

Service Manual

Model: AMX-120



www.altoproaudio.com

Version: .2

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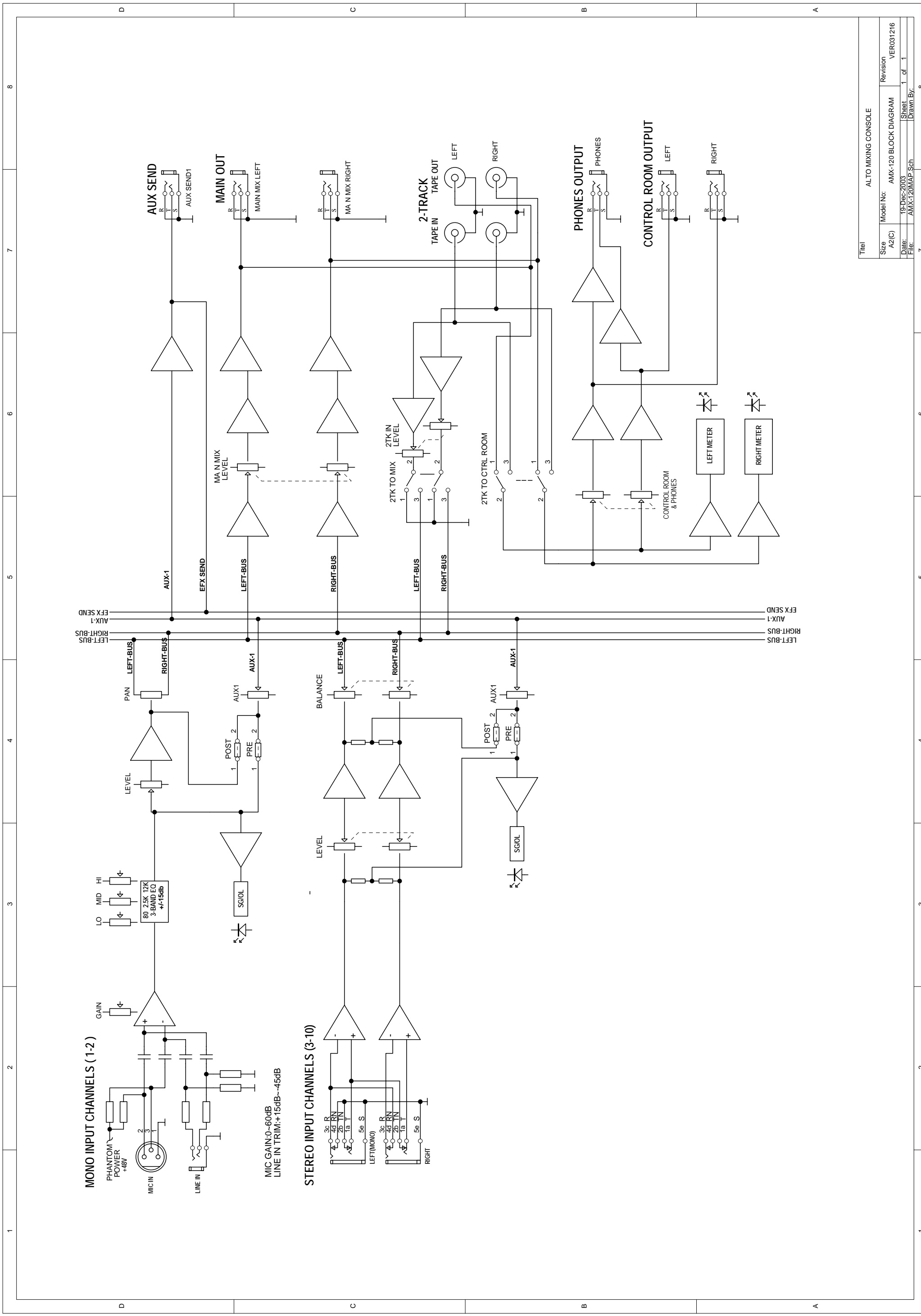
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8. TECHNICAL SPECIFICATION

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.
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 unbalanced, 1/4" jacks
	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	11 watts
Physical		
	Dimension (W×D×H)	208mm×275.5mm×35/43mm (6.06"×7.81"×1.01"/1.30")
		Net weight
	Shipping weight	2.3Kg (5.11lb)

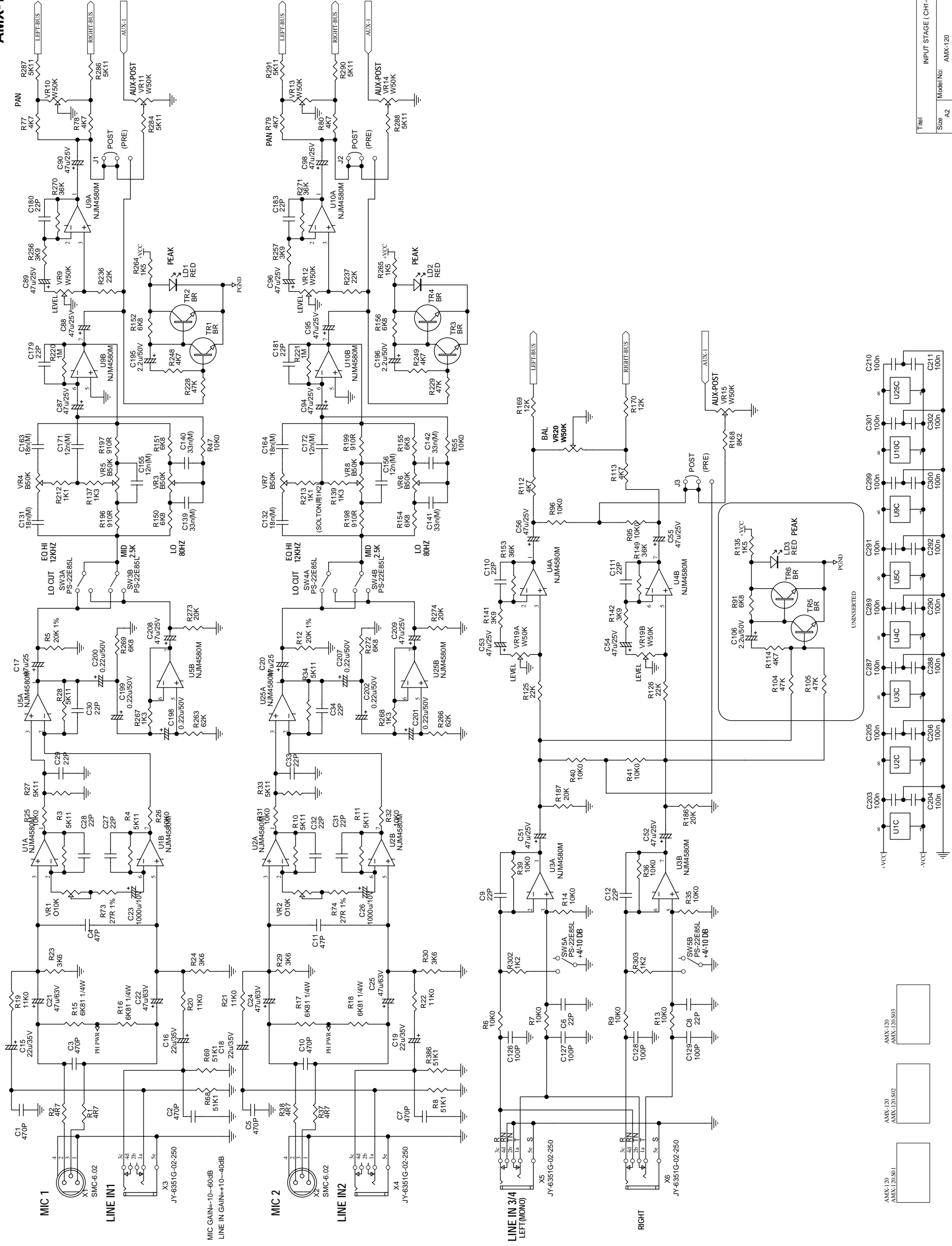


Title: ALTO MIXING CONSOLE	
Size: A2(C)	Model No: AMX-120 BLOCK DIAGRAM
Date: 19-Dec-2003	Revision: VER031216
File: AMX-120MIX-Sch	Sheet: 1 of 1
	Drawn By:

1 2 3 4 5 6 7 8

A B C D

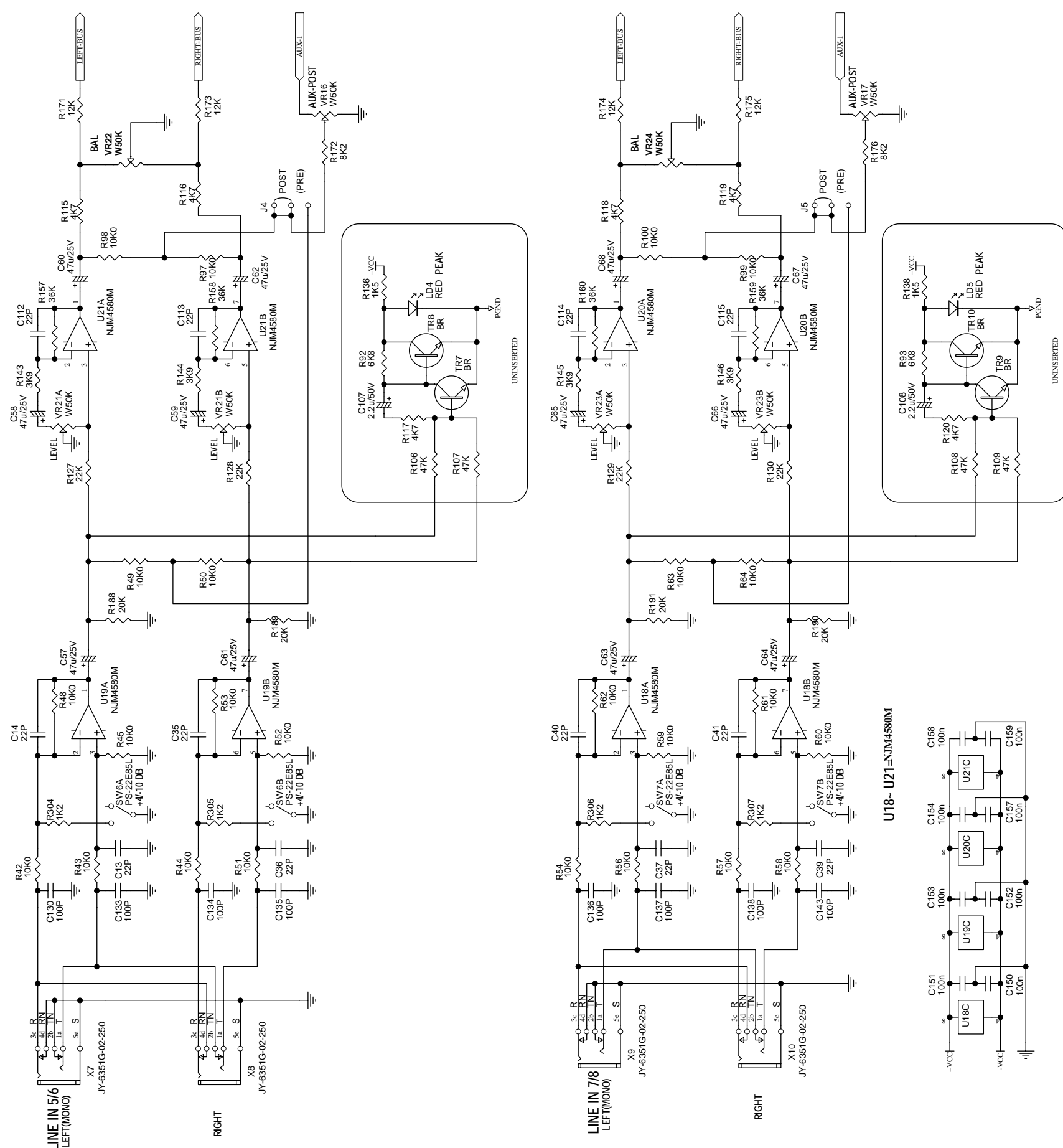
AMX-120 (1/4)



INPUT STAGE (CH1-CH4)	
Model No.	AMX-120
Revision	VER031229
Date	3-Jan-2004
Drawn By	REVIN LIN

File	Size	Model No.	Revision
AMX-120	AMX-120.S01	AMX-120	VER031229
AMX-120	AMX-120.S02	AMX-120	VER031229
AMX-120	AMX-120.S03	AMX-120	VER031229

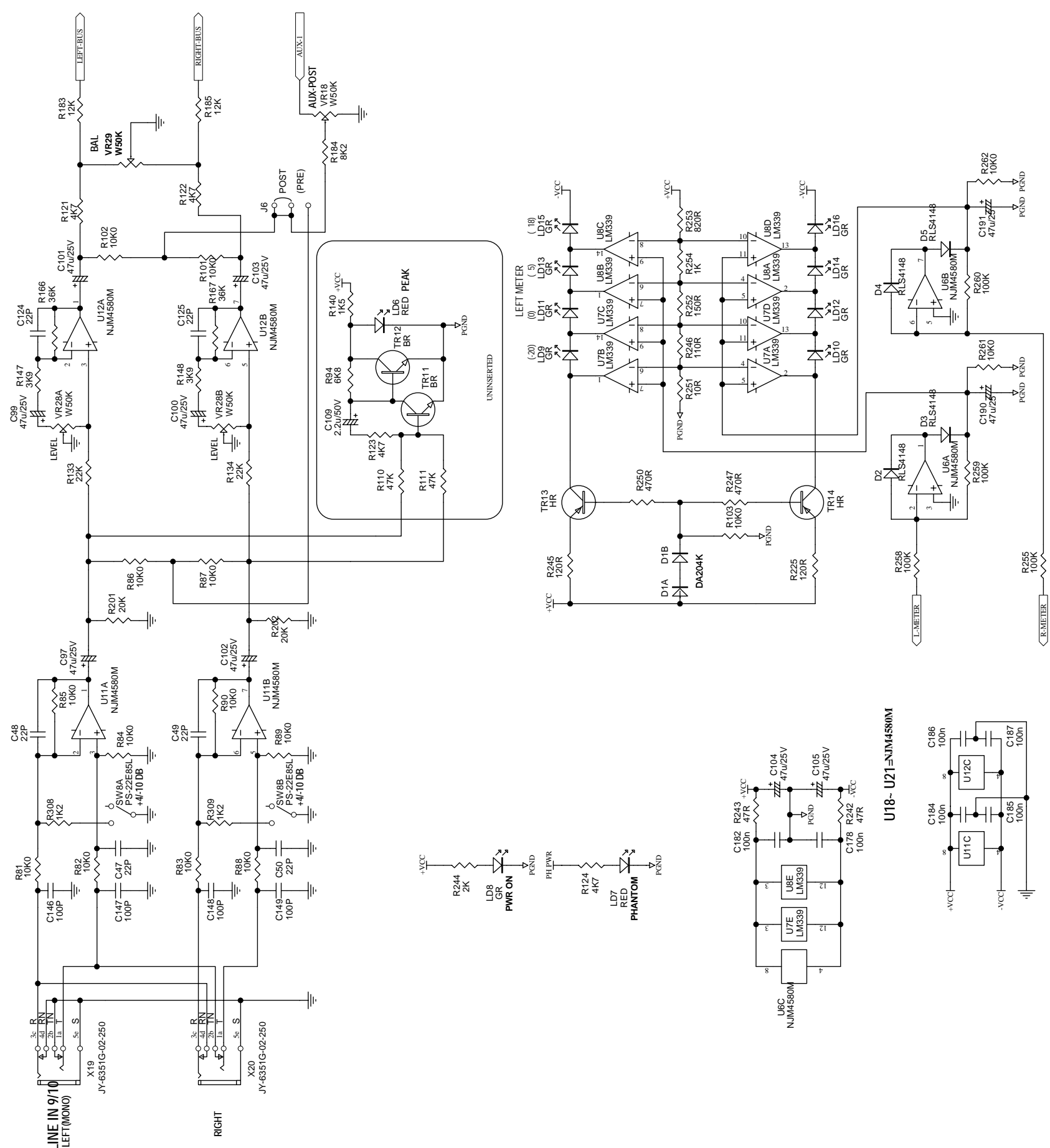
AMX-120 (2/4)



Title		INPUT STAGE (CH-C:H8)	
Size	A2	Model No.	AMX-120
Date	3-Jan-2004	Revision	VER021229
Drawn By	AMX-120.S01	Sheet	2 of 4
		Drawn By	REV.LIN

Title		INPUT STAGE (CH-C:H8)	
Size	A2	Model No.	AMX-120
Date	3-Jan-2004	Revision	VER021229
Drawn By	AMX-120.S01	Sheet	2 of 4
		Drawn By	REV.LIN

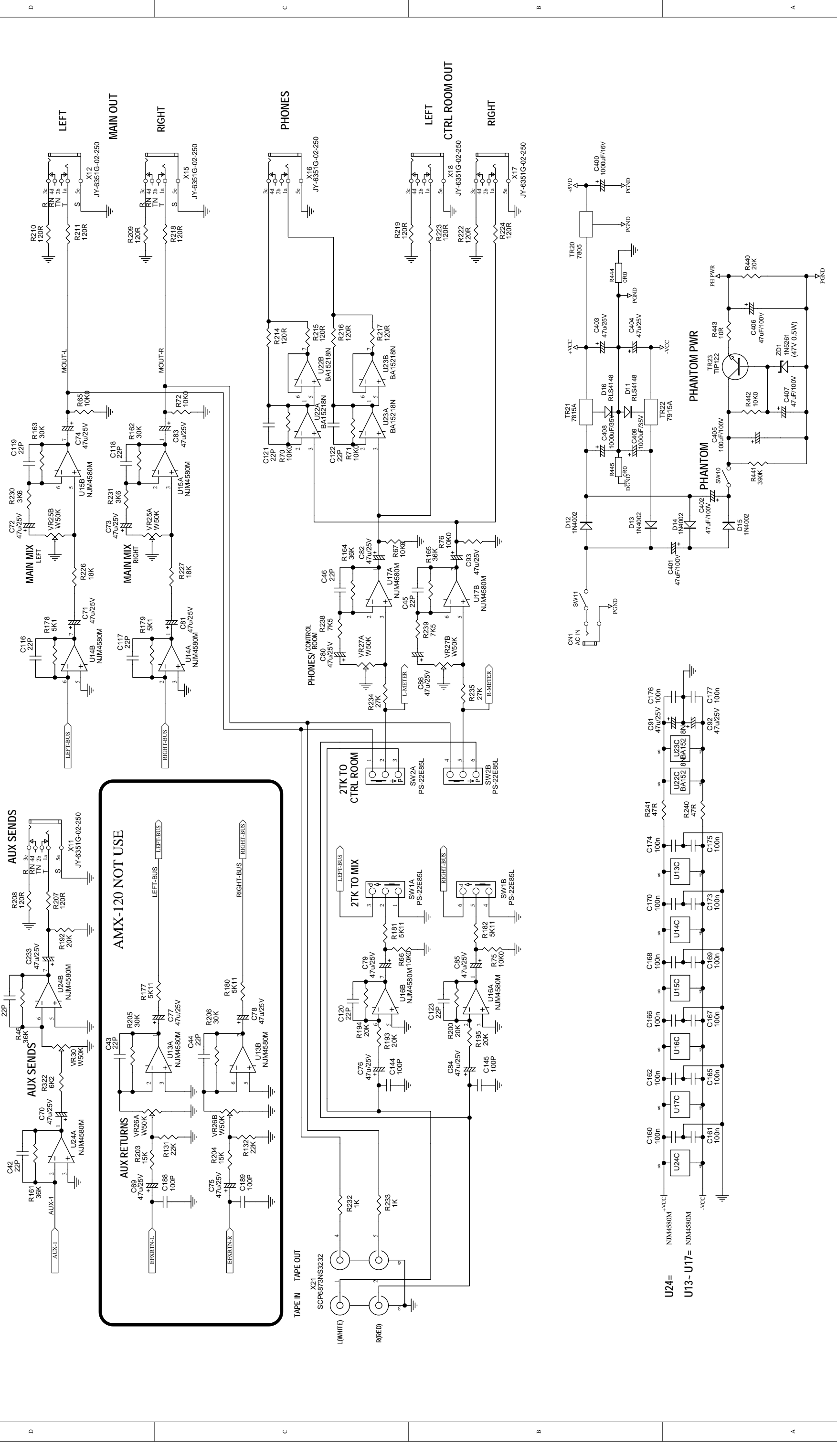
AMX-120 (3/4)



Title		INPUT STAGE (CH8-CH10)	
Size	A2	Model No.	AMX-120
Date	3-14-2004	Revision	VER021229
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		Drawn By	REV/N.LIN

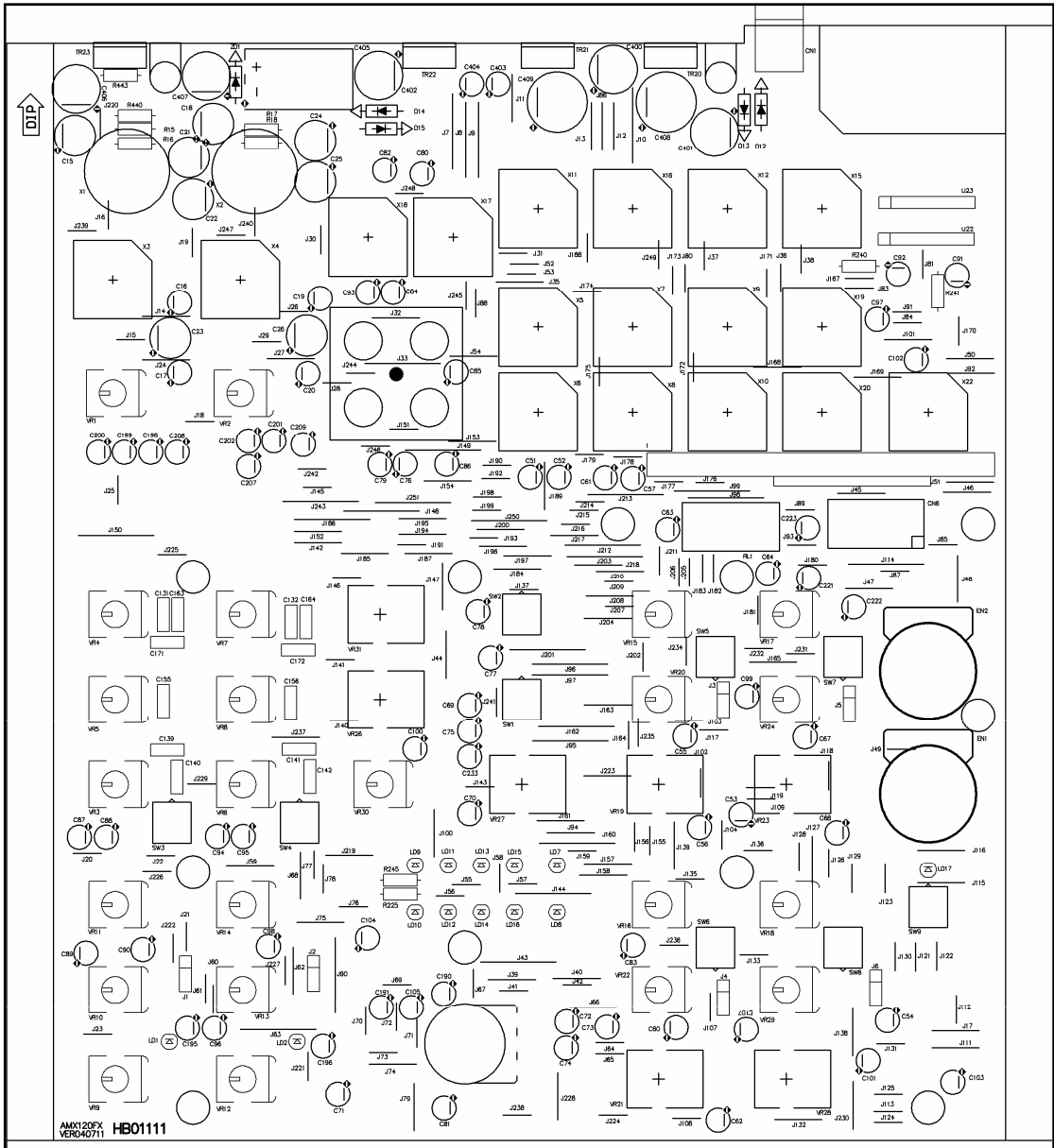
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AMX-120 (4/4)

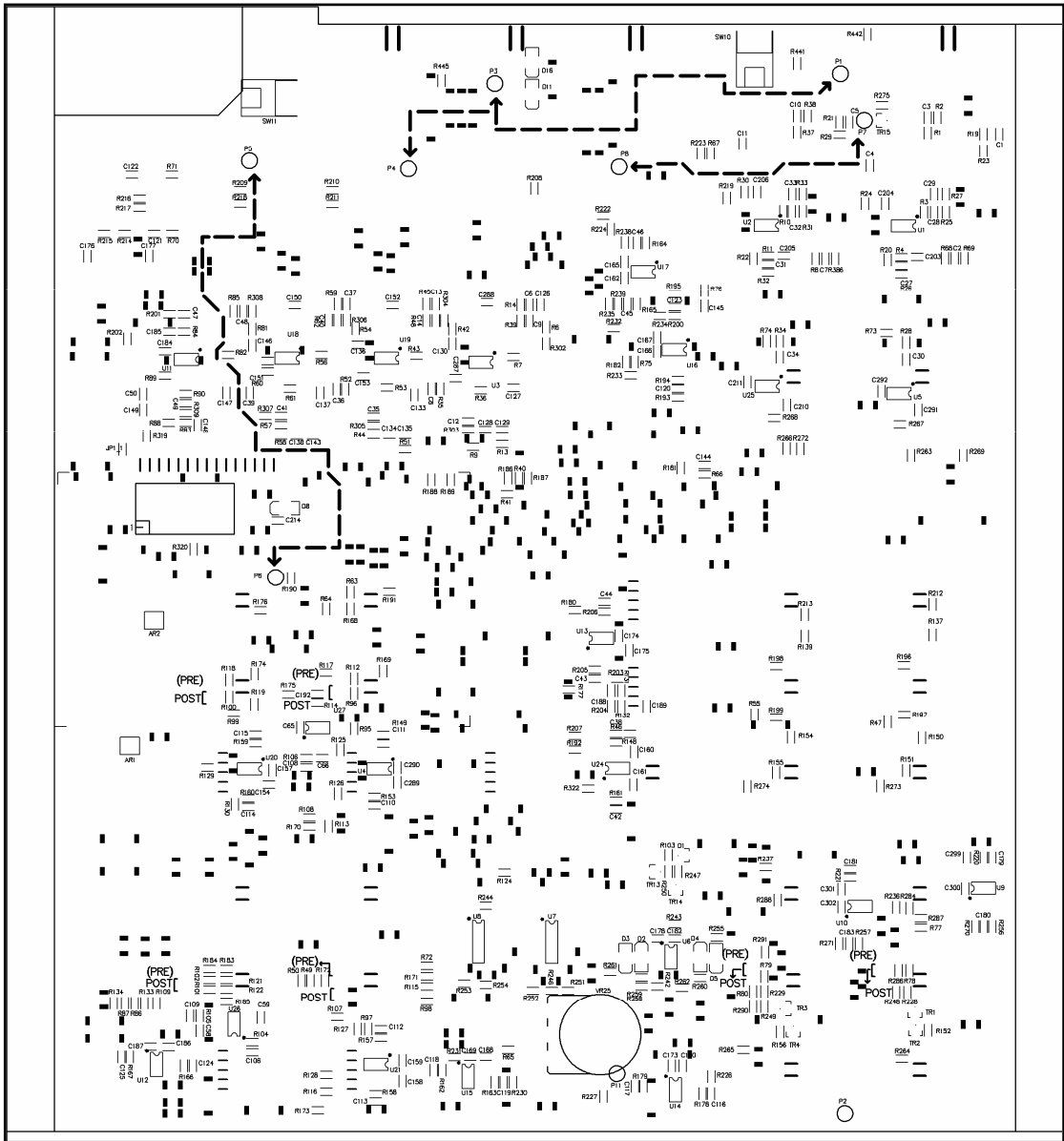


Title	STEREO AUX & SENDS & MAIN OUT & 2TK & CTRL R & PHONES		
Size	A2	Model No.	AMX-120
Date	3-Jan-2004	Revision	VER031229
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		Drawn By	REVJLN

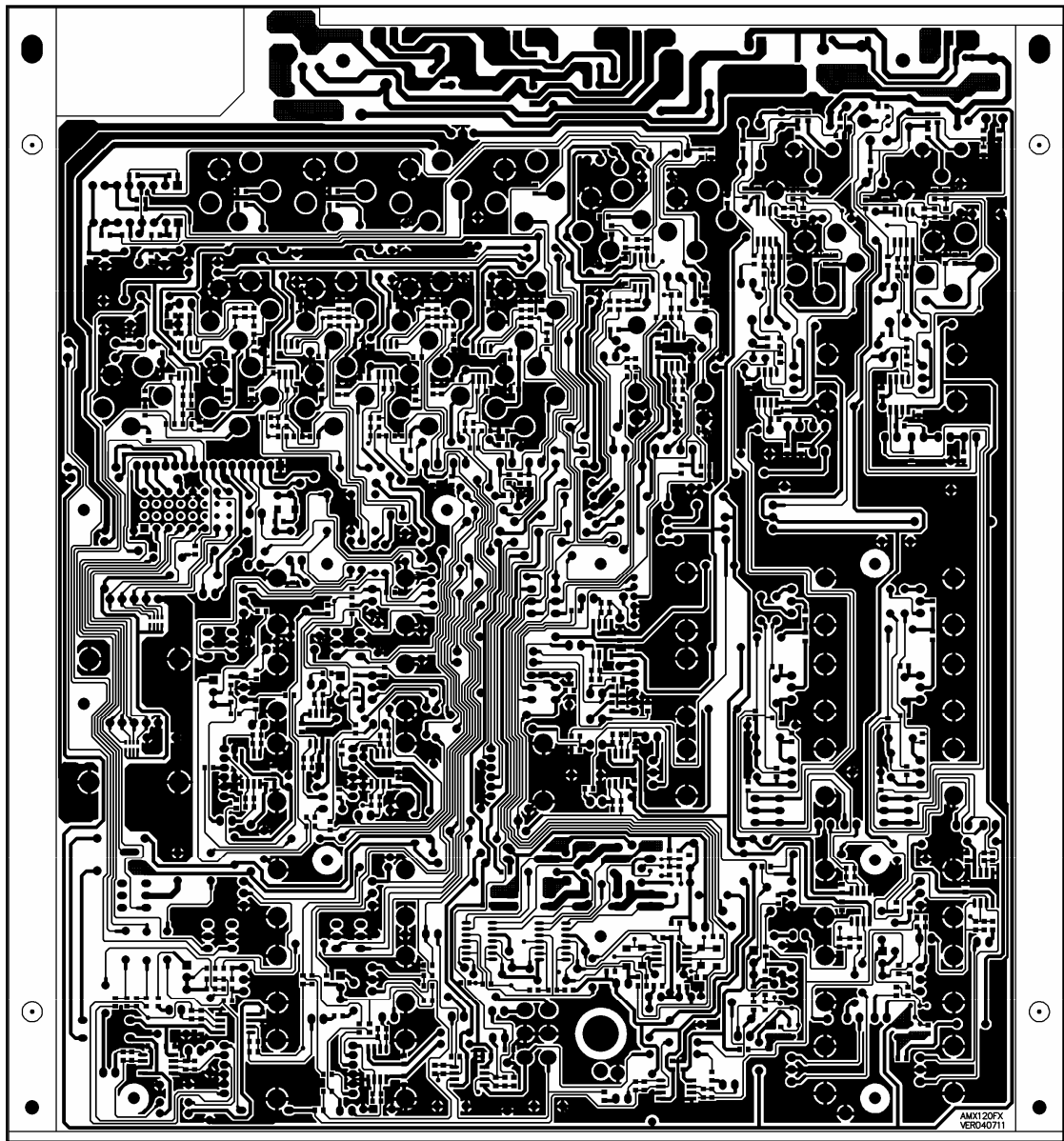
U24 = NJM4580M
 U13 - U17 = NJM4580M



PCB : AMX-120FX Top Overlay

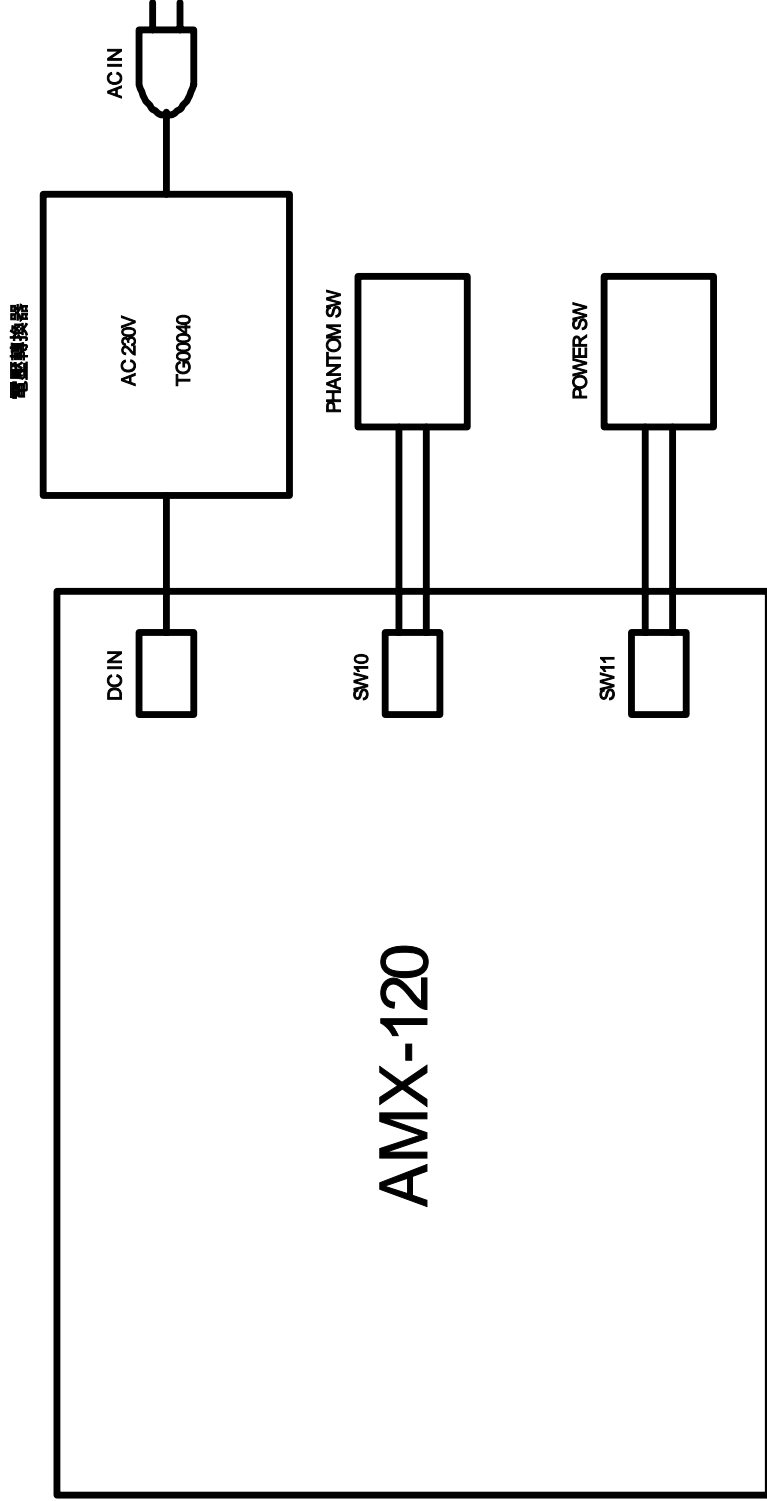


PCB : AMX-120FX Bottom Overlay



PCB : AMX-120FX Bottom Layer

AMX-120全機配線圖



Title	
Size	Number
B	Revision
Date	18 Dec 2003
File	C:\Documents and Settings\pc75\My Documents\EDM\AMX\AMX-120\Panel 09 SE\AMX-120.ddb

Multi-Level BOM Structure Listing

Report No.: IEB0_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120 UNIT: PCS
 AMX-120 ALTO 230V Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
0001-----	MA04536 panel AMX-120 ALTO			PCS	1.0000 1	2003/12/16 N
0001-----	MA04537 panel AMX-120			PCS	1.0000 1	2003/10/20 N
0001-----	MA04538 panel AMX-120_V1.8			PCS	1.0000 1	2003/10/20 N
0001-----	MJ00061 Zn-plated board 1*2135*1220 20.45kg			PCS KG	1.0000 30 0.00	2003/10/20 N %
0002-----	ME00113 iron pillar M3*13.8*0.5PH_V1.1			PCS	8.0000 1	2004/05/31 N
0002-----	MB03080 rear board AMX-120			PCS	1.0000 1	2003/12/16 N
0001-----	MB03081 bottom board AMX-120 1.0t*208*245.5*43			PCS	1.0000 1	2003/10/20 N
0001-----	MJ00058 iron board 1*2135*1220 20.45kg			PCS KG	1.0000 35 0.00	2003/10/20 N %
0003-----	HI00026 power switch RA12KKATOF 2P			PCS	1.0000 1	2003/12/16 N
0004-----	HI00171 power switch R612KKATOF1			PCS	1.0000 1	2003/12/16 N
0005-----	NI02377 knob 5.5*7.5mm(内3.3*3.3mm)			PCS	6.0000 1	2003/12/16 N
0006-----	NI01863 key 5.5*W10*7.5			PCS	2.0000 1	2003/12/16 N
0007-----	NI02083 knob 10.5*18mm			PCS	6.0000 1	2003/12/16 N
0008-----	NI02082 knob 10.5*18mm			PCS	6.0000 1	2003/12/16 N
0009-----	NI02081 knob 10.5*18mm			PCS	7.0000 1	2003/12/16 N
0010-----	NI02817 knob 10.5*18mm			PCS	8.0000 1	2003/12/16 N
0011-----	NI02714 knob 10*13.5mm			PCS	2.0000 1	2003/12/16 N
0012-----	NI02837 knob 35*11mm 534C			PCS	1.0000 1	2003/12/16 N
0013-----	MG00041 screw M3*6			PCS	20.0000 1	2003/12/16 N
0014-----	MG00061 screw M3*10			PCS	8.0000 1	2003/12/16 N
0015-----	ME00060 nut JY-6351G-02-250			PCS	16.0000 1	2003/12/16 N
0016-----	MF00061 washer JY-6351G-02-250			PCS	16.0000 1	2003/12/16 N

Multi-Level BOM Structure Listing

Report No.: IEB0_P02
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Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120 UNIT: PCS
 AMX-120 ALTO 230V Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0017-----	@NI00252 sleeve			PCS	4.0000	2003/12/16
	4*20mm				1	N
0001-----	NI00248 sleeve			M	20.0000	2002/06/04
	4*1000mm				1000	N
0018-----	NI00498 foot cushion			PCS	4.0000	2003/12/16
	12.7*7*6mm(SF-005)				1	N
0019-----	NA00122 PE bag			PCS	2.0000	2004/10/21
	0.04t*350*230mm			KG	1	N
0020-----	HJ00006 desiccant			PCS	1.0000	2003/12/16
	30g				1	N
0021-----	NF00061 assurance card			PCS	1.0000	2003/12/16
	ALTO				1	N
0022-----	NE05004 label			PCS	4.0000	2003/12/16
	ALTO				1	N
0001-----	NH00334 cone paper			M	1.0000	2004/11/29
	0.040*1m				76	N
0023-----	HA01388 row-wire connector wiring			PCS	1.0000	2003/12/16
	2P 100				1	N
0024-----	HA01442 row-wire connector wiring			PCS	1.0000	2003/12/16
	2P 200				1	N
0025-----	NF01656 instruction			PCS	1.0000	2003/12/16
	AMX-120 ALTO_V1.1				1	N
0001-----	NH00149 paper			張令	1.5000	2003/12/25
	889*640mm				1	Y
0026-----	NB02750 colour box			PCS	1.0000	2003/12/16
	AMX-120 ALTO				1	N
0027-----	NE12191 label			PCS	4.0000	2003/12/16
	AMX-120				1	N
0001-----	NH00012 bond paper			M	1.0000	2003/12/09
	0.04*1M				80	N
0002-----	NI00014 membrane			M	1.0000	2003/12/09
	0.035*1M				80	N
0028-----	NI03063 handle			PCS	1.0000	2004/02/16
	AMX-100;100FX;120_V1.0				1	N
0001-----	NI02834 handle			PCS	1.0000	2004/02/14
	208*33*26mm AMX-120 black				1	N
0029-----	NB02887 barrier			PCS	1.0000	2004/03/25
	AMX-100;120_V1.0				1	N
0030-----	NB02888 barrier			PCS	1.0000	2004/03/25
	AMX-100;120_V1.0				1	N
0031-----	NB02748 box			PCS	1.0000	2003/12/16
	AMX-100;100FX;120				8	N
0032-----	TG00040 adaptor			PCS	1.0000	2003/12/16
	230V/50Hz_AC18V/1000mA_EI-48				1	N
					0.00	%

Multi-Level BOM Structure Listing

Report No.: IEB0_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120
 AMX-120 ALTO 230V

UNIT: PCS
 Date: 2003/12/16

Version	Item No Item Descri	Loss %	Ver.	Unit	Cardinal Usage Rate Attrition Rate	Effective Date @:Phantom Layer Rate
0033-----	HK00813 PC board P-AMX-120FX-DIP(AMX-120)			PCS	1.0000 1 0.00 %	2003/12/16 N
0001-----	CB00003 electrolytic capacitor 0.22uF/50V 5*11mm C198,C199,C200,C201,C202,C207			PCS	6.0000 1 0.00 %	2003/12/24 N
0002-----	CB00029 electrolytic capacitor 22uF/35V 5*11mm C15,C18			PCS	2.0000 1 0.00 %	2004/08/29 N
0003-----	CB00042 electrolytic capacitor 47uF/63V 105 LZ 8*11mm C21,C22,C24,C25			PCS	4.0000 1 0.00 %	2003/12/24 N
0004-----	CB00052 electrolytic capacitor 100uF/100V 13*21mm C405			PCS	1.0000 1 0.00 %	2003/12/24 N
0005-----	CB00074 electrolytic capacitor 1000uF/10V 8*11mm C23,C26			PCS	2.0000 1 0.00 %	2003/12/24 N
0006-----	CB00073 electrolytic capacitor 1000uF/35V 13*20mm C408,C409			PCS	2.0000 1 0.00 %	2003/12/24 N
0007-----	HC00183 DC power jack KJ-36-S 3.5 CN1			PCS	1.0000 1 0.00 %	2003/12/24 N
0008-----	SA00052 L.E.D high intensity 3m/m round(green)long foot 26 LD8,LD9,LD10,LD11,LD12			PCS	5.0000 1 0.00 %	2003/12/24 N
0009-----	SA00053 L.E.D high intensity 3m/m round(red)long foot 26mm LD1,LD2,LD7,LD15,LD16			PCS	5.0000 1 0.00 %	2003/12/24 N
0010-----	SA00054 L.E.D high intensity 3m/m round(yellow)long foot 26 LD13,LD14			PCS	2.0000 1 0.00 %	2003/12/24 N
0011-----	NI01782 LED spacer support LEDS-11 11mm			PCS	12.0000 1 0.00 %	2003/12/24 N
0012-----	HC00065 row-wire header(male) 2P 2.5mm 90° SW10,SW11			PCS	2.0000 1 0.00 %	2003/12/24 N

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120
 AMX-120 ALTO 230V

UNIT: PCS
 Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
0013-----	HI00236 push-button switch 2-stage 6P PS-9226A(SELF-LOCK) SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8			PCS	8.0000 1 0.00 %	2003/12/24 N
0014-----	SD00077 integrated circuit L7815CV(TO-220)(ST) TR21			PCS	1.0000 1 0.00 %	2003/12/24 N
0015-----	SD00079 integrated circuit L7915CV(TO-220)(ST) TR22			PCS	1.0000 1 0.00 %	2003/12/24 N
0016-----	SB00043 transistor TIP122(ST) TR23			PCS	1.0000 1 0.00 %	2003/12/24 N
0017-----	SD00007 integrated circuit BA15218N (M5218L substitute) U22,U23			PCS	2.0000 1 0.00 %	2003/12/24 N
0018-----	RC00356 potentiometer Z10K RD09F1130042-10KZ(SAS1);30F VR1,VR2			PCS	2.0000 1 0.00 %	2004/06/12 N
0019-----	RC00358 potentiometer B50K -RD09F113A223-50K2BT(SAS1);30F-C VR3,VR4,VR5,VR6,VR7,VR8			PCS	6.0000 1 0.00 %	2004/06/12 N
0020-----	RC00359 potentiometer W50K RD09F113A224-50K4BT(SAS1);30F-C VR9,VR10,VR11,VR12,VR13,VR14,VR15,VR16,VR17,VR18,VR20, VR22,VR24,VR29,VR30			PCS	15.0000 1 0.00 %	2004/06/12 N
0021-----	RC00361 potentiometer W50K RD12L12CA60B-50K4BT*2(SAS1);30F-C VR19,VR21,VR23,VR27,VR28,VR31			PCS	6.0000 1 0.00 %	2004/06/12 N
0022-----	RC00369 potentiometer(A10K-41 stage) W50K RV16A01-30-25F-W50K-3F97 VR25			PCS	1.0000 1 0.00 %	2003/12/24 N
0023-----	HC00125 MIC jack JY-6351G-02-250 X3,X4,X5,X6,X7,X8,X9,X10,X11,X15,X16,X17,X18,X19,X20, X12			PCS	16.0000 1 0.00 %	2003/12/24 N
0024-----	HC00126 XLR MIC jack JY-5042-030G female plug 180° X1,X2			PCS	2.0000 1 0.00 %	2003/12/24 N

Multi-Level BOM Structure Listing

Report No.: IEB0_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120 UNIT: PCS
 AMX-120 ALTO 230V Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate @:	Phantom Layer Attrition Rate
0025-----	HC00403 RCA jack SCP6873NS3232T2 4P X21			PCS	1.0000 1 0.00 %	2003/12/24 N
0026-----	HK00834 PC board P-AMX-120-AI			PCS	1.0000 1 0.00 %	2003/12/24 N
0001-----	HA01920 jumper wire 6mm J15, J16, J18, J19, J20, J21, J22, J23, J25, J26, J28, J29, J30, J31, J36, J37, J38, J41, J42, J49, J52, J53, J55, J56, J57, J58, J60, J61, J64, J65, J67, J69, J70, J71, J72, J73, J76, J77, J78, J80, J81, J83, J84, J85, J87, J88, J89, J91, J93, J102, J103, J104, J107, J108, J109, J112, J113, J118, J119, J121, J123, J126, J128, J129, J130, J131, J133, J135, J136, J137, J140, J141, J143, J145, J146, J151, J155, J156, J159, J164, J167, J170, J171, J173, J174, J176, J177, J178, J179, J180, J181, J182, J183, J188, J190, J191, J192, J193, J198, J199, J202, J205, J206, J207, J209, J211, J214, J215, J216, J220, J221, J222, J224, J225, J226, J227, J231, J232, J233, J234, J235, J236, J238, J239, J240, J241, J242, J244, J245, J246, J248, J249, J122, J229, J247, J117, J124, J125, J172, J175			PCS	141.0000 1 0.00 %	2004/09/13 N
0001-----	HA02249 wire 0.6			M KG	0.0160 430 0.00 %	2002/09/19 N
0002-----	HA01925 jumper wire 10mm J11, J12, J13, J14, J17, J24, J27, J32, J35, J39, J40, J44, J45, J46, J47, J48, J50, J51, J54, J59, J62, J66, J68, J75, J79, J86, J92, J94, J100, J101, J115, J116, J127, J139, J142, J147, J152, J153, J154, J157, J158, J161, J163, J165, J168, J169, J184, J185, J187, J189, J194, J195, J196, J197, J200, J204, J208, J210, J217, J218, J219, J223, J228, J132, J237, J111, J138, J74, J230			PCS	69.0000 1 0.00 %	2004/09/13 N
0001-----	HA02249 wire 0.6			M KG	0.0200 1 0.00 %	2004/08/05 N
0003-----	HA01931 jumper wire 16mm J7, J8, J10, J33, J43, J63, J90, J95, J96, J97, J98, J99, J114, J144, J148, J149, J150, J160, J162, J186, J201, J203, J212, J213, J243, J250, J251, J9			PCS	28.0000 1 0.00 %	2004/09/13 N
0001-----	HA02249 wire 0.6			M KG	0.0260 1 0.00 %	2002/09/20 N
0004-----	HK00817 PC board P-AMX-120FX-SMD(AMX-120)			PCS	1.0000 1 0.00 %	2003/12/16 N
0001-----	HB01111 PCB AMX-120FX_VER040711			PCS	1.0000 1 0.00 %	2003/12/16 N
0002-----	CI00051 SMD ceramic capacitor 0603 22PF/50V NPO ±5% C6, C8, C9, C12, C13, C14, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C110, C111, C112, C113, C114, C115, C116, C117, C118, C119, C120, C121, C122, C123, C124, C125, C179, C180, C181, C183, C106, C108, C109, C192			PCS	54.0000 1 0.00 %	2004/09/13 N

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
 Page No.: 6 / 13

Item No. PF01438 Version
 DESCRIPTION: AMX-120
 AMX-120 ALTO 230V

UNIT: PCS
 Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0003-----	CI00055 SMD ceramic capacitor 0603 47PF/50V NPO ±5% C4,C11			PCS	2.0000 1 0.00 %	2003/12/16 N
0004-----	CI00059 SMD ceramic capacitor 0603 100PF/50V NPO ±5% C126,C127,C128,C129,C130,C133,C134,C135,C136,C137, C138,C143,C144,C145,C146,C147,C148,C149,C188,C189			PCS	20.0000 1 0.00 %	2003/12/16 N
0005-----	CI00063 SMD ceramic capacitor 0603 470PF/50V NPO ±5 % C1,C2,C3,C5,C7,C10			PCS	6.0000 1 0.00 %	2003/12/16 N
0006-----	CI00075 SMD ceramic capacitor 0603 0.1uF/50V Y5V +80,-20% C150,C151,C152,C153,C154,C157,C158,C159,C160,C161, C162,C165,C166,C167,C168,C169,C170,C173,C174,C175, C176,C177,C178,C182,C184,C185,C186,C187,C203,C204, C205,C206,C210,C211,C287,C288,C289,C290,C291,C292, C299,C300,C301,C302,C58,C59,C65,C66			PCS	48.0000 1 0.00 %	2004/09/13 N
0007-----	SE00008 SMD rectifier diode DA204K/T-146 D1			PCS	1.0000 1 0.00 %	2003/12/16 N
0008-----	SE00011 SMD rectifier diode RLS4148 0.5A (LL-34) D2,D3,D4,D5,D11,D16			PCS	6.0000 1 0.00 %	2003/12/16 N
0009-----	RD00059 SMD fixed resistor 1/10W 0.0 ±5% 0603 R445			PCS	1.0000 1 0.00 %	2003/12/16 N
0010-----	RD00355 SMD fixed resistor 1/10W 4.7 ±5% 0603 R1,R2,R37,R38			PCS	4.0000 1 0.00 %	2003/12/16 N
0011-----	RD00061 SMD fixed resistor 1/10W 10 ±5% 0603 R251			PCS	1.0000 1 0.00 %	2003/12/16 N
0012-----	RD00265 SMD fixed resistor 1/10W 27 ±5% 0603 R73,R74			PCS	2.0000 1 0.00 %	2003/12/16 N
0013-----	RD00065 SMD fixed resistor 1/10W 47 ±5% 0603 R242,R243			PCS	2.0000 1 0.00 %	2003/12/16 N

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120
 AMX-120 ALTO 230V

UNIT: PCS
 Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer Attrition Rate
0014-----	RD00305 SMD fixed resistor 1/10W 110 ±5% 0603 R246			PCS	1.0000 1 0.00 %	2003/12/16 N
0015-----	RD00069 SMD fixed resistor 1/10W 120 ±5% 0603 R207, R208, R209, R210, R211, R214, R215, R216, R217, R218, R219, R222, R223, R224			PCS	14.0000 1 0.00 %	2003/12/16 N
0016-----	RD00070 SMD fixed resistor 1/10W 150 ±5% 0603 R252			PCS	1.0000 1 0.00 %	2003/12/16 N
0017-----	RD00078 SMD fixed resistor 1/10W 470 ±5% 0603 R247, R250			PCS	2.0000 1 0.00 %	2003/12/16 N
0018-----	RD00082 SMD fixed resistor 1/10W 820 ±5% 0603 R253			PCS	1.0000 1 0.00 %	2003/12/16 N
0019-----	RD00349 SMD fixed resistor 1/10W 910 ±5% 0603 R196, R197, R198, R199			PCS	4.0000 1 0.00 %	2003/12/16 N
0020-----	RD00083 SMD fixed resistor 1/10W 1.0K ±5% 0603 R232, R233, R254, R124			PCS	4.0000 1 0.00 %	2004/09/13 N
0021-----	RD00350 SMD fixed resistor 1/10W 1.1K ±5% 0603 R212, R213			PCS	2.0000 1 0.00 %	2003/12/16 N
0022-----	RD00084 SMD fixed resistor 1/10W 1.2K ±5% 0603 R302, R303, R304, R305, R306, R307, R308, R309			PCS	8.0000 1 0.00 %	2003/12/16 N
0023-----	RD00351 SMD fixed resistor 1/10W 1.3K ±5% 0603 R137, R139, R267, R268			PCS	4.0000 1 0.00 %	2003/12/16 N
0024-----	RD00085 SMD fixed resistor 1/10W 1.5K ±5% 0603 R264, R265			PCS	2.0000 1 0.00 %	2003/12/16 N
0025-----	RD00087 SMD fixed resistor 1/10W 2.0K ±5% 0603 R244			PCS	1.0000 1 0.00 %	2003/12/16 N

Multi-Level BOM Structure Listing

Report No.: IEB0_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120
 AMX-120 ALTO 230V

UNIT: PCS
 Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate @:Phantom Layer	Attrition Rate
0026-----	RD00352 SMD fixed resistor 1/10W 3.6K ±5% 0603 R23, R24, R29, R30, R230, R231			PCS	6.0000 1 0.00 %	2003/12/16 N
0027-----	RD00092 SMD fixed resistor 1/10W 3.9K ±5% 0603 R148, R256, R257			PCS	3.0000 1 0.00 %	2004/09/13 N
0028-----	RD00093 SMD fixed resistor 1/10W 4.7K ±5% 0603 R77, R78, R79, R80, R112, R113, R115, R116, R119, R121, R122, R248, R249, R118			PCS	14.0000 1 0.00 %	2004/09/13 N
0029-----	RD00096 SMD fixed resistor 1/10W 6.2K ±5% 0603 R125, R126, R127, R128, R129, R130, R133, R134			PCS	8.0000 1 0.00 %	2004/09/13 N
0030-----	RD00097 SMD fixed resistor 1/10W 6.8K ±5% 0603 R150, R151, R152, R154, R155, R156, R269, R272			PCS	8.0000 1 0.00 %	2003/12/16 N
0031-----	RD00098 SMD fixed resistor 1/10W 7.5K ±5% 0603 R238, R239			PCS	2.0000 1 0.00 %	2003/12/16 N
0032-----	RD00099 SMD fixed resistor 1/10W 8.2K ±5% 0603 R168, R172, R176, R184			PCS	4.0000 1 0.00 %	2003/12/16 N
0033-----	RD00102 SMD fixed resistor 1/10W 12K ±5% 0603 R169, R170, R171, R173, R174, R175, R183, R185			PCS	8.0000 1 0.00 %	2003/12/16 N
0034-----	RD00103 SMD fixed resistor 1/10W 15K ±5% 0603 R203, R204			PCS	2.0000 1 0.00 %	2003/12/16 N
0035-----	RD00104 SMD fixed resistor 1/10W 18K ±5% 0603 R226, R227			PCS	2.0000 1 0.00 %	2003/12/16 N
0036-----	RD00306 SMD fixed resistor 1/10W 20K ±5% 0603 R186, R187, R188, R189, R190, R191, R192, R193, R194, R195, R200, R201, R202, R273, R274			PCS	15.0000 1 0.00 %	2004/04/21 N
0037-----	RD00105 SMD fixed resistor 1/10W 22K ±5% 0603 R131, R132, R236, R237, R275, R322, R162, R163			PCS	8.0000 1 0.00 %	2004/09/13 N

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120
 AMX-120 ALTO 230V

UNIT: PCS
 Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0038-----	RD00106 SMD fixed resistor 1/10W 27K ±5% 0603 R234, R235			PCS	2.0000 1 0.00 %	2003/12/16 N
0039-----	RD00107 SMD fixed resistor 1/10W 30K ±5% 0603 R205, R206			PCS	2.0000 1 0.00 %	2004/09/13 N
0040-----	RD00353 SMD fixed resistor 1/10W 36K ±5% 0603 R46, R149, R153, R157, R158, R159, R160, R161, R164, R165, R166, R167, R270, R271			PCS	14.0000 1 0.00 %	2003/12/16 N
0041-----	RD00111 SMD fixed resistor 1/10W 47K ±5% 0603 R228, R229			PCS	2.0000 1 0.00 %	2003/12/16 N
0042-----	RD00113 SMD fixed resistor 1/10W 62K ±5% 0603 R263, R266			PCS	2.0000 1 0.00 %	2004/12/17 N
0043-----	RD00116 SMD fixed resistor 1/10W 100K ±5% 0603 R255, R258, R259, R260			PCS	4.0000 1 0.00 %	2003/12/16 N
0044-----	RD00345 SMD fixed resistor 1/10W 390K ±5% 0603 R441			PCS	1.0000 1 0.00 %	2003/12/16 N
0045-----	RD00125 SMD fixed resistor 1/10W 1.0M ±5% 0603 R220, R221			PCS	2.0000 1 0.00 %	2003/12/16 N
0046-----	RD00210 SMD precise resistor 1/10W 5.11K ±1% 0603 R3, R4, R10, R11, R27, R28, R33, R34, R177, R180, R181, R182, R284, R286, R287, R288, R290, R291			PCS	18.0000 1 0.00 %	2004/09/13 N
0047-----	RD00214 SMD precise resistor 1/10W 10.0K ±1% 0603 R6, R7, R9, R13, R14, R25, R26, R31, R32, R35, R36, R39, R40, R41, R42, R43, R44, R45, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R70, R71, R72, R75, R76, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R95, R96, R97, R98, R99, R100, R101, R102, R103, R261, R262, R442, R107, R108, R109, R117, R178, R179			PCS	72.0000 1 0.00 %	2004/09/13 N
0048-----	RD00334 SMD precise resistor 1/10W 11.0K ±1% 0603 R19, R20, R21, R22			PCS	4.0000 1 0.00 %	2003/12/16 N

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120
 AMX-120 ALTO 230V

UNIT: PCS
 Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
0049-----	RD00371 SMD precise resistor 1/10W 51.1K ±1% 0603 R8,R68,R69,R386			PCS	4.0000 1 0.00 %	2003/12/16 N
0050-----	SF00010 SMD transistor 2SC2412K(SOT-23)/(R) TR1,TR2,TR3,TR4,TR15			PCS	5.0000 1 0.00 %	2004/04/21 N
0051-----	SF00004 SMD transistor 2SA1036K(SOT-23)/(R) TR13,TR14			PCS	2.0000 1 0.00 %	2003/12/16 N
0052-----	SG00032 SMD integrated circuit LM339DR/(T1) U7,U8			PCS	2.0000 1 0.00 %	2003/12/16 N
0053-----	SG00122 SMD integrated circuit NJM4580M-TE3 U1,U2,U3,U4,U5,U6,U9,U10,U11,U12,U13,U14,U15,U16,U17, U18,U19,U20,U21,U24,U25,U26,U27			PCS	23.0000 1 0.00 %	2004/09/13 N
0054-----	RD00365 SMD precise resistor 1/10W 5.62K ±1% 0603 R104,R105,R106,R114			PCS	4.0000 1 0.00 %	2004/12/18
0005-----	CB00238 electrolytic capacitor 0.22uF/50V 5*11mm C198,C199,C200,C201,C202,C207			PCS	6.0000 1 0.00 %	2004/08/30
0006-----	CB00239 electrolytic capacitor 2.2uF/50V 5*11mm C195,C196			PCS	2.0000 1 0.00 %	2004/08/30
0007-----	CB00242 electrolytic capacitor 22uF/35V 5*11mm C16,C19			PCS	2.0000 1 0.00 %	2004/08/30
0008-----	CB00194 electrolytic capacitor 47uF/25V 5*11mm C17,C20,C51,C52,C53,C54,C55,C56,C57,C60,C61,C62,C63, C64,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,C97,C98,C99,C100,C101,C102,C103, C104,C105,C190,C191,C208,C209,C233,C403,C404,C107			PCS	61.0000 1 0.00 %	2004/09/13
0009-----	CB00254 electrolytic capacitor 47uF/100V 10*12mm 5mm C401,C402,C406,C407			PCS	4.0000 1 0.00 %	2004/08/30
0010-----	CF00138 metal-film capacitor MSC 0.012uF/63V ±5% CASE01			PCS	4.0000 1 0.00 %	2004/08/30

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120
 AMX-120 ALTO 230V

UNIT: PCS
 Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
	C155,C156,C171,C172					
0011-----	CF00136 metal-film capacitor MSC 0.018uF/63V 5% CASE01 C131,C132,C163,C164			PCS	4.0000 1 0.00 %	2004/08/30
0012-----	CF00137 metal-film capacitor MSC 0.033uF/63V 5% CASE01 C139,C140,C141,C142			PCS	4.0000 1 0.00 %	2004/08/30
0013-----	SA00094 rectifier diode 1N4002/100V D12,D13,D14,D15			PCS	4.0000 1 0.00 %	2004/08/30
0014-----	RA01258 fixed resistor 1/4W 10 R443			PCS	1.0000 1 0.00 %	2004/08/30
0015-----	RA01260 fixed resistor 1/4W 120 R225,R245			PCS	2.0000 1 0.00 %	2004/08/30
0016-----	RA01115 fixed resistor 1/4W 20K R440			PCS	1.0000 1 0.00 %	2004/08/30
0017-----	RA01259 fixed resistor 1/4W 47 R240,R241			PCS	2.0000 1 0.00 %	2004/08/30
0018-----	RA01262 precise resistor 1/4W 6.81K R15,R16,R17,R18			PCS	4.0000 1 0.00 %	2004/08/30
0019-----	SA00127 zener diode 1/2W 47V 1N5261 ZD1			PCS	1.0000 1 0.00 %	2004/08/30
0027-----	MI01906 heat sink AMX-120_V1.2			PCS	1.0000 1 0.00 %	2004/01/31
0001-----	MJ00055 AL board 2*2000*1000 10.88kg			PCS KG	1.0000 546 0.00 %	2003/10/20 N
0028-----	NI02249 insulate bean TW-1(TO-220)			PCS	3.0000 1 0.00 %	2004/01/31
0029-----	NC00005 silicone insulator TO-220 square type			PCS	3.0000 1 0.00 %	2004/01/31
0030-----	MG00166 screw M3*10			PCS	3.0000 1 0.00 %	2004/08/26

Multi-Level BOM Structure Listing

Report No.: IEB0_P02
 Prepared by 020050[賴玉菁]

Date 2005/01/13
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Item No. PF01438 Version
 DESCRIPTION: AMX-120 UNIT: PCS
 AMX-120 ALTO 230V Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0031-----	ME00015 nut 3m/m			PCS	3.0000 1 0.00 %	2004/01/31
0032-----	MF00037 washer 3* 5*1t			PCS	3.0000 1 0.00 %	2004/01/31
0033-----	ME00052 nut 7			PCS	1.0000 1 0.00 %	2004/01/31
0034-----	MF00060 washer 7* 12*0.5t			PCS	1.0000 1 0.00 %	2004/01/31
0035-----	HA00373 wire 90mm black L5R5			PCS	2.0000 1 0.00 %	2004/09/27
0036-----	NI00252 sleeve 4*20mm			PCS	1.0000 1 0.00 %	2004/03/25
0001-----	NI00248 sleeve 4*1000mm			M	20.0000 1000 0.00 %	2002/06/04 N
0037-----	HA02382 wire 55mm P7-P8			PCS	1.0000 1 0.00 %	2004/09/16
0038-----	HA00053 wire 80mm black L3R3 P1-P3			PCS	1.0000 1 0.00 %	2004/09/16
0039-----	HA02201 wire 35mm 黑 L5R12 P3-P4			PCS	1.0000 1 0.00 %	2004/09/16
0034-----	NI02911 handle ALTO 072C			PCS	1.0000 1 0.00 %	2004/01/02
0035-----	MG00050 screw M3*8			PCS	3.0000 1 0.00 %	2004/01/10
0036-----	AD00012 twin adhesive 90*120mm_V1.0			M 圈	0.0024 1 0.00 %	2004/11/03
0037-----	NA00279 clip-chain bag 0.04t*100*150mm_V1.0			PCS	1.0000 1 0.00 %	2004/09/07
0038-----	MI02085 fixed bracket AMX-120 left_V1.0			PCS	1.0000 1 0.00 %	2004/10/29
0001-----	MI02084 fixed bracket AMX-120 left_V1.0			PCS	1.0000 1 0.00 %	2004/04/06 N
0001-----	MJ00058 iron board 1*2135*1220 20.45kg			PCS KG	1.0000 49 0.00 %	2004/04/14 N
0039-----	MI02087 fixed bracket AMX-120 right_V1.0			PCS	1.0000 1 0.00 %	2004/10/29
0001-----	MI02086 fixed bracket AMX-120 right_V1.0			PCS	1.0000 1 0.00 %	2004/04/06 N
0001-----	MJ00058 iron board 1*2135*1220 20.45kg			PCS KG	1.0000 49 0.00 %	2004/04/14 N

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 020050[賴玉菁]

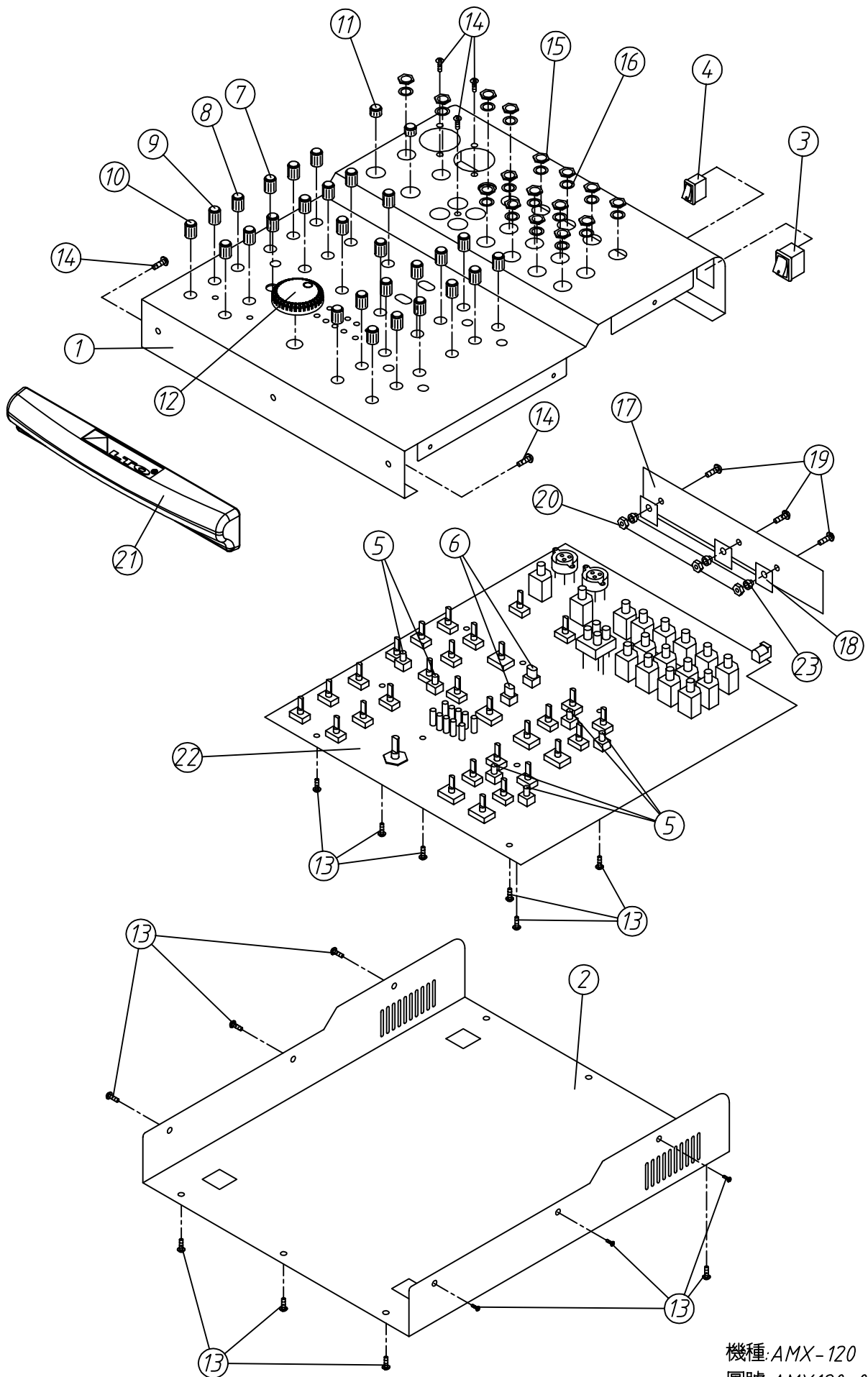
Date 2005/01/13
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Item No. PF01438
 DESCRIPTION: AMX-120
 AMX-120 ALTO 230V

Version

UNIT: PCS
 Date: 2003/12/16

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate



Mechanical Parts List

Model No.		ALTO AMX-120		
NO	Item No	Item Description		pcs
1	MA04536	panel	AMX-120 ALTO	1
2	MB03080	rear board	AMX-120	1
3	HI00026	power switch	RA12KKATOF 2P	1
4	HI00171	power switch	R612KKATOF1	1
5	NI02377	knob	φ5.5*7.5mm(内3.3*3.3mm)	6
6	NI01863	key	φ5.5*W10*7.5	2
7	NI02083	knob	φ10.5*18mm	6
8	NI02081	knob	φ10.5*18mm	7
9	NI02082	knob	φ10.5*18mm	6
10	NI02817	knob	φ10.5*18mm	8
11	NI02714	knob	φ10*13.5mm	2
12	NI02837	knob	φ35*11mm 534C	1
13	MG00041	screw	M3*6	20
14	MG00061	screw	M3*10	8
15	ME00060	nut	JY-6351G-02-250	16
16	MF00061	washer	JY-6351G-02-250	16
17	MI01906	heat sink	AMX-120_V1.1	1
18	NC00005	silicone insulator	TO-220 square type	3
19	MG00162	screw	M3*8	3
20	ME00015	nut	3m/m	3
21	NI02834	handle	208*33*26mm AMX-120 black	1
22	HK00813	PC board	P-AMX-120FX-DIP(AMX-120)	1
23	NI02249	insulate bean	TW-1(TO-220)	3
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