

Rear Card Front Card

ASHLY

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847 Holt Road
Webster, NY 14580-9103
Phone:(585) 872-0010 Fax: (585) 872-0739

Size B	Sheet #1 of 1 10s00021a-1.Sch	A->B @ 157%	Drawn By James B Franks	Print Date 08:40:55 3-May-2006	Rev. A
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MX-508 Channel Card (8 Total)

APPROVED: _____ Dwg # **10s00021**

10S00021 MX-508 Channel Card Revision History

Rev	Date	DCN	PCB Rev	Description of Change
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A	4-11-96	XXX	0000	Initial Release.
B	5-16-97	403		Fixed Send/Return Loop. Manual film fix for pcb, no pcb revision
A	05-03-06	XXX	0000	Analog consolidation. Changed PCB from 5814 to 00021. Added additional power supply filtering. Changed Female XLR to s10p41300. Changed rivet standoffs to h25a04400. Added R53 & R54 12.7K and changed R13 & R14 to 12.7K to handle current draw if phantom power is shorted. Added C38 (p15r00106) to reduce crosstalk. Adjusted all edge components to meet new standards.

D

D

C

C

B

B

A

A

1

2

3

4

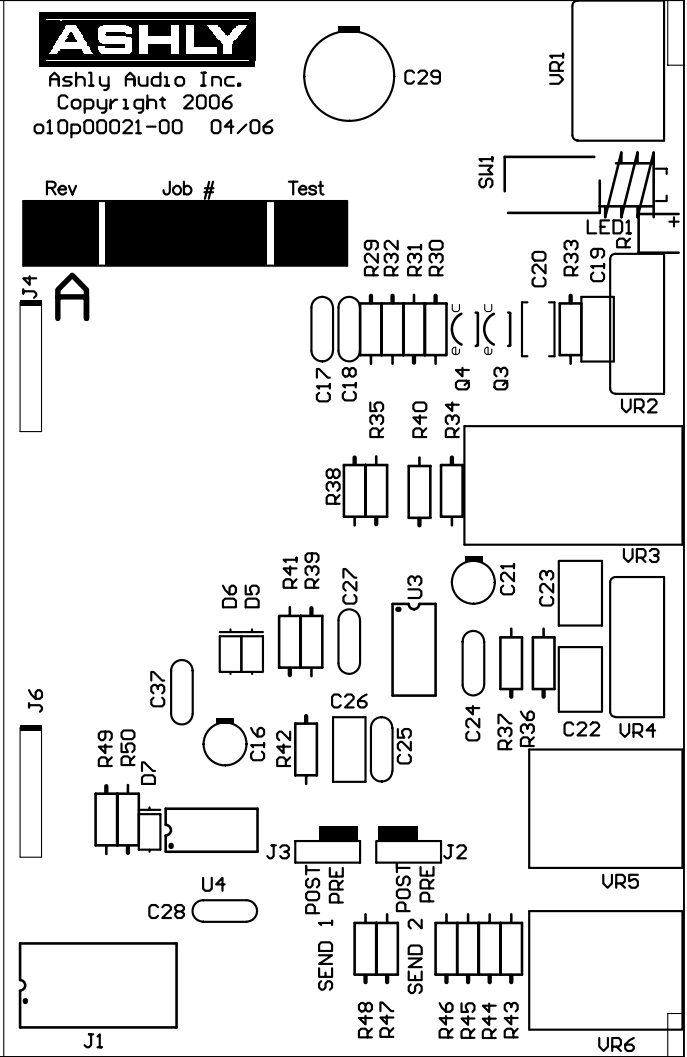
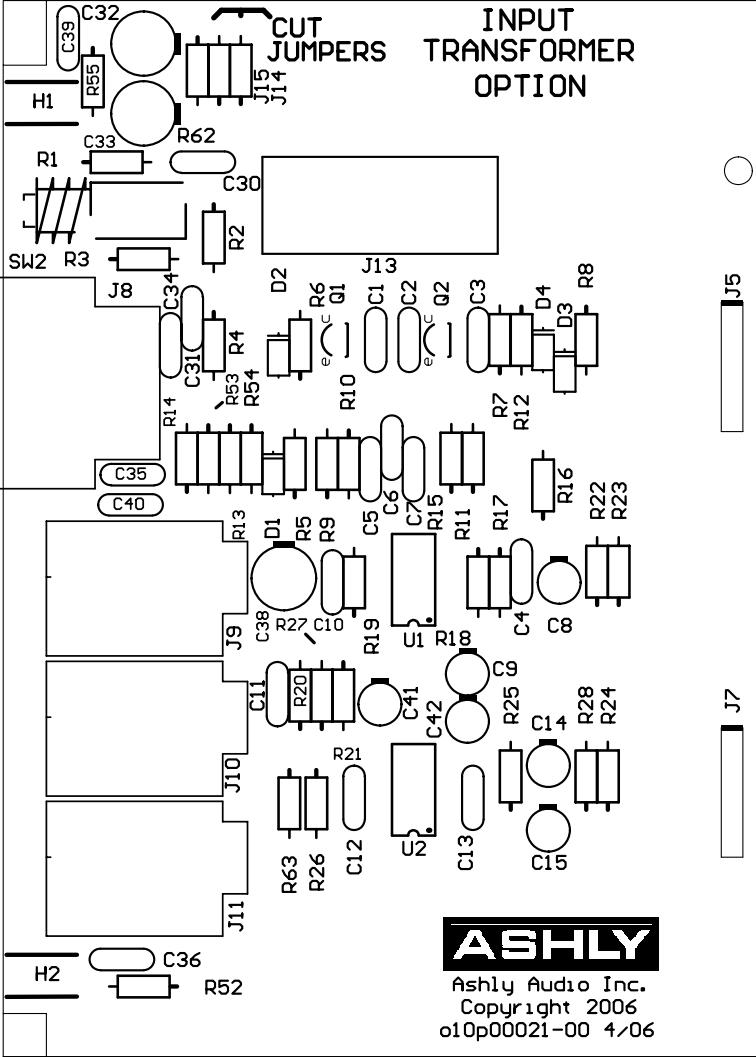
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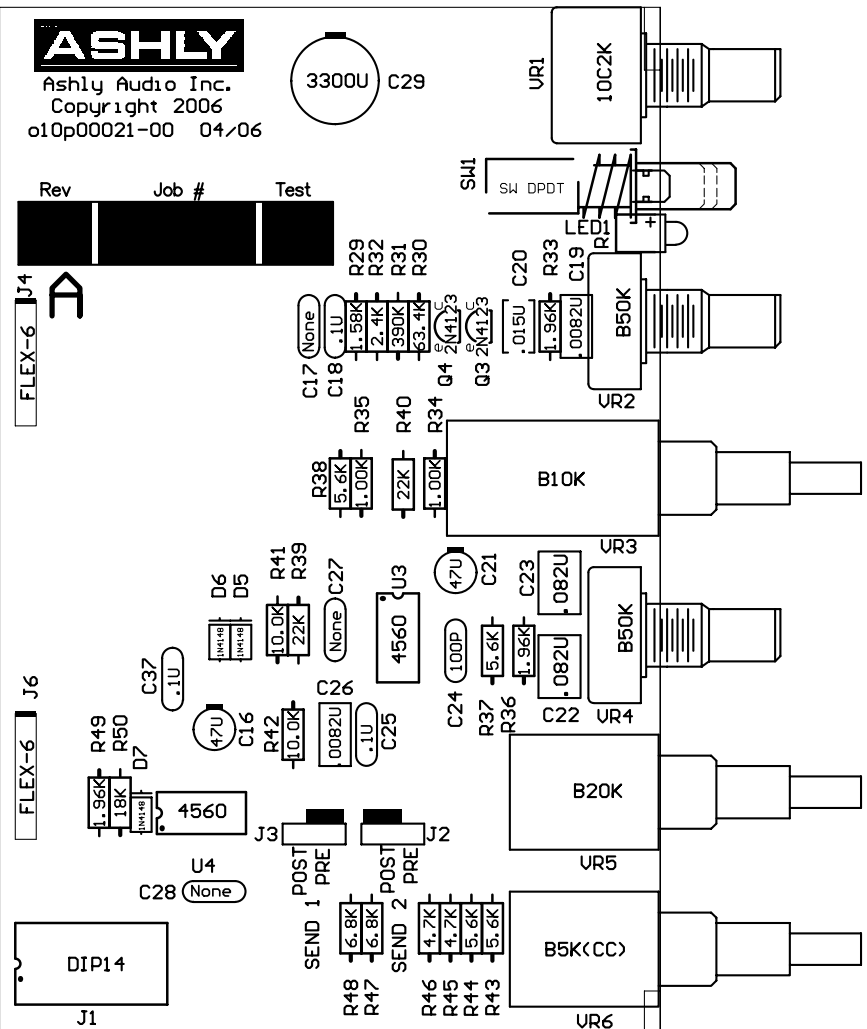
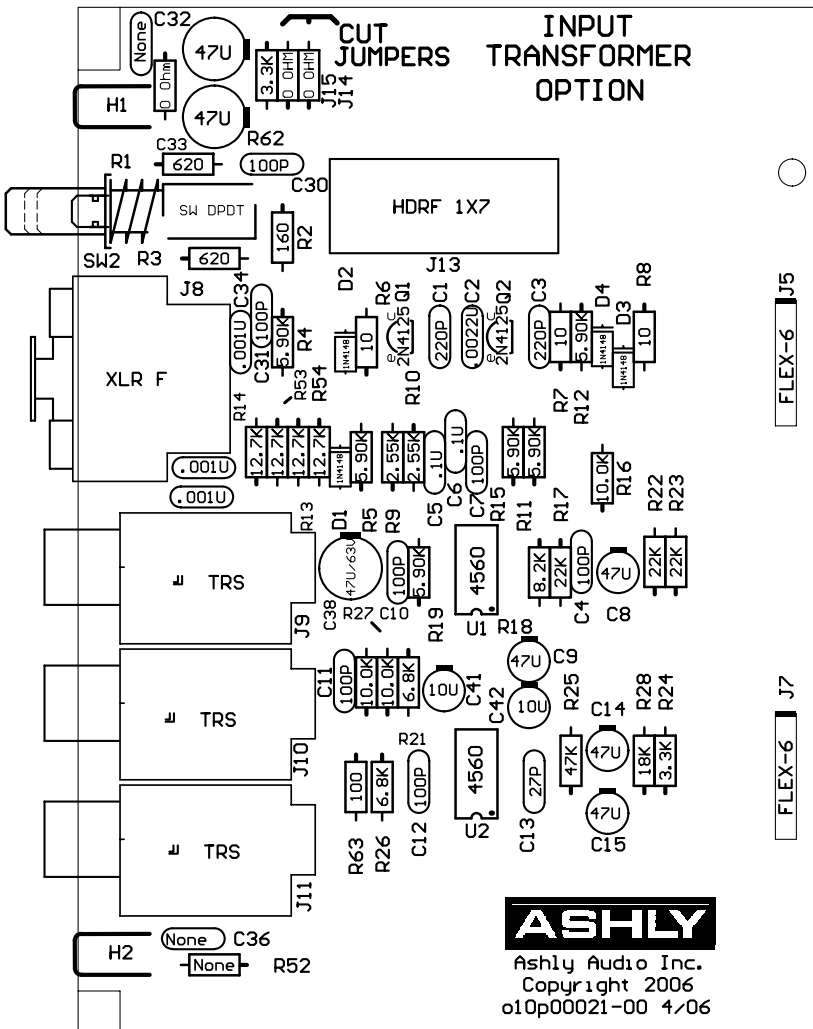
4

ASHLY AUDIO INC.		ASHLY	
TECHNICIAN: Jim Franks PHONE 585-872-0010 x 137 FAX 585-872-0739	TITLE: MX-508 Chanel Card		
PART NO.: o10p00021	REV: 0	DRILL REV 0	DATE: 3-May-2006
FILE NAME: o10p00021-0000a (single for top) Overlay		LAYER: Top	GERBER: .GTO



ASHLY AUDIO INC.

TECHNICIAN: Jim Franks PHONE 585-872-0010 x 137 FAX 585-872-0739	TITLE: MX-508 Chanel Card	ASHLY
PART NO: o10p00021	REV: 0	DRILL REV: 0
DATE: 3-May-2006		
FILE NAME: o10p00021-0000a (single for Rep) Overlay		GERBER: GBO



00021 MX-508 Channel Card Bill of Materials (Rev.A)

(Note: "None" parts are not listed)

Designator	Description	Stock Code
C1	220pF 50V ±10% Ceramic-Y5F Disc	p01r00221
C10	100pF 50V ±10% Ceramic-Y5P Disc	p01r00101
C11	100pF 50V ±10% Ceramic-Y5P Disc	p01r00101
C12	100pF 50V ±10% Ceramic-Y5P Disc	p01r00101
C13	27pF 50V ±10% Ceramic-C0G(NP0) Disc	p01r00270
C14	47µF 16V ±20% Electrolytic Radial	p15r00476
C15	47µF 16V ±20% Electrolytic Radial	p15r00476
C16	47µF 16V ±20% Electrolytic Radial	p15r00476
C18	.1µF 50V ±20% Ceramic-Z5U Radial	p05r00104
C19	.0082µF 50V ±5% Film-Polyester Radial	p05r00822
C2	.0022µF 50V ±20% Ceramic-Z5U Disc	p01r00222
C20	.015µF 50V ±5% Film-Polyester Radial	p05r00153
C21	47µF 16V ±20% Electrolytic Radial	p15r00476
C22	.082µF 50V ±5% Film-Polyester Radial	p05r00823
C23	.082µF 50V ±5% Film-Polyester Radial	p05r00823
C24	100pF 50V ±10% Ceramic-Y5P Disc	p01r00101
C25	.1µF 50V ±20% Ceramic-Z5U Radial	p05r00104
C26	.0082µF 50V ±5% Film-Polyester Radial	p05r00822
C29	3300µF 6.3V ±20% Electrolytic Radial	p15r00338
C3	220pF 50V ±10% Ceramic-Y5F Disc	p01r00221
C30	100pF 50V ±10% Ceramic-Y5P Disc	p01r00101
C31	100pF 50V ±10% Ceramic-Y5P Disc	p01r00101
C32	47µF 63V ±20% Electrolytic Radial	p15r20476
C33	47µF 63V ±20% Electrolytic Radial	p15r20476
C34	.001µF 50V ±10% Ceramic-Y5P Disc	p01r00102
C35	.001µF 50V ±10% Ceramic-Y5P Disc	p01r00102
C37	.1µF 50V ±20% Ceramic-Z5U Radial	p05r00104
C38	47µF 63V ±20% Electrolytic Radial	p15r20476
C4	100pF 50V ±10% Ceramic-Y5P Disc	p01r00101
C40	.001µF 50V ±10% Ceramic-Y5P Disc	p01r00102
C41	10µF 50V ±20% Electrolytic Radial	p15r00106
C42	10µF 50V ±20% Electrolytic Radial	p15r00106
C5	.1µF 50V ±20% Ceramic-Z5U Radial	p05r00104
C6	.1µF 50V ±20% Ceramic-Z5U Radial	p05r00104

00021 MX-508 Channel Card Bill of Materials (Rev.A)

(Note: "None" parts are not listed)

Designator	Description	Stock Code
C7	100pF 50V ±10% Ceramic-Y5P Disc	p01r00101
C8	47µF 16V ±20% Electrolytic Radial	p15r00476
C9	47µF 16V ±20% Electrolytic Radial	p15r00476
D1	100V Signal 200mA 500mW DO-35 1N4148 AX .30	r33d04148
D2	100V Signal 200mA 500mW DO-35 1N4148 AX .30	r33d04148
D3	100V Signal 200mA 500mW DO-35 1N4148 AX .30	r33d04148
D4	100V Signal 200mA 500mW DO-35 1N4148 AX .30	r33d04148
D5	100V Signal 200mA 500mW DO-35 1N4148 AX .30	r33d04148
D6	100V Signal 200mA 500mW DO-35 1N4148 AX .30	r33d04148
D7	100V Signal 200mA 500mW DO-35 1N4148 AX .30	r33d04148
H1	Right Angle Bracket PC Mount Snap-In 4/40	h25a04400
H2	Right Angle Bracket PC Mount Snap-In 4/40	h25a04400
J1	IC Socket 14 Pin DIP .30" Wide	s60p01100
J10	¼" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH	s12p43151
J11	¼" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH	s12p43151
J12	1x2 Female Shunt @.100"	s71s32102
J13	1x7 Female Right Angle Header PC Mount @.156" w Lock MOLEX 09-52-3071	s71p42167
J14	0 Ohm ¼W ±5% Carbon Film	p43a00000
J15	0 Ohm ¼W ±5% Carbon Film	p43a00000
J16	1x2 Female Shunt @.100"	s71s32102
J2	1x3 Male Straight Post Header PC Mount @.100"	s71p14403
J3	1x3 Male Straight Post Header PC Mount @.100"	s71p14403
J8	XLR Female Right Angle + Lock Tab + Separate Chassis Ground NEUTRIK NC3FAH2	s10p41300
J9	¼" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH	s12p43151
JW1	5" Flex 6 Conductor .100" Center	m10b10460
JW2	5" Flex 6 Conductor .100" Center	m10b10460
LED1	LED T1 Through-Hole Diffused Red 625nm Radial	r30a05474
Q1	2N4125 30V 200mA PNP General Purpose Amplifier TO-92	r34c04125
Q2	2N4125 30V 200mA PNP General Purpose Amplifier TO-92	r34c04125
Q3	2N4123 30V 200mA NPN General Purpose Amplifier TO-92	r34a04123
Q4	2N4123 30V 200mA NPN General Purpose Amplifier TO-92	r34a04123
R1	620 Ohm ¼W ±5% Carbon Film	p43a00621
R10	2.55K ¼W ±1% Metal Film	p39a02551
R11	5.90K ¼W ±1% Metal Film	p39a05901

00021 MX-508 Channel Card Bill of Materials (Rev.A)

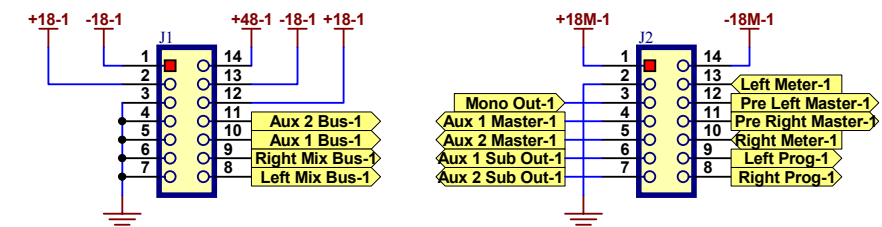
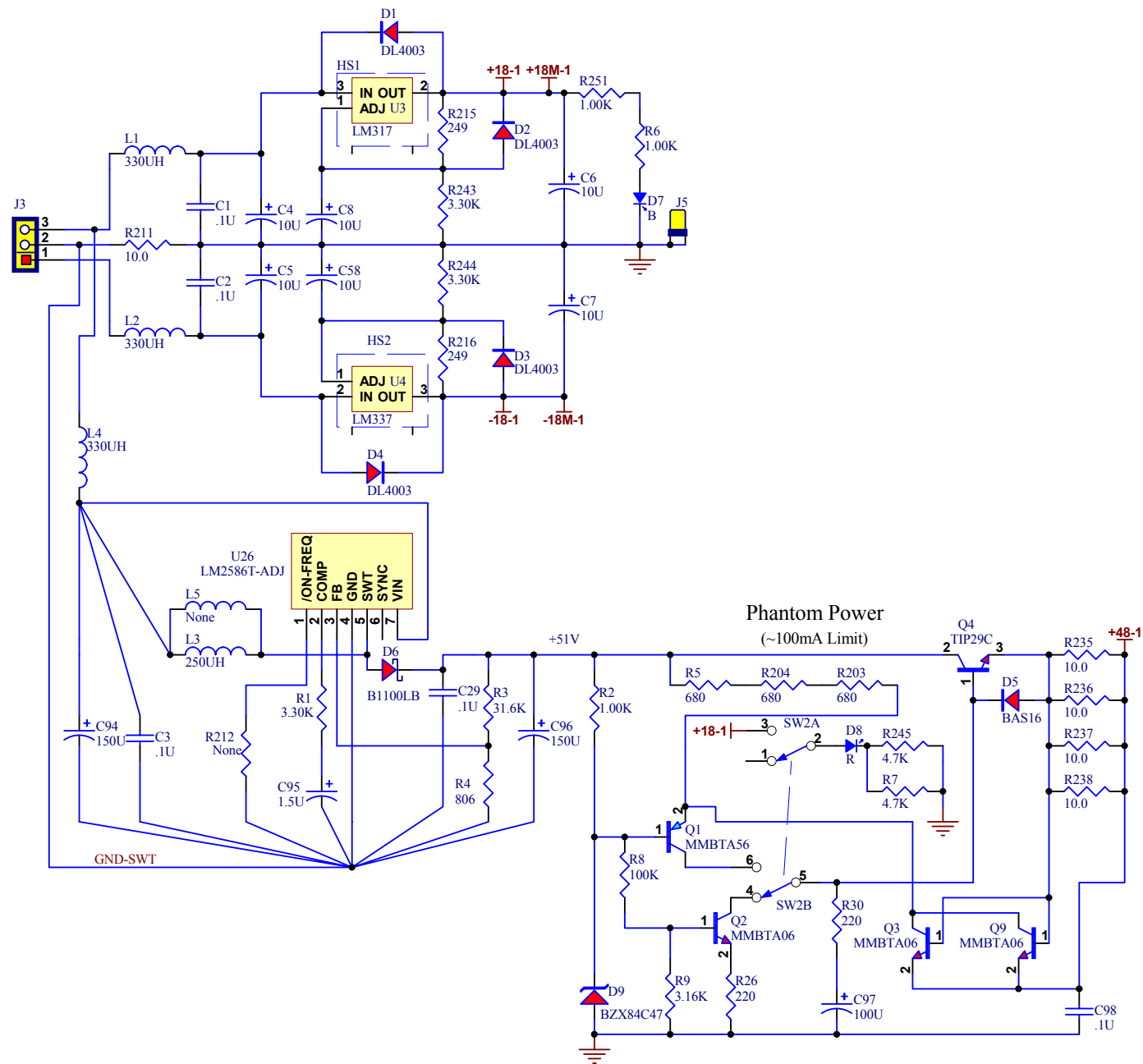
(Note: "None" parts are not listed)

Designator	Description	Stock Code
R12	5.90K ¼W ±1% Metal Film	p39a05901
R13	12.7K ¼W ±1% Metal Film	p39a01272
R14	12.7K ¼W ±1% Metal Film	p39a01272
R15	5.90K ¼W ±1% Metal Film	p39a05901
R16	10.0K ¼W ±1% Metal Film	p39a01002
R17	22K ¼W ±5% Carbon Film	p43a00223
R18	8.2K ¼W ±5% Carbon Film	p43a00822
R19	5.90K ¼W ±1% Metal Film	p39a05901
R2	160 ¼W ±5% Carbon Film	p43a00161
R20	10.0K ¼W ±1% Metal Film	p39a01002
R21	6.8K ¼W ±5% Carbon Film	p43a00682
R22	22K ¼W ±5% Carbon Film	p43a00223
R23	22K ¼W ±5% Carbon Film	p43a00223
R24	3.3K ¼W ±5% Carbon Film	p43a00332
R25	47K ¼W ±5% Carbon Film	p43a00473
R26	6.8K ¼W ±5% Carbon Film	p43a00682
R27	10.0K ¼W ±1% Metal Film	p39a01002
R28	18K ¼W ±5% Carbon Film	p43a00183
R29	1.58K ¼W ±1% Metal Film	p39a01581
R3	620 Ohm ¼W ±5% Carbon Film	p43a00621
R30	63.4K ¼W ±1% Metal Film	p39a06342
R31	390K ¼W ±5% Carbon Film	p43a00394
R32	2.4K ¼W ±5% Carbon Film	p43a00242
R33	1.96K ¼W ±1% Metal Film	p39a01961
R34	1.00K ¼W ±1% Metal Film	p39a01001
R35	1.00K ¼W ±1% Metal Film	p39a01001
R36	1.96K ¼W ±1% Metal Film	p39a01961
R37	5.6K ¼W ±5% Carbon Film	p43a00562
R38	5.6K ¼W ±5% Carbon Film	p43a00562
R39	22K ¼W ±5% Carbon Film	p43a00223
R4	5.90K ¼W ±1% Metal Film	p39a05901
R40	22K ¼W ±5% Carbon Film	p43a00223
R41	10.0K ¼W ±1% Metal Film	p39a01002
R42	10.0K ¼W ±1% Metal Film	p39a01002

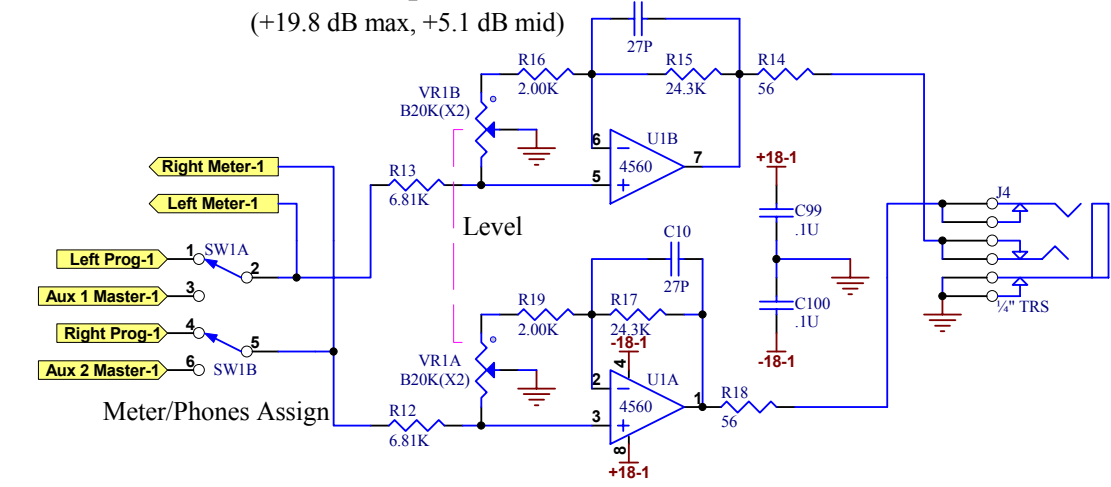
00021 MX-508 Channel Card Bill of Materials (Rev.A)

(Note: "None" parts are not listed)

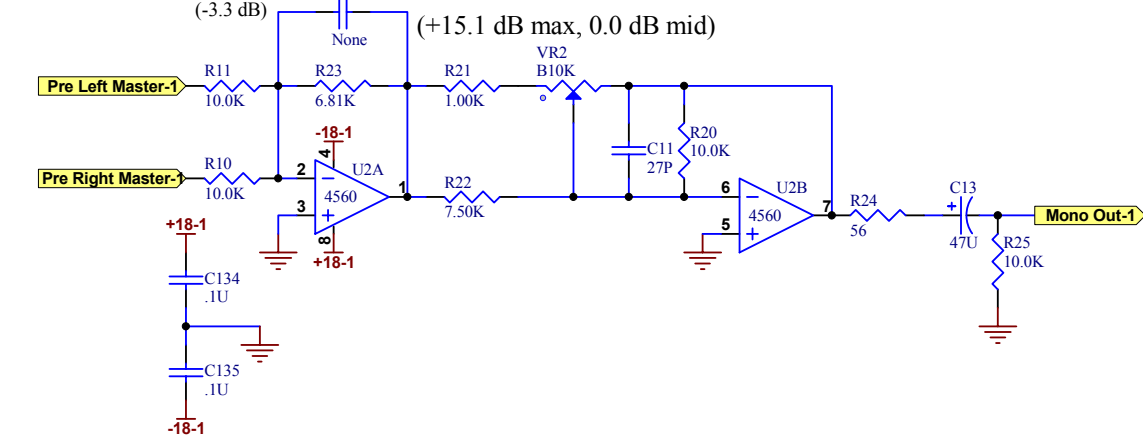
Designator	Description	Stock Code
R43	5.6K ¼W ±5% Carbon Film	p43a00562
R44	5.6K ¼W ±5% Carbon Film	p43a00562
R45	4.7K ¼W ±5% Carbon Film	p43a00472
R46	4.7K ¼W ±5% Carbon Film	p43a00472
R47	6.8K ¼W ±5% Carbon Film	p43a00682
R48	6.8K ¼W ±5% Carbon Film	p43a00682
R49	1.96K ¼W ±1% Metal Film	p39a01961
R5	5.90K ¼W ±1% Metal Film	p39a05901
R50	18K ¼W ±5% Carbon Film	p43a00183
R53	12.7K ¼W ±1% Metal Film	p39a01272
R54	12.7K ¼W ±1% Metal Film	p39a01272
R55	0 Ohm ¼W ±5% Carbon Film	p43a00000
R6	10 Ohm ¼W ±5% Carbon Film	p43a00100
R62	3.3K ¼W ±5% Carbon Film	p43a00332
R63	100 Ohm ¼W ±5% Carbon Film	p43a00101
R7	10 Ohm ¼W ±5% Carbon Film	p43a00100
R8	10 Ohm ¼W ±5% Carbon Film	p43a00100
R9	2.55K ¼W ±1% Metal Film	p39a02551
SW1	Mini Right Angle DPDT PC Mount Pushbutton 2.8mm Shaft	j35d02600
SW2	Mini Right Angle DPDT PC Mount Pushbutton 2.8mm Shaft	j35d02600
U1	NJM4560D Dual Operational Amplifier 8-Pin DIP	r10a04560
U2	NJM4560D Dual Operational Amplifier 8-Pin DIP	r10a04560
U3	NJM4560D Dual Operational Amplifier 8-Pin DIP	r10a04560
U4	NJM4560D Dual Operational Amplifier 8-Pin DIP	r10a04560
VR1	Noble V16L4(PH2D) b20k+10c2k	p62f00203
VR2	Noble V16L4(PH2D) b50k(cc)	p61f00503
VR3	Noble V16L4(PH2D) Dual Concentric 15c100k(x2)+b10k	p60g00104
VR4	Noble V16L4(PH2D) b50k(cc)	p61f00503
VR5	Noble V16L4(PH2D) Dual Concentric b20k+b20k	p60f00203
VR6	Noble V16L4(PH2D) Dual Concentric b5k(cc)+b20k	p60f00502



Headphones



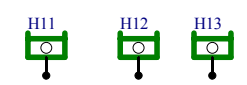
Mono Level



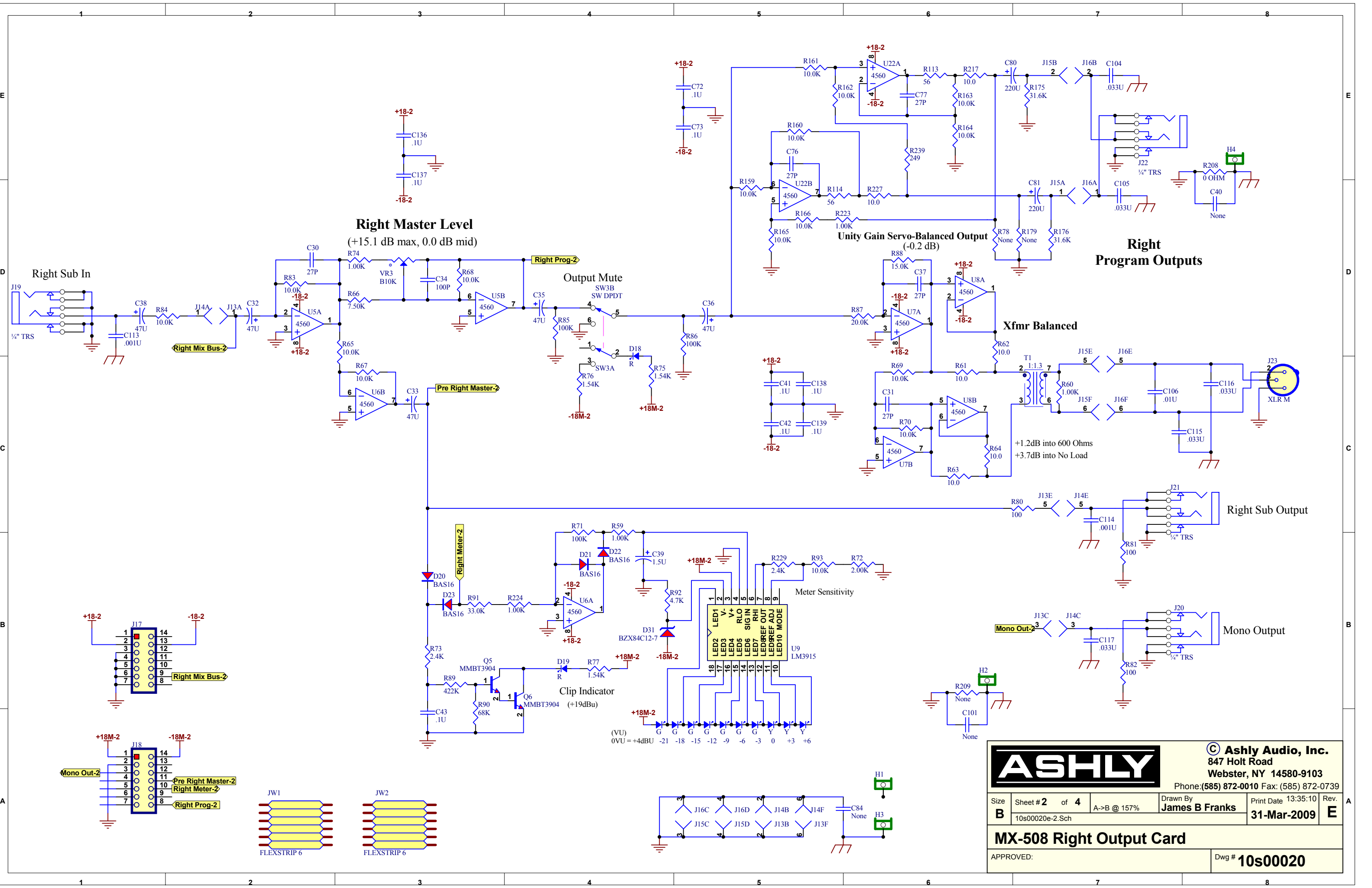
Right Output
10s00020e-2.Sch

Left Output
10s00020e-3.Sch

Aux Master
10s00020e-4.Sch



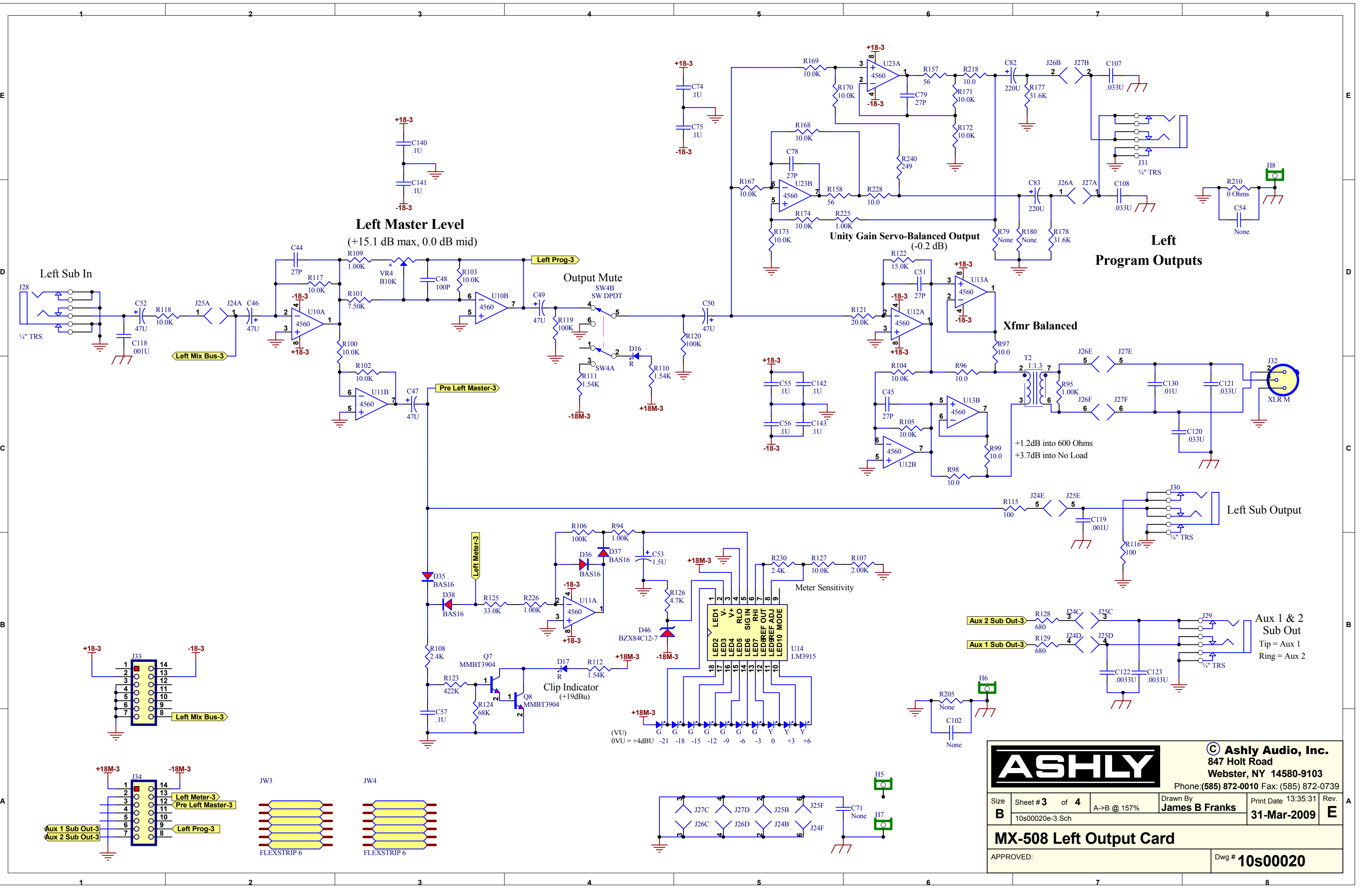
		© Ashly Audio, Inc. 847 Holt Road Webster, NY 14580-9103 Phone:(585) 872-0010 Fax: (585) 872-0739	
		Size B Sheet # 1 of 4 10s00020e-1.Sch	A->B @ 157% Drawn By James B Franks
MX-508 Power Supply/Headphone Card			
APPROVED:			Dwg # 10s00020



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 Phone: (585) 872-0010 Fax: (585) 872-0739

Size B	Sheet #2 of 4	A->B @ 157%	Drawn By James B Franks	Print Date 13:35:10	Rev. E
10s00020e-2.Sch			31-Mar-2009		

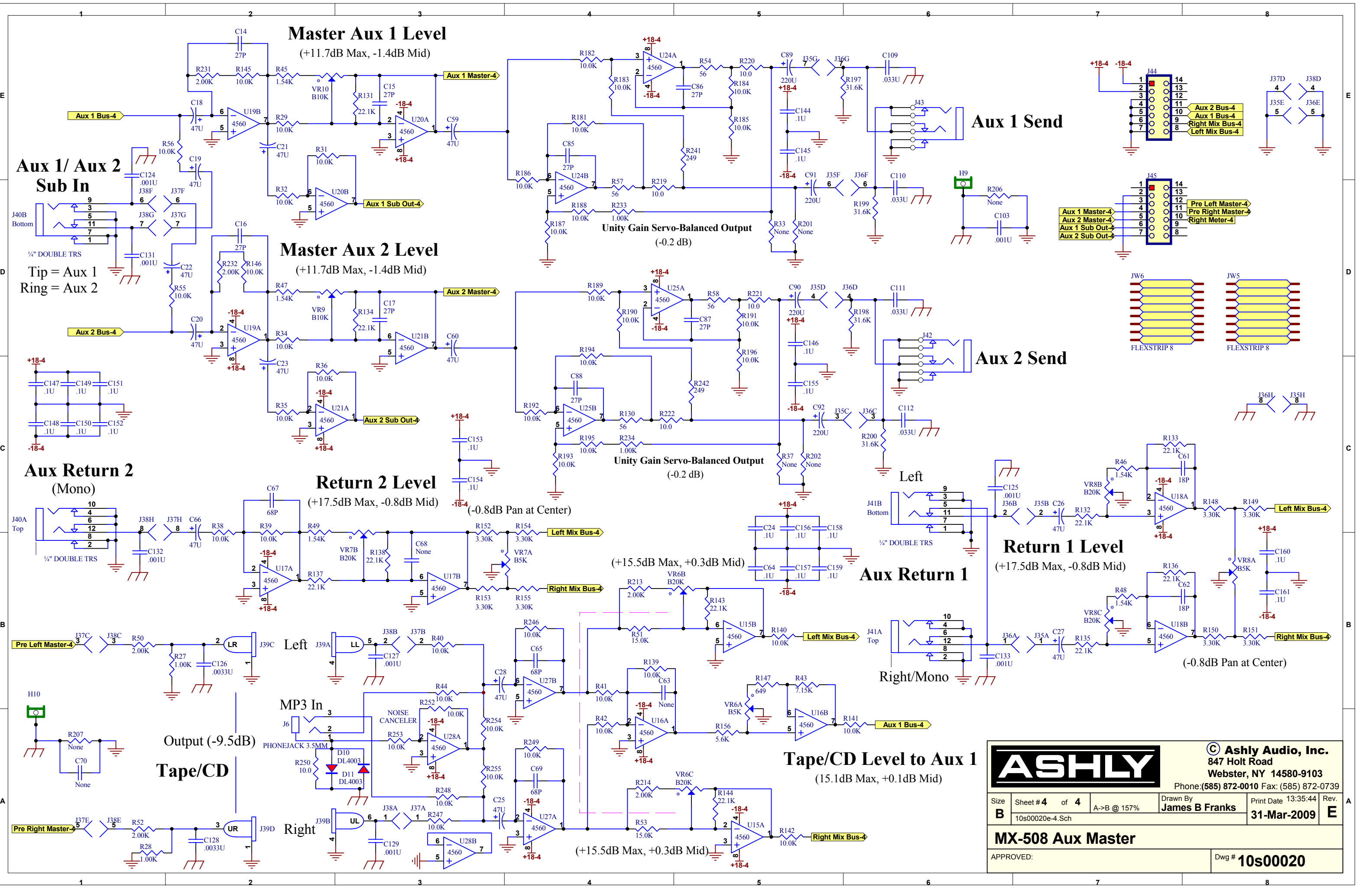
MX-508 Right Output Card
 APPROVED: _____ Dwg # 10s00020



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 Phone: (585) 872-0010 Fax: (585) 872-0739

Size B	Sheet #3 of 4 10s00020e-3.Sch	A->B @ 157%	Drawn By James B Franks	Print Date 13:35:31 31-Mar-2009	Rev. E
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MX-508 Left Output Card
 APPROVED: _____ Dwg # **10s00020**



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 Phone: (585) 872-0010 Fax: (585) 872-0739

Size B	Sheet # 4 of 4	A->B @ 157%	Drawn By James B Franks	Print Date 13:35:44	Rev. E
10s00020e-4.Sch			31-Mar-2009		

MX-508 Aux Master

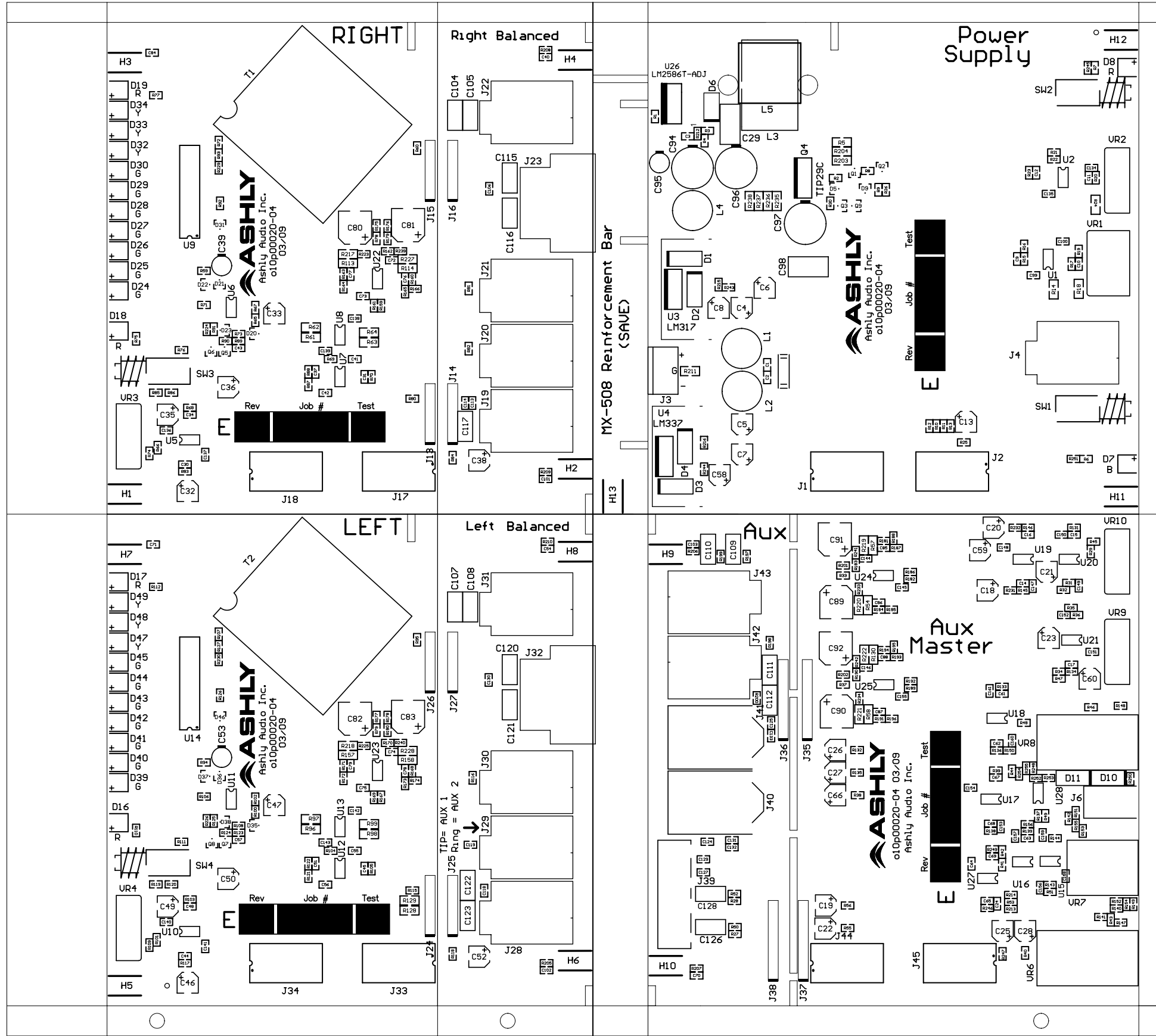
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10s00020 MX-508 Revision History

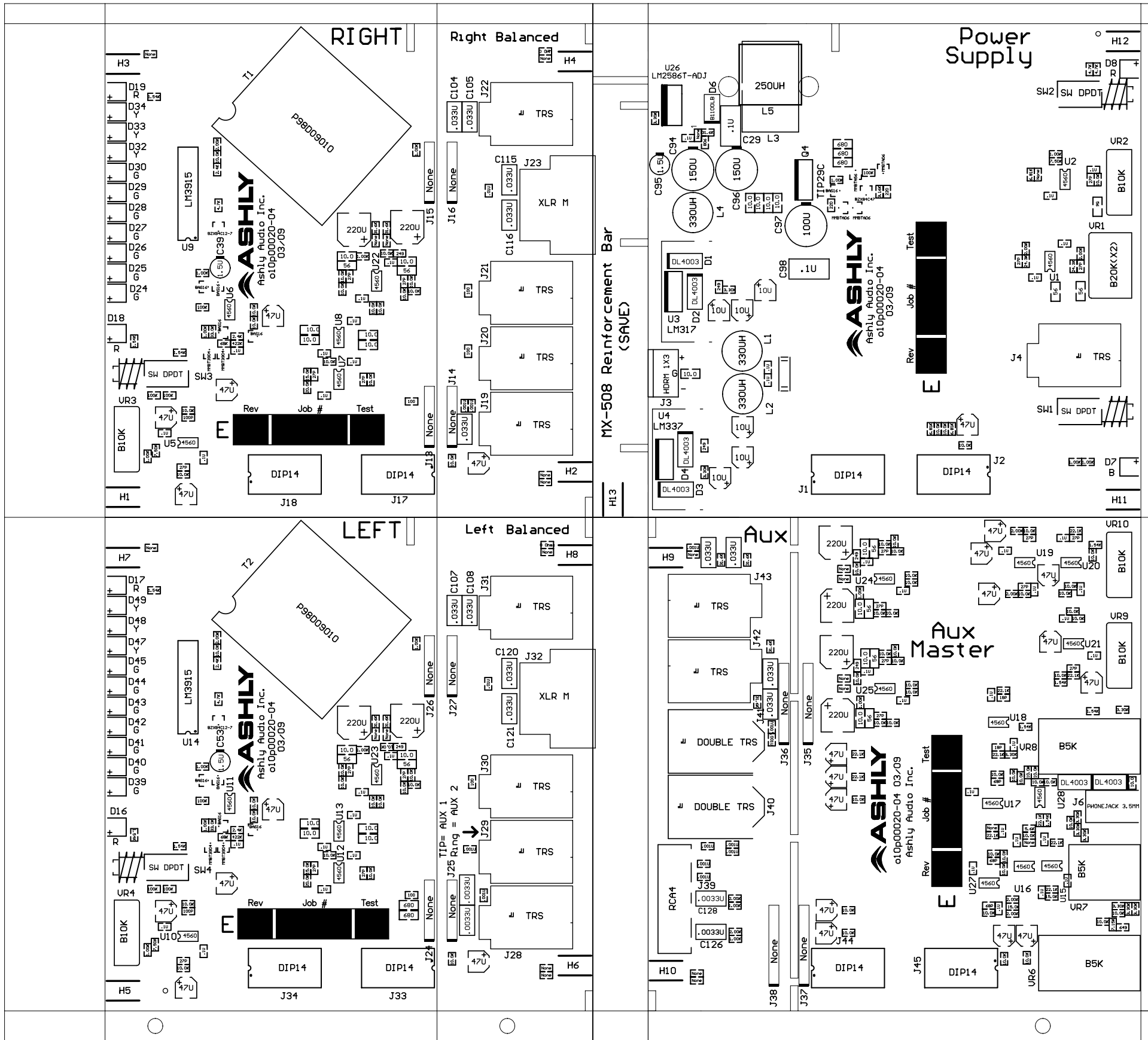
Rev	Date	DCN	PCB Rev	Description of Change
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A	5-02-06	XXX	0000	Analog Consolidation. Part number changed from 5810 to 00020. Pseudo-Balanced Ouputs changed to Servo-Balanced. Power Supply changed to incoporate 00010 switching supply.
B	09-13-06	XXX	0101	Adjusted resistor values in the Left and Right Mix Busses to reduce noise. Added .01U and .001U fliter capacitors to inputs and outputs. Added a .01U capacitor accross transformer outputs fo reduce noise.
C	03-09-07	768	0202	Connected R27 to the proper ground net. Moved C106 and C130. Fixed location of C81 and C83 to prevent crashing. Changed R211 from 100 ohms to 10 ohms as a fallback current path. The following changes made to reduce EMI and improve noise. U26 changed from LM2577 to LM2586T. Changed L3 from 1000uH to 250uH toroid. Changed L1 and L2 from a ferrite bead to a 330uH inductor. Added a 330uH inductor between J3 and U26. Changed R1 to 3.3K changed C95 to 1.5uF. Changed C104, C105, C107 to C112, C115, C116, C117, C120 and C121 to .033uF. Changed C122, C123, C126 and C128 to .003uF. Changed C64, C65 and C65 to 220pF.
E	03-30-09	XXX	0404	-Revision 0303D Prototype only. SMT Update. Added front pannel aux input. Changed R85, R86, R119, R120 to 100k.

ASHLY AUDIO INC.		TECHNICIAN: Jim Franks		TITLE: MX-508 Mixer		ASHLY	
PHONE: 585-872-0010 x 137		FAX: 585-872-0739		Output, Aux Master, Power Supply			
PART NO: o10p00020		REV: 4		DRILL REV: 4		DATE: 31-Mar-2009	
FILE NAME: o10p00020-0404e.PCB		LAYER: Top Overlay		GERBER: .GTO			



ASHLY AUDIO INC.			
TECHNICIAN: Jim Franks PHONE 585-872-0010 x 137 FAX 585-872-0739	TITLE: MX-508 Mixer Output, Aux Master, Power Supply		
PART NO: o10p00020	REV: 4	DRILL REV 4	DATE: 31-Mar-2009
FILE NAME: o10p00020-0404e.PCB	LAYER: Top Overlay	GERBER: GTO	



MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
C1	.1µF 50V ±20% Ceramic-X7R 0603
C10	27pF 50V ±10% Ceramic-C0G 0603
C100	.1µF 50V ±20% Ceramic-X7R 0603
C103	.001µF 50V ±5% Ceramic-NPO 0603
C104	.033µF 50V ±5% Film-Polyester Radial
C105	.033µF 50V ±5% Film-Polyester Radial
C106	.01µF 50V ±20% Ceramic-X7R 0603
C107	.033µF 50V ±5% Film-Polyester Radial
C108	.033µF 50V ±5% Film-Polyester Radial
C109	.033µF 50V ±5% Film-Polyester Radial
C11	27pF 50V ±10% Ceramic-C0G 0603
C110	.033µF 50V ±5% Film-Polyester Radial
C111	.033µF 50V ±5% Film-Polyester Radial
C112	.033µF 50V ±5% Film-Polyester Radial
C113	.001µF 50V ±5% Ceramic-NPO 0603
C114	.001µF 50V ±5% Ceramic-NPO 0603
C115	.033µF 50V ±5% Film-Polyester Radial
C116	.033µF 50V ±5% Film-Polyester Radial
C117	.033µF 50V ±5% Film-Polyester Radial
C118	.001µF 50V ±5% Ceramic-NPO 0603
C119	.001µF 50V ±5% Ceramic-NPO 0603
C120	.033µF 50V ±5% Film-Polyester Radial
C121	.033µF 50V ±5% Film-Polyester Radial
C122	.0033µF 50V ±5% Film-Polyester Radial
C123	.0033µF 50V ±5% Film-Polyester Radial
C124	.001µF 50V ±5% Ceramic-NPO 0603
C125	.001µF 50V ±5% Ceramic-NPO 0603
C126	.0033µF 50V ±5% Film-Polyester Radial
C127	.001µF 50V ±5% Ceramic-NPO 0603
C128	.0033µF 50V ±5% Film-Polyester Radial
C129	.001µF 50V ±5% Ceramic-NPO 0603
C13	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C130	.01µF 50V ±20% Ceramic-X7R 0603
C131	.001µF 50V ±5% Ceramic-NPO 0603
C132	.001µF 50V ±5% Ceramic-NPO 0603
C133	.001µF 50V ±5% Ceramic-NPO 0603
C134	.1µF 50V ±20% Ceramic-X7R 0603
C135	.1µF 50V ±20% Ceramic-X7R 0603
C136	.1µF 50V ±20% Ceramic-X7R 0603
C137	.1µF 50V ±20% Ceramic-X7R 0603
C138	.1µF 50V ±20% Ceramic-X7R 0603
C139	.1µF 50V ±20% Ceramic-X7R 0603
C14	27pF 50V ±10% Ceramic-C0G 0603
C140	.1µF 50V ±20% Ceramic-X7R 0603
C141	.1µF 50V ±20% Ceramic-X7R 0603
C142	.1µF 50V ±20% Ceramic-X7R 0603
C143	.1µF 50V ±20% Ceramic-X7R 0603
C144	.1µF 50V ±20% Ceramic-X7R 0603

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
C145	.1µF 50V ±20% Ceramic-X7R 0603
C146	.1µF 50V ±20% Ceramic-X7R 0603
C147	.1µF 50V ±20% Ceramic-X7R 0603
C148	.1µF 50V ±20% Ceramic-X7R 0603
C149	.1µF 50V ±20% Ceramic-X7R 0603
C15	27pF 50V ±10% Ceramic-C0G 0603
C150	.1µF 50V ±20% Ceramic-X7R 0603
C151	.1µF 50V ±20% Ceramic-X7R 0603
C152	.1µF 50V ±20% Ceramic-X7R 0603
C153	.1µF 50V ±20% Ceramic-X7R 0603
C154	.1µF 50V ±20% Ceramic-X7R 0603
C155	.1µF 50V ±20% Ceramic-X7R 0603
C156	.1µF 50V ±20% Ceramic-X7R 0603
C157	.1µF 50V ±20% Ceramic-X7R 0603
C158	.1µF 50V ±20% Ceramic-X7R 0603
C159	.1µF 50V ±20% Ceramic-X7R 0603
C16	27pF 50V ±10% Ceramic-C0G 0603
C160	.1µF 50V ±20% Ceramic-X7R 0603
C161	.1µF 50V ±20% Ceramic-X7R 0603
C17	27pF 50V ±10% Ceramic-C0G 0603
C18	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C19	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C2	.1µF 50V ±20% Ceramic-X7R 0603
C20	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C21	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C22	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C23	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C24	.1µF 50V ±20% Ceramic-X7R 0603
C25	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C26	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C27	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C28	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C29	.1µF 100V ±5% Film-Polyester Radial
C3	.1µF 50V ±20% Ceramic-X7R 0603
C30	27pF 50V ±10% Ceramic-C0G 0603
C31	27pF 50V ±10% Ceramic-C0G 0603
C32	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C33	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C34	100pF 100V (>50V) ±10% Ceramic-C0G(NP0) 0603
C35	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C36	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C37	27pF 50V ±10% Ceramic-C0G 0603
C38	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C39	1.5µF 50V ±20% Electrolytic Radial
C4	10µF 35V (>25V) ±20% Electrolytic SMT 5.9x5.3mm, NIC UWX1V100MCL1GB
C41	.1µF 50V ±20% Ceramic-X7R 0603
C42	.1µF 50V ±20% Ceramic-X7R 0603
C43	.1µF 50V ±20% Ceramic-X7R 0603

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
C44	27pF 50V ±10% Ceramic-C0G 0603
C45	27pF 50V ±10% Ceramic-C0G 0603
C46	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C47	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C48	100pF 100V (>50V) ±10% Ceramic-C0G(NP0) 0603
C49	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C5	10µF 35V (>25V) ±20% Electrolytic SMT 5.9x5.3mm, NIC UWX1V100MCL1GB
C50	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C51	27pF 50V ±10% Ceramic-C0G 0603
C52	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C53	1.5µF 50V ±20% Electrolytic Radial
C55	.1µF 50V ±20% Ceramic-X7R 0603
C56	.1µF 50V ±20% Ceramic-X7R 0603
C57	.1µF 50V ±20% Ceramic-X7R 0603
C58	10µF 35V (>25V) ±20% Electrolytic SMT 5.9x5.3mm, NIC UWX1V100MCL1GB
C59	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C6	10µF 35V (>25V) ±20% Electrolytic SMT 5.9x5.3mm, NIC UWX1V100MCL1GB
C60	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C61	18pF 50V ±10% Ceramic-C0G(NP0) 0603
C62	18pF 50V ±10% Ceramic-C0G(NP0) 0603
C64	.1µF 50V ±20% Ceramic-X7R 0603
C65	68pF 50V ±20% Ceramic-C0G(NP0) 0603
C66	47µF 16V ±20% Electrolytic SMT 5.9x5.3mm, Panasonic ECE-V1CA470WSR
C67	68pF 50V ±20% Ceramic-C0G(NP0) 0603
C69	68pF 50V ±20% Ceramic-C0G(NP0) 0603
C7	10µF 35V (>25V) ±20% Electrolytic SMT 5.9x5.3mm, NIC UWX1V100MCL1GB
C72	.1µF 50V ±20% Ceramic-X7R 0603
C73	.1µF 50V ±20% Ceramic-X7R 0603
C74	.1µF 50V ±20% Ceramic-X7R 0603
C75	.1µF 50V ±20% Ceramic-X7R 0603
C76	27pF 50V ±10% Ceramic-C0G 0603
C77	27pF 50V ±10% Ceramic-C0G 0603
C78	27pF 50V ±10% Ceramic-C0G 0603
C79	27pF 50V ±10% Ceramic-C0G 0603
C8	10µF 35V (>25V) ±20% Electrolytic SMT 5.9x5.3mm, NIC UWX1V100MCL1GB
C80	220µF 16V ±20% Electrolytic SMT 8x10mm
C81	220µF 16V ±20% Electrolytic SMT 8x10mm
C82	220µF 16V ±20% Electrolytic SMT 8x10mm
C83	220µF 16V ±20% Electrolytic SMT 8x10mm
C85	27pF 50V ±10% Ceramic-C0G 0603
C86	27pF 50V ±10% Ceramic-C0G 0603
C87	27pF 50V ±10% Ceramic-C0G 0603
C88	27pF 50V ±10% Ceramic-C0G 0603
C89	220µF 16V ±20% Electrolytic SMT 8x10mm
C9	27pF 50V ±10% Ceramic-C0G 0603
C90	220µF 16V ±20% Electrolytic SMT 8x10mm
C91	220µF 16V ±20% Electrolytic SMT 8x10mm
C92	220µF 16V ±20% Electrolytic SMT 8x10mm

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
C94	150uF/63v/LowESR 10mm x 25mm UCC LXY63VB151M10X25LL
C95	1.5µF 50V ±20% Electrolytic Radial
C96	150uF/63v/LowESR 10mm x 25mm UCC LXY63VB151M10X25LL
C97	100µF 100V ±20% Electrolytic Radial
C98	.1µF 100V ±5% Film-Polyester Radial
C99	.1µF 50V ±20% Ceramic-X7R 0603
D1	200V Silicon 1A MELF DL4003
D10	200V Silicon 1A MELF DL4003
D11	200V Silicon 1A MELF DL4003
D16	LED T1 Through-Hole Diffused Red 625nm Radial
D17	LED T1 Through-Hole Diffused Red 625nm Radial
D18	LED T1 Through-Hole Diffused Red 625nm Radial
D19	LED T1 Through-Hole Diffused Red 625nm Radial
D2	200V Silicon 1A MELF DL4003
D20	75V Ultra Fast 250mA 350mW SOT-23 BAS16
D21	75V Ultra Fast 250mA 350mW SOT-23 BAS16
D22	75V Ultra Fast 250mA 350mW SOT-23 BAS16
D23	75V Ultra Fast 250mA 350mW SOT-23 BAS16
D24	LED T1 Through Hole Diffused Green 565nm Radial
D25	LED T1 Through Hole Diffused Green 565nm Radial
D26	LED T1 Through Hole Diffused Green 565nm Radial
D27	LED T1 Through Hole Diffused Green 565nm Radial
D28	LED T1 Through Hole Diffused Green 565nm Radial
D29	LED T1 Through Hole Diffused Green 565nm Radial
D3	200V Silicon 1A MELF DL4003
D30	LED T1 Through Hole Diffused Green 565nm Radial
D31	12V Zener (95 Ohms @ 5mA) 225mW SOT-23 BZX84C12-7
D32	LED T1 Through Hole Diffused Yellow 590nm Radial
D33	LED T1 Through Hole Diffused Yellow 590nm Radial
D34	LED T1 Through Hole Diffused Yellow 590nm Radial
D35	75V Ultra Fast 250mA 350mW SOT-23 BAS16
D36	75V Ultra Fast 250mA 350mW SOT-23 BAS16
D37	75V Ultra Fast 250mA 350mW SOT-23 BAS16
D38	75V Ultra Fast 250mA 350mW SOT-23 BAS16
D39	LED T1 Through Hole Diffused Green 565nm Radial
D4	200V Silicon 1A MELF DL4003
D40	LED T1 Through Hole Diffused Green 565nm Radial
D41	LED T1 Through Hole Diffused Green 565nm Radial
D42	LED T1 Through Hole Diffused Green 565nm Radial
D43	LED T1 Through Hole Diffused Green 565nm Radial
D44	LED T1 Through Hole Diffused Green 565nm Radial
D45	LED T1 Through Hole Diffused Green 565nm Radial
D46	12V Zener (95 Ohms @ 5mA) 225mW SOT-23 BZX84C12-7
D47	LED T1 Through Hole Diffused Yellow 590nm Radial
D48	LED T1 Through Hole Diffused Yellow 590nm Radial
D49	LED T1 Through Hole Diffused Yellow 590nm Radial
D5	75V Ultra Fast 250mA 350mW SOT-23 BAS16
D6	100V Schottky 1A SMB B1100LB

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
D7	LED T1 Through Hole Diffused Blue Radial (Bulk)
D8	LED T1 Through-Hole Diffused Red 625nm Radial
D9	47V Zener 225mW SOT-23 BZX84C47
H1	Right Angle Bracket PC Mount Snap-In 4/40
H10	Right Angle Bracket PC Mount Snap-In 4/40
H11	Right Angle Bracket PC Mount Snap-In 4/40
H12	Right Angle Bracket PC Mount Snap-In 4/40
H13	Right Angle Bracket PC Mount Snap-In 4/40
H2	Right Angle Bracket PC Mount Snap-In 4/40
H3	Right Angle Bracket PC Mount Snap-In 4/40
H4	Right Angle Bracket PC Mount Snap-In 4/40
H5	Right Angle Bracket PC Mount Snap-In 4/40
H6	Right Angle Bracket PC Mount Snap-In 4/40
H7	Right Angle Bracket PC Mount Snap-In 4/40
H8	Right Angle Bracket PC Mount Snap-In 4/40
H9	Right Angle Bracket PC Mount Snap-In 4/40
HS1	Heat Sink TO-220 PC Mount
HS2	Heat Sink TO-220 PC Mount
J1	IC Socket 14 Pin DIP .30" Wide
J17	IC Socket 14 Pin DIP .30" Wide
J18	IC Socket 14 Pin DIP .30" Wide
J19	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J2	IC Socket 14 Pin DIP .30" Wide
J20	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J21	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J22	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J23	XLR Male Right Angle NEUTRIK NC3MAH
J28	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J29	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J3	1x3 Male Straight Post Header PC Mount @.156" w Lock Ramp AMP 640445-3
J30	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J31	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J32	XLR Male Right Angle NEUTRIK NC3MAH
J33	IC Socket 14 Pin DIP .30" Wide
J34	IC Socket 14 Pin DIP .30" Wide
J39	RCA Jack Quad Right Angle PC Mount ECI RJ-204S-SG-WW
J4	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J40	1/4" Double Stacked Jack Right Angle CLIFF CL1117
J41	1/4" Double Stacked Jack Right Angle CLIFF CL1117
J42	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J43	1/4" TRS Jack Right Angle Half Threaded Bushing NEUTRIK NRJ6HH
J44	IC Socket 14 Pin DIP .30" Wide
J45	IC Socket 14 Pin DIP .30" Wide
J5	1/4" Tab PC Mount Straight Male Faston AMP 62409-1
J6	3.5mm TRS Jack Right Angle PC Mount, Alpine LJE066AS-3RT
L1	Inductor 330µH .6A Radial 5mm
L2	Inductor 330µH .6A Radial 5mm
L3	Inductor 250µH Toroid 1.5A 21mm x 4.5 mm

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
L4	Inductor 330µH .6A Radial 5mm
Q1	MMBTA56 80V 500mA PNP Small Signal SMT Transistor SOT-23
Q2	MMBTA06 80V 500mA NPN Small Signal SMT Transistor SOT-23
Q3	MMBTA06 80V 500mA NPN Small Signal SMT Transistor SOT-23
Q4	TIP29C 100V 1A NPN Epitaxial Silicon Transistor TO-220
Q5	MMBT3904 40V 200mA NPN Small Signal SMT Transistor SOT-23
Q6	MMBT3904 40V 200mA NPN Small Signal SMT Transistor SOT-23
Q7	MMBT3904 40V 200mA NPN Small Signal SMT Transistor SOT-23
Q8	MMBT3904 40V 200mA NPN Small Signal SMT Transistor SOT-23
Q9	MMBTA06 80V 500mA NPN Small Signal SMT Transistor SOT-23
R1	3.30K 0603 ±1% Metal Film
R10	10.0K 0603 ±1% Metal Film
R100	10.0K 0603 ±1% Metal Film
R101	7.50K 0603 1%
R102	10.0K 0603 ±1% Metal Film
R103	10.0K 0603 ±1% Metal Film
R104	10.0K 0603 ±1% Metal Film
R105	10.0K 0603 ±1% Metal Film
R106	100K 0603 ±1% Metal Film
R107	2.00K 0603 ±1% Metal Film
R108	2.4K 0603 ±5% Carbon Film
R109	1.00K 0603 ±1% Metal Film
R11	10.0K 0603 ±1% Metal Film
R110	1.54K 0603 ±1% Metal Film
R111	1.54K 0603 ±1% Metal Film
R112	1.54K 0603 ±1% Metal Film
R113	56 Ohm 0805 ±5% Carbon Film
R114	56 Ohm 0805 ±5% Carbon Film
R115	100 0603 ±1% Metal Film
R116	100 0603 ±1% Metal Film
R117	10.0K 0603 ±1% Metal Film
R118	10.0K 0603 ±1% Metal Film
R119	100K 0603 ±1% Metal Film
R12	6.81K 0603 ±1% Metal Film
R120	100K 0603 ±1% Metal Film
R121	20.0K 0603 ±1% Metal Film
R122	15.0K 0603 ±1% Metal Film
R123	422K 0603 ±1% Metal Film
R124	68K 0603 ±5% Carbon Film
R125	33.0K 0603 ±1% Metal Film
R126	4.7K 0603 ±5% Carbon Film
R127	10.0K 0603 ±1% Metal Film
R128	680 Ohm 0805 ±1% Metal Film
R129	680 Ohm 0805 ±1% Metal Film
R13	6.81K 0603 ±1% Metal Film
R130	56 Ohm 0805 ±5% Carbon Film
R131	22.1K Ohm 0603 ±1% Metal Film
R132	22.1K Ohm 0603 ±1% Metal Film

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
R133	22.1K Ohm 0603 ±1% Metal Film
R134	22.1K Ohm 0603 ±1% Metal Film
R135	22.1K Ohm 0603 ±1% Metal Film
R136	22.1K Ohm 0603 ±1% Metal Film
R137	22.1K Ohm 0603 ±1% Metal Film
R138	22.1K Ohm 0603 ±1% Metal Film
R139	10.0K 0603 ±1% Metal Film
R14	56 Ohm 0805 ±5% Carbon Film
R140	10.0K 0603 ±1% Metal Film
R141	10.0K 0603 ±1% Metal Film
R142	10.0K 0603 ±1% Metal Film
R143	22.1K Ohm 0603 ±1% Metal Film
R144	22.1K Ohm 0603 ±1% Metal Film
R145	10.0K 0603 ±1% Metal Film
R146	10.0K 0603 ±1% Metal Film
R147	649 Ohm 0603 ±1% Metal Film
R148	3.30K 0603 ±1% Metal Film
R149	3.30K 0603 ±1% Metal Film
R15	24.3K 0603 ±1% Metal Film
R150	3.30K 0603 ±1% Metal Film
R151	3.30K 0603 ±1% Metal Film
R152	3.30K 0603 ±1% Metal Film
R153	3.30K 0603 ±1% Metal Film
R154	3.30K 0603 ±1% Metal Film
R155	3.30K 0603 ±1% Metal Film
R156	5.60K Ohm 0603 ±1% Metal Film
R157	56 Ohm 0805 ±5% Carbon Film
R158	56 Ohm 0805 ±5% Carbon Film
R159	10.0K 0603 ±1% Metal Film
R16	2.00K 0603 ±1% Metal Film
R160	10.0K 0603 ±1% Metal Film
R161	10.0K 0603 ±1% Metal Film
R162	10.0K 0603 ±1% Metal Film
R163	10.0K 0603 ±1% Metal Film
R164	10.0K 0603 ±1% Metal Film
R165	10.0K 0603 ±1% Metal Film
R166	10.0K 0603 ±1% Metal Film
R167	10.0K 0603 ±1% Metal Film
R168	10.0K 0603 ±1% Metal Film
R169	10.0K 0603 ±1% Metal Film
R17	24.3K 0603 ±1% Metal Film
R170	10.0K 0603 ±1% Metal Film
R171	10.0K 0603 ±1% Metal Film
R172	10.0K 0603 ±1% Metal Film
R173	10.0K 0603 ±1% Metal Film
R174	10.0K 0603 ±1% Metal Film
R175	31.6K 0603 ±1% Metal Film
R176	31.6K 0603 ±1% Metal Film

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
R177	31.6K 0603 ±1% Metal Film
R178	31.6K 0603 ±1% Metal Film
R18	56 Ohm 0805 ±5% Carbon Film
R181	10.0K 0603 ±1% Metal Film
R182	10.0K 0603 ±1% Metal Film
R183	10.0K 0603 ±1% Metal Film
R184	10.0K 0603 ±1% Metal Film
R185	10.0K 0603 ±1% Metal Film
R186	10.0K 0603 ±1% Metal Film
R187	10.0K 0603 ±1% Metal Film
R188	10.0K 0603 ±1% Metal Film
R189	10.0K 0603 ±1% Metal Film
R19	2.00K 0603 ±1% Metal Film
R190	10.0K 0603 ±1% Metal Film
R191	10.0K 0603 ±1% Metal Film
R192	10.0K 0603 ±1% Metal Film
R193	10.0K 0603 ±1% Metal Film
R194	10.0K 0603 ±1% Metal Film
R195	10.0K 0603 ±1% Metal Film
R196	10.0K 0603 ±1% Metal Film
R197	31.6K 0603 ±1% Metal Film
R198	31.6K 0603 ±1% Metal Film
R199	31.6K 0603 ±1% Metal Film
R2	1.00K 0603 ±1% Metal Film
R20	10.0K 0603 ±1% Metal Film
R200	31.6K 0603 ±1% Metal Film
R203	680 Ohm 0805 ±1% Metal Film
R204	680 Ohm 0805 ±1% Metal Film
R208	0 Ohm 0603 ±5% Carbon Film
R21	1.00K 0603 ±1% Metal Film
R210	0 Ohm 0603 ±5% Carbon Film
R211	10 Ohm 0805 ±1% Metal Film
R213	2.00K 0603 ±1% Metal Film
R214	2.00K 0603 ±1% Metal Film
R215	249 ohm 0603 ±1% Metal Film
R216	249 ohm 0603 ±1% Metal Film
R217	10 Ohm 0805 ±1% Metal Film
R218	10 Ohm 0805 ±1% Metal Film
R219	10 Ohm 0805 ±1% Metal Film
R22	7.50K 0603 1%
R220	10 Ohm 0805 ±1% Metal Film
R221	10 Ohm 0805 ±1% Metal Film
R222	10 Ohm 0805 ±1% Metal Film
R223	1.00K 0603 ±1% Metal Film
R224	1.00K 0603 ±1% Metal Film
R225	1.00K 0603 ±1% Metal Film
R226	1.00K 0603 ±1% Metal Film
R227	10 Ohm 0805 ±1% Metal Film

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
R228	10 Ohm 0805 ±1% Metal Film
R229	2.4K 0603 ±5% Carbon Film
R23	6.81K 0603 ±1% Metal Film
R230	2.4K 0603 ±5% Carbon Film
R231	2.00K 0603 ±1% Metal Film
R232	2.00K 0603 ±1% Metal Film
R233	1.00K 0603 ±1% Metal Film
R234	1.00K 0603 ±1% Metal Film
R235	10 Ohm 0805 ±1% Metal Film
R236	10 Ohm 0805 ±1% Metal Film
R237	10 Ohm 0805 ±1% Metal Film
R238	10 Ohm 0805 ±1% Metal Film
R239	249 ohm 0603 ±1% Metal Film
R24	56 Ohm 0805 ±5% Carbon Film
R240	249 ohm 0603 ±1% Metal Film
R241	249 ohm 0603 ±1% Metal Film
R242	249 ohm 0603 ±1% Metal Film
R243	3.30K 0603 ±1% Metal Film
R244	3.30K 0603 ±1% Metal Film
R245	4.7K 0603 ±5% Carbon Film
R246	10.0K 0603 ±1% Metal Film
R247	10.0K 0603 ±1% Metal Film
R248	10.0K 0603 ±1% Metal Film
R249	10.0K 0603 ±1% Metal Film
R25	10.0K 0603 ±1% Metal Film
R250	10 Ohm 0603 ±1% Metal Film
R251	1.00K 0603 ±1% Metal Film
R252	10.0K 0603 ±1% Metal Film
R253	10.0K 0603 ±1% Metal Film
R254	10.0K 0603 ±1% Metal Film
R255	10.0K 0603 ±1% Metal Film
R26	220 Ohm 0603 ±5% Carbon Film
R27	1.00K 0603 ±1% Metal Film
R28	1.00K 0603 ±1% Metal Film
R29	10.0K 0603 ±1% Metal Film
R3	31.6K 0603 ±1% Metal Film
R30	220 Ohm 0603 ±5% Carbon Film
R31	10.0K 0603 ±1% Metal Film
R32	10.0K 0603 ±1% Metal Film
R34	10.0K 0603 ±1% Metal Film
R35	10.0K 0603 ±1% Metal Film
R36	10.0K 0603 ±1% Metal Film
R38	10.0K 0603 ±1% Metal Film
R39	10.0K 0603 ±1% Metal Film
R4	806 Ohm 0603 ±1% Metal Film
R40	10.0K 0603 ±1% Metal Film
R41	10.0K 0603 ±1% Metal Film
R42	10.0K 0603 ±1% Metal Film

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
R43	7.15K 0603 1%
R44	10.0K 0603 ±1% Metal Film
R45	1.54K 0603 ±1% Metal Film
R46	1.54K 0603 ±1% Metal Film
R47	1.54K 0603 ±1% Metal Film
R48	1.54K 0603 ±1% Metal Film
R49	1.54K 0603 ±1% Metal Film
R5	680 Ohm 0805 ±1% Metal Film
R50	2.00K 0603 ±1% Metal Film
R51	15.0K 0603 ±1% Metal Film
R52	2.00K 0603 ±1% Metal Film
R53	15.0K 0603 ±1% Metal Film
R54	56 Ohm 0805 ±5% Carbon Film
R55	10.0K 0603 ±1% Metal Film
R56	10.0K 0603 ±1% Metal Film
R57	56 Ohm 0805 ±5% Carbon Film
R58	56 Ohm 0805 ±5% Carbon Film
R59	1.00K 0603 ±1% Metal Film
R6	1.00K 0603 ±1% Metal Film
R60	1.00K 0603 ±1% Metal Film
R61	10 Ohm 0805 ±1% Metal Film
R62	10 Ohm 0805 ±1% Metal Film
R63	10 Ohm 0805 ±1% Metal Film
R64	10 Ohm 0805 ±1% Metal Film
R65	10.0K 0603 ±1% Metal Film
R66	7.50K 0603 1%
R67	10.0K 0603 ±1% Metal Film
R68	10.0K 0603 ±1% Metal Film
R69	10.0K 0603 ±1% Metal Film
R7	4.7K 0603 ±5% Carbon Film
R70	10.0K 0603 ±1% Metal Film
R71	100K 0603 ±1% Metal Film
R72	2.00K 0603 ±1% Metal Film
R73	2.4K 0603 ±5% Carbon Film
R74	1.00K 0603 ±1% Metal Film
R75	1.54K 0603 ±1% Metal Film
R76	1.54K 0603 ±1% Metal Film
R77	1.54K 0603 ±1% Metal Film
R8	100K 0603 ±1% Metal Film
R80	100 0603 ±1% Metal Film
R81	100 0603 ±1% Metal Film
R82	100 0603 ±1% Metal Film
R83	10.0K 0603 ±1% Metal Film
R84	10.0K 0603 ±1% Metal Film
R85	100K 0603 ±1% Metal Film
R86	100K 0603 ±1% Metal Film
R87	20.0K 0603 ±1% Metal Film
R88	15.0K 0603 ±1% Metal Film

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
R89	422K 0603 ±1% Metal Film
R9	3.16K Ohm 0603 ±1% Metal Film
R90	68K 0603 ±5% Carbon Film
R91	33.0K 0603 ±1% Metal Film
R92	4.7K 0603 ±5% Carbon Film
R93	10.0K 0603 ±1% Metal Film
R94	1.00K 0603 ±1% Metal Film
R95	1.00K 0603 ±1% Metal Film
R96	10 Ohm 0805 ±1% Metal Film
R97	10 Ohm 0805 ±1% Metal Film
R98	10 Ohm 0805 ±1% Metal Film
R99	10 Ohm 0805 ±1% Metal Film
SW1	Mini Right Angle DPDT PC Mount 2.8mm Shaft, E-switch LC2259EENP
SW2	Mini Right Angle DPDT PC Mount 2.8mm Shaft, E-switch LC2259EENP
SW3	Mini Right Angle DPDT PC Mount 2.8mm Shaft, E-switch LC2259EENP
SW4	Mini Right Angle DPDT PC Mount 2.8mm Shaft, E-switch LC2259EENP
T1	Transformer Audio Output 1:1.3 ALTRAN C-3276-2
T2	Transformer Audio Output 1:1.3 ALTRAN C-3276-2
U1	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U10	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U11	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U12	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U13	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U14	LM3915 Dot/Bar Display Driver
U15	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U16	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U17	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U18	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U19	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U2	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U20	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U21	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U22	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U23	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U24	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U25	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U26	LM2586T-ADJ 3A Flyback Switching Voltage Regulator TO-220 (TO7A)
U27	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U28	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U3	LM317T 3-Terminal Positive Adjustable Regulator TO-220
U4	LM337 3-Terminal 1.5A Negative Adjustable Voltage Regulator TO-220
U5	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U6	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U7	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U8	NJM4560E Dual Operational Amplifier SMT 8-Pin EMP
U9	LM3915 Dot/Bar Display Driver
VR1	Noble V16L4(PH2D) b20k(x2) w detent 21
VR10	Noble V16L4(PH2D) b10k

MX-508 Non-Channel Cards Bill of Materials (00020 Version Rev.E)

(Note: "None" parts are not listed)

Designator	Description
VR2	Noble V16L4(PH2D) b10k
VR3	Noble V16L4(PH2D) b10k
VR4	Noble V16L4(PH2D) b10k
VR6	Noble V16L4(PH2D) Dual Concentric b5k(cc)+b20k(x2)
VR7	Noble V16L4(PH2D) Dual Concentric b5k(cc)+b20k
VR8	Noble V16L4(PH2D) Dual Concentric b5k(cc)+b20k(x2)
VR9	Noble V16L4(PH2D) b10k

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