR28,VR62,VR63
62	SA00054	L.E.D	3m/m round(yellow)long foot 26	LD2,LD5,LD8,LD11,LD14,LD17,LD20,LD23,LD27,LD31,LD43
63	SA00052	L.E.D	φ3 round(green)long foot 26	LD29,LD32,LD33,LD34,LD35,LD36,LD37,LD38,LD39,LD40,LD41,LD44,LD45,LD46,LD47,LD48,LD49,LD50,LD51,LD52,LD53
64	SA00053	L.E.D	φ3 round(red)long foot 26mm	LD1,LD3,LD4,LD6,LD7,LD9,LD10,LD12,LD13,LD15,LD16,LD18,LD19,LD21,LD22,LD24,LD26,LD28,LD30,LD42,LD401
65	RC00285	slide potentiometer-dual unit	D10KΩ RF60112P600G-10KD*2(SAS1)	VR35,VR42,VR49,VR56,VR64
66	NI01782	LED spacer support	LEDS-11 11mm	
67	HI00161	relay	RY-5W-K,5V	RL1
68	HI00195	rotary switch	SDB161PVB15.5F-1-4-16-16PC	EN1,EN2
69	HI00238	push-button switch-RS	2 6P PS-92 26A(NON-LOCK)	SW401
70	HI00236	push-button switch-RS	2 6P PS-92 26A(SELF-LOCK)	SW1,SW4,SW7,SW10,SW13,SW16,SW19,SW22,SW25,SW27,SW28,SW29,SW30,SW31
71	HI00237	push-button switch-RS	2 12P PS-13422 R(SELF-LOCK)	SW2,SW3,SW5,SW6,SW8,SW9,SW11,SW12,SW14,SW15,SW17,SW18,SW20,SW21,SW23,SW24,SW26
72	HC00473	connector-RS-ACT	2.45mm 180° 2*8P B25-2*8BG1(B)H=5mm	CN11
73	HA03075	wire	14P(male)-14P(female) 40mm UL1007 28AWG	CN1
74	HA03132	wire-RS	5P(male)-5P(female) 350mm UL1007 28AWG	CN5
75	HA03173	wire-RS	16P-16P 300mm UL1007 28AWG	CN3
76	HA03177	wire-RS	16P-14P/2P 40/50mm UL1007 28AWG	CN2
77	HK06388	PC board	P-AMX180FXMN1-USB-SMD	
78	RD00541	SMD precise resistance 1/10W	0Ω±1% 0603	R366,R367,R464,R393,R394
79	RD00224	SMD precise resistor 1/10W	100KΩ ±1% 0603	R356,R357,R395,R396
80	CI00059	SMD ceramic capacitor 0603	100PF/50V NPO ±5%	C251,C252
81	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C41,C42,C43,C44,C45,C46,C47,C48,C49,C50,C51,C52,C53,C54,C55,C56,C57,C58,C59,C60,C61,C62,C63,C64,C217,C219,C222,C223,C225,C226,C227,C228,C229,C230,C231,C232,C234,C235,C237,C238,C275,C296,C300,C301,C302,C303,C304,C305,C306,C307,C308,C309,C310,C311,C318,C319
82	RD00214	SMD precise resistor 1/10W	10.0KΩ ±1% 0603	R81,R82,R83,R84,R89,R90,R91,R92,R93,R94,R95,R96,R107,R110,R113,R116,R251,R252,R255,R256,R273,R274,R287,R288,R289,R290,R303,R304,R362,R363,R364,R365,R397,R398,R465,R466,R467,R468
83	RD00069	SMD fixed resistor 1/10W	120Ω ±5% 0603	R391
84	RD00102	SMD fixed resistor 1/10W	12KΩ ±5% 0603	R407,R409
85	RD00218	SMD precise resistor 1/10W	15.0KΩ ±1% 0603	R221,R222,R223,R224,R360,R361
86	RD00293	SMD precise resistor 1/10W	17.4KΩ ±1% 0603	R85,R86,R87,R88,R426,R427
87	RD00447	SMD precise resistor 1/10W	19.6KΩ±1% 0603	R264,R265,R266,R263
88	RD00350	SMD fixed resistor 1/10W	1.1KΩ ±5% 0603	R1,R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,R12
89	RD00351	SMD fixed resistor 1/10W	1.3KΩ ±5% 0603	R13,R14,R15,R16,R17,R18,R19,R20,R21,R22,R23,R24,R416
90	RD00085	SMD fixed resistor 1/10W	1.5KΩ ±5% 0603	R189,R190,R191,R192,R193,R194,R195,R196,R312,R314
91	RD00292	SMD precise resistor 1/10W	1.00MΩ ±1% 0603	R177,R178,R179,R180,R181,R182,R183,R184,R185,R186,R187,R188
92	RD00219	SMD precise resistor 1/10W	20.0KΩ ±1% 0603	R276,R315,R316,R368,R369,R370,R371,R372,R374,R376,R377,R406,R408,R373,R375
93	RD00119	SMD fixed resistor 1/10W	220KΩ ±5% 0603	R380
94	RD00542	SMD precise resistance 1/10W	220Ω±1% 0603	R352,R353
95	RD00105	SMD fixed resistor 1/10W	22KΩ ±5% 0603	R225,R226,R227,R228,R229,R230,R231,R232,R307,R308,R309,R310

No.	Part No.	Description	Specification	Remark
96	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C137,C138,C139,C140,C141,C142,C143,C144,C145,C146,C147,C148,C149,C150,C151,C152,C153,C154,C155,C156,C157,C158,C159,C160,C169,C170,C171,C172,C173,C174,C177,C178,C179,C180,C185,C186,C253,C254,C255,C256,C282,C283,C284,C285,C286,C287,C288,C312,C313,C314,C315
97	RD00356	SMD precise resistor 1/10W	26.1KΩ ±1% 0603	R267,R268
98	RD00106	SMD fixed resistor 1/10W	27KΩ ±5% 0603	R233,R234,R235,R236,R237,R238,R239,R240,R241,R242,R243,R244,R245,R253,R254,R246,R247,R248,R305,R306
99	RD00221	SMD precise resistor 1/10W	27.4KΩ ±1% 0603	R321,R322
100	RD00203	SMD precise resistor 1/10W	2.00KΩ ±1% 0603	R417,R422,R311,R313
101	RD00392	SMD precise resistor 1/10W	2.20KΩ ±1% 0603	R125,R126,R127,R128,R129,R130,R131,R132
102	RD00393	SMD precise resistor 1/10W	330Ω ±1% 0603	R404,R405
103	RD00108	SMD fixed resistor 1/10W	33KΩ ±5% 0603	R410,R411
104	RD00407	SMD precise resistor 1/10W	36.0KΩ ±1% 0603	R269,R270,R271,R272,R317,R318,R319,R320,R399,R400,R454,R455
105	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR1,TR2,TR3,TR4,TR5,TR6,TR7,TR8,TR9,TR10,TR11,TR12,TR15,TR16,TR17,TR18,TR25,TR26
106	SF00053	transistor	MMBT3906(SOT23)/(PHI)	TR13,TR19,TR14,TR27
107	RD00406	SMD precise resistor 1/10W	3.60KΩ ±1% 0603	R458,R459
108	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U1,U2,U3,U4,U5,U6,U7,U8,U9,U10,U11,U12,U13,U16,U17,U18,U19,U20,U21,U22,U23,U24,U25,U26,U27,U28,U36
109	RD00078	SMD fixed resistor 1/10W	470Ω ±5% 0603	R281,R401,R402,R403
110	RD00339	SMD precise resistor 1/10W	47.0KΩ ±1% 0603	R117,R118,R119,R120,R121,R122,R123,R124,R275,R420,R421
111	RD00065	SMD fixed resistor 1/10W	47Ω ±5% 0603	R424,R425
112	RD00093	SMD fixed resistor 1/10W	4.7KΩ ±5% 0603	R105,R106,R108,R109,R111,R112,R114,R115,R197,R198,R199,R200,R201,R202,R203,R204,R205,R206,R207,R208,R209,R210,R211,R212,R213,R214,R215,R216,R217,R218,R219,R220,R423
113	RD00347	SMD fixed resistor 1/10W	510Ω ±5% 0603	R249,R388,R389,R414
114	RD00346	SMD fixed resistor 1/10W	56Ω ±5% 0603	R390
115	RD00094	SMD fixed resistor 1/10W	5.1KΩ ±5% 0603	R137,R138,R141,R142,R145,R146,R149,R150,R153,R154,R155,R156,R157,R158,R159,R160,R161,R162,R163,R164,R165,R166,R167,R168,R169,R170,R171,R172,R173,R174,R175,R176,R381,R382,R383,R384,R385,R386,R430,R431,R432,R433,R434,R436,R437,R438,R439,R440,R441,R442,R444,
116	RD00095	SMD fixed resistor 1/10W	5.6KΩ ±5% 0603	R418
117	RD00348	SMD fixed resistor 1/10W	620Ω ±5% 0603	R415
118	RD00113	SMD fixed resistor 1/10W	62KΩ ±5% 0603	R412,R413,R378,R379
119	RD00080	SMD fixed resistor 1/10W	680Ω ±5% 0603	R133,R134,R135,R136,R259,R260
120	RE00011	SMD resistor networks 1/16W	680Ω*4 ±5% 8P 0603	AR1,AR2
121	RD00096	SMD fixed resistor 1/10W	6.2KΩ ±5% 0603	R277,R278
122	RD00097	SMD fixed resistor 1/10W	6.8KΩ ±5% 0603	R49,R50,R51,R52,R53,R54,R55,R56,R57,R58,R59,R60,R61,R62,R63,R64,R65,R66,R67,R68,R69,R70,R71,R72,R73,R74,R75,R76,R77,R78,R79,R80,R139,R140,R143,R144,R147,R148,R151,R152
123	RD00098	SMD fixed resistor 1/10W	7.5KΩ ±5% 0603	R97,R98,R99,R100,R101,R102,R103,R104
124	RD00468	SMD precise resistor 1/10W	7.68KΩ ±1% 0603	R428,R429,R435,R443
125	RD00099	SMD fixed resistor 1/10W	8.2KΩ ±5% 0603	R261,R262,R279,R280,R291,R294,R298,R300,R419
126	RD00349	SMD fixed resistor 1/10W	910Ω ±5% 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
127	SE00028	SMD rectifier diode-RS-ACT	BAS316,115	D2,D3,D4,D5,D6,D7,D8,D9,D11,D12
128	SE00008	SMD rectifier diode	DA204K/T-146	D1
129	SF00039	transistor	MMBFJ112(SOT23)/(FAIRCHILD)	TR22,TR23,TR24,TR20,TR21
130	SG00032	SMD integrated circuit	LM339DR(SO14)/(TI/ST)	U30,U31,U32,U33,U34,U35
131	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D13,D14,D16,D17,D20
132	AE00449	solder material without lead	9308/Sn Ag Cu	
133	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
134	HK06387	PC board	P-AMX180FXMN1-USB-AI	

No.	Part No.	Description	Specification	Remark
135	RA01260	fixed resistor 1/4W	120Ω	R250,R387,R392
136	CF00137	metal-film capacitor MSC	0.033uF/63V 5% CASE01	C113,C114,C115,C116,C117,C118,C119,C120,C121,C122,C123,C124,C125,C126,C127,C128,C129,C130,C131,C132,C133,C134,C135,C136
137	CF00136	metal-film capacitor MSC	0.018uF/63V 5% CASE01	C65,C66,C67,C68,C69,C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C80,C81,C82,C83,C84,C85,C86,C87,C88
138	CF00138	metal-film capacitor MSC	0.012uF/63V ±5% CASE01	C89,C90,C91,C92,C93,C94,C95,C96,C97,C98,C99,C100,C101,C102,C103,C104,C105,C106,C107,C108,C109,C110,C111,C112
139	CB00190	electrolytic capacitor	4.7uF/25V φ4*7mm	C261,C262,C263
140	CB00194	electrolytic capacitor	47uF/25V φ5*11mm	C1,C2,C3,C4,C5,C6,C7,C8,C9,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28,C29,C30,C31,C32,C33,C34,C35,C36,C37,C38,C39,C40,C175,C176,C187,C188,C189,C190,C191,C195,C199,C200,C205,C206,C209,C210,C211,C212,C213,C214,C215,C216,C243
141	CB00248	electrolytic capacitor	2.2uF/50V φ4*5mm	C161,C162,C163,C164,C165,C166,C167,C168,C299
142	CB00268	electrolytic capacitor	330uF/16V φ8*11mm 5mm	C181
143	HB01833	PCB-RS	AMX180FXMN1-USB_VER060222	
144	RD00112	SMD fixed resistor 1/10W	56KΩ ±5% 0603	R358,R359
145	HK06352	PC board	P-DSP-PRE-DIP	CN4
146	HC00697	connector	2.0 90° 16P(gold-pated)2.5/9.5mm 2mm	CN1
147	HK06353	PC board	P-DSP-PRE-SMD	
148	HB01916	PCB-RS	DSP-PRE_VER051020	
149	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C329,C330,C331,C332
150	CI00053	SMD ceramic capacitor 0603	33PF/50V C0G±5%(C1608C0G1H330JT)/TDK	C348,C349
151	CI00129	SMD ceramic capacitor 0603	0.0015uF/50V X7R ±10%	C345,C346,C347
152	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C333,C334,C336,C337,C338,C339,C340,C341
153	CL00002	SMD tantalum capacitor-RS-ACT	1.0uF/16V case A	C352,C353
154	CL00006	SMD tantalum capacitor-RS-ACT	10uF/16V case B2	C350,C351
155	RD00068	SMD fixed resistor 1/10W	100Ω ±5% 0603	R420,R421
156	RD00073	SMD fixed resistor 1/10W	220Ω ±5% 0603	R426
157	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R1
158	RD00083	SMD fixed resistor 1/10W	1.0KΩ ±5% 0603	R418
159	RD00088	SMD fixed resistor 1/10W	2.2KΩ ±5% 0603	R424
160	RD00091	SMD fixed resistor 1/10W	3.3KΩ ±5% 0603	R422,R423
161	RD00093	SMD fixed resistor 1/10W	4.7KΩ ±5% 0603	R416
162	RD00098	SMD fixed resistor 1/10W	7.5KΩ ±5% 0603	R419
163	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
164	RD00111	SMD fixed resistor 1/10W	47KΩ ±5% 0603	R415
165	RD00124	SMD fixed resistor 1/10W	820KΩ ±5% 0603	R431
166	RD00125	SMD fixed resistor 1/10W	1.0MΩ ±5% 0603	R417
167	RD00126	SMD fixed resistor 1/10W	2.2MΩ ±5% 0603	R425
168	SG00122	SMD integrated circuit-RS-ACT	NJM4580M-TE3(SOP8)/(JRC)	U44,U45,U46
169	SG00306	SMD integrated circuit	LM393DR(TI)/(MEXICO)	U47
170	SG00068	SMD integrated circuit	74HC14DT(SO14)/(PHI)	U49
171	SG00469	SMD integrated circuit-RS	SN74HC109DR(SO16)/(TI)	U48
172	SE00028	SMD rectifier diode-RS-ACT	BAS316,115	D7,D15
173	SE00009	SMD rectifier diode	DAN202K/T-146	D16
174	SE00007	SMD rectifier diode	RB400D(D3A)	D10
175	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR17
176	AE00449	solder material without lead	9308/Sn Ag Cu	
177	SE00085	SMD zener diode-RS	1/2W 2.4V ZMM55-C2V4	ZD1,ZD2
178	SG00243	SMD integrated circuit	NE555DR(SO8)/(TI)	U43
179	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
180	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	

No.	Part No.	Description	Specification	Remark
181	RC00672	potentiometer-RS	B50KΩ XV09213YNPV30F-1B50K C.C	VR1,VR2,VR3,VR8,VR9,VR10,VR15,VR16,VR17,VR22,VR23,VR24
182	RC00703	potentiometer-RS	W50KΩ XV09213YNPV30F-4BP50K CC	VR4,VR5,VR11,VR12,VR18,VR19,VR25,VR26,VR32,VR33,VR39,VR40,VR46,VR47,VR53,VR54,VR60,VR61
183	RC00669	potentiometer-RS	B50KΩ XV012313YGPV30F-3B50K C.C	VR29,VR30,VR31,VR36,VR37,VR38,VR43,VR44,VR45,VR50,VR51,VR52
184	RC00670	potentiometer-RS	W50KΩ XV012313YGPV30F-4B50K C.C	VR57,VR58,VR59,VR65
185	RC00700	potentiometer-RS	B5KΩ XV09213YNPV30F-1BP5K CC	VR6,VR13,VR20,VR27,VR34,VR41,VR48,VR55
186	HK06383	PC board	P-AMX-180FXPU1-USB-DIP	
187	SD00074	integrated circuit	L7805CV(TO220)/(ST)	TR2
188	RC00356	potentiometer	Z10KΩ RD09F1130042-10KZ(SAS1);30F	VR5,VR6,VR7,VR8,VR9
189	SD00079	integrated circuit	L7915CV(TO220)/(ST)	TR3
190	SD00077	integrated circuit-RS	L7815CV(TO220)/(ST/MOROCCO)	TR1
191	SD00007	integrated circuit	BA15218N(M5218L)(SIP8)/(ROHM)	U9,U10
192	SB00043	transistor-RS-ACT	TIP122(TO220)/(ST)	TR4
193	NI02249	plastic washer	TW-1(TO-220)	
194	NC00005	mica	SB-9500DSP 18*13*0.1t_V1.0	
195	MG00041	screw	M3*6	
196	MF00037	washer	φ3.2*φ5.5*1t	
197	HI00236	push-button switch-RS	2 6P PS-92 26A(SELF-LOCK)	SW1,SW2,SW3,SW4,SW5,SW6,SW7,SW8,SW14
198	HI00237	push-button switch-RS	2 12P PS-13422 R(SELF-LOCK)	SW9
199	HC00754	USB socket	CU02SAH0000 90°	CN4
200	HI00125	slide switch	SL20202-25Y-6mm	SW12,SW13
201	HC00403	RCA jack	SCP6873NS3232T2 4P	X27
202	HC00392	balance MIC jack-RS	JY-5030-030G 180°	X37,X38
203	HC00076	connector(male)	2P 2.5mm 180°	SW11
204	HC00126	balance MIC jack-RS	JY-5042-030G female plug 180°	X22,X23,X24,X25,X26
205	HC00125	MIC jack-RS	JY-6351G-02-250	X1,X2,X3,X4,X5,X6,X7,X8,X9,X10,X11,X12,X13,X14,X15,X16,X17,X18,X19,X20,X21,X28,X29,X30,X31,X32,X33,X34,X35,X36
206	HC00505	connector(male)	16P 2.0mm 180°	CN2,CN3
207	HC00256	connector(male)	5P 2.0mm 180°	CN8
208	HC00321	connector(male)	14P 2.0mm 180°	CN1
209	HC00065	connector(male)	2P 2.5mm 90°	SW10
210	CB00082	electrolytic capacitor	2200uF/25V φ16*21mm	C173,C174
211	CB00279	electrolytic capacitor	100uF/100V φ10*20mm	C169,C170,C171,C175
212	HK06385	PC board	P-AMX-180FXPU1-USB-SMD	
213	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R204,R205
214	RD00224	SMD precise resistor 1/10W	100KΩ ±1% 0603	R230
215	CI00059	SMD ceramic capacitor 0603	100PF/50V NPO ±5%	C121,C122,C123,C124,C125,C126,C127,C128,C129,C130,C131,C132,C133,C134,C135,C136,C191,C192,C193,C194
216	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C24,C25,C137,C138,C139,C140,C141,C142,C143,C144,C145,C146,C147,C148,C149,C150,C151,C152,C153,C154,C155,C156,C157,C158,C159,C160,C161,C162,C163,C166,C167,C168,C184,C188,C189,C190,C205,C206,C207,C208
217	RD00214	SMD precise resistor 1/10W	10.0KΩ ±1% 0603	R76,R77,R78,R79,R80,R81,R84,R85,R86,R87,R88,R89,R90,R91,R92,R105,R106,R107,R108,R109,R116,R117,R118,R119,R122,R123,R126,R127,R210,R211,R82,R83,R147,R148,R237,R238,R241,R242,R101,R103,R104,R212,R214,R215
218	RD00334	SMD precise resistor 1/10W	11.0KΩ ±1% 0603	R243,R244,R245,R246,R31,R32,R33,R36,R37,R38,R39,R40
219	RD00069	SMD fixed resistor 1/10W	120Ω ±5% 0603	R164,R165,R166,R167,R168,R169,R170,R171,R172,R173,R174,R175,R180,R181,R182,R183,R184,R185,R186,R187,R188,R189,R190,R191,R192,R193,R194,R195,R196,R197,R198,R199
220	RD00218	SMD precise resistor 1/10W	15.0KΩ ±1% 0603	R252,R253
221	RD00473	SMD precise resistor 1/10W	18.0KΩ ±1% 0603	R247,R248,R249,R250,R251,R254
222	RD00282	SMD precise resistor 1/10W	1.00KΩ ±1% 0603	R176,R177
223	RD00351	SMD fixed resistor 1/10W	1.3KΩ ±5% 0603	R132,R133,R134,R135

No.	Part No.	Description	Specification	Remark
224	RD00219	SMD precise resistor 1/10W	20.0KΩ ±1% 0603	R100,R140,R141,R142,R143,R144,R145,R152,R153,R239,R240,R146,R149,R151,R154
225	RD00105	SMD fixed resistor 1/10W	22KΩ ±5% 0603	R259,R260,R261,R262
226	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C7,C9,C46,C47,C48,C49,C50,C51,C52,C53,C54,C55,C56,C57,C58,C59,C60,C61,C62,C63,C64,C65,C66,C67,C68,C69,C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C80,C81,C101,C105,C119,C120,C164,C165
227	RD00265	SMD fixed resistor 1/10W	27Ω ±5% 0603	R51,R52,R53,R54,R55
228	RD00392	SMD precise resistor 1/10W	2.20KΩ ±1% 0603	R93,R94,R95,R96,R97,R98,R110,R111,R112,R113,R114,R115,R120,R121,R124,R125,R271,R272,R273,R274,R275,R276,R277,R278,R279,R280,R281,R282,R283,R284,R285,R286
229	CI00053	SMD ceramic capacitor 0603	33PF/50V C0G±5%(C1608C0G1H330JT)/TDK	C209,C210,C211,C212,C213,C214,C215,C216
230	SF00056	transistor	MMBT3904(SOT23)/(PHI)	TR5
231	RD00345	SMD fixed resistor 1/10W	390KΩ ±5% 0603	R207
232	RD00406	SMD precise resistor 1/10W	3.60KΩ ±1% 0603	R41,R42,R43,R44,R45,R46,R47,R48,R49,R50
233	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D7,D8,D9,D10,D11,D12,D13,D14,D15,D16,D17,D18,D19,D20,D21,D22,D23,D24,D25,D26,D5,D6
234	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U1,U2,U3,U4,U5,U6,U7,U8,U11,U12,U13,U15,U16,U17,U18,U20,U21,U23,U24
235	CI00063	SMD ceramic capacitor 0603	470PF/50V NPO ±5	C1,C2,C3,C4,C5,C8,C11,C12,C13,C14,C17,C18,C19
236	RD00111	SMD fixed resistor 1/10W	47KΩ ±5% 0603	R208,R229
237	CI00055	SMD ceramic capacitor 0603	47PF/50V C0G±5%(C1608C0G1H470JT)/TDK	C6,C10,C15,C16,C20
238	RD00298	SMD precise resistor 1/10W	47.0Ω ±1% 0603	R11,R12,R13,R14,R15,R16,R17,R18,R19,R20
239	RD00347	SMD fixed resistor 1/10W	510Ω ±5% 0603	R263,R264,R265,R266,R267,R268,R269,R270
240	RD00354	SMD fixed resistor 1/10W	51KΩ ±5% 0603	R1,R2,R5,R6,R7,R8,R9,R10
241	SE00048	SMD Schottky barrier diode	1A/20V PRL15817(SOD87)/(PHI)	D27,D28
242	RD00094	SMD fixed resistor 1/10W	5.1KΩ ±5% 0603	R3,R4,R34,R35,R156,R157,R158,R159,R160,R161,R162,R163,R200,R201,R202,R203
243	RD00210	SMD precise resistor 1/10W	5.11KΩ ±1% 0603	R56,R57,R58,R59,R60,R61,R62,R63,R64,R65,R66,R67,R68,R69,R70,R71,R72,R73,R74,R75
244	RD00113	SMD fixed resistor 1/10W	62KΩ ±5% 0603	R128,R129,R130,R131
245	RD00394	SMD precise resistor 1/10W	68.0Ω ±1% 0603	R255,R256,R257,R258
246	RD00097	SMD fixed resistor 1/10W	6.8KΩ ±5% 0603	R136,R137,R138,R139
247	AE00449	solder material without lead	9308/Sn Ag Cu	
248	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
249	HK06384	PC board	P-AMX-180FXPU1-USB-AI	
250	RA01262	precise resistor 1/4W	6.81KΩ	R21,R22,R23,R24,R25,R26,R27,R28,R29,R30
251	RA01325	fixed resistor 1/8W	4.7Ω	R206
252	RA01115	fixed resistor 1/4W	20KΩ	R209
253	SA00094	rectifier diode	1N4002/100V	D1,D2,D3,D4
254	SA00127	zener diode	1/2W 47V 1N5261	ZD1
255	CB00194	electrolytic capacitor	47uF/25V φ5*11mm	C94,C95,C96,C97,C98,C99,C100,C103,C106,C107,C108,C109,C110,C111,C112,C113,C114,C115,C116,C179,C180,C183,C185,C186,C187,C203,C204,C217,C218,C219,C220,C197,C199
256	CB00251	electrolytic capacitor	220UF/25V φ8*11mm	C176,C177
257	CB00255	electrolytic capacitor	1000uF/10V φ8*11mm 5mm	C41,C42,C43,C44,C45
258	CB00238	electrolytic capacitor	0.22uF/50V φ5*11mm	C82,C83,C84,C85,C86,C87,C88,C89,C90,C91,C92,C93
259	CB00254	electrolytic capacitor	47uF/100V φ10*12mm 5mm	C172
260	CB00334	electrolytic capacitor-RS	47uF/50V φ6.3*11mm	C31,C32,C33,C34,C35,C36,C37,C38,C39,C40
261	CB00253	electrolytic capacitor	1000uF/16V φ10*16mm 5mm	C178
262	CB00242	electrolytic capacitor	22uF/35V φ5*11mm	C21,C22,C23,C26,C27,C28,C29,C30
263	HB01834	PCB-RS	AMX180FXPU1-USB_VER060915	
264	CI00219	SMD ceramic capacitor 0603	150PF/50V C0G ±5%(C1608C0G1H151JT)/TDK	C117,C118
265	RD00112	SMD fixed resistor 1/10W	56KΩ ±5% 0603	R221,R222
266	RD00289	SMD precise resistor 1/10W	8.06KΩ ±1% 0603	R227,R228
267	RD00129	SMD fixed resistor 1/4W	0.0Ω ±5% 1206	R99

No.	Part No.	Description	Specification	Remark
268	HC00920	DC jack-RS	SCD554CCS103BB4G	
269	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
270	MI03095	heat-sink	AMX180FX.USB 1t*125*160_V1.2	
271	MJ00999	AL plate-RS	1*2000*1000 5.44kg	
272	ME00041	iron pillar	hexagon6.35*M3*6	
273	ME00166	iron pillar	M3*3_V1.0	
274	MG00024	screw	M3*7 0.5PH	
275	HA00392	wire-RS	260mm black L5R5	
276	HA00384	wire	180mm black L5R5	
277	HK08142	PC board	P-AMX-USB-DIP(AMX-180FX USB)	CN6
278	SC00003	crystal oscillator	12.000MHZ HC-49/US ±20PPM	X1
279	HC00555	connector	2.54 90° 12P 6/14	CN1
280	HK06382	PC board	P-AMX-USB-SMD	
281	RD00309	SMD fixed resistor 1/10W	10MΩ ±5% 0603	R6
282	RD00063	SMD fixed resistor 1/10W	22Ω ±5% 0603	R3,R4
283	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R2
284	RD00085	SMD fixed resistor 1/10W	1.5KΩ ±5% 0603	R5
285	RD00272	SMD precise resistor 1/10W	10.0Ω ±1% 0603	R9
286	RD00492	SMD precise resistor 1/10W	1.82KΩ ±1% 0603	R1
287	RD00363	SMD precise resistor 1/10W	3.16KΩ ±1% 0603	R26
288	SG00412	SMD integrated circuit-RS	AZ1117H-ADJ(SOT223)/(BCD)	TR1
289	SG00489	SMD integrated circuit-RS	PCM2900E(SSOP28)/(TI)	U1
290	CJ00005	SMD AL electrolytic capacitor	10uF/16V CASE4φ	C1,C2,C3,C4,C5,C6,C20,C21,C22,C23
291	CI00051	SMD ceramic capacitor 0603	22PF/50V C0G±5%(C1608C0G1H220JT)/TDK	C8,C9
292	CI00030	SMD ceramic capacitor 0805	1uF/16V Y5V-0805(2012)	C10,C11,C12,C13
293	HB01832	PCB-RS	AMX-USB _VER061128	
294	CJ00012	SMD AL electrolytic capacitor-	100uF/16V CASE6.3φ	C7
295	AE00449	solder material without lead	9308/Sn Ag Cu	
296	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C34,C30,C31,C32,C33,C35
297	RD00068	SMD fixed resistor 1/10W	100Ω ±5% 0603	R18,R19,R20,R21
298	RD00106	SMD fixed resistor 1/10W	27KΩ ±5% 0603	R22,R23
299	RD00104	SMD fixed resistor 1/10W	18KΩ ±5% 0603	R24,R25
300	RD00102	SMD fixed resistor 1/10W	12KΩ ±5% 0603	R12,R13
301	RD00093	SMD fixed resistor 1/10W	4.7KΩ ±5% 0603	R10,R11
302	RD00092	SMD fixed resistor 1/10W	3.9KΩ ±5% 0603	R14,R15,R16,R17
303	CO00006	SMD chip inductance-RS-ACT	BLM21A102SPT/(MURATA)	L1
304	SG00558	integrated circuit-RS	4580M(SOP8)/(YW)	U2,U3
305	CI00090	SMD ceramic capacitor 0603	0.0047uF/50V X7R ±10%	C24,C25
306	CI00066	SMD ceramic capacitor 0603	0.0018uF/50V X7R ±10%	C15,C18
307	CI00065	SMD ceramic capacitor 0603	0.001uF/50V X7R ±10%	C26,C27
308	CI00062	SMD ceramic capacitor 0603	330PF/50V NPO ±5	C14,C16,C17,C19
309	CI00061	SMD ceramic capacitor 0603	220PF/50V NPO ±5%	C28,C29
310	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
311	HK06603	PC board	P-313123_2-V2-DIP	
312	SC00004	crystal oscillator	16.00MHZ	XT1
313	HC00484	connector	2.54 180° 2*8P(gold-plated) 13.5/19mm	CN2
314	SG00193	SMD integrated circuit	AT27LV010A-90JC/L-8	IC4
315	SG00168	SMD integrated circuit-RS	HT27LC010-90J(PLCC32)/(HOLTEK)	
316	NE11475	label	L-8	
317	NH00221	paper	0.055*1M	
318	NI00016	membrane	0.05*1M	
319	AC00179	tin without lead-RS	M705E Sn 3Ag-0.5Cu	
320	HK06604	PC board	P-313123_2-V2-SMD	
321	HB01963	PCB-RS	313123_2-V2	
322	CI00049	SMD ceramic capacitor 0603	15PF/50V C0G±5%(C1608C0G1H150JT)/TDK	C8,C9
323	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C17,C15,C18,C6,C10,C22,C20,C13,C14,C1,C3,C4,C11

No.	Part No.	Description	Specification	Remark
324	RD00059	SMD fixed resistor 1/10W	0.0Ω ±5% 0603	R35,R36
325	RD00061	SMD fixed resistor 1/10W	10Ω ±5% 0603	R22
326	RD00068	SMD fixed resistor 1/10W	100Ω ±5% 0603	R12,R14,R7,R8,R34,R17,R13,R33
327	RD00073	SMD fixed resistor 1/10W	220Ω ±5% 0603	R3
328	RD00085	SMD fixed resistor 1/10W	1.5KΩ ±5% 0603	R16,R15,R21,R20,R4,R19,R10,R18,R9,R5
329	RD00088	SMD fixed resistor 1/10W	2.2KΩ ±5% 0603	R28,R27,R23,R24,R29,R30,R25,R26
330	RD00101	SMD fixed resistor 1/10W	10KΩ ±5% 0603	R32,R31,R1
331	RD00125	SMD fixed resistor 1/10W	1.0MΩ ±5% 0603	R2
332	CJ00013	SMD AL electrolytic capacitor-	100uF/6.3V CASE5φ	C19,C12,C5,C2,C24,C16,C21,C25,C26,C28,C7
333	RE00006	SMD resistor networks 1/16W	100Ω*4 ±5% 8P 0603	AR1,AR2
334	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D1
335	SG00068	SMD integrated circuit	74HC14DT(SO14)/(PHI)	IC1
336	SG00410	SMD integrated circuit	IC41LV16256-35KG(SOJ40)/(ICSI)	IC6
337	SG00166	SMD integrated circuit	TY-2 ALTO(GMCODE:105022)	IC3
338	SG00147	SMD integrated circuit	CHEF DSP(GMCODE:105022)	
339	SG00037	SMD integrated circuit	LD1117DT33C(TO252)/(ST)	IC2
340	HC00611	IC socket (SMD)	PLCC32 (AMP S/N:822516-7)	IC4
341	SG00016	SMD integrated circuit	UDA1345TS(SSOP28)/(PHI)	IC5
342	AE00449	solder material without lead	9308/Sn Ag Cu	
343	NC00037	cushion-RS-ACT	1t*φ8*φ12.5mm XM1602_V1.1	
344	NC01665	black foil white board-RS-CT	1.0t*65mm(+0.1)*60M 5.4kg	
345	NC00080	washer	φ3.17*φ8.2*1	
346	NC01112	black foil white board	1.0t*65mm(+0.1)*60M	
347	MB04414	rear board-RS	AMX-180FX.USB_V1.0	
348	AE00177	paint-RS	4866	
349	MB04413	rear board-RS	AMX-180FX.USB 0.8t*43*330*385_V1.1	
350	MJ00067	single light board	0.8t*2135*1220mm 18.69kg	
351	MG00036	screw	M3*4	
352	MF00093	washer	φ8.10*φ10.10*0.3t	
353	HA01835	wire-RS	70mm brown L5R5	
354	NB03036	inner case-RS	AMX-180/180FX/180FX USB ALTO_V1.1	
355	MG00304	copper pillar	M3*14*0.5PH	
356	MI02093	fixed bracket	AMX-180 left_V1.0	
357	MI02092	fixed bracket	AMX-180 1.0t*25*76.5*410_V1.1	
358	MJ00058	single light board	1*2135*1220 20.45kg	
359	MI02095	fixed bracket	AMX-180 right_V1.0	
360	MI02094	fixed bracket	AMX-180 1.0t*25*76.5*410_V1.1	
361	MJ00058	single light board	1*2135*1220 20.45kg	