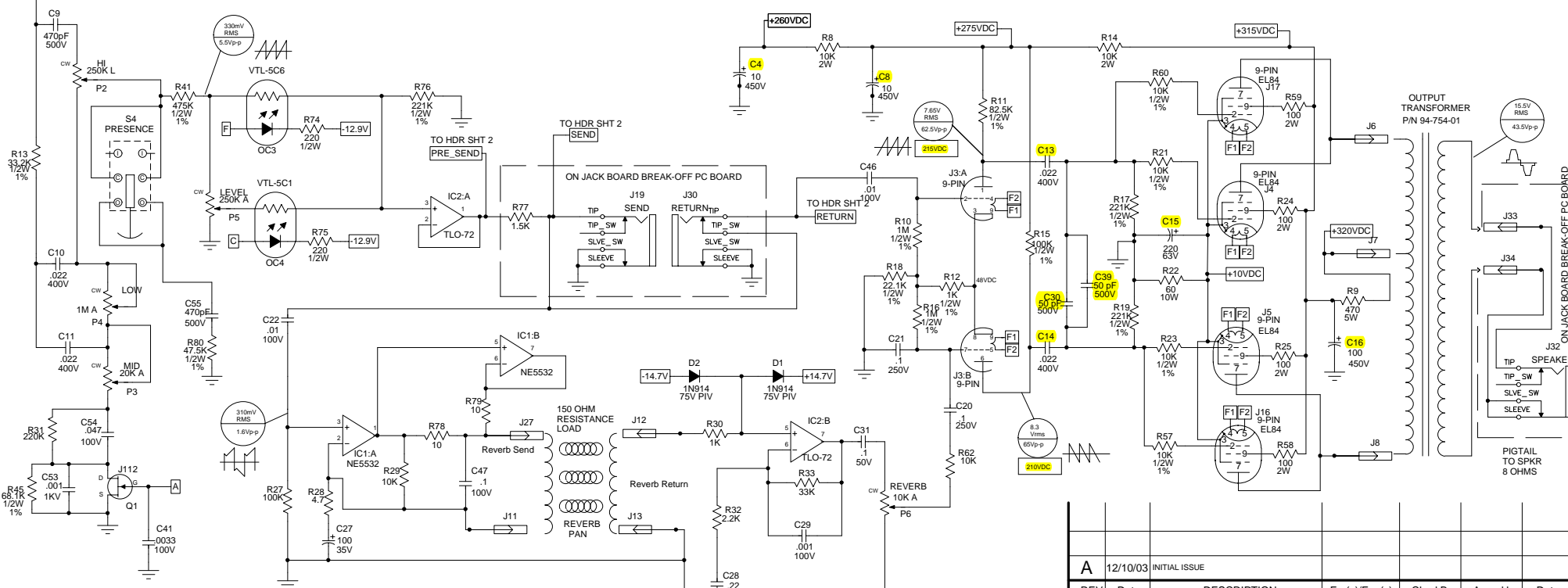
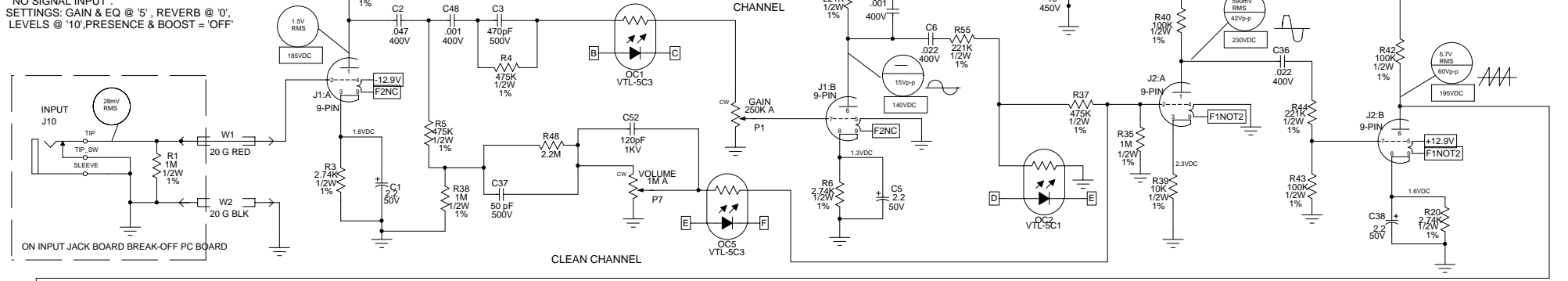


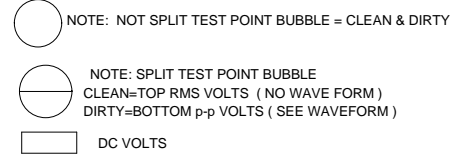
NOTE: TEST POINT CONDITIONS

LINE: 120 Vrms SPEAKER LOAD: 8 OHM RESISTANCE  
 REVERB SEND LOAD: 150 OHM RESISTANCE  
 INPUT: 28mVrms @ 500HZ  
 VOLTAGES: ALL DC VOLTAGES MEASURED WITH  
 "NO SIGNAL INPUT"  
 SETTINGS: GAIN & EQ @ '5', REVERB @ '0',  
 LEVELS @ '10', PRESENCE & BOOST = 'OFF'



CAUTION:  
 THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL.  
 TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED  
 SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND  
 THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

NOTES:  
 1) CAUTION: SHOCK HAZARD!!  
 THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER  
 AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE  
 TOUCHING INTERNAL PARTS.  
 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL.  
 CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.  
 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE  
 AND 10 MEGOHM DIGITAL VOLTMETER.



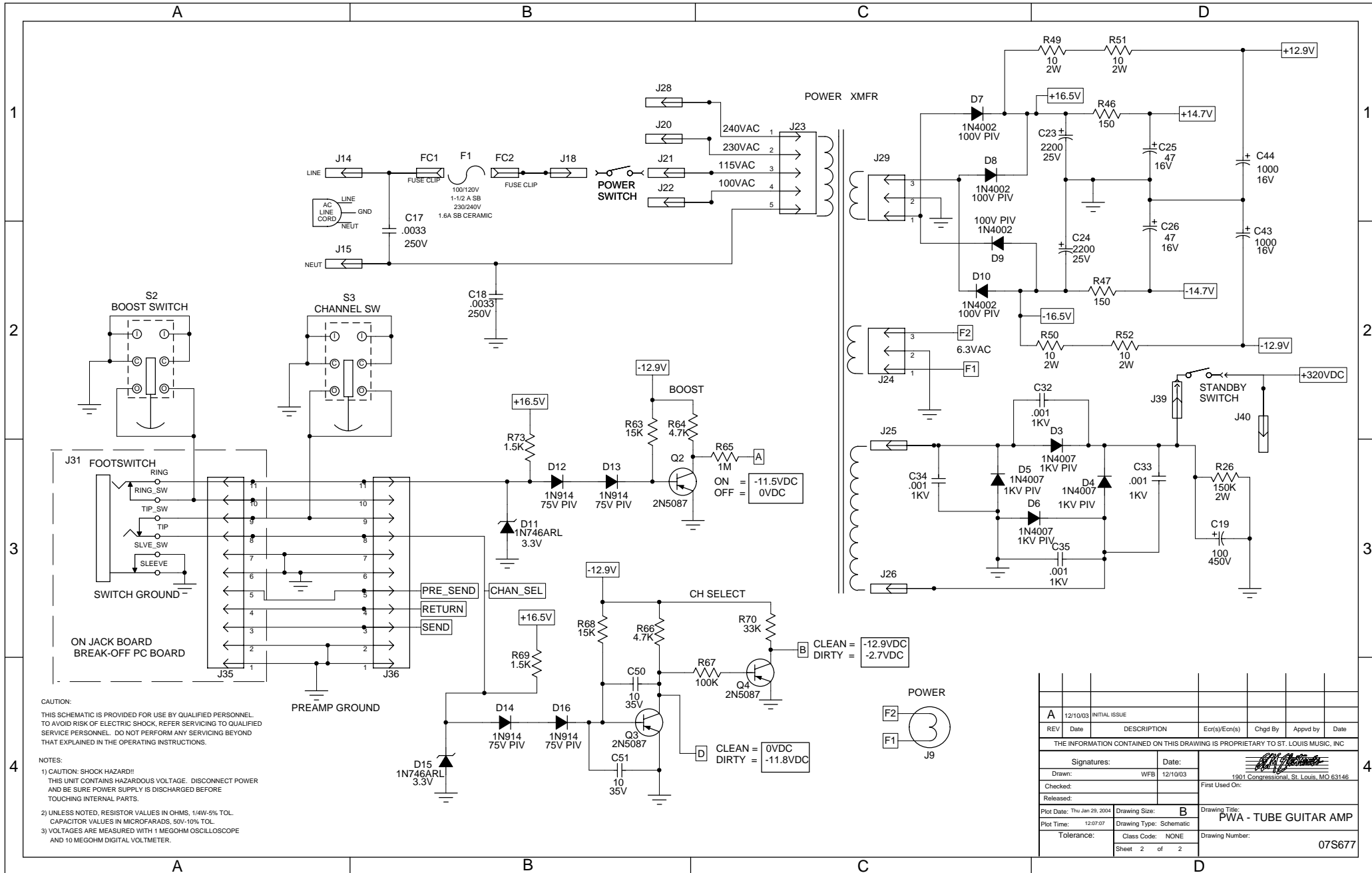
Power Table		
RefDes	+14.7V	-14.7V
IC1 & IC2	8	4

REV	Date	DESCRIPTION	Ecr(s)/Ecn(s)	Chgd By	Appvd by	Date
A	12/10/03	INITIAL ISSUE				

THE INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO  
 ST. LOUIS MUSIC, INC.

Signatures:	Date:	 1901 Congressional, St. Louis, MO 63146 First Used On:
Drawn: WFB	12/10/03	
Checked:		
Released:		

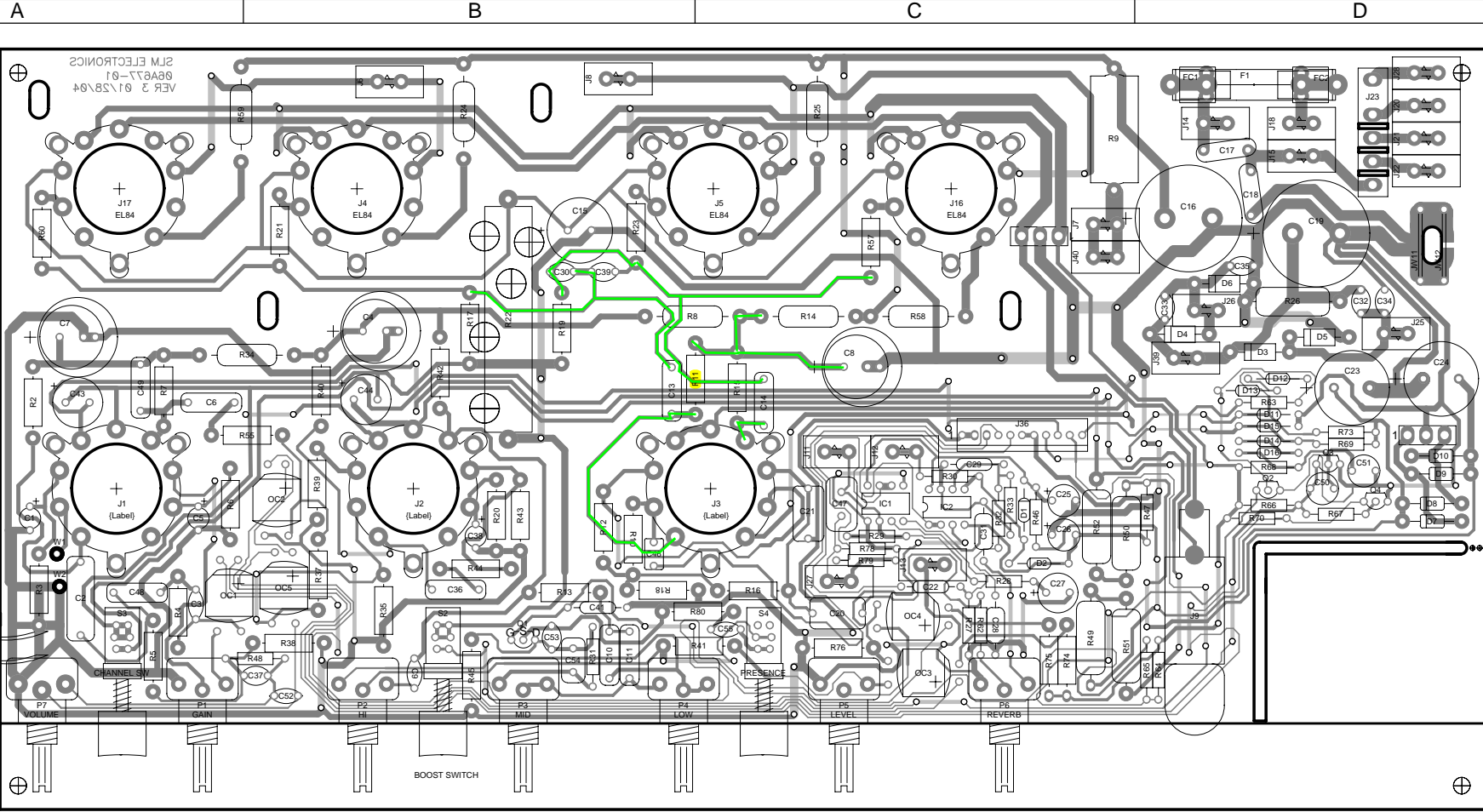
Plot Date: Thu Jan 29, 2004	Drawing Size: C	Drawing Title: PWA - TUBE GUITAR AMP
Plot Time: 12:07:06	Drawing Type: Schematic	Drawing Number: 07S677
Tolerance:	Class Code: NONE	Sheet 1 of 2



REV	Date	DESCRIPTION	Ecr(s)/Ecr(n)	Chgd By	Appvd by	Date
A	12/10/03	INITIAL ISSUE				

THE INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC

Signatures:		Date:
Drawn: WFB	12/10/03	1901 Congressional, St. Louis, MO 63146
Checked:		First Used On:
Released:		
Plot Date: The Jan 29, 2004	Drawing Size: B	Drawing Title: PWA - TUBE GUITAR AMP
Plot Time: 12:07:07	Drawing Type: Schematic	
Tolerance:	Class Code: NONE	Drawing Number:
Sheet 2 of 2		07S677



SLM ELECTRONICS  
 68A877-01  
 VER 3 01\28\04

ASSY P/N 07-677-01

FOR ASSEMBLY P/N: 07-677-01  
 USE SCHEMATIC # 07S677

- NOTES:  
 1. APPLY RTV SILICONE SEALANT PER SLM DOCUMENT NUMBER 00A005-00

CAUTION:  
 THIS ASSEMBLY DRAWING IS PROVIDED FOR USE BY QUALIFIED PERSONNEL.  
 TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.  
 DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

REV	Date	DESCRIPTION	ECR(s)/ECN(s)	Chgd By	Appvd by	Date
A	12/28/03	INITIAL ISSUE				
THE INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
Signatures:		Date:		 1901 Congressional, St. Louis, MO 63146		
Drawn: WFB		12/19/03				
Checked:						
Released:						
Plot Date: Thu Jan 29, 2004		Drawing Size: B		Drawing Title: PWA - GUITAR AMP		
Plot Time: 12:00:34		Drawing Type: ASSEMBLY		Drawing Number:		
Tolerance:		Class Code: NONE		Sheet 1 of 1		
						07-677

<b>A</b>	<b>1/29/04</b>	<b>INITIAL ISSUE</b>				
Rev.	Date	DESC.	ECR(s)/ECN(s)	Chgd by	Appvd by	DATE
THE INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
			SLM Electronics 1901 Congressional Drive, St. Louis, MO 63146			
Signatures:		Date:				
Drawn: WFB		1/28/04				
Checked:				First Used On:		
Released:						
Tolerance:	Drawing Size:	A		Drawing Title:	PWA - 30W TUBE	
	Drawing Type:	PL		Drawing No.:	07-677-PL	
	Class Code:					
	Scale:	N/A				

**PARTS LIST**

ASSEMBLY PART # 07-677-01

REVISION: A

ITEM	P/N	DESC	VALUE	LABEL	MFG P/N 1	MFG P/N 2
C1	12R225-50	2.2 uF 50V [20% TOL] EL	2.2		USA1H2R2MCA1T -- AVNET	SSP2R2M1HC07 -- JAMICON
C2	10-473-10	.047 uF 400V [10% TOL] WIMA MTLPOLY	0.047		MKS4 .047-400-10 -- WIMA	
C3	10-471-52	470 pF 500V [10% TOL] Z5F DISK	470pF		DD471 -- PHILLIPS	DP500K470Y5F -- ECI
C4	12-106-95	10 uF 450V 20% EL	10		UVX2W100MHA -- NICHICON	1SG2WWB106M1320 -- SAMHWA
C5	12R225-50	2.2 uF 50V [20% TOL] EL	2.2		USA1H2R2MCA1T -- AVNET	SSP2R2M1HC07 -- JAMICON
C6	10-223-10	.022 uF 400V [10% TOL] WIMA MTLPOLY	0.022		MKS4 .022-400-10 -- WIMA	
C7	12-106-95	10 uF 450V 20% EL	10		UVX2W100MHA -- NICHICON	1SG2WWB106M1320 -- SAMHWA
C8						
C9	10-471-52	470 pF 500V [10% TOL] Z5F DISK	470pF		DD471 -- PHILLIPS	DP500K470Y5F -- ECI
C10	10-223-10	.022 uF 400V [10% TOL] WIMA MTLPOLY	0.022		MKS4 .022-400-10 -- WIMA	
C11						
C13						
C14						
C15	12-227-62	220 uF 63V 20% EL	220		CEM63-0220 -- ECI	SKR221M1JG21 -- JAMICON
C16	12-107-93	100 uF 450V 20% EL	100		LLQ2W101MHSZ -- NICHICON	ECOS2WP101BA -- PANASONIC
C17	10-332-01	.0033 uF [20% TOL] UL/VDE DISK	0.0033		DE2E3KH332MA3B -- MURATA	
C18						
C19	12-107-93	100 uF 450V 20% EL	100		LLQ2W101MHSZ -- NICHICON	ECOS2WP101BA -- PANASONIC
C20	10-104-21	.1uF 250V [10% TOL]	0.1		QXJ2E104KTP -- NICHICON	DMPP104K2E -- MERITEK
C21						
C22	10A103-11	.01 uF 100V [10% TOL] X7R	0.01		SA201C103KAA -- AVX	C420C103K1R5CA -- KEMET
C23	12-228-26	2200 uF 25V 20% EL	2200		UVX1E222MHA1AA -- NICHICON	228CKR025M-SI -- ILLINOIS CAPACITOR
C24						
C25	12R476-12	47 uF 16V [20% TOL] EL	47		SSP470M1CE07 -- JAMICON	USA1C470MCA1TE -- NICHICON
C26						
C27	12R107-32	100 uF 35V [20% TOL] EL	100		1SG1VAB107MAR08 -- SAMHWA	SKP101M1VE11 -- JAMICON
C28	10A224-01	.22 uF 50V [10% TOL] X7R	0.22		SA305C224KAA -- AVX	C430C224K5R5CA -- KEMET
C29	10A102-11	.001 uF 100V [10% TOL] X7R	0.001		SA101C102KAA -- AVX	C410C102K1R5CA -- KEMET
C30	10R500-02	50 pF 500V [10% TOL] S3N DISK RADIAL TAPED	50 pF		S500K25S3NN6TK5 -- AVNET	D500K25S3NNTHAL -- PHILLIPS
C31	10A104-01	.1 uF 50V [10% TOL] X7R	0.1		SA305C104KAA -- AVX	C430C104K5R5CA -- KEMET
C32	10R102-02	.001 1KV Z5F DISC [10% TOL]	0.001		D102K39Z5FNTHM -- PHILLIPS	D102K39Z5FNTHM -- PHILLIPS
C33						
C34						
C35						
C36	10-223-10	.022 uF 400V [10% TOL] WIMA MTLPOLY	0.022		MKS4 .022-400-10 -- WIMA	
C37	10R500-02	50 pF 500V [10% TOL] S3N DISK RADIAL TAPED	50 pF		S500K25S3NN6TK5 -- AVNET	D500K25S3NNTHAL -- PHILLIPS
C38	12R225-50	2.2 uF 50V [20% TOL] EL	2.2		USA1H2R2MCA1T -- AVNET	SSP2R2M1HC07 -- JAMICON
C39	10R500-02	50 pF 500V [10% TOL] S3N DISK RADIAL TAPED	50 pF		S500K25S3NN6TK5 -- AVNET	D500K25S3NNTHAL -- PHILLIPS
C41	10A332-01	.0033 uF 100V [10% TOL] X7R	0.0033		SA101C332KAA -- AVX	C410C332K1R5CA -- KEMET
C43	12R108-12	1000 uF 16V [20% TOL] EL	1000		SKP102M1CG16 -- JAMICON	UVR1C102MPA1TD -- NICHICON
C44						
C46	10R103-03	.01 uF 100V [10% TOL] RADIAL POLY	0.01		DLR1S1KR -- CORNELL DUBILIER	5TY2ARB103KAN -- SAMHWA
C47	10R104-03	.1 uF 100V [10% TOL] RADIAL POLY	0.1		DLR1P1KR -- CORNELL DUBILIER	5TY2ARB104KAN -- SAMHWA
C48	10-102-10	.001 uF 400V [10% TOL] WIMA MTLPOLY	0.001		FKS31000-400-5B -- WIMA	MFR5102K400 -- EVOX
C49						
C50	12R106-36	10 uF 35V [20% TOL] EL NP	10		1NS1VAB106MAP6L -- SAMHWA	USP1V100MCA1TE -- AVNET CORP
C51						
C52	10-121-01	120 pF 1KV DISK	120pF		S121K29S3NN63L6 -- PHILLIPS	
C53	10R102-02	.001 1KV Z5F DISC [10% TOL]	0.001		D102K39Z5FNTHM -- PHILLIPS	D102K39Z5FNTHM -- PHILLIPS

ASSEMBLY PART #

07-677-01

REVISION:

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ITEM	P/N	DESC	VALUE	LABEL	MFG P/N 1	MFG P/N 2
C54	10R473-03	.047 uF 100V [10% TOL] RADIAL POLY	0.047		DLR1S47KR -- CORNELL DUBILIER	5TY2ARB473KAN -- SAMHWA
C55	10-471-52	470 pF 500V [10% TOL] Z5F DISK	470pF		DD471 -- PHILLIPS	DP500K470Y5F -- ECI
D1	21A914-01	75V PIV 10mA/1V .5W	1N914		1N4148TR -- MARSHALL	
D2						
D3	21A407-01	1KV PIV 1A .5W	1N4007		1N4007TR -- AVX	
D4						
D5						
D6						
D7	21A402-01	100V PIV 1A .5W	1N4002		1N4002TR -- AVX	
D8						
D9						
D10						
D11	21A146-01	3.3V .4W ZENER 28 OHM Zz	1N746ARL		1N746ATR -- FAIRCHILD	
D12	21A914-01	75V PIV 10mA/1V .5W	1N914		1N4148TR -- MARSHALL	
D13						
D14						
D15	21A146-01	3.3V .4W ZENER 28 OHM Zz	1N746ARL		1N746ATR -- FAIRCHILD	
D16	21A914-01	75V PIV 10mA/1V .5W	1N914		1N4148TR -- MARSHALL	
F1	23-308-05	1.5 AMP SB 3AG FUSE	1-1/2 A SB		M31301.5 -- LITTELFUSE	
FC1	23-926-02	Universal Fuse Clip	FUSE CLIP		OG 0751.0099 -- SCHURTER	POP AD43H -- ENGINEERED FASTENERS
FC2						
IC1	37-532-01	NE5532(N/P) DUAL OP-AMP	NE5532		NE5532P -- TI	
IC2	37-072-01	TLO-72CP DUAL OP-AMP	TLO-72		NJM072B -- NJR	TLO-72CP -- SGS THOMPSON
J1	17-451-09	9 PIN TOP PC MNT TUBE SOCKET	9-PIN		VT9-PT-2 -- BELTON	
J2						
J3						
J4				EL84		
J5						
J6	17-894-01	.187 PC TAB STBL LOC 6024-6			6024-6 -- ZIERICK MFG	
J7						
J8						
J9	17-581-01	PC MNT BAYONET SOCKET	LAMP HOLDER	POWER	07-35XP11N -- LIGHTING COMPONENTS	
J10	39-012-01	112APC JACK VERT	112 APC	INPUT	LJ-0695F-02-3TS -- LIH SHENG PRECISION	
J11	17-894-01	.187 PC TAB STBL LOC 6024-6			6024-6 -- ZIERICK MFG	
J12						
J13						
J14	17-836-01	.250 PC TAB STBL LOC 6021-6			6021-6 -- ZIERICK MFG	
J15						
J16	17-451-09	9 PIN TOP PC MNT TUBE SOCKET	9-PIN	EL84	VT9-PT-2 -- BELTON	
J17						
J18	17-894-01	.187 PC TAB STBL LOC 6024-6			6024-6 -- ZIERICK MFG	
J19	39-119-01	T/S JACK HORIZ CHROME NUT	T/S	SEND	S4-BNB-BLK/PC/A CL1308T -- CLIFF ELECTRONICS	LJB0664 -- LIH SHENG PRECISION
J20	17-894-01	.187 PC TAB STBL LOC 6024-6			6024-6 -- ZIERICK MFG	
J21						
J22						
J23	17-320-05	5 PIN HEADER 5MM POLAR			10-63-3053 -- AVNET	
J24	17-310-03	.156 ST POL MFSS156-3-D HEADER			MFSS156-3-D -- PANCON	
J25	17-836-01	.250 PC TAB STBL LOC 6021-6			6021-6 -- ZIERICK MFG	
J26						
J27						

ASSEMBLY PART #

07-677-01

REVISION:

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ITEM	P/N	DESC	VALUE	LABEL	MFG P/N 1	MFG P/N 2
J28	17-894-01	.187 PC TAB STBL LOC 6024-6			6024-6 -- ZIERICK MFG	
J29	17-310-03	.156 ST POL MFSS156-3-D HEADER			MFSS156-3-D -- PANCON	
J30	39-119-01	T/S JACK HORIZ CHROME NUT	T/S	RETURN	S4-BNB-BLK/PC/A CL1308T -- CLIFF ELECTRONICS	LJB0664 -- LIH SHENG PRECISION
J31	39-120-01	T/R/S JACK CHROME NUT	T/R/S	FOOTSWITCH	S4-BBB-BLK/PC/A CL1330T -- CLIFF ELECTRONICS	
J32	39-119-01	T/S JACK HORIZ CHROME NUT	T/S	SPEAKER	S4-BNB-BLK/PC/A CL1308T -- CLIFF ELECTRONICS	
J33	17-894-01	.187 PC TAB STBL LOC 6024-6			6024-6 -- ZIERICK MFG	
J34						
J35	17-105-11	.1 ST POL LOCK MLSS100-11 HEADER			MLSS100-11-C -- PANCON	
J36						
J39	17-894-01	.187 PC TAB STBL LOC 6024-6			6024-6 -- ZIERICK MFG	
J40						
JW11	76-000-05	22 GA TINNED COPPER	0		22TC122 UNINSUL -- ADVENT	
JW12						
OC1	66-101-01	VTL-5C3 VACTROL	VTL-5C3		VT5C3 -- PERKIN-ELMER	
OC2	66-104-01	VTL-5C1 VACTROL	VTL-5C1		VT5C1 -- PERKIN-ELMER	
OC3	66-102-01	VTL-5C6 VACTROL	VTL-5C6		VT5C6 -- PERKIN-ELMER	
OC4	66-104-01	VTL-5C1 VACTROL	VTL-5C1		VT5C1 -- PERKIN-ELMER	
OC5	66-101-01	VTL-5C3 VACTROL	VTL-5C3		VT5C3 -- PERKIN-ELMER	
P1	70-254-70	250K AUDIO 5%@50% [10% TOL] HORIZ MNT MTL 16MM	250K A	GAIN	V16L4[7X5+6_5][PH2D]N15[4_75]KC[BR]-15A250K(NO STOPPER)/T -- NOBLE USA	
P2	70-306-70	250K LINEAR [10% TOL] HORIZ MNT MTL	250K L	HI	V16L4(7X5+6_5)(PH2D)N15(4_75)KC(BR)-B250K(NO STOPPER)/T -- NOBLE	
P3	70-203-70	20K AUDIO [15%@50%] HORIZ MNT	20K A	MID	V16L4(7X5+6_5)(PH2D)N15(4_75)KC(BR)15A10K(NO STOPPER)/T -- NOBLE USA	
P4	70-105-70	1M AUDIO 15%@50% [10% TOL] HORIZ MNT MTL	1M A	LOW	V16L4(7X5+6_5)(PH2D)N15(4_75)KC(BR)-15A1M(NO STOPPER)/T -- NOBLE USA	
P5	70-254-70	250K AUDIO 5%@50% [10% TOL] HORIZ MNT MTL 16MM	250K A	LEVEL	V16L4[7X5+6_5][PH2D]N15[4_75]KC[BR]-15A250K(NO STOPPER)/T -- NOBLE USA	
P6	70-103-70	10K AUDIO 15%@50% (10% TOL) HORIZ MNT MTL 16MM	10K A	REVERB	V16L4(7X5+6_5)(PH2D)N15(4_75)KC(BR)-15A10K9NO STOPPER)/T -- NOBLE USA	
P7	70-105-70	1M AUDIO 15%@50% [10% TOL] HORIZ MNT MTL	1M A	VOLUME	V16L4(7X5+6_5)(PH2D)N15(4_75)KC(BR)-15A1M(NO STOPPER)/T -- NOBLE USA	
PWB1	06A677-01	PWB - 30W TUBE				
Q1	96R112-01	J112 N-CH -35Vdg -5Vgs(off) 50 OHM RdsON	J112		J112-TR1 -- SILICONIX	
Q2	96R587-01	2N5087 PNP -50V 1.5W -50mA	2N5087		2N5087 RLRA -- FAIRCHILD	2N5087 RLRA -- NATIONAL
Q3						
Q4						
R1	77-105-02	1M OHM .5W 1% RESISTOR	1M		1M-R86-1541 -- SEI	
R2	77-104-02	100K OHM .5W 1% RESISTOR	100K		100K-R86-1541 -- SEI	
R3	77-272-02	2.74K OHM .5W 1% RESISTOR	2.74K		2.74K-R86-1541 -- SEI	
R4	77-474-02	475K OHM .5W 1% RESISTOR	475K		475-R86-1541 -- SEI	
R5						
R6	77-272-02	2.74K OHM .5W 1% RESISTOR	2.74K		2.74K-R86-1541 -- SEI	
R7	77-224-02	221K OHM .5W 1% RESISTOR	221K		221K-R86-1541 -- SEI	
R8	78A103-21	10K 2W 5% MOX OR CF T&R	10K		10K-R86-3263 -- SEI	
R9	78-471-02	470 OHM 5W 5% WIREWOUND	470		470-86-3763 -- SEI	
R10	77-105-02	1M OHM .5W 1% RESISTOR	1M		1M-R86-1541 -- SEI	
R11	77-823-02	82.5K OHM .5W 1% RESISTOR	82.5K		82.5K-R86-1541 -- SEI	
R12	77-102-02	1K OHM .5W 1% RESISTOR	1K		1K-R86-1541 -- SEI	
R13	77-333-02	33.2K OHM .5W 1% RESISTOR	33.2K		33.2K-R86-1541 -- SEI	
R14	78A103-21	10K 2W 5% MOX OR CF T&R	10K		10K-R86-3263 -- SEI	
R15	77-104-02	100K OHM .5W 1% RESISTOR	100K		100K-R86-1541 -- SEI	
R16	77-105-02	1M OHM .5W 1% RESISTOR	1M		1M-R86-1541 -- SEI	
R17	77-224-02	221K OHM .5W 1% RESISTOR	221K		221K-R86-1541 -- SEI	
R18	77-223-02	22.1K OHM .5W 1% RESISTOR	22.1K		22.1K-R86-1541 -- SEI	
R19	77-224-02	221K OHM .5W 1% RESISTOR	221K		221K-R86-1541 -- SEI	
R20	77-272-02	2.74K OHM .5W 1% RESISTOR	2.74K		2.74K-R86-1541 -- SEI	

ASSEMBLY PART #

07-677-01

REVISION:

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ITEM	P/N	DESC	VALUE	LABEL	MFG P/N 1	MFG P/N 2
R21	77-103-02	10K OHM .5W 1% RESISTOR	10K		10K-R86-1541 -- SEI	
R22	78-600-10	60 OHM 10W 5% W/FEET	60		PW-10-60-5 -- IRC	
R23	77-103-02	10K OHM .5W 1% RESISTOR	10K		10K-R86-1541 -- SEI	
R24	78A101-21	100 OHM 2W 5% MOX T&R	100		100-R86-3263 -- SEI	
R25						
R26	78-154-02	150K 2W 5% MOX OR CF BULK	150K		150K-86-3263 -- SEI	
R27	76-104-01	100K OHM .25W 5% RESISTOR	100K		100KQTR-ND -- YAGEO/DIGIKEY	100K-R86-0040 -- SEI
R28	76-047-01	4.7 OHM .25W 5% RESISTOR	4.7		4.7QTR-ND -- YAGEO/DIGIKEY	4.7-R86-0040 -- SEI
R29	76-103-01	10K OHM .25W 5% RESISTOR	10K		10KQTR-ND -- YAGEO/DIGIKEY	10K-R86-0040 -- SEI
R30	76-102-01	1K OHM .25W 5% RESISTOR	1K		1KQTR-ND -- YAGEO/DIGIKEY	1K-R86-0040 -- SEI
R31	76-224-01	220K OHM .25W 5% RESISTOR	220K		220KQTR-ND -- YAGEO/DIGIKEY	220K-R86-0040 -- SEI
R32	76-222-01	2.2K OHM .25W 5% RESISTOR	2.2K		2.2KQTR-ND -- YAGEO/DIGIKEY	2.2K-R86-0040 -- SEI
R33	76-333-01	33K OHM .25W 5% RESISTOR	33K		33KQTR-ND -- YAGEO/DIGIKEY	33K-R86-0040 -- SEI
R34	78A103-21	10K 2W 5% MOX OR CF T&R	10K		10K-R86-3263 -- SEI	
R35	77-105-02	1M OHM .5W 1% RESISTOR	1M		1M-R86-1541 -- SEI	
R37	77-474-02	475K OHM .5W 1% RESISTOR	475K		475-R86-1541 -- SEI	
R38	77-105-02	1M OHM .5W 1% RESISTOR	1M		1M-R86-1541 -- SEI	
R39	77-103-02	10K OHM .5W 1% RESISTOR	10K		10K-R86-1541 -- SEI	
R40	77-104-02	100K OHM .5W 1% RESISTOR	100K		100K-R86-1541 -- SEI	
R41	77-474-02	475K OHM .5W 1% RESISTOR	475K		475-R86-1541 -- SEI	
R42	77-104-02	100K OHM .5W 1% RESISTOR	100K		100K-R86-1541 -- SEI	
R43						
R44	77-224-02	221K OHM .5W 1% RESISTOR	221K		221K-R86-1541 -- SEI	
R45	77-683-02	68.1K OHM .5W 1% RESISTOR	68.1K		68.1K-R86-1541 -- SEI	
R46	76-151-01	150 OHM .25W 5% RESISTOR	150		150QTR-ND -- YAGEO/DIGIKEY	150-R86-0040 -- SEI
R47						
R48	76-225-01	2.2M OHM .25W 5% RESISTOR	2.2M		2.2MQTR-ND -- YAGEO/DIGIKEY	2.2M-R86-0040 -- SEI
R49	78-100-01	10 OHM 2W 5% MOX OR CF BULK	10		10-86-3263 -- SEI	
R50						
R51						
R52						
R55	77-224-02	221K OHM .5W 1% RESISTOR	221K		221K-R86-1541 -- SEI	
R57	77-103-02	10K OHM .5W 1% RESISTOR	10K		10K-R86-1541 -- SEI	
R58	78A101-21	100 OHM 2W 5% MOX T&R	100		100-R86-3263 -- SEI	
R59						
R60	77-103-02	10K OHM .5W 1% RESISTOR	10K		10K-R86-1541 -- SEI	
R62	76-103-01	10K OHM .25W 5% RESISTOR			10KQTR-ND -- YAGEO/DIGIKEY	10K-R86-0040 -- SEI
R63	76-153-01	15K OHM .25W 5% RESISTOR	15K		15KQTR-ND -- YAGEO/DIGIKEY	15K-R86-0040 -- SEI
R64	76-472-01	4.7K OHM .25W 5% RESISTOR	4.7K		4.7KQTR-ND -- YAGEO/DIGIKEY	4.7K-R86-0040 -- SEI
R65	76-105-01	1M OHM .25W 5% RESISTOR	1M		1MQTR-ND -- YAGEO/DIGIKEY	1M-R86-0040 -- SEI
R66	76-472-01	4.7K OHM .25W 5% RESISTOR	4.7K		4.7KQTR-ND -- YAGEO/DIGIKEY	4.7K-R86-0040 -- SEI
R67	76-104-01	100K OHM .25W 5% RESISTOR	100K		100KQTR-ND -- YAGEO/DIGIKEY	100K-R86-0040 -- SEI
R68	76-153-01	15K OHM .25W 5% RESISTOR	15K		15KQTR-ND -- YAGEO/DIGIKEY	15K-R86-0040 -- SEI
R69	76-152-01	1.5K OHM .25W 5% RESISTOR	1.5K		1.5KQTR-ND -- YAGEO/DIGIKEY	1.5K-R86-0040 -- SEI
R70	76-333-01	33K OHM .25W 5% RESISTOR	33K		33KQTR-ND -- YAGEO/DIGIKEY	33K-R86-0040 -- SEI
R73	76-152-01	1.5K OHM .25W 5% RESISTOR	1.5K		1.5KQTR-ND -- YAGEO/DIGIKEY	1.5K-R86-0040 -- SEI
R74	77-221-01	220 OHM .5W 5% RESISTOR	220		220-R86-0080 -- SEI	
R75						
R76	77-224-02	221K OHM .5W 1% RESISTOR	221K		221K-R86-1541 -- SEI	
R77	76-152-01	1.5K OHM .25W 5% RESISTOR	1.5K		1.5KQTR-ND -- YAGEO/DIGIKEY	1.5K-R86-0040 -- SEI



