

BASSMAN 100

p/n 022-4503-000 (120V)

SERVICE MANUAL



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BASSMAN 100
(This is the model name for warranty claims)

SERVICE MANUAL

FEBRUARY 2000

IMPORTANT NOTICE:

The information contained herein is CONFIDENTIAL and PROPRIETARY to Fender Musical Instruments Corp. It is disclosed solely for use by qualified technicians for purposes of equipment maintenance and service. It is not to be disclosed to others without the expressed permission of Fender Musical Instruments Co. All specifications subject to change without notice.

For warranty repair service, only Fender specified part numbers are to be used. It is recommended they also be used for post-warranty maintenance and repair.

Parts marked with an asterisk (*) indicate the required use of that specific part. This is necessary for RELIABILITY and SAFETY requirements. **DO NOT USE A SUBSTITUTE!**

A coded naming convention is used in the description of certain parts. The codes and what they mean are as follows:

CAPACITOR CODES

CAP AE = Aluminum Electrolytic
CAP CA = Ceramic Axial
CAP CD = Ceramic Disk
CAP MPF = Metalized Polyester Film
CAP MY = Mylar
CAP PFF = Polyester Film/Foil

RESISTOR CODES

RES CC = Carbon Comp
RES CF = Carbon Film
RES FP = Flame Proof
RES MF = Metal Film
RES WW = Wire Wound

HARDWARE CODES

BLX = Black Oxide
CR = Chrome Plated
HWH = Hex Washer Head
M = Machine Screw
NI = Nickel Plated
OHP = Oval Head Phillips
PB = Particle Board
PHP = Pan Head Phillips
PHPS = Pan Head Phillips Sems
SMA = Sheet Metal "A" Point
SMB = Sheet Metal "B" Point
SS = Stainless Steel
TF = Thread Forming
ZI = Zinc Plated

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SPECIFICATIONS

Product Release No.:	PR 420 <i>(This is not a model number)</i>	
Part Number:	120V Version :	22-4503
	240V Aus :	22-4533
	230V UK :	22-4543
	230V Eur :	22-4563
	100V :	22-4573
Power Requirements:	100V Version :	100 VAC 50/60 Hz, 360W
	120V :	120 VAC 60 Hz, 360W
	230V :	230 VAC 50 Hz, 360W
	240V :	240 VAC 50 Hz, 360W
Power Amp Section:		
Power Output:	100 Watts RMS into 4Ω @ <1% THD	
Sensitivity:	1.1115V RMS	
Preamp Section:		
Input impedance:	Passive: 1MΩ	Active: 1MΩ
Sensitivity For Full Power:	Passive: 12mV	Active: 25mV
Nominal Level:	Passive: 75mV	Active: 150mV
Tone Controls:	Bass: +/- 15 dB @ 50 Hz	
Semi-parametric control:	Mid frequency: 150 to 1500 Hz	
	Mid level: +/-15 dB @ Mid frequency setting	
	Treble: +/-15 dB @ 5 kHz	
Speaker Complement:	One 4 Ω Fender Special Design 15" woofer (P/N 0040580000) One Motorola Piezo Horn (P/N 0053641000)	
Effects Loop: Send impedance:	1kΩ	
Return impedance:	22kΩ	
Nominal level:	+4dBu	
Dimensions:	Height: 24 1/4"	(61.6 cm)
	Width: 23"	(58.4 cm)
	Depth: 12 1/2"	(31.8 cm)
Weight:	65 lbs.	(29.3 kg)

Product specifications are subject to change without notice

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SERVICE NOTES

- HORN REPLACEMENT** requires speaker removal in order to access horn wiring. If wire ties, clamps, etc. are removed for ease of connecting/disconnecting horn wires, these must be replaced to prevent buzzing at higher power levels.
- RIBBON CABLES** running between rear panel board and preamp board should be routed next to the chassis, underneath the power-amp board.
- CHASSIS REMOVAL** is accomplished by first removing six (6) screws from the top, and one (1) screw from each side of the cabinet; then slide the chassis toward the rear just far enough to provide access to the speaker wiring. **Note: the speaker wires are bundled and shrink-wrapped with the power transformer secondary wiring, and this configuration must be restored after servicing (for safety compliance).** Locate the speaker wires (white goes to P1, black goes to P2 of the power-amp board) and disconnect them. It will be necessary to cut the shrink wrap (take care not to cut the transformer wires) so that the speaker wires can be pulled from the opening in the bottom of the chassis.

It should be noted that the speaker wires have been glued in place inside the speaker baffle (for sound quality reasons), if this is disturbed during disassembly, it should be restored by removing the speaker, and working through the speaker hole; leave sufficient slack to allow reassembly of the speaker leads to the chassis.

For reference, the red wires from the transformer go to P3 & P5. The red/yellow wire goes to P4.

PARTS LIST

NOTE: SHADED ITEMS ARE FOR REFERENCE ONLY

PRINTED CIRCUIT BOARD ASSEMBLY - PREAMP

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	26517001	CAP AE AX 2.2uF 50V 20%	C40
2	38691001	CAP AE AX 4.7uF 50V 20%	C2 C6
9	25960001	CAP AE AX 22uF 16V 20%	C5 C13 C20 C25-27 C30-31 C33
1	38693001	CAP AE AX 47uF 16V 20%	C64
4	42001001	CAP CA 33pF 100V LL	C8 C19 C21 C32
1	39256001	CAP CA 68pF 100V LL	C22
1	38699001	CAP CA 100pF 100V LL	C39
2	39261001	CAP CA 330pF 100V LL	C11 C37
2	38703001	CAP CA .1uF 50V	C38 C41
2	51405003	CAP CD 120pF 500V 5%	C28-29
1	51960003	CAP CD 180pF 500V 10%	C1
16	34788003	CAP CR .1uF 50V 20% .2" LS	C44-45 C52-63 C65-66
1	27256003	CAP MPF .0015uF 100V 10%	C10
1	27257003	CAP MPF .0022uF 100V 10%	C23
1	27259003	CAP MPF .0033uF 100V 10%	C17
2	27260003	CAP MPF .0039uF 100V 10%	C36 C67
1	27261003	CAP MPF .0047uF 100V 10%	C18
1	27262003	CAP MPF .0068uF 100V 10%	C12
1	27264003	CAP MPF .01uF 100V 10%	C15

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PRINTED CIRCUIT BOARD ASSEMBLY - PREAMP (cont)

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	27265003	CAP MPF .015uF 100V 10%	C9
1	27270003	CAP MPF .033uF 100V 10%	C16
2	27278003	CAP MPF .1uF 63V 10%	C3-4
1	27281003	CAP MPF .22uF 63V 10%	C24
2	27283003	CAP MPF .33uF 63V 10%	C34-35
3	27286003	CAP MPF .47uF 63V 10%	C14 C47 C49
2	33578003	CAP PFF RDL .001uF 100V 10%	C42 C51
1	33581003	CAP PFF RDL .0033uF 100V 10%	C50
1	30942003	CAP PFF RDL .0056uF 50V 5%	C7
3	33592003	CAP PFF RDL .047uF 100V 10%	C43 C46 C48
1	31089000	CONTROL SNAPIN 100k 10C DUAL	R36 (Mid frequency)
6	27945000	CONTROL SNAPIN 100k B TAPER	R14 R27-29 R56 R72 (Gain, Bass, Mid level, Treble, Compressor, Master vol)
26	6260001	DIODE 1N4448 SIGNAL LL	D1-9 D11-17 D19-20 D22-27 D29 D32
1	27327001	DIODE ZEN 1N5234B 6.2V 5% LL	D10
1	31635001	DIODE ZEN 1N5240B 10V 5% LL	D30
2	27413000	HDR .1 CTR 6 CKT SQ PIN	P1-2
1	27416000	HDR .1 CTR 8 CKT SQ PIN	P3
6	31611000	IC OP-AMP DUAL PC4560	U6 U9-13
6	16795000	IC OP-AMP DUAL TL072	U1-5 U7
1	27404000	IC OTA CA3080AE	U8
1	53450000	JACK STEREO R/A	J1 (Input)
1	30755000	LED GREEN T-1 3mm DIFFUSED	D31
2	49948000	LED RED LONG LEAD LUMEX	D21 D28
1	40271000	LED RED/YELLOW	D18
4	24937001	RES CF 1/4W 5% 10ohm LL	R1-2 R119-120
2	24947001	RES CF 1/4W 5% 47ohm LL	R81-82
1	24952001	RES CF 1/4W 5% 100ohm LL	R45
2	24962001	RES CF 1/4W 5% 560ohm LL	R59-60
1	29607001	RES CF 1/4W 5% 620ohm LL	R118
1	24963001	RES CF 1/4W 5% 680ohm LL	R106
3	24965001	RES CF 1/4W 5% 1k LL	R78 R96 R112
4	24971001	RES CF 1/4W 5% 2.2k LL	R12-13 R92 R94
1	24973001	RES CF 1/4W 5% 3.3k LL	R3
1	24977001	RES CF 1/4W 5% 4.7k LL	R83
3	24978001	RES CF 1/4W 5% 5.6k LL	R30 R58 R61
1	28948001	RES CF 1/4W 5% 6.2k LL	R109
1	24979001	RES CF 1/4W 5% 6.8k LL	R40
1	24980001	RES CF 1/4W 5% 8.2k LL	R51
1	24983001	RES CF 1/4W 5% 12k LL	R84
1	24985001	RES CF 1/4W 5% 15k LL	R15
1	24986001	RES CF 1/4W 5% 18k LL	R17
2	29006001	RES CF 1/4W 5% 20k LL	R46 R50
9	24987001	RES CF 1/4W 5% 22k LL	R19 R66-69 R95 R100 R111 R122
4	24988001	RES CF 1/4W 5% 27k LL	R18 R20 R85-86
3	24989001	RES CF 1/4W 5% 33k LL	R42-43 R52
1	24991001	RES CF 1/4W 5% 39k LL	R23
9	24993001	RES CF 1/4W 5% 47k LL	R8-9 R11 R26 R41 R70-71 R88-89
2	28990001	RES CF 1/4W 5% 51k LL	R73-74
4	24994001	RES CF 1/4W 5% 56k LL	R10 R21-22 R24
2	26507001	RES CF 1/4W 5% 62k LL	R54 R107
2	24995001	RES CF 1/4W 5% 68k LL	R34-35
3	24996001	RES CF 1/4W 5% 82k LL	R57 R75-76
4	24997001	RES CF 1/4W 5% 100k LL	R32-33 R99 R123
1	28549001	RES CF 1/4W 5% 110k LL	R77

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PRINTED CIRCUIT BOARD ASSEMBLY - PREAMP (cont)

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	24998001	RES CF 1/4W 5% 120k LL	R93
2	25059001	RES CF 1/4W 5% 220k LL	R104-105
3	25063001	RES CF 1/4W 5% 390k LL	R4 R7 R31
3	25069001	RES CF 1/4W 5% 1M LL	R25 R53 R101
3	25073001	RES CF 1/4W 5% 1.5M LL	R55 R108 R110
1	25075001	RES CF 1/4W 5% 2.2M LL	R90
1	25084001	RES CF 1/4W 5% 10M LL	R87
22	24981001	RES CF 1/4W 5% 10k LL	R5-6 R16 R37-39 R44 R47-49 R62-65 R79-80 R98 R102-103 R114-116 R91 R97 R113 R117 R121
5	27348001	RES FILM 1W 5% 3.3k LL	
4	28091000	SWITCH PUSH SLFLK SHORT STROKE	S1-4 (Active/Passive, Enhance, Mute, Limiter)
2	14689003	XSTR N-CH JFET J111 TO-92	Q1-2
3	16739003	XSTR NPN 2N4401 TO-92	Q3-4 Q8
4	16742003	XSTR PNP 2N4403 TO-92	Q5-7 Q9
4	48451000	BUTTON PUSH OFF WHITE	@ S1-4
3	36178000	SPACER LED .5X.1 BROWN	@ D21 D28 D31
1	55630000	PCB, FAB, PREAMP, BASSMAN 100	

PRINTED CIRCUIT BOARD ASSEMBLY - POWER AMP

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
2	53856000	CABLE RIBBON 6 CKT 8"	PW1-2
1	48914000	CABLE RIBBON 8 CKT 7"	PW3
1	26517001	CAP AE AX 2.2uF 50V 20%	C4
8	25960001	CAP AE AX 22uF 16V 20%	C16-17 C20-25
8	49521000	CAP AE AX 47uF 50V 20%	C2 C5 C11-12 C26-27 C31-32
1	28474003	CAP AE RDL 100uF 25V 20%	C3
2	31756000	CAP AE RDL 4700uF 50V +100%-20%	C29-30
2	42001001	CAP CA 33pF 100V LL	C36-37
2	38703001	CAP CA .1uF 50V	C34-35
2	51409003	CAP CD 68pF 500V 5%	C7-8
2	51459003	CAP CD 560pF 500V 10%	C18-19
2	34788003	CAP CR .1uF 50V 20% .2" LS	C9-10
3	27257003	CAP MPF .0022uF 100V 10%	C1 C13-14
1	27278003	CAP MPF .1uF 63V 10%	C15
1	52003003	CAP MPF .1uF 250V 10%	C28
1	53860000	CAP MPF .1uF 250VAC 20%	C33
1	27941000	CONTROL SNAPIN 50k B TAPER	R55 (DI level)
2	64089001	DIODE 1N4003 LL	D23-24
15	6260001	DIODE 1N4448 SIGNAL LL	D1-8 D11-14 D21-22 D25
4	29045000	DIODE 6A 400V 6A4 LEAD FORMED	D26-29
2	25821001	DIODE HV FDH400 SWITCHING	D15-16
2	31635001	DIODE ZEN 1N5240B 10V 5% LL	D9-10
2	28119060	DIODE ZEN 1N5353B 16V 5W 5%	D30-31
4	26000001	FASTON TAB, .187"	P6 P9 P13-14
10	25802000	FASTON TAB, .250"	P1-5 P7-8 P10-12

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PRINTED CIRCUIT BOARD ASSEMBLY - POWER AMP (cont)

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	31611000	IC OP-AMP DUAL PC4560	U1
1	51658000	JACK MONO R/A	J3 (Tuner)
2	53450000	JACK STEREO R/A	J1-2 (FX send,FX return)
1	54261000	XLR CONNECTOR MALE RT ANGLE	J4 (DI out)
2	26549001	RES CF 1/2W 5% 1.5k LL	R25 R28
3	24937001	RES CF 1/4W 5% 10ohm LL	R26-27 R66
3	24947001	RES CF 1/4W 5% 47ohm LL	R4 R6 R12
11	24965001	RES CF 1/4W 5% 1k LL	R1 R3 R5 R16 R37 R39 R45-48 R65
4	24971001	RES CF 1/4W 5% 2.2k LL	R20-23
2	24972001	RES CF 1/4W 5% 2.7k LL	R36 R38
2	24973001	RES CF 1/4W 5% 3.3k LL	R56 R59
1	24975001	RES CF 1/4W 5% 3.9k LL	R10
1	24977001	RES CF 1/4W 5% 4.7k LL	R7
2	24981001	RES CF 1/4W 5% 10k LL	R57-58
2	24986001	RES CF 1/4W 5% 18k LL	R9 R15
1	24987001	RES CF 1/4W 5% 22k LL	R8
1	24988001	RES CF 1/4W 5% 27k LL	R2
1	24993001	RES CF 1/4W 5% 47k LL	R11
6	24997001	RES CF 1/4W 5% 100k LL	R43-44 R49-50 R54 R64
3	25059001	RES CF 1/4W 5% 220k LL	R51-53
2	37354001	RES FILM 1W 5% 4.7k LL	R24 R29
3	36960001	RES MF FUSE 1/4W 5% 47ohm LL	R30-31 R40
2	27750001	RES MF FUSE 1/4W 5% 100ohm LL	R18-19
2	51731001	RES MF FUSE 1/4W 5% 1k LL	R13-14
4	31628001	RES MOX 2W 5% .22ohm LL	R32-35
2	27628001	RES MOX 2W 5% 47ohm LL	R41-42
4	41256000	RES WW 5W 10% 470ohm	R60-63
2	28091000	SWITCH PUSH SLFLK SHORT STROKE	S1-2 (DI select)
1	51418003	THERMAL SENSOR PTC 100 DEG C	RT1
1	14689003	XSTR N-CH JFET J111 TO-92	Q21
1	16739003	XSTR NPN 2N4401 TO-92	Q19
4	25751003	XSTR NPN 2SC2362K/2SC2389STPS	Q1-3 Q8
2	54418000	XSTR NPN 2SC3263 MT-100	Q14-15
1	28760000	XSTR NPN 2SC4793/2SC3298B	Q13
1	51448003	XSTR NPN 2SD1857	Q11
1	14867003	XSTR NPN MPSW42 (TO-92)	Q10
3	16742003	XSTR PNP 2N4403 TO-92	Q4-5 Q20
2	25752003	XSTR PNP 2SA1038STPS	Q6-7
2	54417000	XSTR PNP 2SA1294 MT-100	Q17-18
1	28759000	XSTR PNP 2SA1306A TO-220P	Q16
1	51447003	XSTR PNP 2SB1236	Q12
1	14866003	XSTR PNP MPSW92 TO-226AE	Q9
2	48451000	BUTTON PUSH OFF WHITE	AT S1-2
1	55772000	PCB, FAB, POWER AMP, BASSMAN 100	
1	55636000	HEATSINK PLATE, BASSMAN 100	
3	32908000	SCRW TF 6-32X3/8 PHP ZI	AT ITEM 103 AND 101
2	51094003	FUSE CLIP PCB 5MM	AT F1
4	40903000	INSULATOR MICA TO-218	AT Q14-15, Q17-18
4	32937000	WSHR CONE	AT Q14-15, Q17-18
6	27638000	SCRW TF 4-40X3/8 HWHS ZI .1" HD	AT Q13-18

BASSMAN 100 CHASSIS ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0054843000	CHASSIS, BASSMAN 100	
1	0054642000	CONNECTOR IEC SNAP IN	
1	0053884000	FUSE QA 20MMX5MM 125V4A ULCSA	100V/120V
1	0020794000	FUSE QA 20MMX5MM 250V 2A	EXPORT 220V/240V
7	0055775000	KNOB ROT W/ CH INS, BASSMAN	
1	0019798000	KNOB ROTARY SS	DI LEVEL ON REAR
1	0055637000	HEATSINK BAR, BASSMAN 100	
4	0028500000	SCRW TF 8-32x3/4 HWH SLTD Z1	@HEATSINK
1	0055631000	PCB ASSY, PREAMP, BASSMAN 100	
1	0055773000	PCB ASSY, POWER AMP, BASSMAN 100	
1	0055629000	PANEL, REAR, BASSMAN 100	
1	0055628000	PANEL, FRONT, BASSMAN 100	
1	0040582000	SWITCH DPST .250 TAB GLOBAL	EXPORT
1	0039236000	SWITCH ROCKER DPST PSEUDO-IEC	DOMESTIC
1	0038900000	SCRW TF 6-32X1/4 PHP ZI	CHS GND
17	0051404000	STANDOFF NYLON BLK .375	
1	0053479000	NUT, HEX 7/16-20X1/8 NI	@FRONT IN JACK ONLY
1	0053480000	WASHER FLAT .442 X .692 NI	@FRONT IN JACK ONLY
2	0051155000	SCRW SMB #4X3/8 PHP BLX	XLR JACK
3	0055838000	NUT PLASTIC BLK REAN JACK	REAR JACKS
1	0040696000	XFMR PWR 120V 100W BXR100	
1	0040697000	XFMR, PWR, EXP BXR100, 100W	
1	0033045000	END BELL XFMR PWRCH	@XFMR
4	0028591000	NUT ACORN 8-32	@XFMR
4	0030007000	WSHR LCK INTL 8x.330x.02 ZI	@XFMR

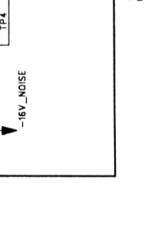
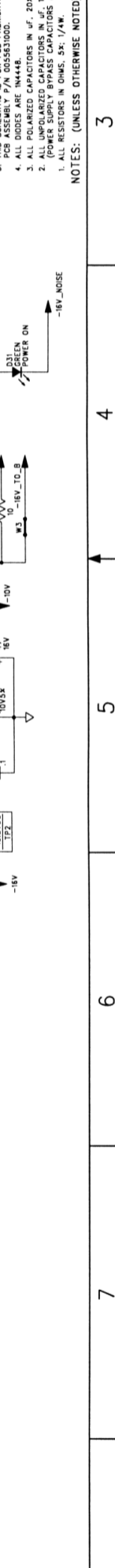
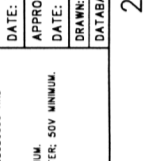
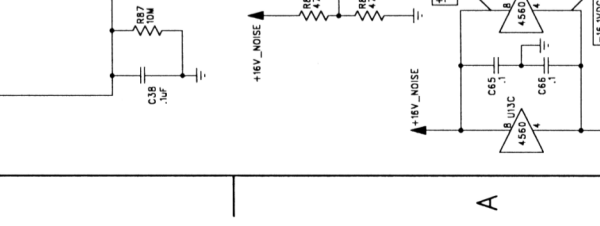
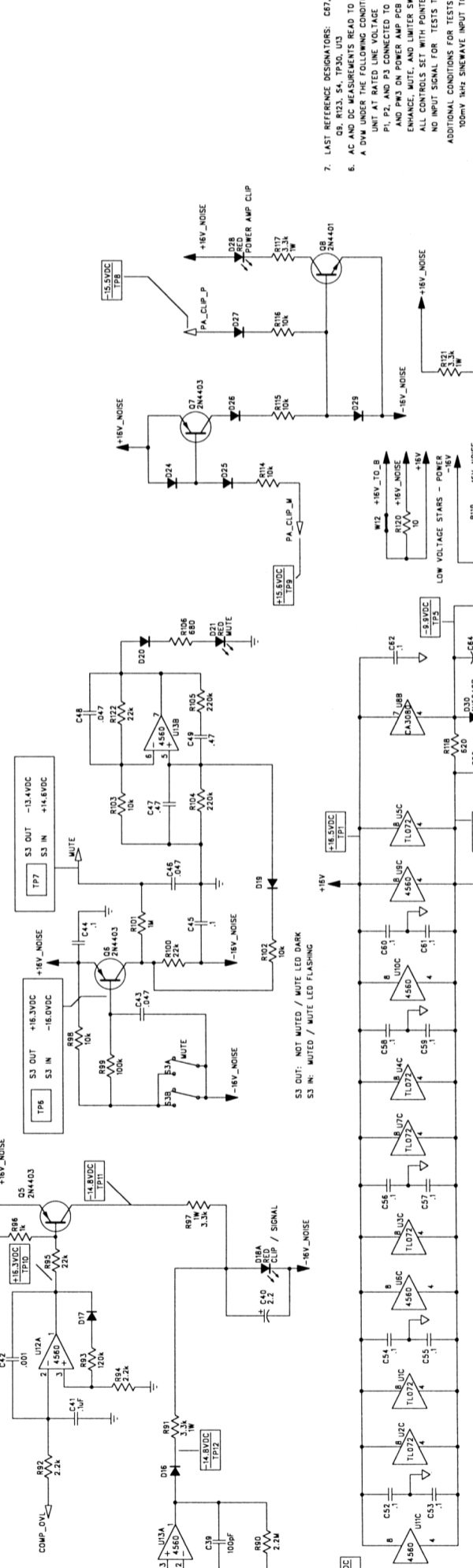
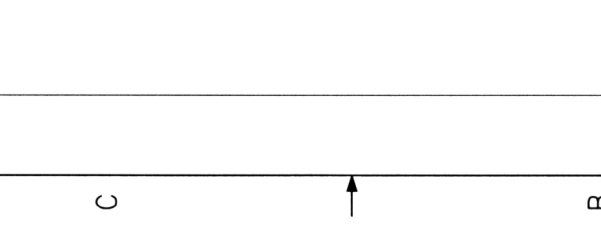
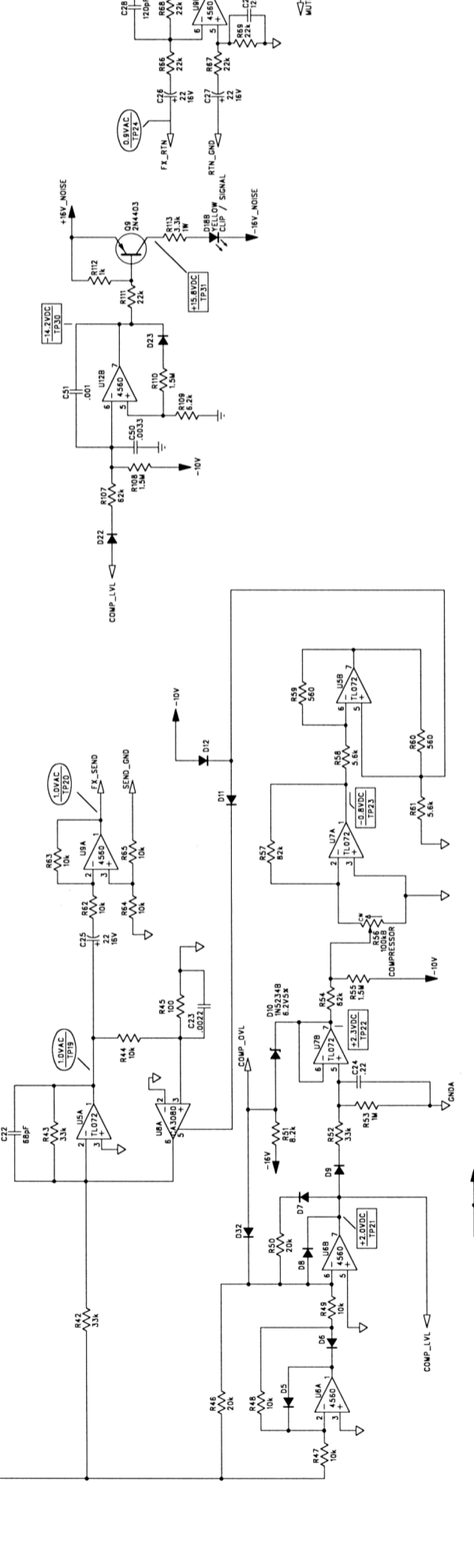
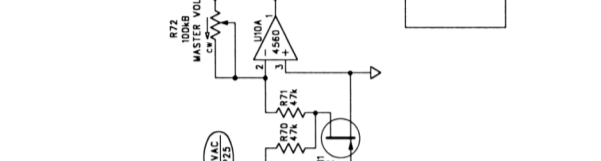
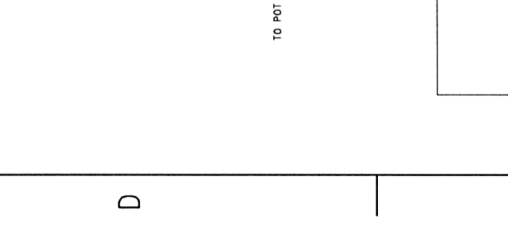
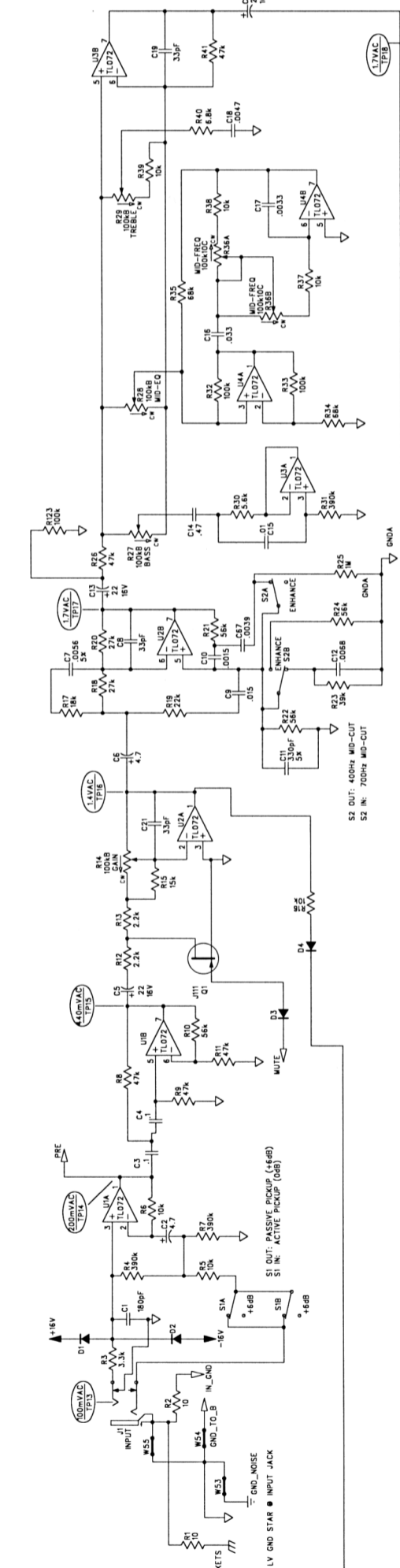
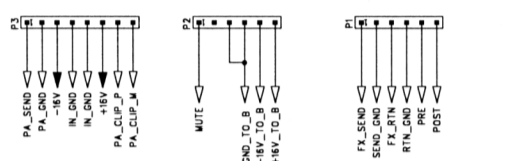
CAB ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0048958000	HANDLE RECESSED KXR/BXR	
1	0049564000	GASKET HANDLE	
2	0026568000	CORNER 3 HOLE NI	@LOWER REAR
4	0029071000	CORNER NOTCHED NICKLE (FD)	
4	0051049000	FOOT RUBBER 1.5 DIA	
3	0038796000	SCREW 8 x 1-1/2 PFH SM ZI	@BACK CLEAT
10	0026571000	SCREW SMAB 8X5/8 THP NI	@CORNERS
8	0016627000	SCREW SMA 8 X 3/4 OHP BLX	@HANDLE
1	0021972000	NUT T 10-32X3/4 STR 3 PRNG BLX	@SPEAKER MOUNT
4	0033380000	SCREW SMAB 8X1 THP BLX	@FEET
2.01	0051343000	VINYL TOLEX 4227A (SY)	
.12	0040046000	CARPET BLACK (SY)	GRILLE DAMP CLEAT

**BASSMAN 100
END ITEM ASSEMBLY**

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0055360000	CAB ASSY, BASSMAN 100	
1	0055623000	CHS ASSY, BASSMAN 100, 120V	DOMESTIC 120V
1	0055624000	CHS ASSY BASSMAN 100 230V	EXPORT 230V UK/EUR
1	0055626000	CHS ASSY BASSMAN 100 240V AUST	EXPORT 240V AUST
1	0055627000	CHS ASSY BASSMAN 100 100V	EXPORT 100V JPN
1	0047248000	CORD PWR W/ IEC CONN DOM	DOMESTIC
1	0047250000	CORD PWR W/ IEC CONN 250V	EXPORT 240V AUST
1	0047249000	CORD PWR W/ IEC CONN 230V UK	EXPORT 230V UK
1	0047251000	CORD PWR W/ IEC CONN 230V	EXPORT 230V EUR
1	0053997000	CORD PWR W/ IEC CONN 100V JPN	EXPORT 100V JPN
1	0055831000	GASKET, HORN, BASSMAN SERIES	
1	0053641000	HORN PIEZO LTB 12 SPKR	
1	0040580000	SPEAKER 15" 4M 100W (099-4815-001)	
1	0055731000	LOGO, DOME, BASSMAN AMPS	
1	0050850000	NAMEPLATE VINTAGE PLASTIC SMAL	
1	0055671000	GRILLE, METAL, BASSMAN 100	
2	0050312000	SCRW 2-56X3/8 FHP NI	LOGO
8	0026577000	SCRW M 10-32x1 PHP BLX	SPKR
8	0029527000	WSHR FNSH 8-5/8 FLNGD BLX WX	CHS
10	0036112000	SCRW SMAB 6X1-1/4 OHP BLX W/ WS	GRL
8	0036199000	SCRW M 8-32x1-3/16 OHP BLX CP	CHS (PEM)
2	0050311000	NUT 2-56 NYLON INSERT 2CNME-Z	LOGO
4	0024052000	SCRW SMA 6-X5/8 PHP BLX	HORN

REV.	DESCRIPTION	DATE	APPROVED
A	PR 420	27-JUL-99	S M M
B	EC 2346	24-SEP-99	S M M



7. LAST REFERENCE DESIGNATORS: C67, D32, J1, P3, Q5, R123, S4, TP30, U13
 8. AC AND DC MEASUREMENTS READ TO GROUND WITH UNIT AT RATED LINE VOLTAGE
 9. P1, P2, AND P3 CONNECTED TO PWR, PWZ, AND PWS ON POWER AMP PCB ASSY (P/N 005373000)
 10. ENHANCE, MUTE, AND COMPRESSOR TEST POINTS ARE NO INPUT SIGNAL FOR TESTS TPI-12 TO TPI-14
 11. ADDITIONAL CONDITIONS FOR TESTS TPI-1 TO TPI-11: 100% INH SWINGWAY INPUT TO J1
 12. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 005363000 AND ALL DIMENSIONS ARE IN MM
 13. ALL POLARIZED CAPACITORS IN U.F. 20% 50V MINIMUM (POWER SUPPLY BYPASS CAPACITORS ARE 20%)
 14. ALL RESISTORS IN OHMS, 5% 1/4W
- NOTES: (UNLESS OTHERWISE NOTED)

THE DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FEMER MUSICAL INSTRUMENTS AND SHOULD NOT BE REPRODUCED, TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FEMER MUSICAL INSTRUMENTS.

CHECKED BY: *[Signature]*
DATE: 29-SEP-99

APPROVED BY: *[Signature]*
DATE: 01-SEP-99

DRAWN: S M M ENGR: S M M
DATABASE FILE: Z42051SCH

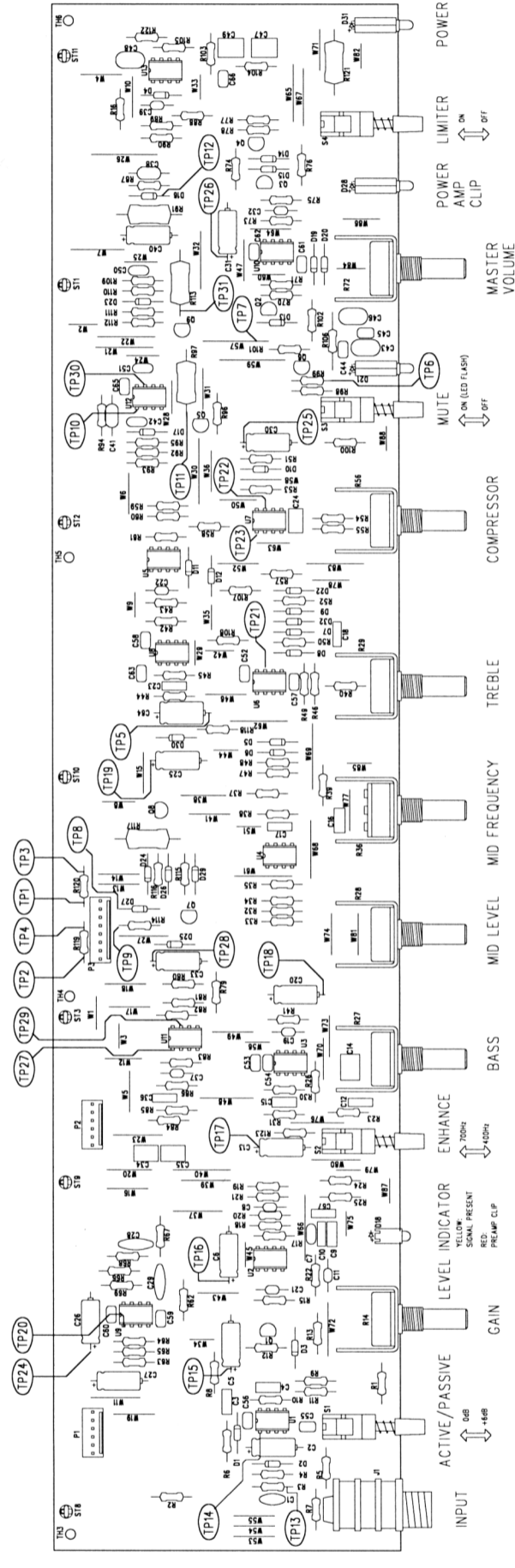
MUSICAL INSTRUMENTS
2621 Research Drive
Corona, CA 91720 USA

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
BASSMAN 100
PREAMP

REV. B
SIZE D
DRAWING NUMBER 0055632000
RELEASE DATE: 30-JUL-99 SHEET: 1 OF 2

1 2 3 4 5 6 7 8

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR420	30-JUL-89	SM/AB
B	EC 2346	24-SEP-89	SMM



FILM/NO. SERVICE DIAGRAM DATE: 24-SEP-89
 DATABASE: Z420P1PCB

MUSICAL INSTRUMENTS
 2621 Research Drive
 Corona, CA 91720 USA

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)
BASSMAN 100
PREAMP

CHECKED BY: *[Signature]*
 DATE: 24-SEP-89

APPROVED BY: *[Signature]*
 FROM POWER AMP PCB ASSY (PWL, PWP, PWS RESPECTIVELY)
 DATE: 01-DEC-89

DRAWN: A. BARNAL
 ENGR: S. MARSHALL

DATEBASE FILE: Z420P1PCB

SIZE: D
 DRAWING NUMBER: 0055632000
 REV. B

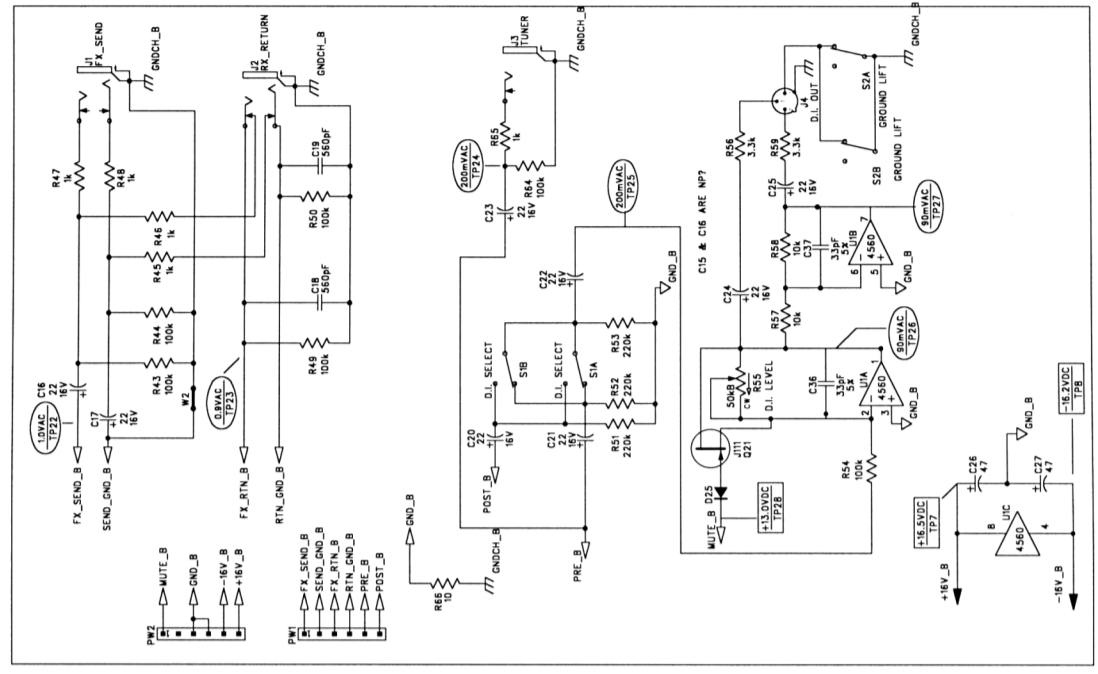
RELEASE DATE: 30-JUL-89
 SHEET 2 OF 2

2. P1, P2 AND P3 CONNECT TO BROWN CABLES FROM POWER AMP PCB ASSY (PWL, PWP, PWS RESPECTIVELY)
1. SEE SHEET 1 FOR TEST CONDITIONS AND TEST POINT VALUES.
- NOTES: (UNLESS OTHERWISE NOTED)

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR420	27-JUL-99	S M M
B	EC2363	18-NOV-99	S M M

OUTPUT POWER TEST:
CONNECT A 1KHZ SINEWAVE SIGNAL TO J2. SET MASTER VOLUME ON FRONT TO MAX (CW). WITH A 4 OHM LOAD CONNECTED TO P1/P2 AND UNIT AT RATED AC LINE INPUT ADJUST INPUT SIGNAL TO VERIFY 100 WATTS AT $\lt; 0.01\text{ THD}$.

BACK PANEL CIRCUITRY - ON BREAKAWAY PCB



7. LAST REFERENCE DESIGNATORS: C37 D31 F1 J4 P15 P16 P17 P18 P19 P20 P21 P22 P23 P24 P25 P26 P27 P28 P29 P30 P31 P32 P33 P34 P35 P36 P37 P38 P39 P40 P41 P42 P43 P44 P45 P46 P47 P48 P49 P50 P51 P52 P53 P54 P55 P56 P57 P58 P59 P60 P61 P62 P63 P64 P65 P66 P67 P68 P69 P70 P71 P72 P73 P74 P75 P76 P77 P78 P79 P80 P81 P82 P83 P84 P85 P86 P87 P88 P89 P90 P91 P92 P93 P94 P95 P96 P97 P98 P99 P100
8. COMPONENTS NOT STUFFED: D17-D20
9. AC AND DC MEASUREMENTS READ TO GROUND WITH A 0.1 OHM RESISTIVE LOAD CONNECTED ACROSS P1-P2
10. UNIT IS POWERED AT RATED LINE VOLTAGE AND FREQUENCY
11. NO INPUT SIGNAL FOR DC TESTS (P1-P2)
12. ADDITIONAL CONDITIONS FOR AC TESTS (P20-P28)
13. PRELIMINARY DESIGNATIONS SHOULD BE SET UP PER ITS SERVICE DIAGRAM (P/N 004837000)
14. REAR PANEL SWITCHES OUT
15. INPUT 100VAC RMS SINEWAVE INTO PREAMP PCB ASSY - J1 ("INPUT")
16. NOTE: P1, P2, AND P3 INTERCONNECTS TO P1, P2, AND P3 RESPECTIVELY ON THE PREAMP PCB.
17. THIS SCHEMATIC IS FOR PCB P/N 0055774000 AND PCB ASSY P/N 0055773000.
18. ALL POLARIZED CAPACITORS IN W/F, 100V OR BETTER, 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20V).
19. ALL RESISTORS IN OHMS, SK: 1/AW.

MUSICAL INSTRUMENTS
2621 Research Drive
COTOCOTA, CA 91720 USA

CHECKED BY: *[Signature]*
DATE: 22-NOV-95

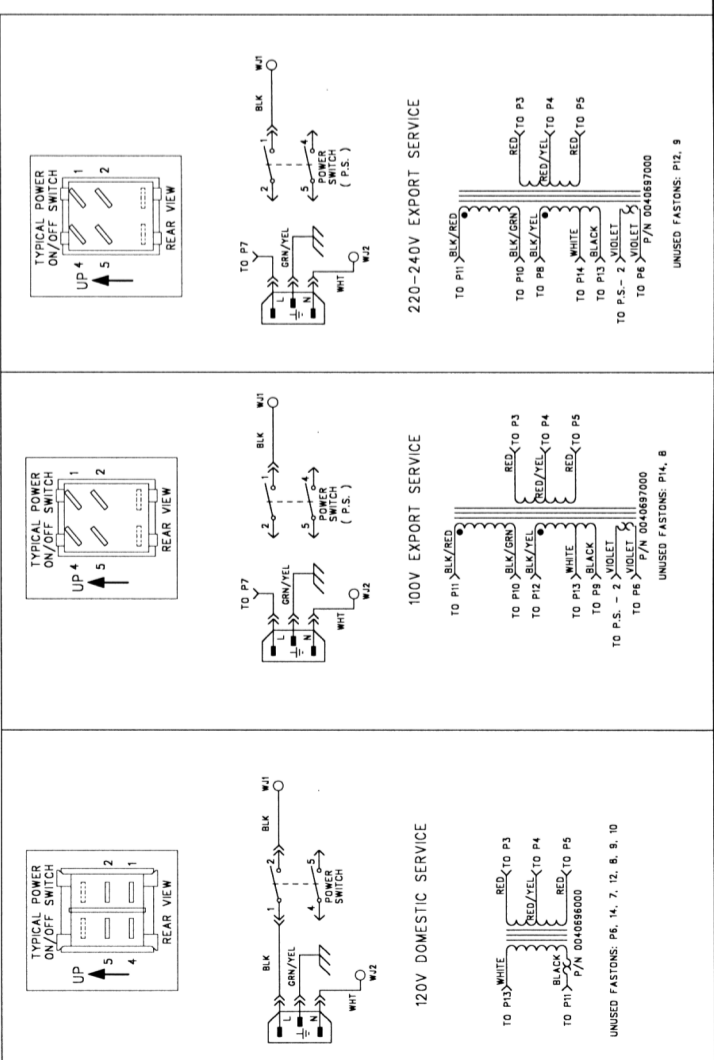
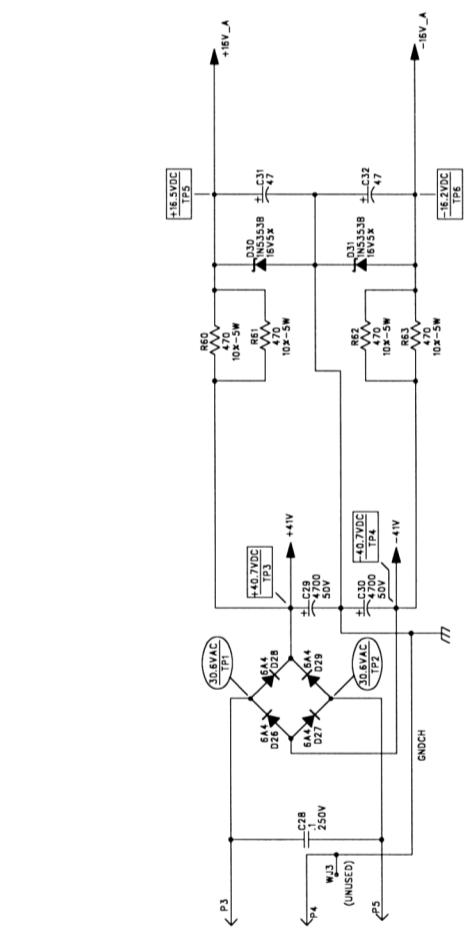
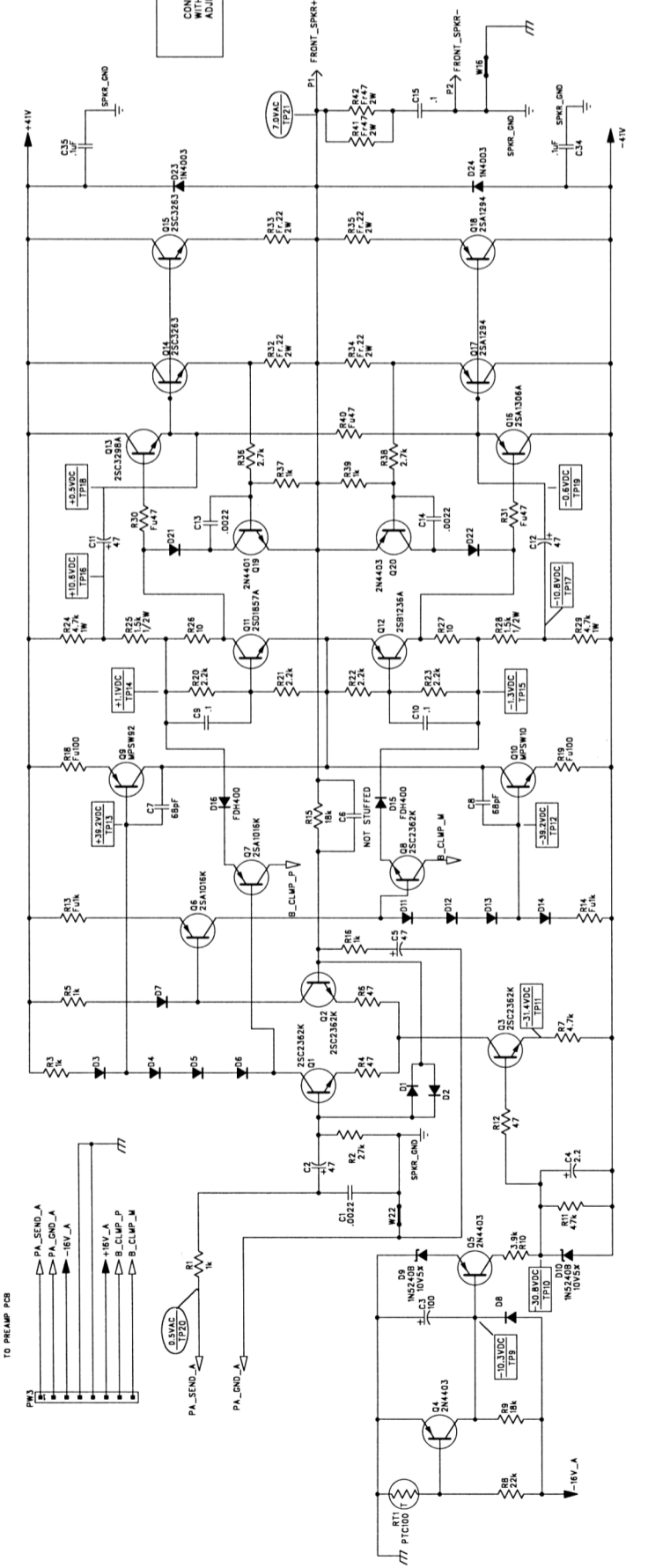
APPROVED BY: *[Signature]*
DATE: 22-NOV-95

DRAWN: S M M ENGR: S M M
DATABASE FILE: Z42052.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
BASSMAN, 100
POWER AMP

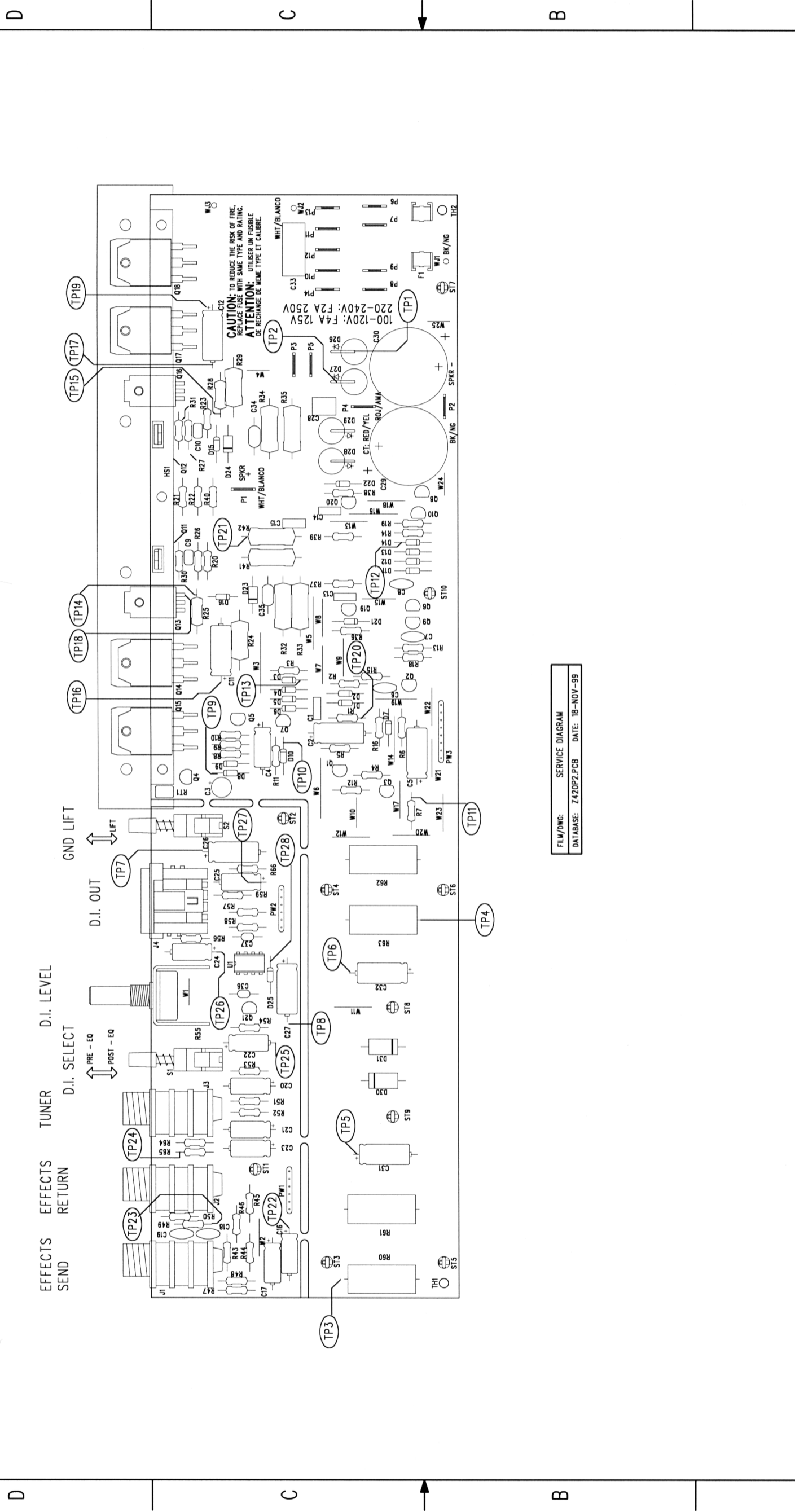
SIZE: D
DRAWING NUMBER: 0055774000
REV. B

RELEASE DATE: 30-JUL-99 SHEET: 1 OF 2



8 7 6 5 4 3 2 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR420	30-JUL-99	S M M
B	EC 2363	18-NOV-99	S M M



FILE/DWG: SERVICE DIAGRAM
 DATABASE: Z420P2.PCB DATE: 18-NOV-99

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CHECKED BY: *B. Desai*
 DATE: 22-NOV-99

APPROVED BY: *Alfred...*
 DATE: 22 Nov 99

DRAWN: S M M ENGR: S M M
 DATABASE FILE: Z420P2.PCB

MUSICAL INSTRUMENTS
 2621 Research Drive
 Corona, CA 91720 USA

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)
 BASSMAN 100
 POWER AMP

SIZE: C DRAWING NUMBER: 0055774000
 REV. B

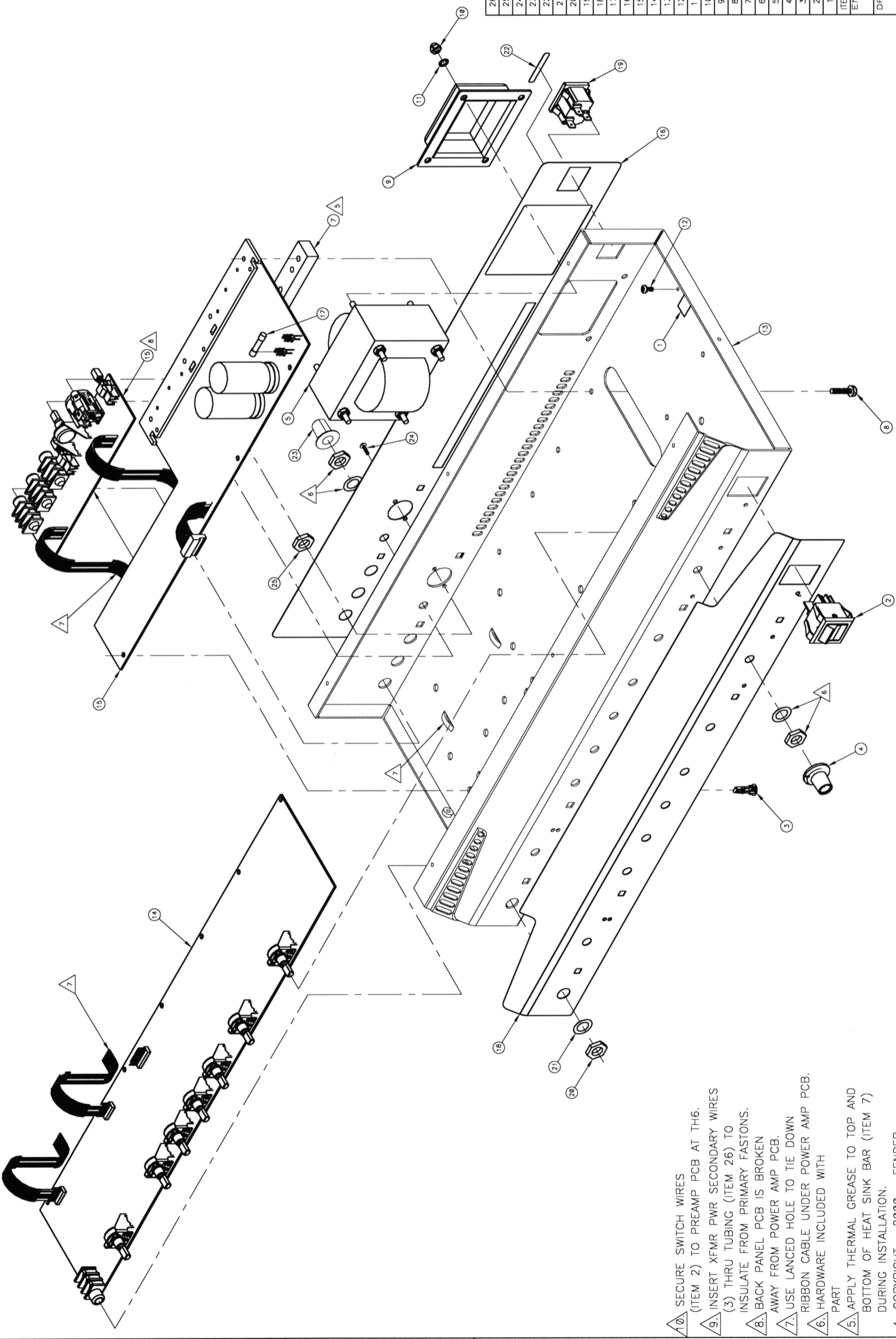
RELEASE DATE: 30-JUL-99 SHEET 2 OF 2

2. RIBBON CABLES AT PW1, PW2, PW3 CONNECT TO PREAMP PCB ASSY (P1, P2, P3 RESPECTIVELY)
1. SEE SHEET 1 FOR PRIMARY WIRING, TEST CONDITIONS, AND TEST POINT VALUES
- NOTES: (UNLESS OTHERWISE NOTED)

8 7 6 5 4 3 2 1

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REV	EC NUMBER	BY	DATE
B	EC 2363 REV NOTE AND ADD NOTE 10	JR	12/01/99
C	EC 2384 ADD NOTE 10	BW	12/19/99
D	EC 2389 - CHG QTY FOR ITEM 3	BW	1/31/2000



- 10. SECURE SWITCH WIRES (ITEM 2) TO PREAMP PCB AT TH6.
 - 9. INSERT XFMR PWR SECONDARY WIRES (3) THRU TUBING (ITEM 26) TO INSULATE FROM PRIMARY FASTONS.
 - 8. BACK PANEL PCB IS BROKEN AWAY FROM POWER AMP PCB.
 - 7. USE LANCED HOLE TO TIE DOWN RIBBON CABLE UNDER POWER AMP PCB.
 - 6. HARDWARE INCLUDED WITH PART
 - 5. APPLY THERMAL GREASE TO TOP AND BOTTOM OF HEAT SINK BAR (ITEM 7) DURING INSTALLATION.
 - 4. COPYRIGHT - 2000 - FENDER MUSICAL INSTRUMENTS CORP.
 - 3. - 3 - SAMPLES OF FIRST PARTS MUST BE APPROVED BY FENDER R&D BEFORE STARTING PRODUCTION.
 - 2. ALL DIMENSIONS ARE IN INCHES.
 - 1. DO NOT SCALE DRAWING.
- NOTES: UNLESS OTHERWISE NOTED

MATRIX

22	LABEL VOLTAGE	NONE	0050507000	0050507000
17	FUSE GA 20MMX5MM	0053884000	0020794000	0053884000
5	XFMR PWR	0040697000	0040697000	0040697000
2	SWITCH ROCKER DPST	0039236000	0040582000	0040582000
	CHASSIS ASSEMBLY	BASSMAN 100 120V DOM. 230V U.K./EUR.	BASSMAN 100 240V AUST. 100V JAP.	BASSMAN 100 100V JAP. 0055627000

26	A/R	0047163000	TUBING SHRINK 1" BLACK (N.S.) / 8
25	3	0055838000	NUT PLASTIC REAN
24	2	0051155000	SCRW SMB #4X3/8 PHP BLX
23	1	0019798000	KNOB ROTARY SS
22	1	SEE MATRIX	LABEL VOLTAGE
21	1	0053480000	WASHER FLAT .442 X.692 NI
20	1	0053479000	NUT HEX 7/16 20X1/8 NI
19	1	0054642000	CONNECTOR IEC SNAP IN
18	1	0055628000	PANEL FRONT BASSMAN 100
17	1	SEE MATRIX	FUSE GA 20MMX5MM
16	1	0055629000	PANEL REAR BASSMAN 100
15	1	0055773000	PCB ASSY POWER AMP BASSMAN 100
14	1	0055631000	PCB ASSY PREAMP BASSMAN 100
13	1	0054843000	CHASSIS BASSMAN 100
12	1	0038900000	SCRW TF 6-32X1/4 PHP ZI
11	4	0028591000	WSHR LCK INTL 8x.330x.02 ZI
10	4	0033045000	NUT ACORN 8-32
9	1	0033045000	END BELL XFMR PWRCH
8	4	0028500000	SCRW TF 8-32x3/4 HWH SLTD ZI
7	1	0055637000	HEATSINK BAR BASSMAN 100
6	1	0055635000	WIRE SET CHASSIS (N.S.)
5	1	SEE MATRIX	XFMR PWR
4	7	0055775000	KNOB ROT W/ CH INS BASSMAN
3	18	0051404000	STANDOFF NYLON BLK .375
2	1	SEE MATRIX	SWITCH ROCKER DPST
1	1	0013020000	LABEL GROUNDING SEMKO

N.S. = NOT SHOWN

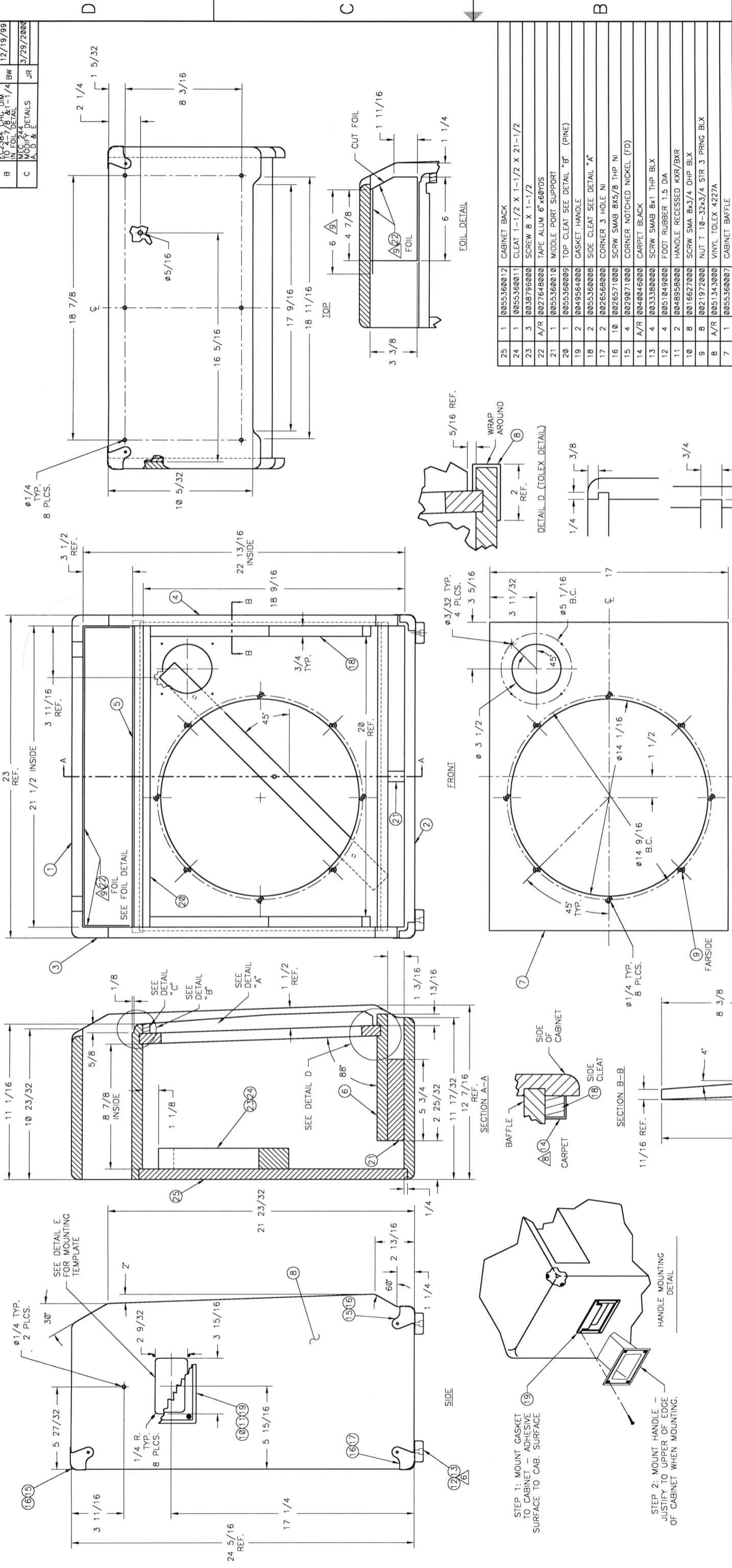
Fender
FENDER MUSICAL INSTRUMENTS CORP.
CORONA, CALIFORNIA 91720

ENGINEER
MARSHALL
DRAWN
RICHARDS
DATE
06/22/99

DFT.	ENG.	TITLE
DATE	DATE	CHASSIS ASSEMBLY
DATE	DATE	BASSMAN 100
DATE	DATE	

APPROVED	SHEET	SIZE	DRAWING NUMBER	REV.
<i>Richards</i>	1/1	D	0055623000	D
DATE	SCALE	N/A	MASTER/ASSEMBLY	
06 Feb 2000				

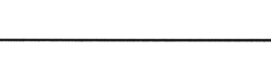
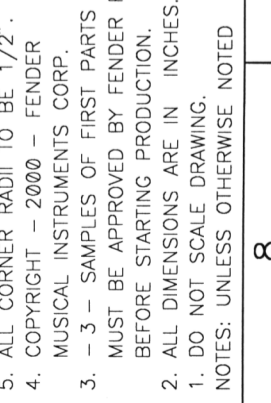
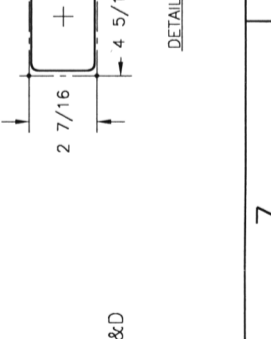
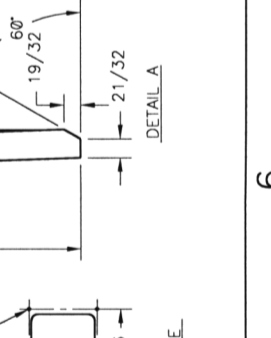
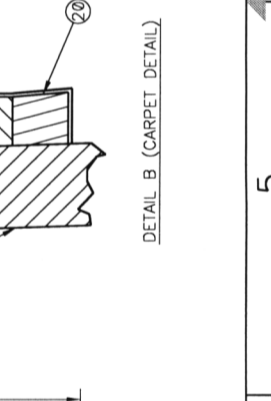
REV	DESCRIPTION	DATE
A	PR 420	08/05/99
B	FC2384 CHG DIM IN FOIL DETAIL - 1/4 BW	12/19/99
C	MFC 244 MODIFY DETAILS A, D & E	3/29/2000



ENGINEER	MARSHALL	
DRAWN	COOLER	
DATE	11/16/98	
DESCRIPTION	CABINET ASSEMBLY	
ITEM	QTY.	PART NO.
25	1	0055360012
24	1	0055360011
23	3	0038796000
22	A/R	0027648000
21	1	0055360010
20	1	0055360009
19	2	0049564000
18	2	0055360008
17	2	0026568000
16	10	0026571000
15	4	0029071000
14	A/R	0040046000
13	4	0033380000
12	4	0051049000
11	2	0048958000
10	8	0016627000
9	8	0021972000
8	A/R	0051343000
7	1	0055360007
6	1	0055360006
5	1	0055360005
4	1	0055360004
3	1	0055360003
2	1	0055360002
1	1	0055360001

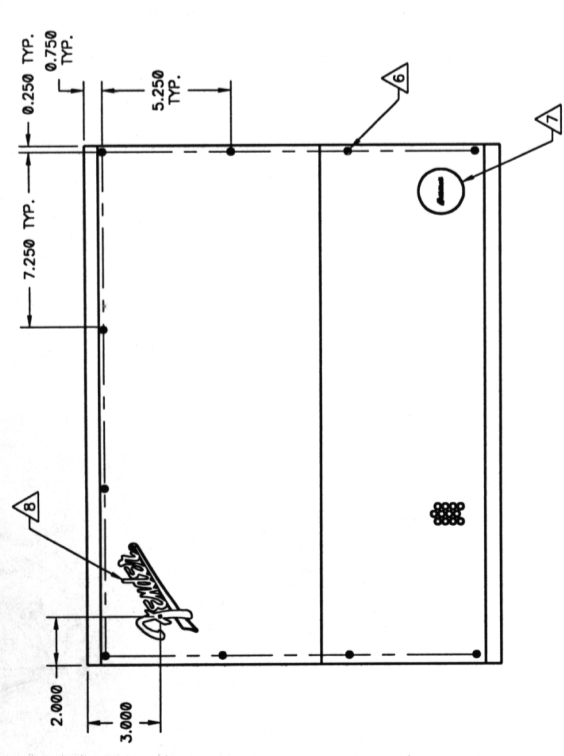
MATERIAL	0027579000 3/4" PINE	
	0027502000 3/4" P/B	
FINISH	0027903000 2" x 2" LUMBER	
TITLE	CABINET ASSEMBLY	
DESIGNER	MARSHALL	
DRAWN	COOLER	
DATE	11/16/98	
DESCRIPTION	CABINET ASSEMBLY	
ITEM	QTY.	PART NO.
25	1	0055360012
24	1	0055360011
23	3	0038796000
22	A/R	0027648000
21	1	0055360010
20	1	0055360009
19	2	0049564000
18	2	0055360008
17	2	0026568000
16	10	0026571000
15	4	0029071000
14	A/R	0040046000
13	4	0033380000
12	4	0051049000
11	2	0048958000
10	8	0016627000
9	8	0021972000
8	A/R	0051343000
7	1	0055360007
6	1	0055360006
5	1	0055360005
4	1	0055360004
3	1	0055360003
2	1	0055360002
1	1	0055360001

PAINT ALL EXPOSED SURFACES BLACK
TOL. UNLESS NOTED
FRACT. --- 1/32
.X --- 0.050
.XX --- 0.010
.XXX --- 0.005
ANGLE DIA. --- 0.005 DEGREES
UNMARKED ANGLES ARE 90 DEGREES.

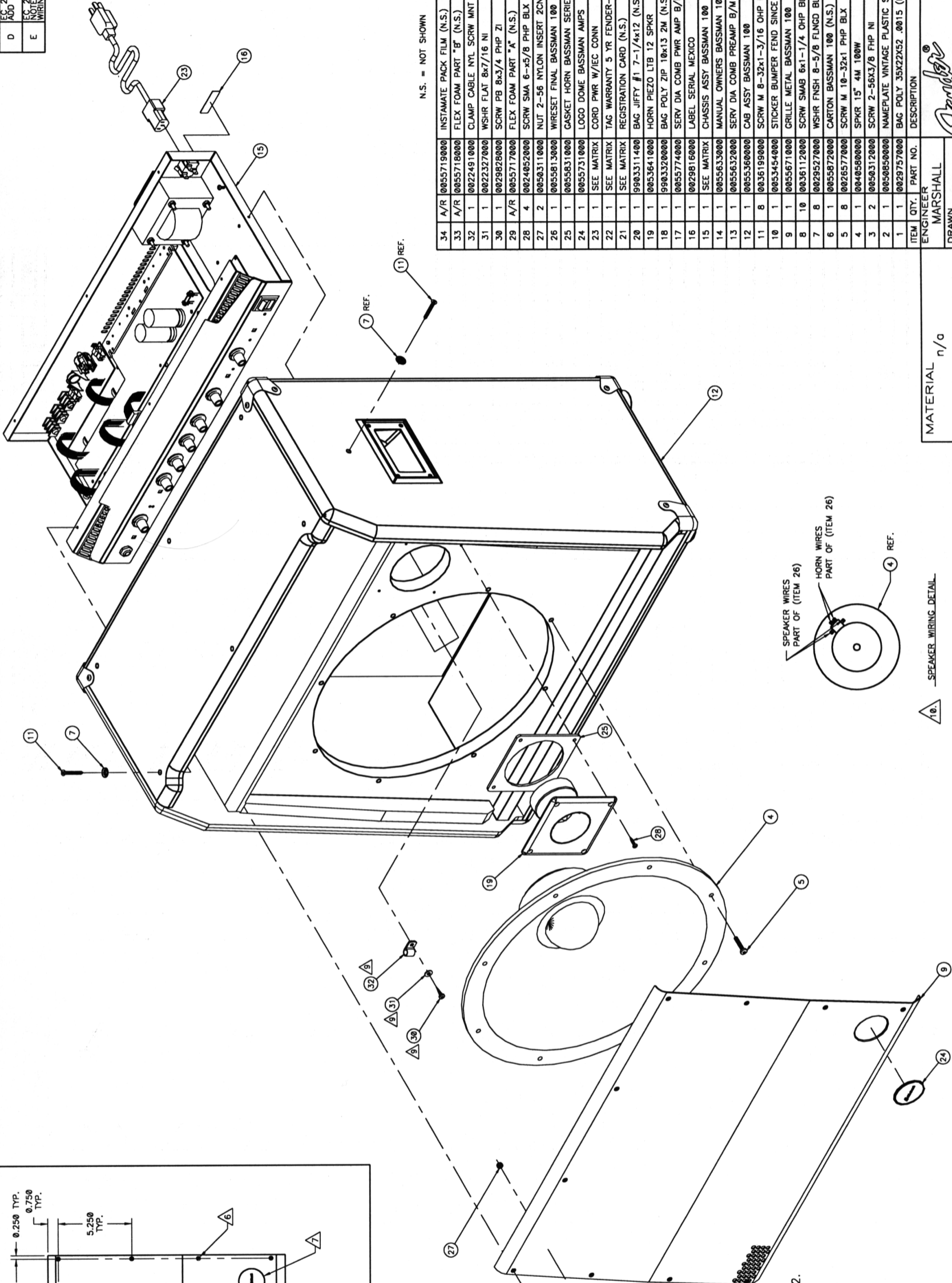


- 1. DO NOT SCALE DRAWING.
- 2. ALL DIMENSIONS ARE IN INCHES.
- 3. - 3 - SAMPLES OF FIRST PARTS MUST BE APPROVED BY FENDER R&D BEFORE STARTING PRODUCTION.
- 4. COPYRIGHT - 2000 - FENDER MUSICAL INSTRUMENTS CORP.
- 5. ALL CORNER RADI TO BE 1/2".
- 6. HOLE W/SCREW ITEM #1.3.
- 7. MOUNT FEET USING BOTTOM CORNER SCREW
- 8. FEET NOT SHOWN IN ALL VIEWS FOR CLARITY.
- 9. COVER FRONT AND SIDES OF CLEATS WITH CARPET.
- 10. MAKE SHIELDING FOR TOP SEPARATE PIECE, 6" NO CUT.
- 11. STAPLE SHIELDING AT CORNERS AND MIDDLE.

THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFIDENCE AND SHALL BE KEPT CONFIDENTIAL AND NOT TO BE DISCLOSED OR REPRODUCED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS CORP.



GRILLE MOUNTING DETAIL



N.S. = NOT SHOWN

34	A/R	0055719000	INSTAMATE PACK FILM (N.S.)
33	A/R	0055718000	FLEX FOAM PART "B" (N.S.)
32	1	0022491000	CLAMP CABLE NYL SCRW MNT 5/16
31	1	0022327000	WSHR FLAT 8x7/16 NI
30	1	0029828000	SCRW PB 8x3/4 PHP ZI
29	A/R	0055717000	FLEX FOAM PART "A" (N.S.)
28	4	0024052000	SCRW SMA 6-x5/8 PHP BLX
27	2	0050311000	NUT 2-56 NYLON INSERT 2CNME-Z
26	1	0055813000	WIRESET FINAL BASSMAN 100 (N.S.)
25	1	0055831000	GASKET HORN BASSMAN SERIES
24	1	0055731000	LOGO DOME BASSMAN AMPS
23	1	SEE MATRIX	CORD PWR W/IEC CONN
22	1	SEE MATRIX	TAG WARRANTY 5 YR FENDER-NEW (N.S.)
21	1	SEE MATRIX	REGISTRATION CARD (N.S.)
20	1	9903311400	BAG JIFFY #1 7-1/4x12 (N.S.)
19	1	0053641000	HORN PIEZO LTB 12 SPKR
18	1	9903320000	BAG POLY ZIP 10x13 2M (N.S.)
17	1	0055774000	SERV DIA COMB PWR AMP B/M 100 (N.S.)
16	1	0029816000	LABEL SERIAL MEXICO
15	1	SEE MATRIX	CHASSIS ASSY BASSMAN 100
14	1	0055633000	MANUAL OWNERS BASSMAN 100 (N.S.)
13	1	0055632000	SERV DIA COMB PREAMP B/M 100 (N.S.)
12	1	0055360000	CAB ASSY BASSMAN 100
11	8	0036199000	SCRW M 8-32x1-3/16 OHP BLX CP
10	1	0053454000	STICKER BUMPER FEND SINCE 1946 (N.S.)
9	1	0055671000	GRILLE METAL BASSMAN 100
8	10	0036112000	SCRW SMAB 6x1-1/4 OHP BLX W/WS
7	8	0029527000	WSHR FNISH 8-5/8 FLNGD BLX WX
6	1	0055872000	CARTON BASSMAN 100 (N.S.)
5	8	0026577000	SCRW M 10-32x1 PHP BLX
4	1	0040580000	SPKR 15" 4M 100W
3	2	0050312000	SCRW 2-56X3/8 FHP NI
2	1	0050850000	NAMEPLATE VINTAGE PLASTIC SMAL
1	1	0029757000	BAG POLY 35X22X52 .0015 (N.S.)

ENGINEER
MARSHALL
DRAWN
RICHARDS
DATE
7/1/99

TITLE
END ITEM ASSEMBLY
BASSMAN 100

SHEET
1/1
SCALE
N/A

REV.
E
0224503000
MASTER/ASSEMBLY

MATERIAL
n/a
FINISH
n/a

TOL. UNLESS NOTED
FRACT. --- 1/32
.X --- 0.050
.XX --- 0.010
.XXX --- 0.010
ANGLES --- 0.5 DEGREES
HOLE DIA. --- 0.005
UNMARKED ANGLES ARE 90 DEGREES.

MATRIX

33	CORD POWER	0047245000	0047251000	0047249000	0047250000	0053997000
32	TAG WARRANTY 5 YEAR-NEW	0053412000	NONE	NONE	NONE	NONE
31	REGISTRATION CARD	0054387000	NONE	NONE	NONE	NONE
30	CHASSIS ASSEMBLY	0055623000	0055624000	0055624000	0055626000	0055627000
	END ITEM	BASSMAN 100 120V DOM. 0224503000	BASSMAN 100 230V U.K. 0224553000	BASSMAN 100 230V U.K. 0224543000	BASSMAN 100 240V AUSTR. 0224535000	BASSMAN 100 100V JAP. 0224536000

- ATTACH SPEAKER & HORN WIRES PER SPKR WIRING DETAIL.
- SECURE SPEAKER & HORN CABLES (ITEM 26) TO BACK BRACE OF CABINET USING ITEMS 30-32. CABLES SHOULD NOT REST ON SPEAKER CONE.
- LINE OF "d" ON LOGO SHOULD BE VERTICAL (PERPENDICULAR TO TOP).
- THE WORD "BASSMAN" ON THE BASSMAN LOGO SHOULD BE HORIZONTAL (PARALLEL TO BOTTOM).
- APPROXIMATE LOCATION OF SCREWS TO MOUNT GRILLE AS HOLES WILL PERMIT.
- ALL DIMENSIONS ON GRILLE MOUNTING DETAIL ARE APPROXIMATE.
- COPYRIGHT - 2000 - FENDER MUSICAL INSTRUMENTS CORP.
- 3 - SAMPLES OF FIRST PARTS MUST BE APPROVED BY FENDER R&D BEFORE STARTING PRODUCTION.
- ALL DIMENSIONS ARE IN INCHES. 1. DO NOT SCALE DRAWING. NOTES: UNLESS OTHERWISE NOTED
- INSERT SPEAKER WIRES THRU TUBING PRIOR TO ATTACHING FASTONS TO PCB. THIS PROTECTS SPEAKER WIRES FROM PRIMARY VOLTAGE FASTONS.