

Service Manual

Model: AMX-140/AMX-140FX



www.altoproaudio.com

Version: .2

CONTENTS

1. Specification

2. Block Diagram

3. Schematic Diagram

4. Printed Circuit Board

5. Wiring Diagram

~~**6. Test Procedure**~~

7. Electrical Parts List

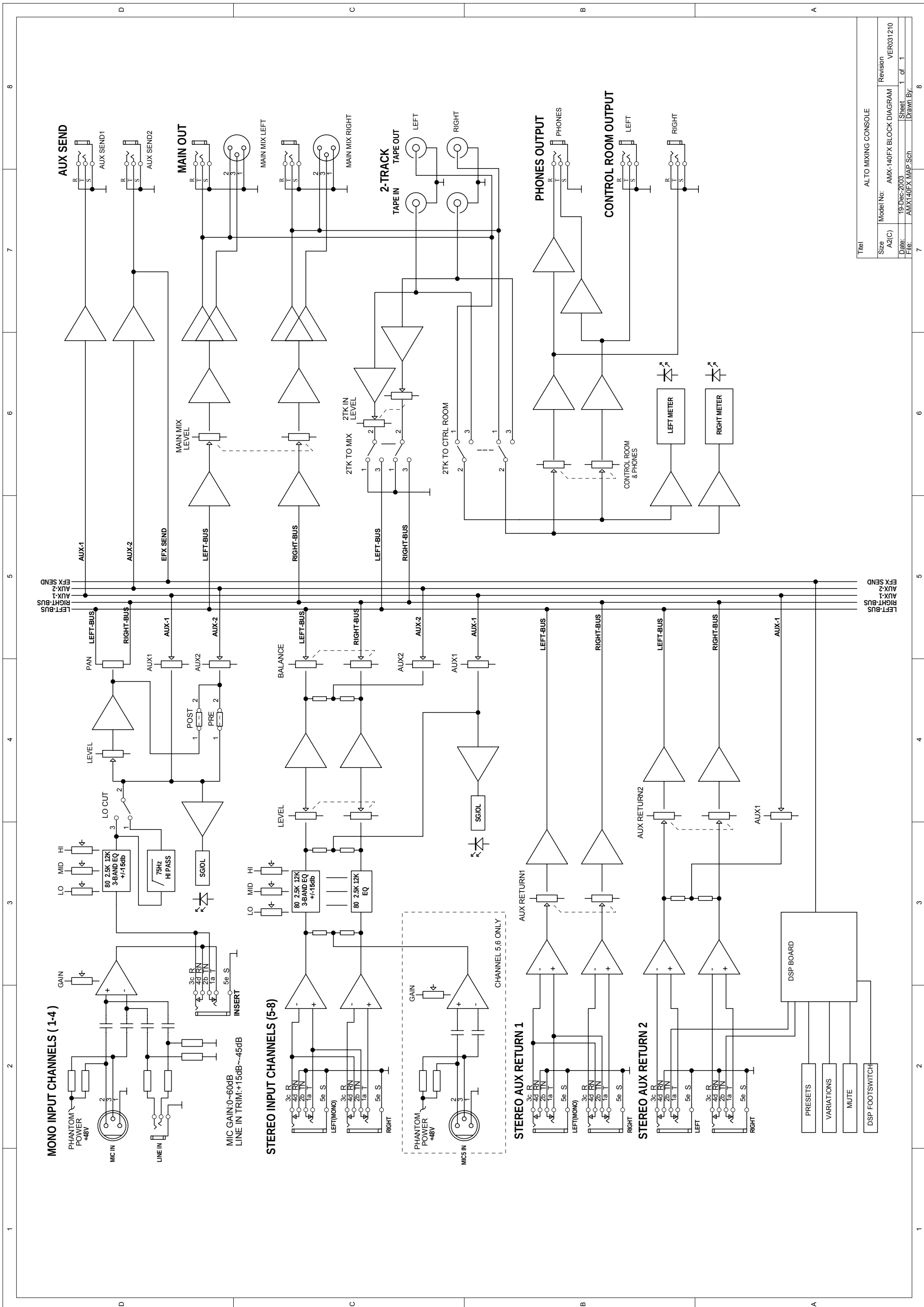
8. Exploded Views & Mechanical Parts List

9. Notes

1. Specification

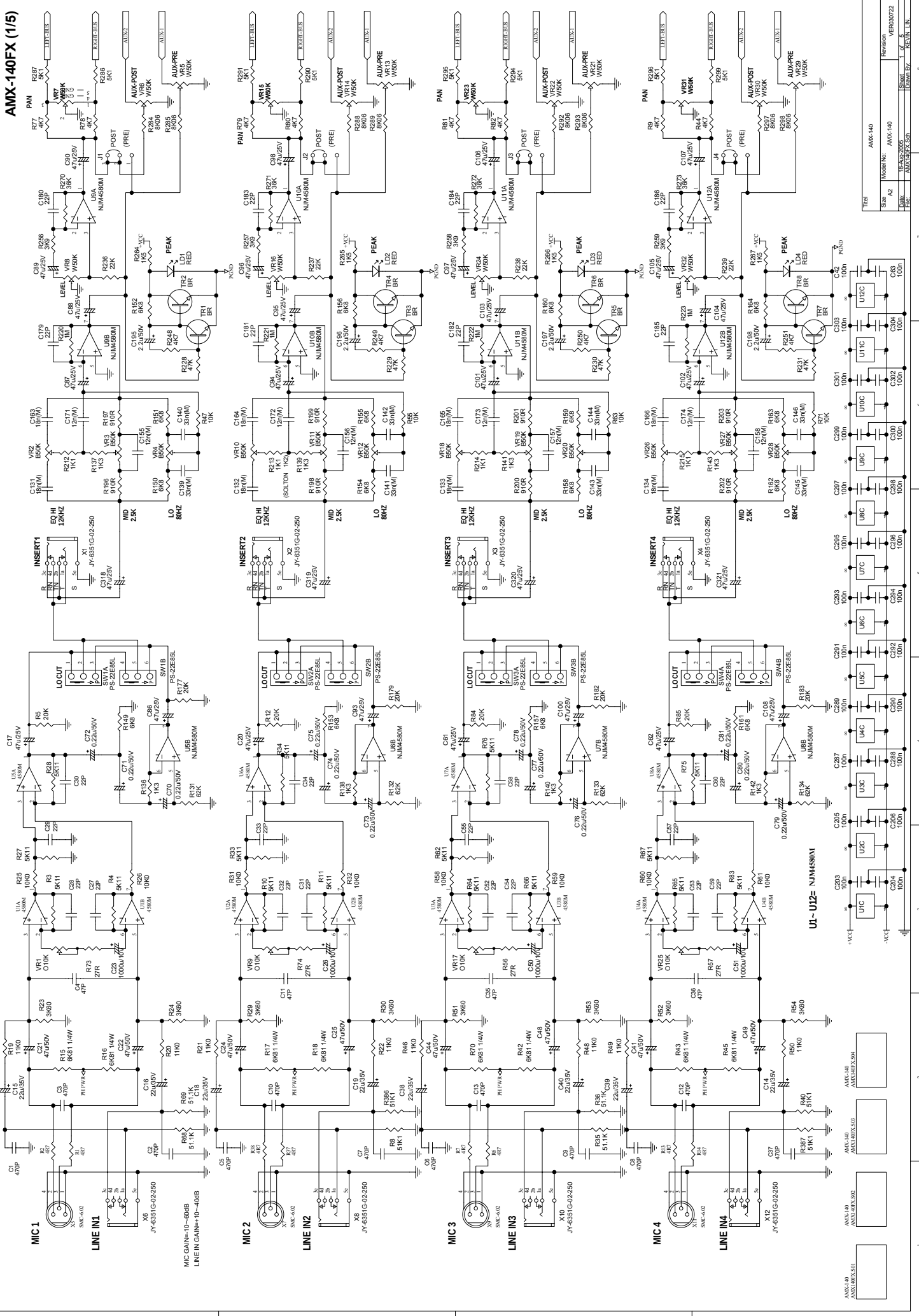
Mono input channels		
	Microphone input	electronically balanced, discrete input configuration
	Frequency response	10Hz to 55kHz, +/- 3dB
	Distortion (THD & N)	0.005% at +4dBu, 1kHz
	Gain range	0dB to 44dB (MIC)
	SNR (Signal to Noise Ratio)	115dB
	Line input	electronically balanced
	Frequency response	10Hz to 55kHz, + -3dB
	Distortion (THD & N)	0.005% at +4dBu, 1kHz
	Sensitivity range	+15dBu to -30dBu
Stereo input channels		
	Line input	Unbalanced
	Frequency response	10Hz to 55kHz, +/- 3dB
	Distortion (THD & N)	0.005% at +4dBu, 1kHz
Impedances		
	Microphone input	1.4kOhm
	Channel Insert return	2.5kOhm
	All other inputs	10kOhm or greater
	Tape out	1kOhm
	All other output	120Ohm
Equalization		
	Hi shelving	+/- 15dB @12kHz
	Mid bell	+/- 12dB @2.5kHz
	Low shelving	+/- 15dB @80Hz
	Low Cut filter	75Hz, 18dB/oct.
DSP Section (For AMX-140FX Model)		
	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
Main Mix Section		
	Noise (Bus noise)	Fader 0 dB, channels muted: -100dBr (ref.:+4dBu) Fader 0dB, all input channels assigned and set to UNITY gain: 90dBr (ref.:+4dBu)
	Max output	+22dBu balanced XLR, +22dBu unbalanced, 1/4" jacks
	AUX Returns gain range	- to +20dB
	AUX Sends max out	+22dBu
Power supply (AC/AC Adaptor)		
	Main voltage	USA/Canada 100 120V~, 60Hz Europe 210 240V~, 50Hz U.K./Australia 240V~, 50Hz
	Power Consumption	17.1 watts
Physical		
	Dimension (W X D X H)	270mmX310mmX35/45mm (7.79"X8.95" X1.01"/1.30")
	Net weight	3.0Kg (6.61lb)
	Shipping weight	3.6Kg (7.94lb)

2. Block Diagram

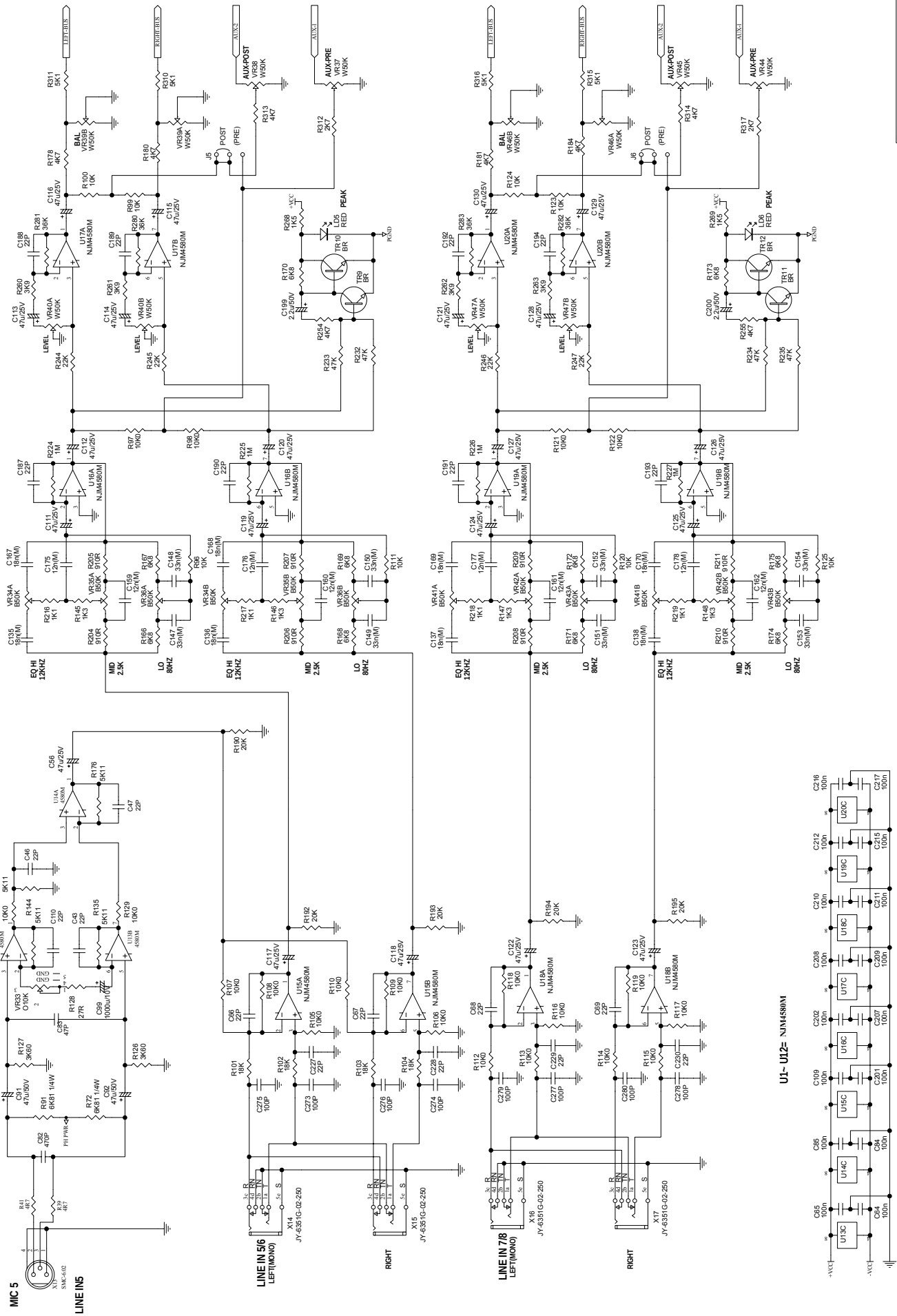


Title	ALTO MIXING CONSOLE		
Size	Model No:	Revision	
A2(C)	AMX-140FX BLOCK DIAGRAM	VER031210	
Date:	19-Dec-2003	Sheet	1 of 1
File:	AMX140FX (MAP.Sch)	Drawn By:	

3. Schematic Diagram

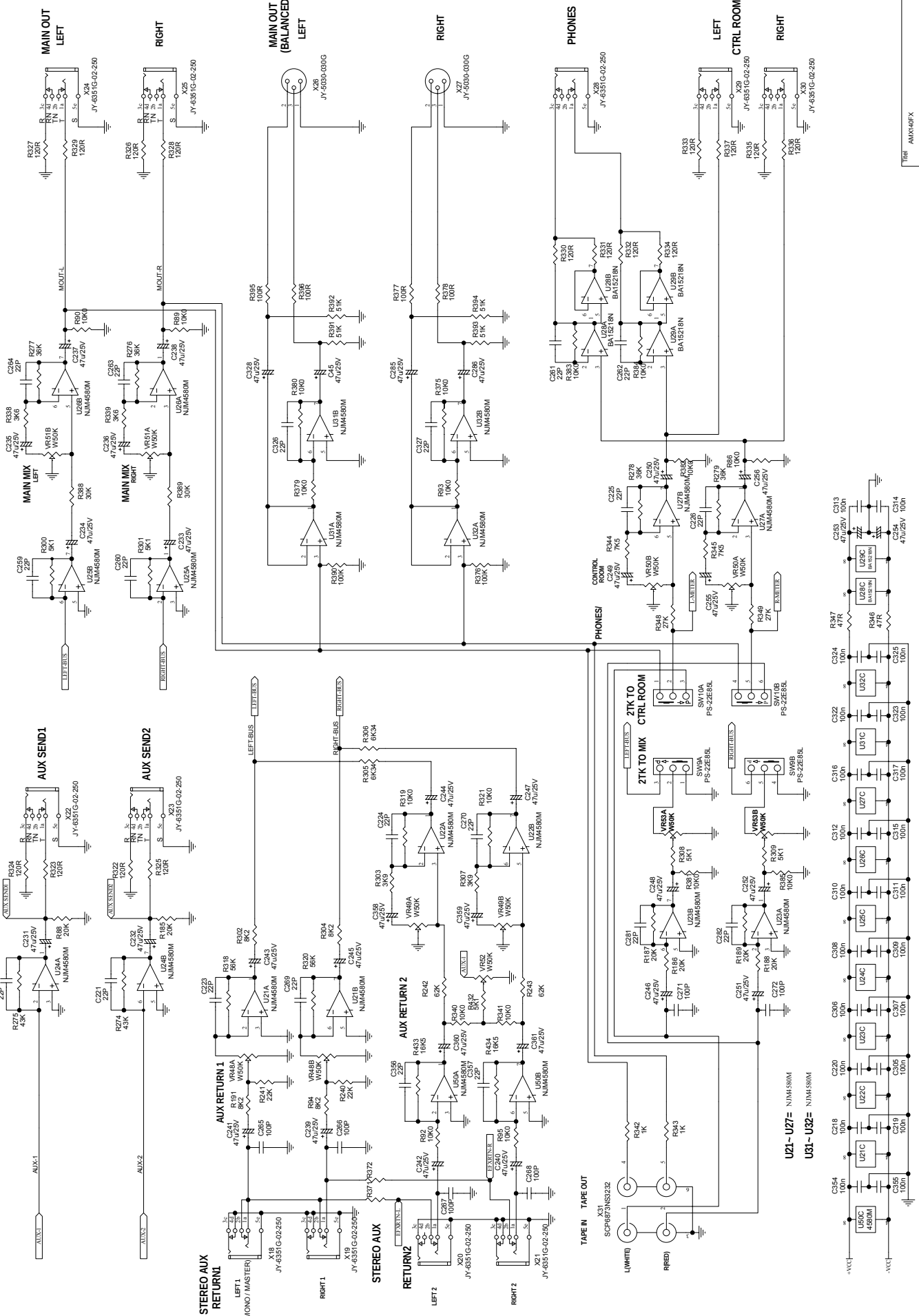


AMX-140FX (2/5)



Sheet	A2	Revision	VER030722
Drawn	EF-202-2005	Checked	2 of 5
Drawn By	AMX-140FX-301	Checked By	REV LN

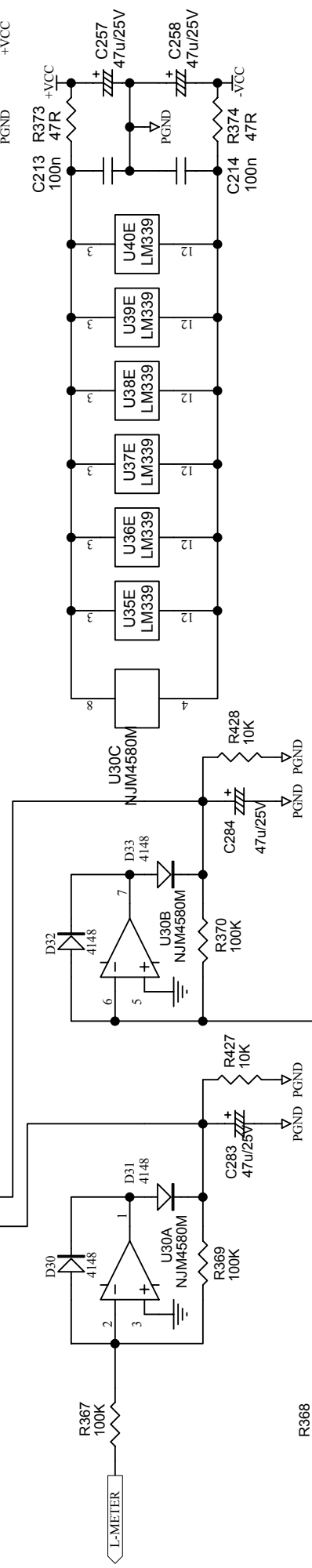
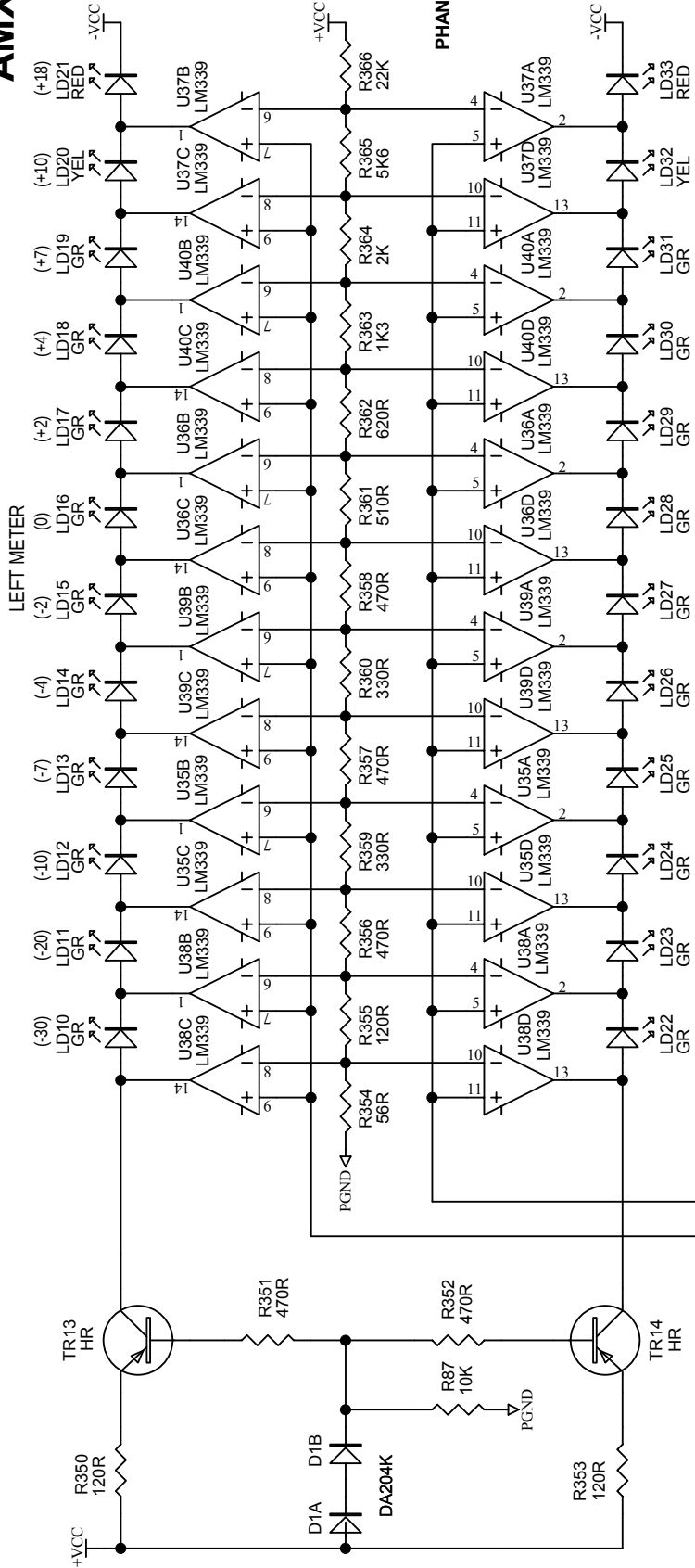
AMX-140FX (3/5)



Rev	AMX-140FX
Sup	A2
Model	AMX-140FX
Drawn	LF-262-2005
Checked	AMX-140FX-302
Revision	VER030722
Sheet	3 of 5
Drawn By	REV LIN

AMX-140FX (4/5)

LEFT METER

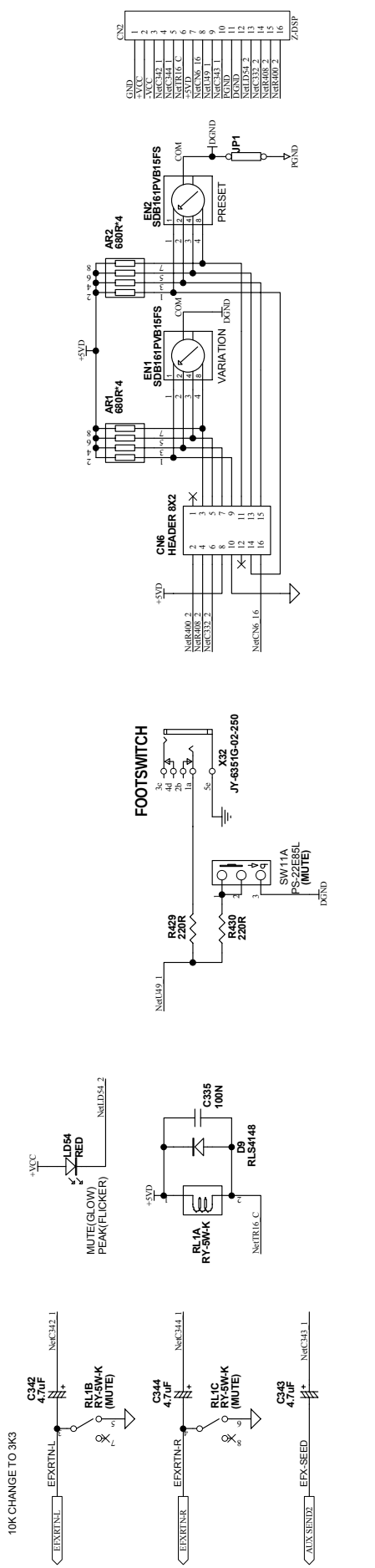


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		Drawn By:	KEVIN LIN.

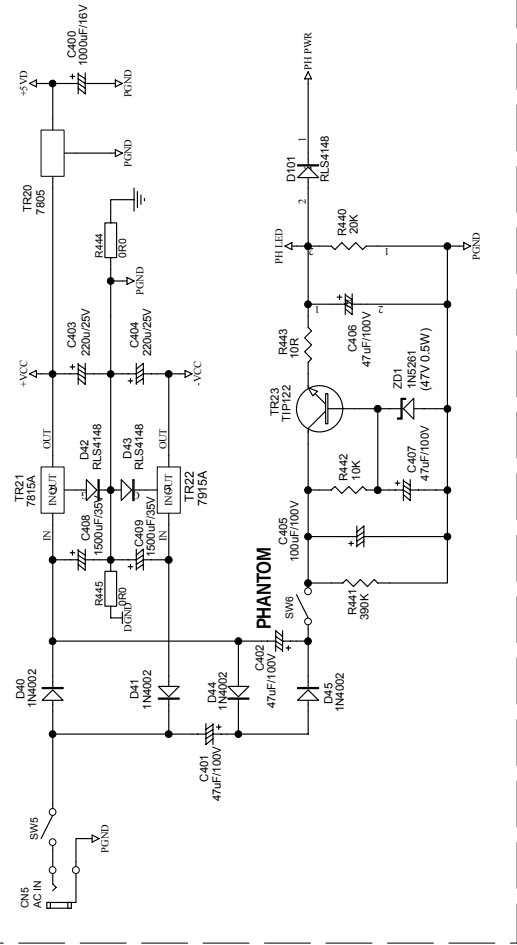
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AMX-140FX (5/5)

DSP

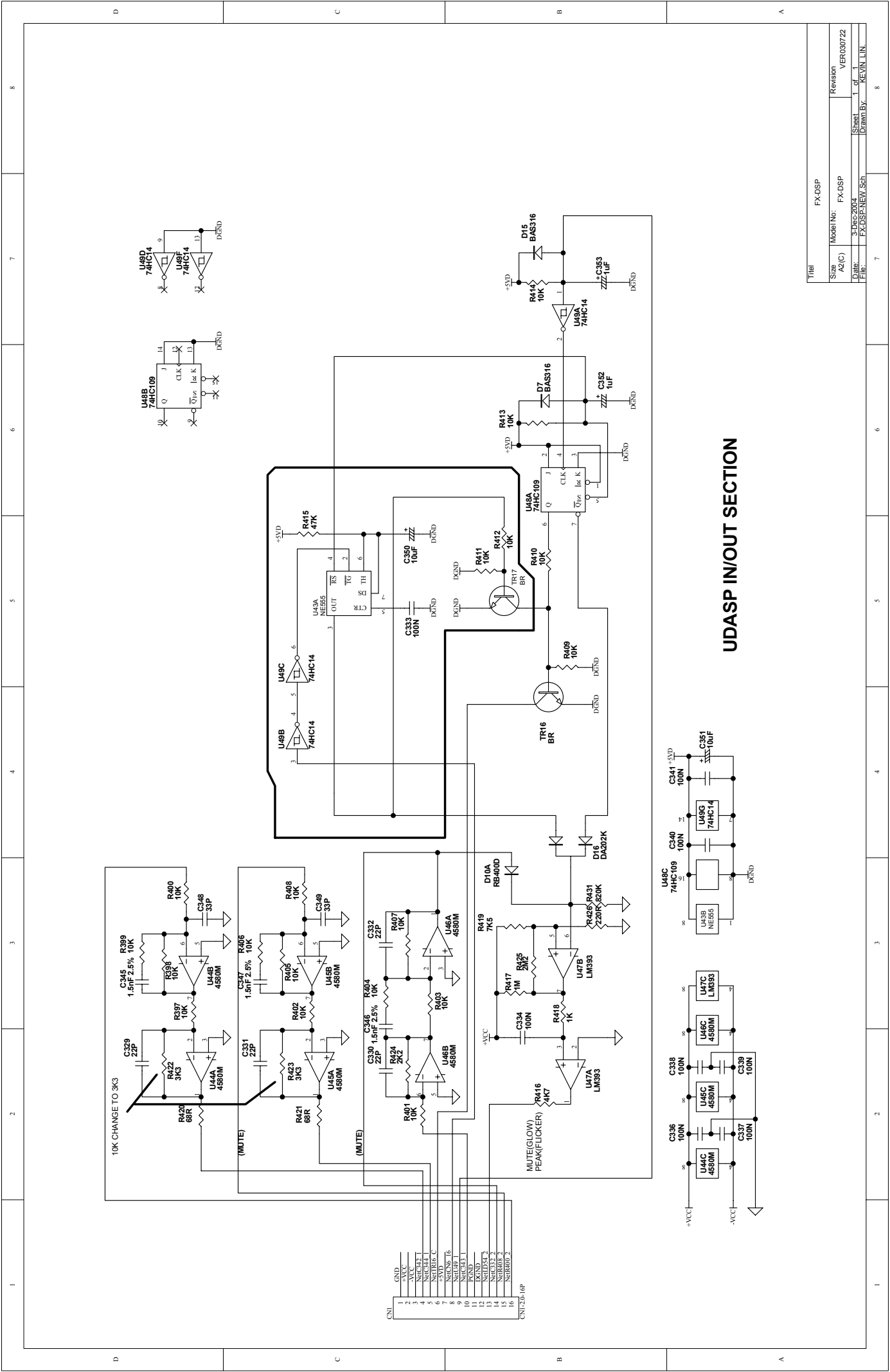


PHANTOM PWR



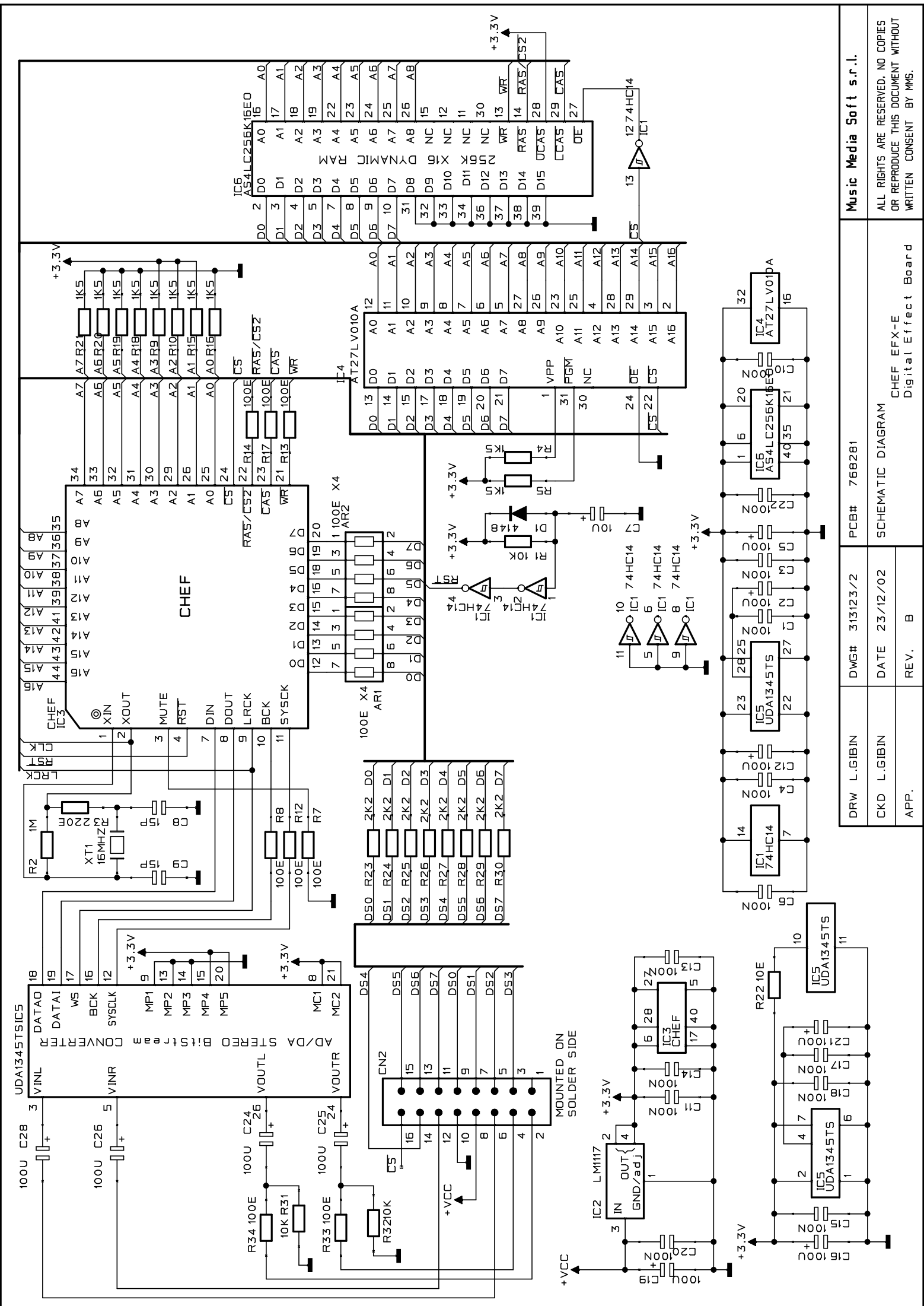
Total AMX140FX

Site	Model No:	Revision
A2(C)	AMX140FX	VER030722
Date:	Drawn By:	Sheet
AMX140FX.S04		5 of 7
		REV: N.L.N.



UDASP IN/OUT SECTION

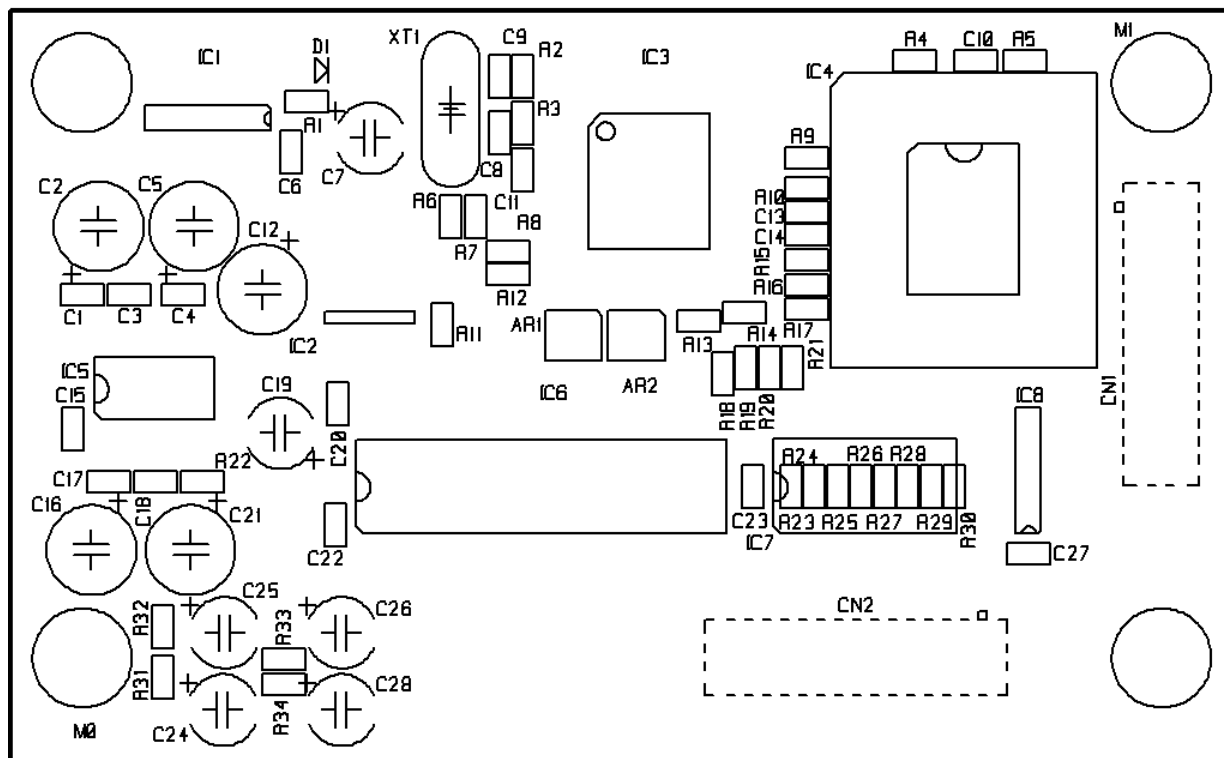
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Size	Model No.	FX-DSP	Revision
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File	3-DES-2003	Sheet	1 of 1
Lib	FX-DSP-NEW.Sch	Drawn By	KEVIN LIN



DRW L.GIBIN	DWG# 313123/2	PCB# 768281	Music Media Soft s.r.l.
CKD L.GIBIN	DATE 23/12/02	REV. B	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY MMS.
APP.	SHEMATIC DIAGRAM		CHEF EF-E Digital Effect Board

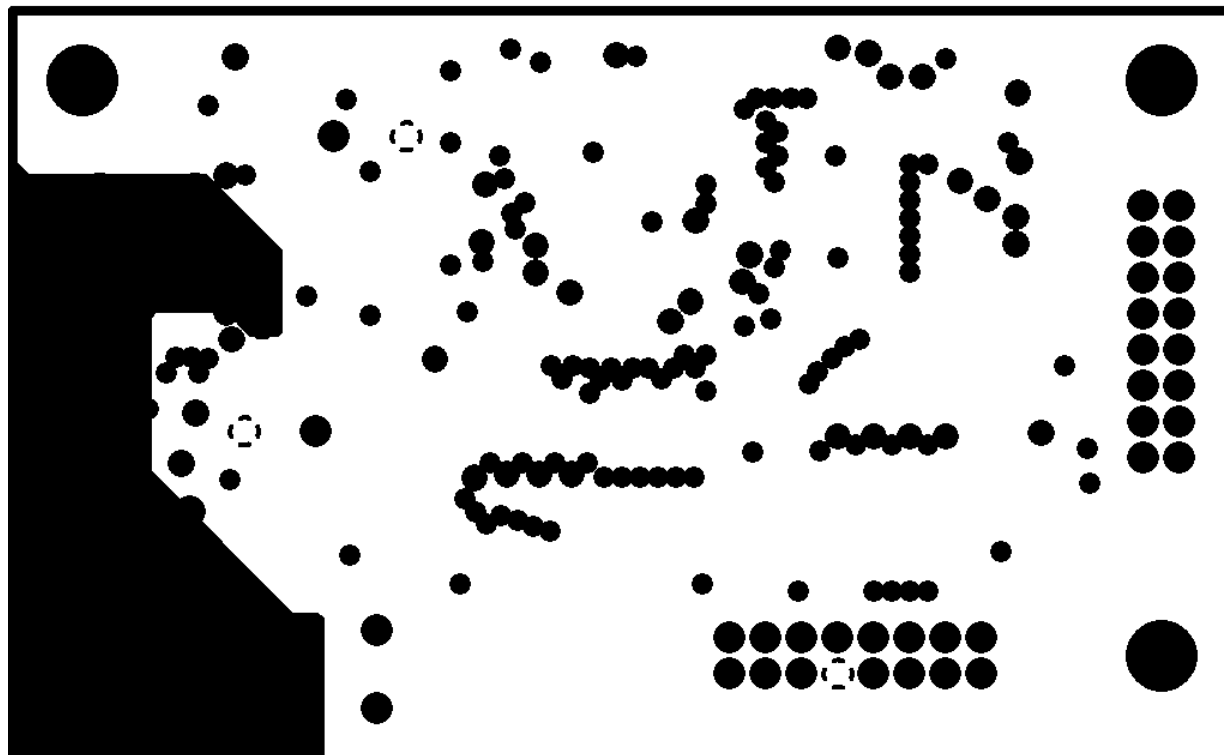
4. Printed Circuit Board

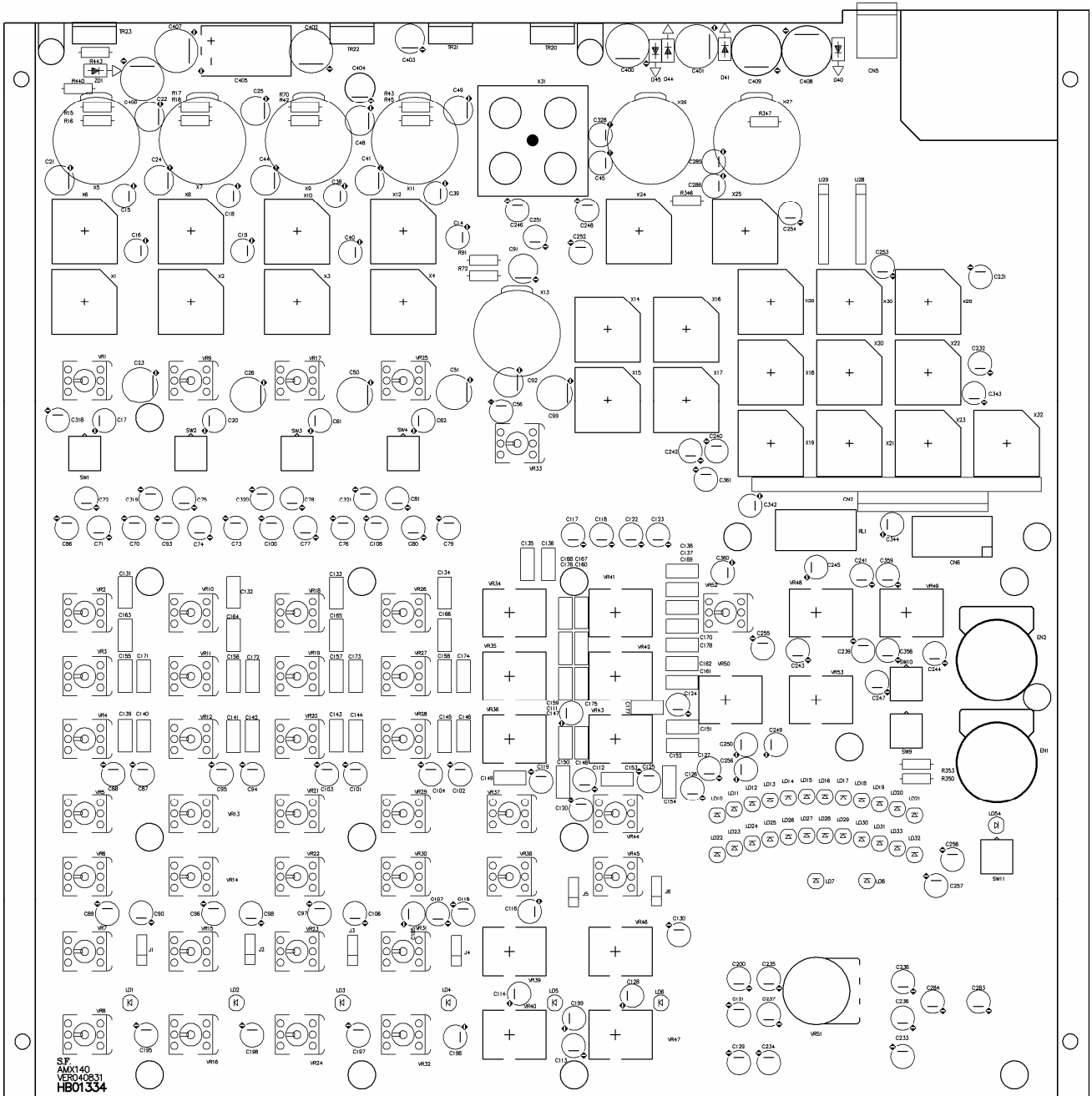
313123/2 TOP SILK



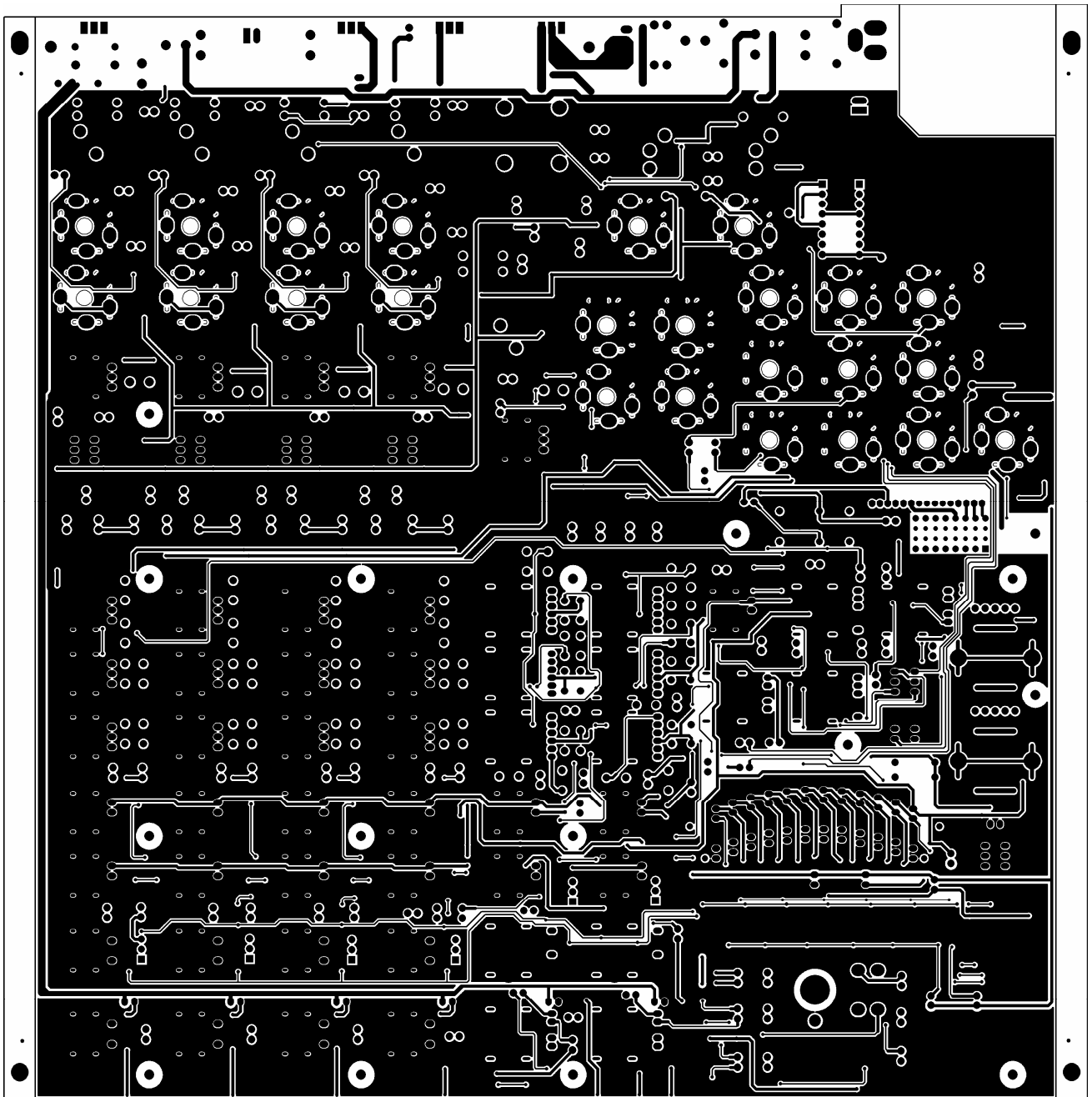
PCB : 313123/2 Top Overlay

313123/2 I* INTERNAL LAYER GND

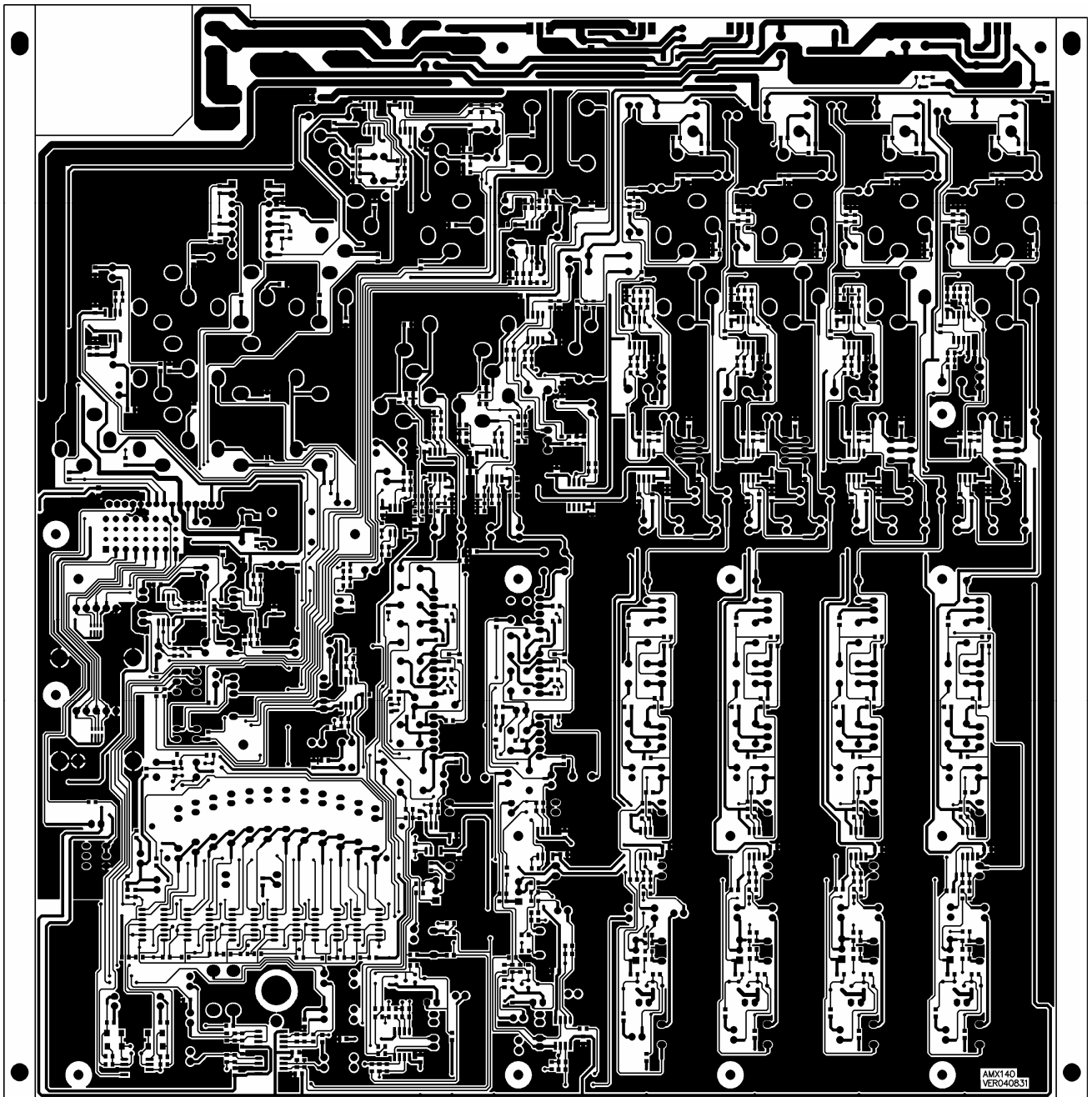




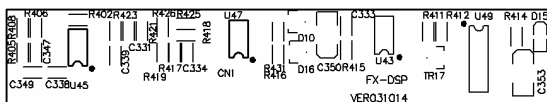
PCB : AMX-140FX Top Overlay



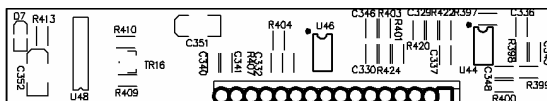
PCB : AMX-140FX Top Layer



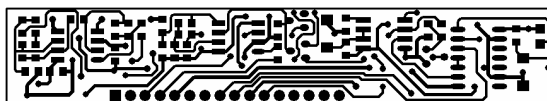
PCB : AMX-140FX Bottom Layer



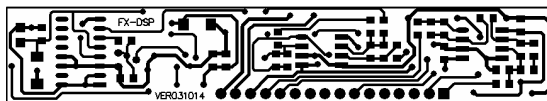
PCB : FX-DSP Top Overlay



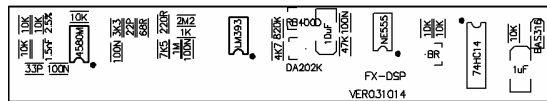
PCB : FX-DSP Bottom Overlay



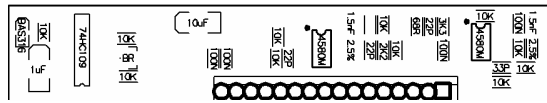
PCB : FX-DSP Top Layer



PCB : AMX-100FX Bottom Layer

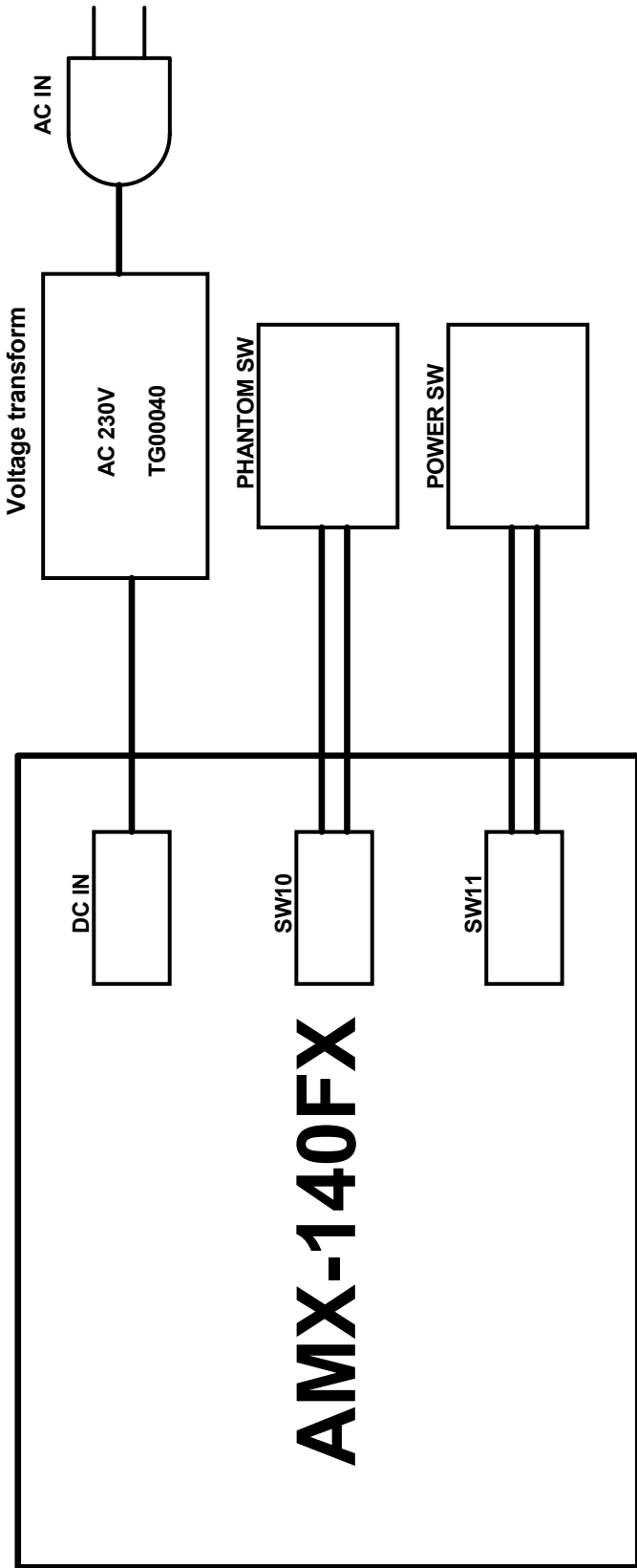


PCB : FX-DSP Top Overlay



PCB : FX-DSP Bottom Overlay

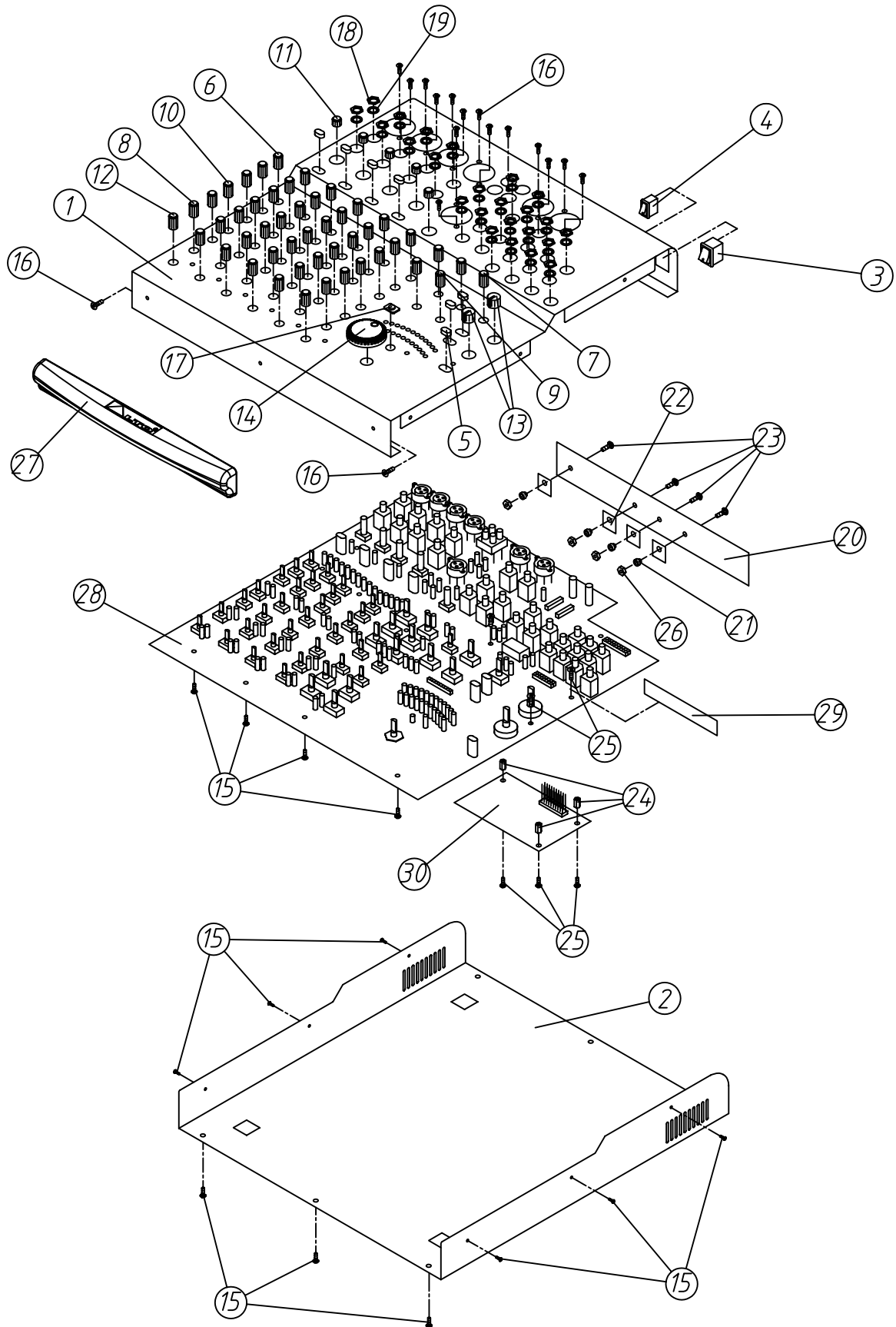
AMX-140FX Wiring Diagram



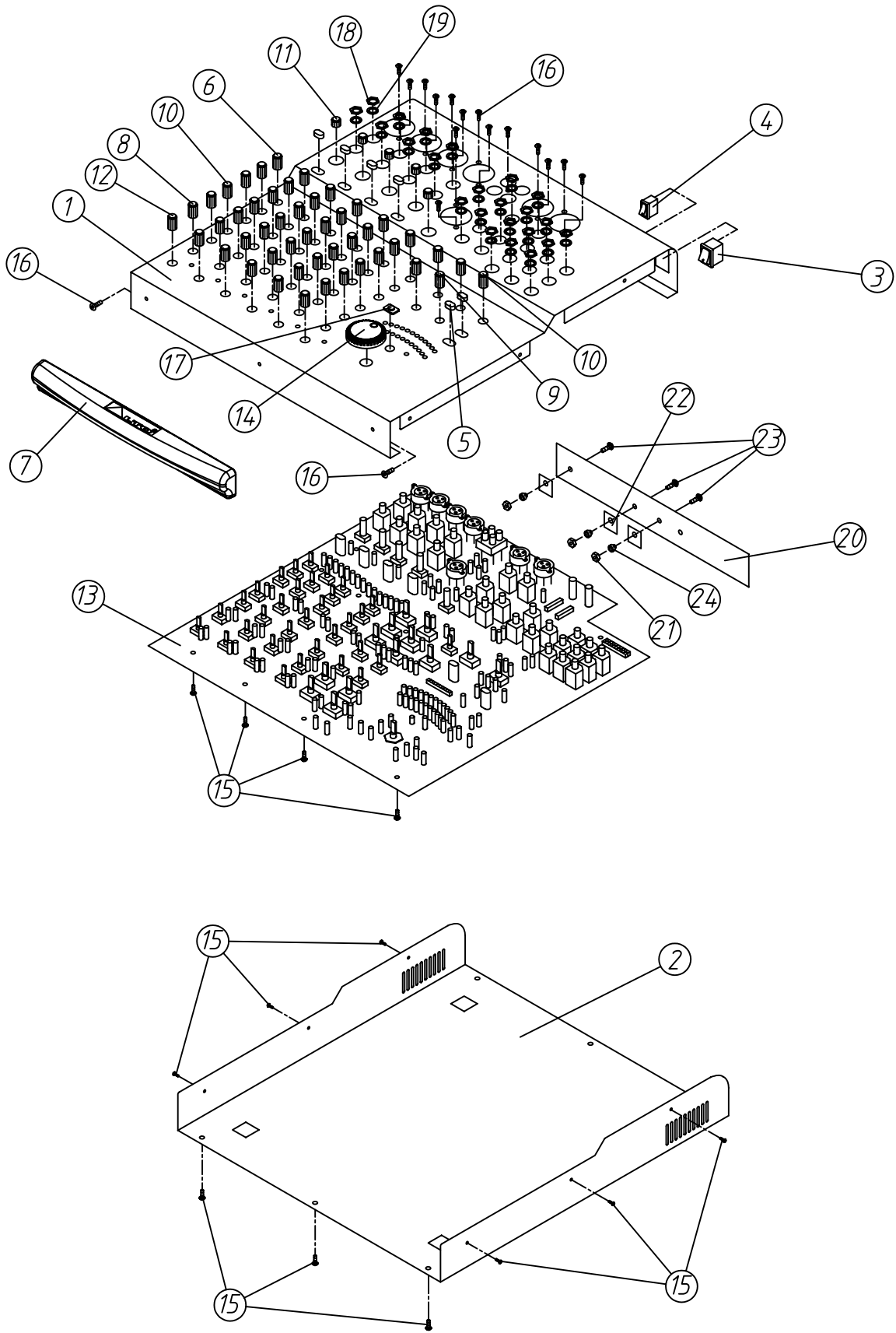
Title	
Size	Number
A3	Revision
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	8

6.Exploded Views & Mechanical Parts List

SEKAKU



Machine type:AMX-140FX
Serial number:AMX140FX-00
Date:2004/01/06



Machine type:AMX-140
Serial number:AMX140-00
Date:2004/01/06

Mechanical Parts List				
Model No.		ALTO AMX-140FX		
NO	Item No	Item Description		pcs
1	MA04539	panel	AMX-140FX ALTO	1
2	MB03078	rear board	AMX-140	1
3	HI00026	power switch	RA12KKATOF 2P	1
4	HI00171	power switch	R612KKATOF1	1
5	NI01863	key	φ5.5*W10*7.5	7
6	NI02083	knob	φ10.5*18mm	18
7	NI02633	knob	φ10.5*18	8
8	NI02082	knob	φ10.5*18mm	6
9	NI02817	knob	φ10.5*18mm	2
10	NI02081	knob	φ10.5*18mm	7
11	NI02714	knob	φ10*13.5mm	5
12	NI00826	knob	φ12*18mm double color	6
13	NI02386	konb	φ14*13mm	2
14	NI02837	knob	φ35*11mm 534C	1
15	MG00041	screw	M3*6	24
16	MG00061	screw	M3*10	18
17	NI02836	LED lens	10*7*3mm AMX-140	1
18	ME00060	nut	JY-6351G-02-250	24
19	MF00061	washer	JY-6351G-02-250	24
20	MI01905	heat sink	AMX-140 2.0t*195.5*29*2mm	1
21	NI02249	insulate bean	TW-1(TO-220)	4
22	NC00005	silicone insulator	TO-220 square type	4
23	MG00162	screw	M3*8	4
24	MG00238	copper pillar	M3*6*0.5PH	3
25	MG00036	screw	M3*4	6
26	ME00015	nut	3m/m	4
27	NI02835	handle	269*33*26mm AMX-140 black	1
28	HK00821	PC board	P-AMX-140FX-DIP	1
29	HK00832	PC board	P-FX-DSP-DIP	1
30	HK01409	PC board	P-313123-DIP(AMX-140FX)	1
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Mechanical Parts List				
Model No.		ALTO AMX-140		
NO	Item No	Item Description		pcs
1	MA04539	panel	AMX-140FX ALTO	1
2	MB03078	rear board	AMX-140	1
3	HI00026	power switch	RA12KKATOF 2P	1
4	HI00171	power switch	R612KKATOF1	1
5	NI01863	key	φ5.5*W10*7.5	7
6	NI02083	knob	φ10.5*18mm	18
7	NI02835	handle	269*33*26mm AMX-140 black	1
8	NI02082	knob	φ10.5*18mm	6
9	NI02817	knob	φ10.5*18mm	2
10	NI02081	knob	φ10.5*18mm	15
11	NI02714	knob	φ10*13.5mm	5
12	NI00826	knob	φ12*18mm double color	6
13	HK00821	PC board	P-AMX-140FX-DIP	1
14	NI02837	knob	φ35*11mm 534C	1
15	MG00041	screw	M3*6	24
16	MG00061	screw	M3*10	18
17	NI02836	LED lens	10*7*3mm AMX-140	1
18	ME00060	nut	JY-6351G-02-250	23
19	MF00061	washer	JY-6351G-02-250	23
20	MI01905	heat sink	AMX-140 2.0t*195.5*29*2mm	1
21	ME00015	nut	3m/m	3
22	NC00005	silicone insulator	TO-220 square type	3
23	MG00162	screw	M3*8	3
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