

PRINCETON CHORUS DSP

p/n 022-5700-020 (120V)

SERVICE MANUAL

PRINCETON CHORUS DSP
(This is the model name for warranty claims)

SERVICE MANUAL

OCTOBER 1999

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:



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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

PARTS LIST

SPECIFICATIONS

Product Release No.: PR 424 *(This is not a model number)*

Part Number:
 120V Version : 22-5700-020
 240V Aus : 22-5730-020
 230V UK : 22-5740-020
 230V Eur : 22-5760-020
 100V : 22-5770020

Power Requirements:
 100V Version : 100 VAC 50/60 Hz, 180W
 120V : 120 VAC 60 Hz, 180W
 230V : 230 VAC 50 Hz, 180W
 240V : 240 VAC 50 Hz, 180W

Power Amp Section
Power Output: 25 Watts per channel, (50W total) @ 5% THD
Rated Load Impedance: 8Ω per channel
Sensitivity: 1.4V RMS

Preamp Section
Input Impedance: >1MΩ (Input 1) >130kΩ (Input 2)
Nominal Level: 100mV (Input 1) 200mV (Input 2)
Mono Effects Loop: Nominal level -10dBV
 Send output impedance 1kΩ (Balanced)
 Return input impedance 22kΩ (Balanced)
Stereo Effects Loop: Nominal level -10dBV
 Send output impedance 1kΩ
 Return input impedance 18kΩ
 (Left on tip, right on ring)

Speaker Complement: Two 8 Ω Fender Special Design 10" Speakers (P/N 029753)

Dimensions:
 Height: 17 1/2" (44 cm)
 Width: 22 3/8" (57 cm)
 Depth: 10 3/16" (26 cm)

Weight: 40 lbs. (18 kg)

Product specifications are subject to change without notice

NOTE: SHADED ITEMS ARE FOR REFERENCE ONLY

PRINTED CIRCUIT BOARD ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0055579000	PCB, MAIN, PRNCTN CHRSP DSP	
1	0040987000	CABLE RIBBON 10 CKT 3.75"	PW2
1	0048845000	CABLE RIBBON 12 CKT 3.75"	PW17
1	0048914000	CABLE RIBBON 8 CKT 7"	PW3
1	0051445003	CAP CD 22pF 500V 5%	C25
4	0051457003	CAP CD 100pF 500V 5%	C32 C34 C47-48
1	0051406003	CAP CD 220pF 500V 10%	C51
6	0051458003	CAP CD 470pF 500V 10%	C10 C21 C29-30 C52 C74
1	0051459003	CAP CD 560pF 500V 10%	C14
19	0034788003	CAP CR .1uF 50V 20% .2" LS	C41 C67-70 C79-80 C87-90 C94-101
4	0027255003	CAP MPF .001uF 100V 10%	C4 C17 C38-39
3	0027257003	CAP MPF .0022uF 100V 10%	C12 C15-16
1	0027259003	CAP MPF .0033uF 100V 10%	C13
4	0027261003	CAP MPF .0047uF 100V 10%	C1-2 C43-44
2	0027264003	CAP MPF .01uF 100V 10%	C5 C42
2	0027265003	CAP MPF .015uF 100V 10%	C18-19
2	0027267003	CAP MPF .022uF 100V 10%	C61-62
3	0027270003	CAP MPF .033uF 100V 10%	C6 C8 C24
1	0027272003	CAP MPF .047uF 63V 10%	C76
1	0027277003	CAP MPF .082uF 100V 10%	C7
1	0027278003	CAP MPF .1uF 63V 10%	C75
2	0052003003	CAP MPF .1uF 250V 10%	C83-84
1	0053860000	CAP MPF .1uF 250VAC 20%	C104
3	0027281003	CAP MPF .22uF 63V 10%	C20 C23 C77
5	0027286003	CAP MPF .47uF 63V 10%	C9 C11 C22 C73 C78
2	0033477003	CAP MPF .68uF 63V 10%	C36-37
2	0033606003	CAP AE RDL .47uF 50V 20%	C53-54
7	0028459003	CAP AE RDL 2.2uF 50V 20%	C45-46 C55-58 C82
2	0028460003	CAP AE RDL 4.7uF 50V 20%	C59-60
2	0028463003	CAP AE RDL 10uF 50V 20%	C65-66
12	0028467003	CAP AE RDL 22uF 50V 20%	C3 C26-28 C31 C33 C35 C49-50 C81 C102-103
2	0028471003	CAP AE RDL 47uF 50V 20%	C92-93
2	0047195003	CAP AE RDL 47uF 63V 20%	C71-72
2	0028482003	CAP AE RDL 220uF 50V 20%	C63-64
1	0028485003	CAP AE RDL 470uF 16V 20%	C40
1	0028490003	CAP AE RDL 1000uF 6.3V 20%	C91
2	0029654000	CAP AE RDL 4700uF 35V +100%-20%	C85-86
1	0027937000	CONTROL SNAPIN 2k 15A TAPER	R42 mid
2	0054390000	CONTROL SNAPIN 5k 15A TAPER	R61-62 rvb/dly level, chr/mod level
2	0027940000	CONTROL SNAPIN 50k 15A TAPER	R40-41 treb, bass
2	0027941000	CONTROL SNAPIN 50k B TAPER	R9 R33 volume, od volume
1	0027942000	CONTROL SNAPIN 50k 2B DETENT	R30 presence
1	0027947000	CONTROL SNAPIN 100k 30C TAPER	R19 gain
1	0027950000	CONTROL SNAPIN 1 MEG 5C TAPER	R22 limiter

PARTS LIST

PARTS LIST

PRINTED CIRCUIT BOARD ASSEMBLY (CONT)

PRINTED CIRCUIT BOARD ASSEMBLY (CONT)

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
23	0006260001	DIODE 1N4448 SIGNAL	D1-12 D17-18 D21-24 D26-28 D30-31
7	0064089001	DIODE 1N4003	D13-16 D29 D36-37
4	0020534000	DIODE 1N5402 RECTIFIER 200V C&F	D32-35
2	0031635001	DIODE ZEN 1N5240B 10V 5%	D19 D25
1	0041074000	ENCODER 16-POS 4-BIT BINARY	S5
1	0026000001	FSTN TAB MALE .187x.032 PCB MT	P12 (ass'y P/N 0055580000 domestic)
3	0026000001	FSTN TAB MALE .187x.032 PCB MT	P12 P15-16 (ass'y P/N 0055581000 export)
8	0025802000	FSTN TAB MALE .250x.032 PCB MT	P1-4 P6-8,P10(ass'y P/N 0055580000domestic)
11	0025802000	FSTN TAB MALE .250x.032 PCB MT	P1-5 P7 P9-11 P13-14(ass'y P/N 0055581000 export)
2	0051094003	FUSE CLIP PCB 5mm (EXPT)	@F1 (ass'y P/N 0055580000 domestic)
6	0051094003	FUSE CLIP PCB 5mm (EXPT)	@F1-3 (ass'y P/N 0055581000 export)
1	0027421000	HDR .1 CTR 12 CKT SQ PIN	P17
6	0031611000	IC OP-AMP DUAL PC4560	U4-7 U10-11
3	0016795000	IC OP-AMP DUAL TL072	U1-3
1	0041261000	IC VOLT REF LM4040DIZ-10.0	U12
2	0054377000	IC POWER AMP TDA1514A 40W	U8-9
1	0054648000	HEATSINK PLATE DUAL TDA1514A	@U8-9
2	0054378000	INSULATOR MICA 9 PIN SIP	@U8-9
4	0027638000	SCRW TF 4-40x3/8 HWHS ZI .1"HD	@U8-9
2	0032908000	SCRW TF 6-32x3/8 PHP ZI	PCB to HEATSINK PLATE
1	0041812000	IC REGULATOR +5V MC7805CT	U13
1	0013562000	IC REGULATOR +15V MC7815CT	U14
1	0013564000	IC REGULATOR -15V MC7915CT	U15
3	0050849000	HEATSINK PCB LEVEL 576012U	@U13-15
3	0039420000	SCRW M 4-40X3/8 PHP SS SEMS	@U13-15
3	0097360000	NUT HEX 4-40 EX LOCK	@U13-15
1	0051658000	JACK MONO R/A	J7
6	0053450000	JACK STEREO R/A	J1-6
1	0048332000	LED RED PNL MT 7"	D38
1	0049948000	LED RED LONG LEAD LUMEX	D20
1	0036178000	SPACER LED .5x.1 BRN A6192-1	@D20
1	0028036000	LED 21L994 OPTO-ISOLATOR	OP1
3	0024947001	RES CF 1/4W 47ohm 5%	R72 R151-152
1	0028015001	RES CF 1/4W 130ohm 5%	R37
2	0024955001	RES CF 1/4W 180ohm 5%	R70 R150
1	0024961001	RES CF 1/4W 470ohm 5%	R8
10	0024965001	RES CF 1/4W 1k 5%	R20 R51-54 R91-94 R122
1	0028842001	RES CF 1/4W 1.1k 5%	R11
1	0024969001	RES CF 1/4W 1.5k 5%	R127
2	0024973001	RES CF 1/4W 3.3k 5%	R18 R36
4	0024975001	RES CF 1/4W 3.9k 5%	R101-102 R109-110
1	0028034001	RES CF 1/4W 5.1k 5%	R5

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
4	0024979001	RES CF 1/4W 6.8k 5%	R6 R97-98 R136
4	0025942001	RES CF 1/4W 7.5k 5%	R15 R31-32 R73
6	0024981001	RES CF 1/4W 10k 5%	R45-48 R139 R141
1	0029002001	RES CF 1/4W 11k 5%	R14
4	0024983001	RES CF 1/4W 12k 5%	R74 R88 R95-96
5	0024985001	RES CF 1/4W 15k 5%	R7 R75-76 R123 R137
13	0024987001	RES CF 1/4W 22k 5%	R12-13 R25-26 R28 R39 R57-60 R65-66 R142
2	0028863001	RES CF 1/4W 24k 5%	R16 R87
7	0024988001	RES CF 1/4W 27k 5%	R35 R77-78 R103-106
1	0024991001	RES CF 1/4W 39k 5%	R38
7	0024993001	RES CF 1/4W 47k 5%	R34 R81-86
1	0024994001	RES CF 1/4W 56k 5%	R10
3	0024995001	RES CF 1/4W 68k 5%	R1-2 R27
14	0024997001	RES CF 1/4W 100k 5%	R49-50 R55-56 R63-64 R79-80 R89-90 R132 +R138 R140 R144
1	0025059001	RES CF 1/4W 220k 5%	R43
2	0025061001	RES CF 1/4W 330k 5%	R117-118
6	0025065001	RES CF 1/4W 470k 5%	R44 R67-68 R120 R126 R135
2	0028018001	RES CF 1/4W 510k 5%	R3-4
3	0025067001	RES CF 1/4W 680k 5%	R99-100 R143
2	0025068001	RES CF 1/4W 820k 5%	R29 R134
5	0025069001	RES CF 1/4W 1M 5%	R21 R23-24 R121 R125
2	0025079001	RES CF 1/4W 4.7M 5%	R145-146
1	0025084001	RES CF 1/4W 10M 5%	R17
1	0016953001	RES MF 1/4W 1.78k 1%	R71
2	0015581001	RES MF 1/4W 9.53k 1%	R69 R131
1	0040772001	RES MF 1/4W 15.0k 1%	R130
1	0017191001	RES MF 1/4W 36.5k 1%	R133
1	0031820001	RES MF 1/4W 49.9k 1%	R129
1	0016979001	RES MF 1/4W 215k 1%	R128
2	0030737001	RES CF 1/2W 5.6ohm 5%	R111-112
1	0028861001	RES CF 1/2W 3.3k 5%	R124
3	0027344001	RES FILM 1W 270ohm 5%	R147-149
1	0029722001	RES FILM 1W 1k 5%	R119
2	0027628001	RES MOX 2W 47ohm 5%	R113-114
2	0028028000	RES WW BT 5W .47 ohm 5%	R107-108
2	0029670000	RES WW BT 5W 150 ohm10%	R115-116
4	0028091000	SWITCH PUSH SLFLK SHORT STROKE	S1-4
4	0048451000	BUTTON PUSH OFF-WHITE	@S1-4
1	0028503000	THERMISTOR 10 ohm 5A C60-11	RT1

PARTS LIST

PRINTED CIRCUIT BOARD ASSEMBLY (CONT)

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
5	0014689003	XSTR N-CH JFET J111 TO-92	Q1-3 Q8-9
1	0016739003	XSTR NPN 2N4401 TO-92	Q7
3	0016742003	XSTR PNP 2N4403 TO-92	Q4-6

CHASSIS ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0055584000	CHASSIS PRINCETON CHORUS DSP	
1	0055580000	PCB ASSY PRNCTN CHRS DSP DOM	
1	0055581000	PCB ASSY PRNCTN CHRS DSP EXP	
1	0048384000	FUSE 20mmX5mm F2A 250V (100V/120V)	
1	0013112000	FUSE TD 20mmx5mm 250v 1A (230V/240V)	
2	0013681000	FUSE TD 20mmx5mm 250v 5A (Export only)	
1	0025935000	SWITCH DPST .187 TAB (DOM) (100V/120V)	
1	0039287000	SWITCH DPST .187 TAB GLOBAL (230V/240V)	
5	0051404000	STANDOFF NYLON BLK .375	
13	0026402000	KNOB POINTER BLACK	
1	0029648000	XFMR PWR 120V PRINC (Domestic only)	
1	0029649000	XFMR PWR EXPORT PRCR/CHRLD50	
1	0028560000	END BELL XFMR 85W	
4	0028591000	NUT ACORN 8-32	
4	0030007000	WSHR LCK INTL 8x.330x.02 ZI	
1	0038900000	SCRW TF 6-32X1/4 PHP ZI	
1	0055582000	PANEL FRNT PRNCTN CHRS DSP	
1	0055583000	PANEL REAR PRNCTN CHRS DSP	
1	0028499000	HEATSINK BAR	
3	0028500000	SCRW TF 8-32x3/4 HWH SLTD ZI	
2	0021709000	BUSHING SR .437x.062x13/32 BLK	
1	0054642000	CONNECTOR IEC SNAP-IN	
1	0055590008	PCB ASSY DSP PRNCTN CHRS DSP	
1	0027288000	LENS LED RED	

PARTS LIST

CABINET ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
4	0019275000	INSERT GLIDE CUSHION 1.27 DIA	
4	0019276000	GLIDE CAB 1.24 X .335	
2	0019279000	HANDLE CAP 2 HOLE NICKEL	
1	0027846000	HANDLE 9.25" NO LOGO	
1	0032524000	INSERT HANDLE	
4	0026566000	CORNER 2 HOLE W/TAB NI	
2	0026568000	CORNER 3 HOLE NI	
12	0021972000	NUT T 10-32 X 3/4 STR 3 PRNG BLX	
4	0022244000	SCRW M 10-32 X 1-1/8 OHP NI	
10	0026571000	SCRW SMAB 8 X 5/8 THP NI	
4	0026625000	SCRW WOOD 8 X 1 FH	
1.06	0026570000	TOLEX BLACK	
.6	0037788000	CLOTH GRILLE BLACK/SILVER	

FOOTSWITCH ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0028109000	HSG END CUP LEFT FTSW	
1	0028141000	HSG FTSW 3 BUTTON	
1	0028143000	HSG END CUP RIGHT FTSW	
1	0028895000	CABLE ASSY FTSW RT ANG 12'	
1	0031647000	NUT HEX 12mmx1mm NI	
8	0028684000	SCRW SMB 6x3/8 PH PHS BLX	
3	0031899000	WSHR NYL .485x.775x.150 TK	
1	0055594000	PLATE FTSW 3 BTN PRNCTN CH DSP	
1	0055593000	PCB ASSY FTSW 3 BTN PRNCTN DSP	

FOOTSWITCH PCB ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
3	0006260001	DIODE 1N4448	
3	0028039000	LED RED 5x5mm SLB-55VR3	
3	0028714000	SWITCH PUSH SPDT	
1	0031017000	DIODE ZEN 1N5223B 2.7V 5%	
3	0034921000	SPACER RND NYL .147x.250x.780	
1	0037036000	JACK PCB MONO CA(099-0912-000)	
1	0053898000	PCB FAB FTSW 3 BTN SUNN BASS	

PARTS LIST

PARTS LIST

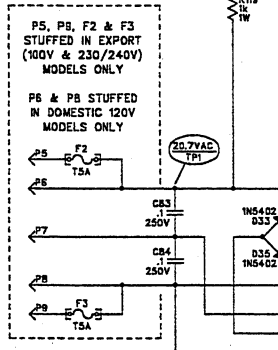
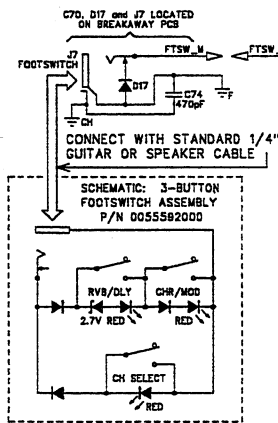
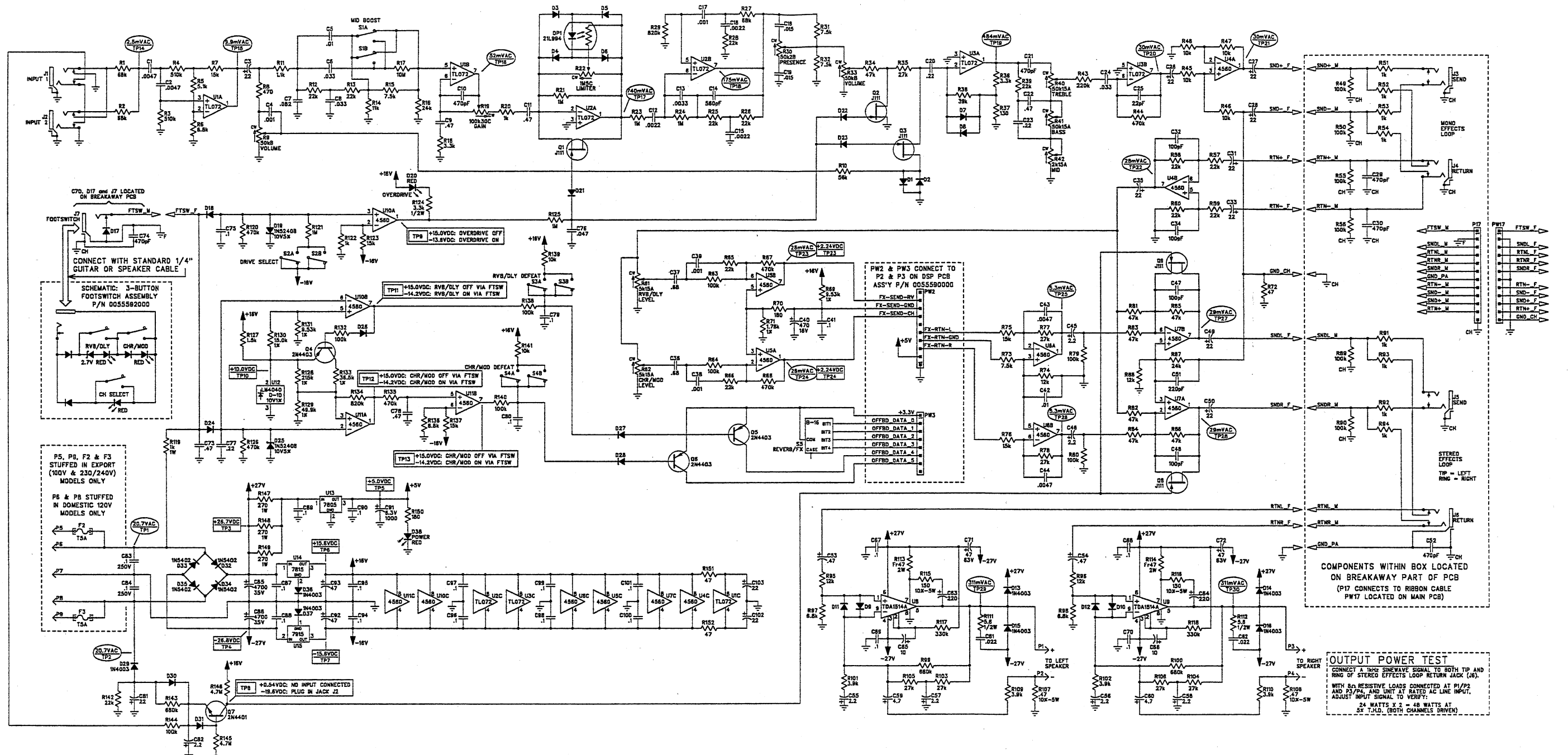
DSP PCB ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
4	0053544004	XSTR NPN 2N2222 SMT	Q1-4
1	0053536004	IC, DSP, 56L811	U1
2	0053537004	SRAM, LOW VOLTAGE 32Kx8, SMT	U2-3
1	0055764000	PROGRAMMED EPROM	U4
1	0053540004	IC, CODEC, AK4520A	U5
1	0053541004	VOLT REGULATOR 3.3V W/R, SMT	U6
1	0049948000	LED RED LL LUMEX	D6
1	0036178000	SPACER LED .5x.1 BRN A6192-1	
2	0041074000	ENCODER	S1,S2 BREAK OFF LOCATING TABS-2PLCS
1	0027419000	HDR .1 CTR 10 CKT SQ PIN	P2
1	0027416000	HDR .1 CTR 8 CKT SQ PIN	P3
2	0053555004	CAP CER 0805 22pF 25V 5%	C10-11
1	0053558004	CAP CER 0805 750pF 25V 5%	C13
2	0053557004	CAP CER 0805 .001uF 25V 5%	C29-30
2	0053559004	CAP CER 0805 .0039uF 25V 5%	C33-34
5	0053556004	CAP CER 0805 .01uF 25V 5%	C12 C16 C19 C38-39
17	0053554004	CAP CER 0805 .1uF 25V 5%	C1-9 C14-15 C18 C22-23 C25 C27 C36
2	0053560004	CAP TAN 3528 4.7uF 15V 20%	C31-32
7	0053561004	CAP TAN 3528 10uF 15V 20%	C17 C21 C24 C26 C28 C35 C37
2	0055777004	RES MF 0805 1/10W 0 ohm	R59 R61
3	0053547004	RES MF 0805 1/10W 10 ohm 5%	R15-17
4	0053552004	RES MF 0805 1/10W 150ohm 5%	R40-43
2	0053550004	RES MF 0805 1/10W 180 ohm 5%	R34-35
8	0053549004	RES MF 0805 1/10W 560 ohm 5%	R25 R27-29 R54-R57
1	0053546004	RES MF 0805 1/10W 2k 5%	R2
4	0053548004	RES MF 0805 1/10W 3.3k 5%	R24 R26 R30-31
32	0053545004	RES MF 0805 1/10W 10k 5%	R3-14 R18-23 R36-39 R44-53
2	0053551004	RES MF 0805 1/10W 47k 5%	R32-33
1	0053553004	RES MF 0805 1/10W 1M 5%	R1
1	0053542004	CRYSTAL, 10 MHz, SMT	Y1
1	0053539004	IC SOCKET, 32 PLCC, SMT	@ U4
1	0053570000	PCB FAB, DSP SFX SERIES	

END ITEM ASSEMBLY

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0040187000	CAB ASSY PRINCETON CH BLK/SLVR	
1	0055585000	CHS ASSY PRNCTN CHRS DSP 120V	DOMESTIC
1	0055586000	CHS ASSY PRNCTN CHRS DSP 230V	230V/240V
1	0055587000	CHS ASSY PRNCTN CHRS DSP 100V	100V
1	0047248000	CORD PWR W/IEC CONN DOM	DOMESTIC
1	0047251000	CORD PWR W/IEC CONN 230V	EUROPE
1	0047249000	CORD PWR W/IEC CONN 230V UK	UK
1	0047250000	CORD PWR W/IEC CONN 250V	AUSTRALIA
1	0053997000	CORD PWR W/IEC CONN 100V JPN	JAPAN
1	0055592000	FOOTSWITCH 3-BTN PRCR DSP	
1	0029906000	NAMEPLATE FENDER GENERIC SMALL	
1	0033077000	NAMEPLATE CAST PRCR	
8	0026577000	SCRW M 10-32x1 PHP BLX	speakers
4	0018113000	SCRW SMA 4x1/2 OHP BLX	nameplates
6	0036199000	SCRW M 8-32x1-3/16 OHP BLX CP	chassis
6	0029527000	WSHR FNSH 8-5/8 FLNGD BLX WX	chassis
2	0029753000	SPKR 10"8 OHM (099-4810-004)	
2	0038299000	DECAL SPEAKER GLOBE ROUND	speakers

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR424	31-MAR-99	R J D



OUTPUT POWER TEST
 CONNECT A 1KHZ SINEWAVE SIGNAL TO BOTH TIP AND RING OF STEREO EFFECTS LOOP RETURN JACK (J6).
 WITH 8Ω RESISTIVE LOADS CONNECTED AT P1/P2 AND P3/P4, AND UNIT AT RATED AC LINE INPUT, ADJUST INPUT SIGNAL TO VERIFY:
 24 WATTS X 2 = 48 WATTS AT 5% T.H.D. (BOTH CHANNELS DRIVEN)

- LAST REFERENCE DESIGNATORS: C184, D38, F3, J7, DP1, P17, Q9, R152, R15, TP30, U15, W2. (ALSO USED: PW2, PW3, PW17.)
- TESTPOINT VOLTAGES TP14-30 READ TO GROUND WITH A DVM UNDER THE FOLLOWING CONDITIONS:
 UNIT AT RATED LINE VOLTAGE
 CABLE P1/P2 CONNECTED TO P2 ON DSP PCB ASSEMBLY
 CABLE P1/P3 CONNECTED TO P3 ON DSP PCB ASSEMBLY
 P/N 005559000
 8Ω RESISTIVE LOADS (2) CONNECTED AT P1-P4
 NO FOOTSWITCH CONNECTED
 MID BOOST SWITCH OUT
 OVERDRIVE SELECT SWITCH IN
 REVERB FX DEFEAT AND CHORUS DEFEAT SWITCHES OUT
 ALL ROTARY CONTROLS SET TO 12 O'CLOCK
 DSP PCB ASSEMBLY P/N 005558000 AND 005559000
 (REFER TO SCHEMATIC P/N 005558000 FOR TEST MODE)
- TESTPOINT VOLTAGES TP1-13 READ TO GROUND WITH A DVM AND NO INPUT SIGNAL WITH UNIT AT RATED LINE VOLTAGE AND CABLE P1/P2 CONNECTED TO HEADER P17.
- 8Ω RESISTIVE LOADS (2) CONNECTED AT P1-P4
- THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0055578000 AND PCB ASSEMBLY P/N 005558000 AND 005559000.
- ALL DIPDES ARE 184448.
- ALL POLARIZED CAPACITORS IN μF, 20% 50V MINIMUM.
- ALL UNPOLARIZED CAPACITORS IN μF, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%.)
- ALL RESISTORS IN OHMS, 5% 1/4W.

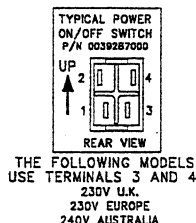
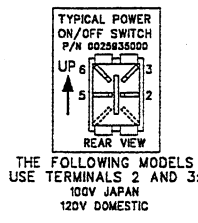
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 Corona, CA 91720 USA

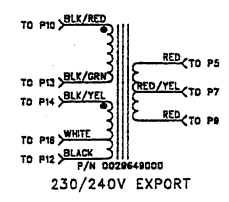
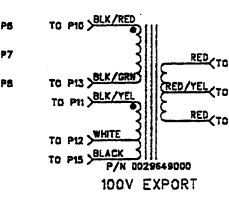
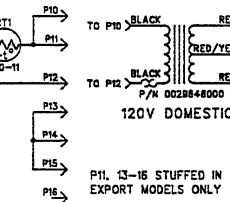
CHECKED BY: *B.Pen*
 DATE: 31-MAR-99
 APPROVED BY: *[Signature]*
 DATE: 31-MAR-99
 DRAWN: B. DESI
 ENGR: B. DESI
 DATABASE FILE: 2424S.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
 PRINCETON CHORUS DSP
 MAIN PCB

SIZE: D
 DRAWING NUMBER: 0055578000
 RELEASE DATE: 31-MAR-99
 SHEET: 1 OF 2



MODELS:	F1 VALUE:
100-120V	F2A 250V
230-240V	T1A 250V



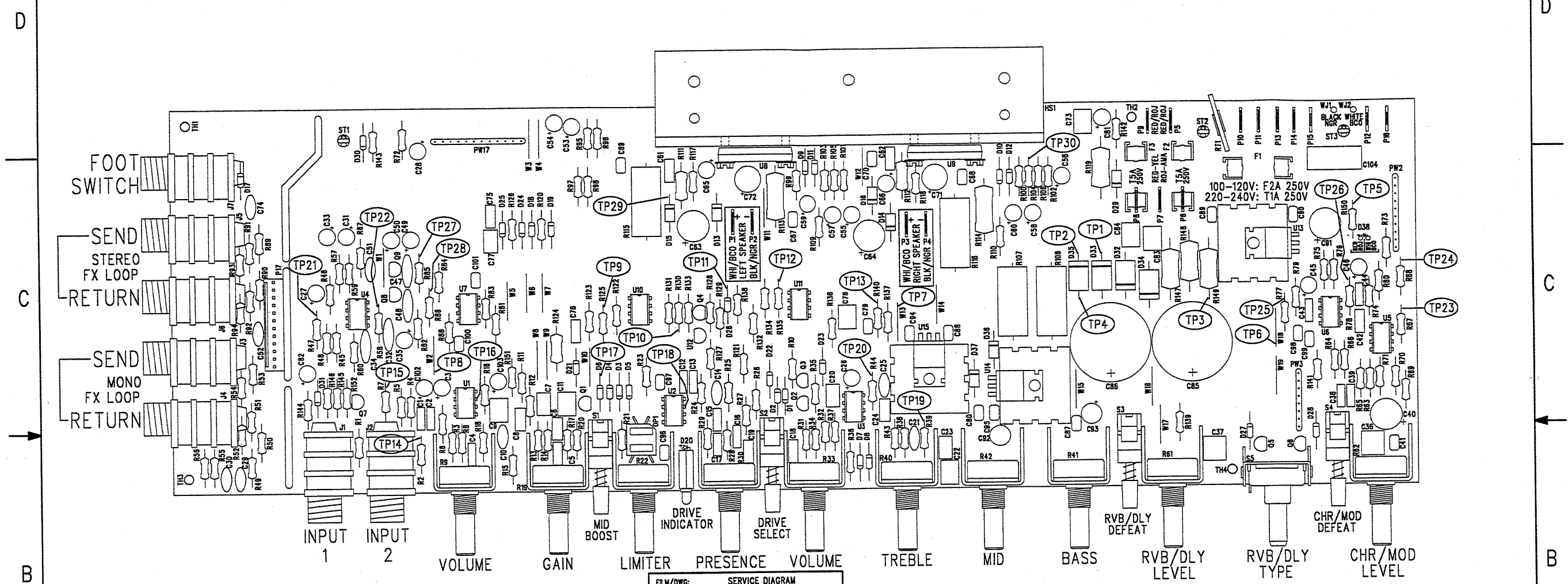
THE FOLLOWING MODELS USE TERMINALS 2 AND 3:
 100V JAPAN
 120V DOMESTIC

THE FOLLOWING MODELS USE TERMINALS 3 AND 4:
 230V U.K.
 230V EUROPE
 240V AUSTRALIA

P11, 13-15 STUFFED IN EXPORT MODELS ONLY

NOTES: (UNLESS OTHERWISE NOTED)

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR424	31-MAR-99	R J D

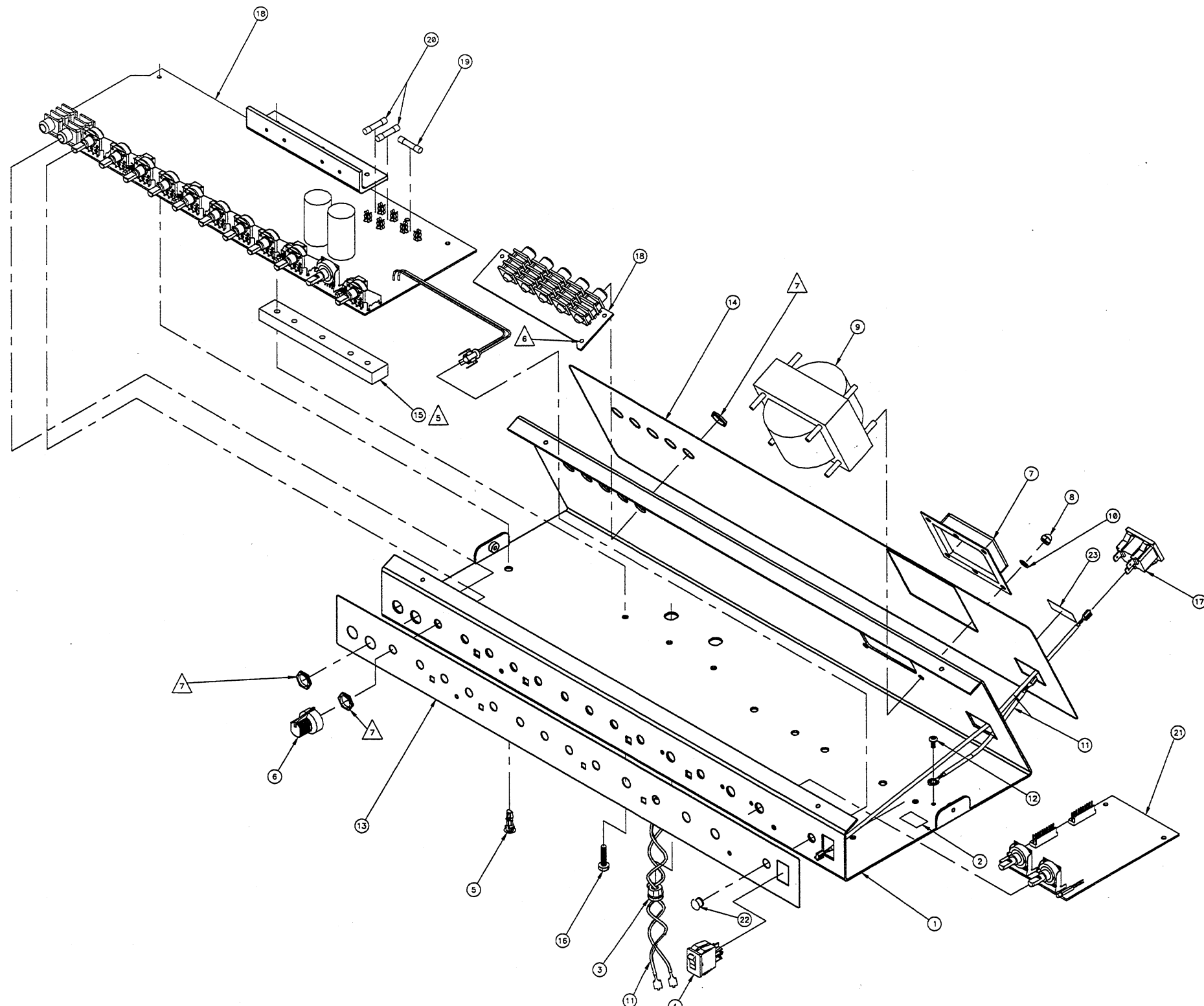


FILM/DWG: SERVICE DIAGRAM
 DATABASE: Z424P.PCB DATE: 31-MAR-99

2. DSP ASSEMBLY P/N 0055590000 MUST BE CONNECTED TO PW2 FOR SIGNAL TO APPEAR AT TP25 AND TP26.
 1. SEE SHEET 1 FOR PRIMARY WIRING, TEST CONDITIONS AND TESTPOINT VALUES.

NOTES: (UNLESS OTHERWISE NOTED)

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CHECKED BY: <u>B. Desi</u>	DATE: <u>31-MAR-99</u>	TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) PRINCETON CHORUS DSP MAIN PCB	
APPROVED BY: <u>[Signature]</u>	DATE: <u>31-MAR-99</u>	SIZE: <u>C</u>	DRAWING NUMBER: <u>0055578000</u>
DRAWN: B. DESI	ENGR: B. DESI	RELEASE DATE: 31-MAR-99	SHEET 2 OF 2
DATABASE FILE: Z424P.PCB			REV. <u>A</u>



N.S. = NOT SHOWN

23	1	SEE MATRIX	LABEL VOLTAGE
22	1	0027288000	LENS LED RED
21	1	0055590008	PCB ASSY DSP PRNCTN CHRSP
20	2	SEE MATRIX	FUSE TD 20mm X 5mm 250V 5A
19	1	SEE MATRIX	FUSE 20mm X 5mm
18	1	SEE MATRIX	PCB ASSY PRNCTN CHRSP
17	1	0054642000	CONNECTOR IEC SNAP-IN
16	3	0028500000	SCRW TF 8-32 X 3/4 HWH SLTD ZI
15	1	0028499000	HEATSINK BAR
14	1	0055583000	PANEL REAR PRNCTN CHRSP
13	1	0055582000	PANEL FRONT PRNCTN CHRSP
12	1	0038900000	SCRW TF 6-32 X 1/4 PHP ZI
11	1	0055588000	WIRE SET CHR PRNCTN CHRSP
10	4	0030007000	WSHR LCK INTL 8 X .330 X .02 ZI
9	1	SEE MATRIX	XFMR PWR
8	4	0028591000	NUT ACORN 8-32
7	1	0028560000	END BELL XFMR 85w
6	13	0026402000	KNOB POINTER BLACK
5	5	0051404000	STANDOFF NYLON BLK .375
4	1	SEE MATRIX	SWITCH DPST .187 TAB
3	2	0021709000	BUSHING SR .437 x .062 x 13/32 BLK
2	1	0013020000	LABEL GROUNDING SEMKO
1	1	0055584000	CHASSIS PRINCETON CHORUS DSP

- △ HARDWARE INCLUDED WITH PART.
- △ HOLE PROVIDED FOR SPEAKER WIRE TIE DOWN
- △ APPLY THERMAL GREASE TO TOP AND BOTTOM OF HEATSINK BAR DURING INSTALLATION.

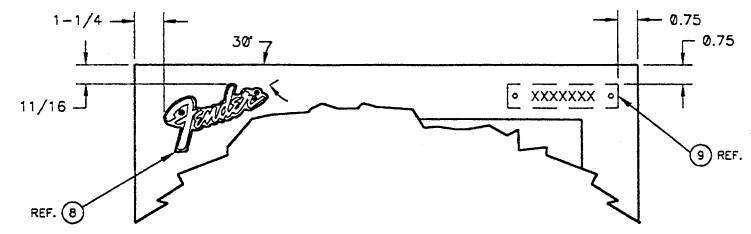
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 3. - 3 - SAMPLES OF FIRST PARTS MUST BE APPROVED BY FENDER R&D BEFORE STARTING PRODUCTION.
 2. ALL DIMENSIONS ARE IN INCHES.
 1. DO NOT SCALE DRAWING.
 NOTES: UNLESS OTHERWISE NOTED

MATRIX			
ITEM #	DESCRIPTION	QTY	PART NO.
23	LABEL VOLTAGE	NONE	AT END ITEM LEVEL 0036327000
20	FUSE	NONE	0013681000 0013681000
19	FUSE	0048384000	0013112000 0048384000
18	PCB ASSY	0055580000	0055581000 0055581000
9	XFMR	0029648000	0029649000 0029649000
4	SWITCH	0025935000	0039287000 0025935000
COMPONENT & ITEM #		0055586000	0055587000
		120V DOM. PRNCTN CHRSP	230V PRNCTN CHRSP
			100V JAP. PRNCTN CHRSP

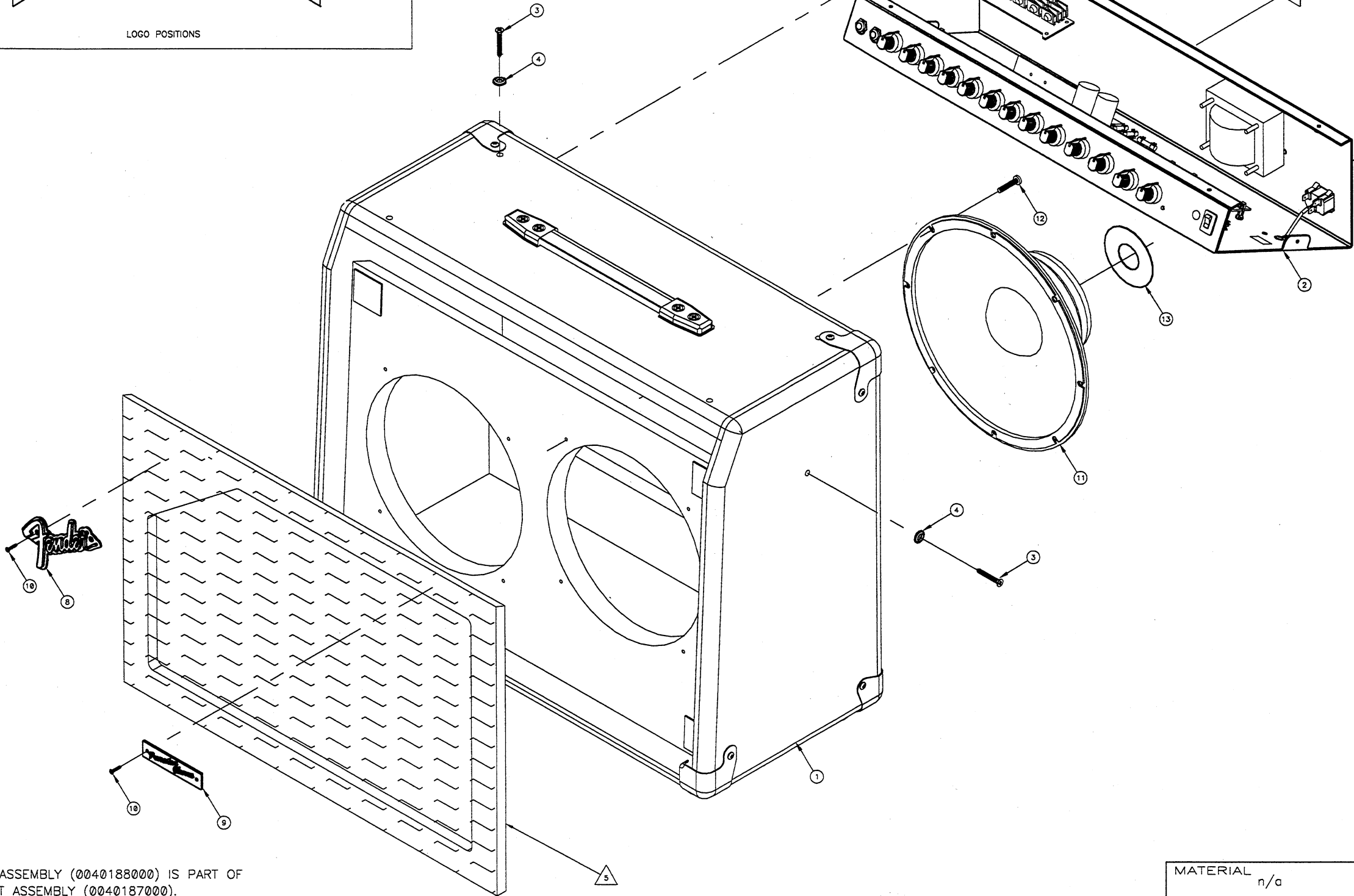
ENGINEER: DESIDERIO
 DRAWN: J. RICHARDS
 DATE: 2/18/99
 TITLE: CHASSIS ASSEMBLY PRINCETON CHORUS DSP
 SHEET: 1/1
 SCALE: N/A
 DRAWING NUMBER: 0055585000
 REV: A
 MASTER

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REV	EC NUMBER	BY	DATE/NOV
A	PR 424	JR	4/1/99
B	EC 2524	JPS	9/8/00



LOGO POSITIONS



N.S. = NOT SHOWN

ITEM	QTY.	PART NO.	DESCRIPTION
26	1	0057037000	HANG TAG, DSP (N.S.)
25	1	SEE MATRIX	LABEL VOLTAGE W ON B
24	1	0053454000	STICKER BUMPER FEND SINCE 1946 (N.S.)
23	1	SEE MATRIX	TAG WARRANTY 5 YR FENDER-NEW (N.S.)
22	1	9903320000	BAG POLY ZIP 10x13 2M (N.S.)
21	1	SEE MATRIX	REGISTRATION CARD (N.S.)
20	1	0055578000	SVC DIAG COMB PRNCTN CHR5 DSP (N.S.)
19	1	0055591000	MANUAL OWNERS PRNCTN CHR5 DSP (N.S.)
18	1	0050753000	FOAM STYRENE BOTTOM (N.S.)
17	1	0050752000	FOAM STYRENE TOP (N.S.)
16	1	0010032000	BAG POLY BOX BTM 23x17x40 .002 (N.S.)
15	1	0028513000	CARTON STG112/PRCR/ROCPRO 1000 (N.S.)
14	1	0055592000	FOOTSWITCH 3-BTN PRCR DSP (N.S.)
13	2	0038299000	DECAL SPEAKER GLOBE ROUND
12	8	0026577000	SCRW M 10-32x1 PHP BLX
11	2	0029753000	SPKR 10" 8 OHM (099-4810-004)
10	4	0018113000	SCRW SMA 4x1/2 OHP BLX
9	1	0033077000	NAMEPLATE CAST PRCR
8	1	0029060000	NAMEPLATE FENDER GENERIC SMALL
7	1	9903311400	BAG JIFFY #1 7-1/4 X 12 (N.S.)
6	1	SEE MATRIX	CORD PWR W/IEC CONN (N.S.)
5	1	0029816000	LABEL SERIAL MEXICO
4	6	0029527000	WSHR FN5H 8-5/8 FLNGD BLX WX
3	6	0036199000	SCRW M 8-32x1-3/16 OHP BLX CP
2	1	SEE MATRIX	CHS ASSY PRNCTN CHR5 DSP
1	1	0040187000	CAB ASSY PRINCETON CH BLK/SLVR

- 5. GRILLE ASSEMBLY (0040188000) IS PART OF CABINET ASSEMBLY (0040187000).
 - 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						
25	LABEL VOLTAGE	NONE	0039022000	0039022000	0036329000	AT CHASSIS LEVEL
23	TAG WARRANTY 5 YR FENDER-NEW	0053412000	NONE	NONE	NONE	NONE
21	REGISTRATION CARD	0054387000	NONE	NONE	NONE	NONE
6	CORD PWR	0047248000	0047251000	0047249000	0047250000	0053997000
2	CHS ASSY	0055585000	0055586000	0055586000	0055586000	0055587000
	COMPONENT & ITEM #	PRNCTN CHR5 DSP 120V DOM. 0225700020	PRNCTN CHR5 DSP 230V EUR. 0225760020	PRNCTN CHR5 DSP 230V UK 0225740020	PRNCTN CHR5 DSP 240V AUST 0225730020	PRNCTN CHR5 DSP 100V JAP 0225770020

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 - 0.001 UNMARKED ANGLES ARE 90 DEGREES.

ENGINEER
DESIDERIO

DRAWN
JOEY RICHARDS

DATE
3/9/99

DFT
9/10/00

ENG
JPS

DATE
03 SEP 00

TITLE
END ITEM
PRINCETON CHORUS DSP

SHEET
1/1

SCALE
N/A

SIZE
D

DRAWING NUMBER
0225700020

REV.
B

ASSEMBLY/MASTER

8 7 6 5 4 3 2 1