



STAGE® 1000/1600 DSP

(This is the model name for warranty claims)

p/n 2267000030 / 2268000030 (120V)

SERVICE MANUAL



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IMPORTANT NOTICE

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specifications are subject to change without notice. This information and any copies produced electronically or otherwise must be surrendered upon demand of Fender Musical Instruments Corporation.

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

PARTS LIST CODES

The description codes used in the itemized Parts Lists are defined below:

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

Model Name:	Stage 1000	Stage 1600	
Release Number: (Not model numbers)	PR 577	PR 572	
Part Numbers	(120V, 60Hz) US: 2267000030 (110V, 60Hz) TW: 2267001030 (240V, 50Hz) AUS: 2267003030 (230V, 50Hz) UK: 2267004030 (230V, 50Hz) ARG: 2267005030 (230V, 50Hz) EUR: 2267006030 (100V, 50/60Hz) JPN: 2267007030 (220V, 60Hz) ROK: 2267009030	2268000030 2268001030 2268003030 2268004030 2268005030 2268006030 2268007030 2268009030	
	<i>(For all Models)</i>		
Power Requirement:	400W		
Power Output:	100W RMS into 8 ohms @ 5%THD 160W RMS into 4 ohms @ 5%THD		
Power Amp Sensitivity:	620mV for 100W into 8 ohms @ 5%THD 810mV for 160W into 4 ohms @ 5%THD		
Impedances	Input (Pre-Amp): 1M ohms Pre Amp Out: 1k ohms Pwr Amp In: 10k ohms		
Speaker Complement:	One (1) 12", 8 ohm, Celestion G12T-100 (P/N 0054420000)	Two (2) 12", 8 ohm, Celestion G12T-100 (P/N 0054420000)	-NA-
Dimensions	Height: 17.5 in (45 cm) Width: 22.4 in (57 cm) Depth: 10.2 in (26 cm)	18.5 in (47 cm) 26.1 in (66 cm) 10.3 in (26 cm)	8.5 in (22 cm) 22.4 in (57 cm) 9.5 in (24 cm)
Weight:	42 lbs (19.1 kg)	53 lbs (24.1 kg)	24 lbs (10.9 kg)

Product specifications are subject to change without notice



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SERVICE NOTES

1. **CHASSIS REMOVAL** is accomplished by first removing two (2) screws from the cabinet side panel and four (4) screws from the top of the cabinet; disconnect the 1/4" speaker plug(s) from the speaker jack(s) and then slide the chassis toward the rear of the cabinet.
2. **uDSP PCB ASSEMBLY REMOVAL** is accomplished by disconnecting the ribbon cable on the PCB Assembly, releasing the tabs on each of the plastic stand-offs which the PCB assembly is mounted. Removal of the uDSP PCB assembly may be necessary should any of the Digital Effects operate improperly.
3. **STAGE 1000/1600 MAIN PCB REMOVAL** is accomplished by removing the following items: All knobs including washers and nuts (11) , one (1) input jack nut and washer, (2) screws near mains fuse, seven (7) screws at the heatsink attached from the bottom of the chassis. Disconnect the transformer and primary leads at P1-P14. Disconnect the breakaway PCB ribbon cable at P20 and speaker wires (blk/wht) at P15-P16. Disconnect the ribbon cable to uDSP and Display assemblies at P19 and P21.
4. **STAGE 1000/1600 BREAKAWAY PCB REMOVAL** is accomplished by removing five (5) nuts and washers at the jacks and two (2) screws at the XLR jack. Disconnect the ribbon cable from the main PCB at P20 and the speaker wires (blk/wht) at P15-P16.
5. **Tuner/Timbre Display PCB Removal** After the main PCB is removed, removal of the display PCB is accomplished by first disconnecting the ribbon cable from P3. Using long nose pliers, remove the five (5) push nuts holding the bezel and PCB to the front panel. Remove the five (5) nuts and washers at the DSP controls. The PCB assy can now be pulled rearward off of the bezel studs.

PCB EXCHANGE POLICY

Parts marked with a single asterisk (*) in the Part Lists are not field replaceable. If a failure due to one of these components is detected, please con-

tact the Fender® Dealer Customer Service Department to order the complete PCB Assembly.



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CIRCUIT DESCRIPTION

This section provides an overview of any new or unusual circuitry incorporated into this amplifier model. The purpose is to aid the service technician by providing insight into the design areas most likely to present a challenge in troubleshooting. This overview is focused for the efficient use and security of Fender® proprietary information.

PRE-AMPLIFIER

The guitar input signal is fed into the high pass filter at U1-A before splitting into two signal paths. The normal channel signal path (U1 to U4A) is active until FET Q2 is turned on and either Q4/Q1 (DRIVE1) or Q3/Q5 (DRIVE2) are turned on activating the DRIVE channels signal paths. Differential amp U6-A and follower U6-B adjust the signal level and provides +1.65VDC bias voltage to the uDSP effects card. The preamp is in series with the digital effects card, therefore, disconnecting the card breaks the overall signal path. The low pass filter at U4-B recovers the signal from the uDSP card and sends it to the external effects loop and power amplifier.

POWER AMPLIFIER

“Flying Rail” power amp topology. The output stage is referenced to ground, and the output signal is derived from the center tap of the high voltage power supply (C86 & C87) which is floating. Diff-amp U7-B amplifies voltage developed at the load sense resistors (R120–123) to provide negative current feedback. Inserting an 8Ω load at Ext. Spkr (J7) turns on FET Q20 creating an attenuation network (R117–119) to compensate for the increased current at 4Ω total load impedance. This allows the amplifier to have a similar frequency response running either an 8 or 4Ω speaker load.

Thermistor RT2 monitors the heatsink temperature. Its resistance increases with temperature and at

approx. 100 °C turns on xstr Q23. This shorts out C77, turning on FET Q22 providing a muting function at the power amp input. The amplifier remains muted until the heatsink cools down, at which point, normal operation is restored.

POWER SUPPLY

Standard bridge rectifiers for both high and low voltage sections, with zener regulation (D52–53) for the +/-16V supplies. Half-wave rectifier (D46–47, C48) supplies U11, 7805 regulator for +5V supply for the uDSP card and digital user-interface. Q31 drops the 5V supply to 3.3V which powers U12 and U13.

DIGITAL USER INTERFACE

The uDSP effects card generates clock signals HD0 (~45Hz) and HD1 (~90Hz) which control the 4053 CMOS switch to read REVERB level, FX level and TIME/RATE pots on the display PCB. The DC level (0–5V) of the pots controls the reverb level, fx level, and fx time/rate. HD2/3 send serial data to the Display PCB which is then converted to the parallel bits that power the TUNER/TIMBRE LEDs. HD5/6 contain clock and serialized data from the REVERB and FX encoders as well as the TUNER/TIMBRE buttons. HD7 is a bi-directional serial bus sending TIMBRE settings to the U12 EEPROM which stores them during power down.

DIGITAL NOISE

The uDSP effects card generates some high frequency noise (>50kHz), which is a normal product of DSP processing. This noise is not audible and does not effect amplifier performance, but may be visible when observing the output of the amplifier on an oscilloscope.

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PARTS LIST: MAIN – PCB ASSEMBLY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
REF		PCB ASSEMBLY STAGE 1000/1600	
1	0027627001	RES FILM 1W 5% 10ohm LL	R112
1	0031067001	RES FILM 1W 5% 750ohm LL	R158
4	0039209001	RES FILM 1W 5% .22ohm LL	R120-123
2	0027628001	RES MOX 2W 5% 47ohm LL	R110-111
2	0028021001	RES MOX 2W 5% 470ohm LL	R124-125
2	0063741000	**RES MF FUSE 2W 5% 47ohm	R155-156
1	0055781001	**RES MF FUSE 2W 5% 82ohm	R157
6	0028028000	RES WW BT 5W 10% .47ohm	R100-101 R104-105 R108-109
1	0053860000	CAP MPF .1uF 250VAC 20%	C114
4	0038699001	CAP CA 100pF 100V LL	C7 C32 C41-42
4	0039263001	CAP CA 1000pF 50V LL	C3 C18 C22 C30
6	0039259001	CAP CA 220pF 100V LL	C33-36 C62-63
4	0038701001	CAP CA 470pF 50V LL	C9 C16 C26 C43
2	0039256001	CAP CA 68pF 100V LL	C44-45
1	0051457003	CAP CD 100pF 500V 5%	C94
10	0051406003	CAP CD 220pF 500V 10%	C66-67 C95 C116-118 C123-126
3	0047198003	CAP CR .1uF 50V 20% .1" LS	C31 C127-128
16	0034788003	CAP CR .1uF 50V 20% .2" LS	C37-38 C57-58 C68-69 C71-72 C79-80 C104-109
55	0006260001	DIODE 1N4448 SIGNAL LL	D1-10 D13-18 D21-24 D27 D36-39 D41-44 D58-59 D63 D65 D67 D70-72 D74-77 D79-84 D93-94 D97
9	0064089001	DIODE 1N4003	D25-26 D40 D46-47 D48-51
4	0029045000	DIODE 6A 400V 6A4 LEAD FORMED	D54-57
2	0054210001	DIODE BAT85	D19-20
1	0031635001	DIODE ZEN 1N5240B 10V 5% LL	D64
1	0031019001	DIODE ZEN 1N5245B 15V 5% LL	D66
2	0036178000	SPACER LED .5x.1 BRN	@D45,73
3	0027329001	DIODE ZEN 1N5228B 3.9V 5% LL	D60-62
2	0028119000	DIODE ZEN 1N5353B 16V 5W 5%	D52-53
4	0028458003	CAP AE RDL 1uF 50V 20%	C14 C28 C75 C77
7	0028474003	CAP AE RDL 100uF 25V 20%	C50 C55-56 C84-85 C100-101
5	0028459003	CAP AE RDL 2.2uF 50V 20%	C6 C17 C29 C53 C70
9	0028467003	CAP AE RDL 22uF 50V 20%	C8 C10 C19 C39-40 C46 C81 C110-111
2	0028031000	CAP AE RDL 3300uF 63V +100%-20%	C86-87
1	0033606003	CAP AE RDL .47uF 50V 20%	C47
3	0028471003	CAP AE RDL 47uF 50V 20%	C51 C102-103
3	0055780000	CAP AE RDL 1000uF 35V 105C 20%	C78 C82-83
16	0025802000	FASTON TAB, .250"	P1-16
1	0020775000x2	**FUSE CLIP PCB 5mm	F1
1	0027872001	RES CF 1/2W 5% 1.2k LL	R191
1	0031767001	RES CF 1/2W 5% 15ohm LL	R126
1	0026549001	RES CF 1/2W 5% 1.5k LL	R192
1	0027416000	HDR .1 CTR 8 CKT SQ PIN	P20
2	0057350000	HDR .1 CTR 8x2 CKT SQ PIN	P19 P21
3	0051658000	JACK MONO R/A	J2-3 J6
2	0053450000	JACK STEREO R/A	J4 J7
1	0059889000	JACK STEREO R/A w/METAL BUSH	J1
REF		JUMPER WIRE 22GA	W4-14
1	0027387000	INDUCTOR AIR CORE RDL 2.5uH	L1
1	0047179000	LED AMBER	D45
1	0049948000	LED RED LONG LEAD LUMEX	D73

* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY above.

Unique Fender® part. Order directly from the Fender® dealer Customer Service Department.

** Safety Requirement part. Replacement must match *Safety Agency*...–*Value*, if specified –*Type*, if specified –*Approval Mark(s)* if on part.

** Both a unique Fender® part and a Safety Requirement part as defined above.



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PARTS LIST: MAIN – PCB ASSEMBLY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
2	0049948000	LED RED LONG LEAD LUMEX	D11-12
2	0027255003	CAP MPF .001uF 100V 10%	C119 C121
2	0027264003	CAP MPF .01uF 100V 10%	C54 C122
1	0027278003	CAP MPF .1uF 63V 10%	C25
2	0027257003	CAP MPF .0022uF 100V 10%	C59-60
1	0027267003	CAP MPF .022uF 100V 10%	C21
4	0027281003	CAP MPF .22uF 63V 10%	C5 C89-91
2	0027259003	CAP MPF .0033uF 100V 10%	C23 C48
1	0027270003	CAP MPF .033uF 100V 10%	C12
3	0027261003	CAP MPF .0047uF 100V 10%	C1-2 C24
11	0027272003	CAP MPF .047uF 63V 10%	C11 C13 C20 C64-65 C76 C92 C96-99
6	0027286003	CAP MPF .47uF 63V 10%	C4 C15 C27 C52 C88 C93
1	0027275003	CAP MPF .068uF 100V 10%	C49
2	0052003003	CAP MPF .1uF 250V 10%	C112-113
1	0026411000	THERMISTOR 2.5 ohm 8A C30-19	RT1
3	0027947000	CONTROL SNAPIN 100k 30C TAPER	R24 R42 R48
1	0027949000	CONTROL SNAPIN 250k 30C TAPER	R45
1	0054390000	CONTROL SNAPIN 5k 15A TAPER	R11
4	0027940000	CONTROL SNAPIN 50k 15A TAPER	R10 R16 R34 R52
2	0027941000	CONTROL SNAPIN 50k B TAPER	R9 R38
1	0051418003	THERMAL SENSOR PTC 100 DEG C	RT2
1	0024952001	RES CF 1/4W 5% 100ohm LL	R53
12	0024965001	RES CF 1/4W 5% 1k LL	R20 R35-36 R85 R95-96 R118-119 R127 R131 R151 R202
22	0024981001	RES CF 1/4W 5% 10k LL	R27 R29 R49-51 R62-63 R97 R115-116 R129 R136 R139 R143-144 R183 R193 R209 R211-212 R214-215
14	0024997001	RES CF 1/4W 5% 100k LL	R18-19 R41 R83 R86 R128 R130 R165 R172 R182 R188-190 R200
10	0025069001	RES CF 1/4W 5% 1M LL	R149 R152 R166 R170 R173 R177 R186-187 R194 R201
1	0024954001	RES CF 1/4W 5% 150ohm LL	R81
10	0024969001	RES CF 1/4W 5% 1.5k LL	R47 R98-99 R102-103 R106-107 R132 R162 R181
2	0024985001	RES CF 1/4W 5% 15k LL	R1 R6
1	0029453001	RES CF 1/4W 5% 1.6k LL	R208
2	0025058001	RES CF 1/4W 5% 180k LL	R13 R55
4	0024956001	RES CF 1/4W 5% 220ohm LL	R87 R94 R198-199
6	0024971001	RES CF 1/4W 5% 2.2k LL	R17 R66-67 R82 R84 R117
7	0024987001	RES CF 1/4W 5% 22k LL	R8 R12 R21-22 R54 R150 R153
3	0025059001	RES CF 1/4W 5% 220k LL	R15 R31 R180
8	0024988001	RES CF 1/4W 5% 27k LL	R64-65 R72-75 R113-114
1	0029604001	RES CF 1/4W 5% 300ohm LL	R80
1	0028865001	RES CF 1/4W 5% 30k LL	R26
4	0024973001	RES CF 1/4W 5% 3.3k LL	R76 R88 R93 R133
4	0024989001	RES CF 1/4W 5% 33k LL	R40 R43 R46 R176
2	0025061001	RES CF 1/4W 5% 330k LL	R175 R184
4	0024947001	RES CF 1/4W 5% 47ohm LL	R7 R196-197 R207
1	0024977001	RES CF 1/4W 5% 4.7k LL	R77
7	0024993001	RES CF 1/4W 5% 47k LL	R32-33 R37 R39 R78-79 R195
5	0025065001	RES CF 1/4W 5% 470k LL	R30 R159 R169 R171 R174
5	0028034001	RES CF 1/4W 5% 5.1k LL	R4 R68-71
2	0028018001	RES CF 1/4W 5% 510k LL	R2-3

* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY above.

Unique Fender® part. Order directly from the Fender® dealer Customer Service Department.

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PARTS LIST: MAIN – PCB ASSEMBLY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0024978001	RES CF 1/4W 5% 5.6k LL	R210
4	0024979001	RES CF 1/4W 5% 6.8k LL	R5 R14 R25 R28
1	0024995001	RES CF 1/4W 5% 68k LL	R44
1	0024980001	RES CF 1/4W 5% 8.2k LL	R23
1	0025068001	RES CF 1/4W 5% 820k LL	R168
1	0015582001	RES MF 1/4W 1% 10.0k LL	R179
1	0025816001	RES MF 1/4W 1% 20.0k LL	R178
2	0034781001	RES MF 1/4W 1% 2.10k LL	R89 R92
1	0016979001	RES MF 1/4W 1% 215k LL	R163
5	0027632001	RES MF 1/4W 1% 2.43k LL	R140-142, (R90,91 WHEN Q14-19 MADE BY ONSEMI)
2	0025810001	RES MF 1/4W 1% 2.49k LL	R90-91 WHEN Q14-19 MADE BY ST
1	0016971001	RES MF 1/4W 1% 33.2k LL	R160
1	0017191001	RES MF 1/4W 1% 36.5k LL	R167
2	0017372001	RES MF 1/4W 1% 51.1k LL	R161 R164
4	0016739003	XSTR NPN 2N4401 TO-92	Q12 Q26 Q29 Q31
8	0016742003	XSTR PNP 2N4403 TO-92	Q13 Q21 Q23-25 Q27-28 Q30
1	0051447003	XSTR PNP 2SB1236	Q11
1	0051448003	XSTR NPN 2SD1857	Q10
13	0014689003	XSTR N-CH JFET J111 TO-92	Q1-9 Q20 Q22 Q32-33
3	0028114000	XSTR NPN TIP142 TO-218AC	Q14 Q16 Q18
3	0028115000	XSTR PNP TIP147 TO-218AC	Q15 Q17 Q19
1	0048914000	CABLE RIBBON 8 CKT 7"	PW20
1	0051416003	CAP SF .1uF 100V 10%	C61
2	0028091000	SWITCH PUSH SLFLK SHORT STROKE	S1-2
1	0028120000	IC 4053B TPL 2 CHAN ANLG SW	U10
6	0031611000	IC OP-AMP DUAL PC4560	U4-9
1	0041812000	IC REGULATOR +5V MC7805CT	U11
1	0054427000	IC EPROM 8K	U12
1	0055985000	IC 8-BIT SHIFT REG 74HC166	U13
2	0041261000	IC VOLT REF LM4040DIZ-10.0	D68-69
3	0016795000	IC OP-AMP DUAL TL072	U1-3
1	0054261000	XLR CONNECTOR MALE RT ANGLE	J5
1	0025796000	HEATSINK TO-220	@ REGULATOR
6	0032908000	SCRW TF 6-32x3/8 PHP ZI	@ HEATSINK PLATE
6	0027638000	SCRW TF 4-40x3/8 HWHS ZI .1" HD	@ PWR XSTRS
6	0028169000	WSHR SHLDR NYL 5/32x1/4	@ PWR XSTRS
6	0040903000	INSULATOR MICA TO-218	@ PWR XSTRS
1	0031077000	SCRW TF 4-40x1/4 H	@7805
1	0054259000	HEATSINK PLATE STAGE 100/160	
REF		WIRE SET PCB STAGE 100/160	
2	0048451000	BUTTON PUSH OFF WHITE	
REF		**PCB FAB STAGE 1000/1600	

PARTS LIST: uDSP – PCB ASSEMBLY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0063680000	**PCB ASSY uDSP STAGE 1000/1600	w/ EPROM
REF	0057283000	SVC DIAG COMB MICRO DSP	
1	*	IC ROM STAGE 1000/1600 V1.00	
1	*	PCB Fab u-DSP	
2	*	CAP 0805 CER .001uF 25V 5%	

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PARTS LIST: <u>uDSP – PCB ASSEMBLY</u>			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
14	*	CAP 0805 CER .01uF 25V 5%	
10	*	CAP 0805 CER .1uF 25V 5%	
2	*	CAP 0805 CER 22pF 25V 5%	
2	*	CAP 0805 CER 750Pf 25v 5%	
3	*	CAP 3528 TAN 4.7uF 16V 20%	
6	*	CAP 3528 TAN 10uF 16V 20%	
5	*	DIODE SMT 1N4448 SIGNAL	
2	*	HDR .1 CTR 8x2 CKT SQ PIN	
4	*	RES 0805 MF 1/10W 5% 0ohm	
2	*	RES 0805 MF 1/10W 5% 100ohm	
4	*	RES 0805 MF 1/10W 5% 750ohm	
4	*	RES 0805 MF 1/10W 5% 1k	
1	*	RES 0805 MF 1/10W 5% 2k	
1	*	RES 0805 MF 1/10W 5% 3.3k	
2	*	RES 0805 MF 1/10W 5% 4.7k	
1	*	RES 0805 MF 1/10W 5% 15k	
1	*	RES 0805 MF 1/10W 5% 47k	
1	*	IC SMT SOCKET PLCC 44-TT	
1	*	IC SMT TLC549 AD	
1	*	IC SMT SRAM 64Kx16	
1	*	IC SMT COUNTER 74LV4040	
1	*	IC SMT HEX SCHMITT-T INV 74HC14	
1	*	IC SMT VREG +3.3V LM1117	
1	*	IC SMT CODEC TLC320AD77C	
1	*	IC SMT DSP TMS320VC5402PGE	
1	*	IC SMT VREG +1.8V 150mA TPS76318	
1	*	IC SMT RESET 5V MC34064D-5	
1	*	XTAL 20MHz HC49SD	

PARTS LIST: <u>CHASSIS ASSEMBLY</u>			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
REF		CHASSIS ASSY STAGE 1000	
REF		CHASSIS ASSY STAGE 1600	
REF		LABEL GROUNDING SEMKO	
2	0025936000	STANDOFF NYL PCB SNAP 3/8" NAT	
7	0028500000	SCRW TF 8-32x3/4 HWH SLTD Z1	@ HEATSINK
1	0028564000	END BELL XFMR 185 Series	@ XFMR
4	0028591000	NUT ACORN 8-32	@ XFMR
2	0028937000	SCRW TF 6-32x5/8 PHP ZI TAPTYT	@ STNDOFF
4	0030007000	WSHR LCK INTL 8x.330x.02 ZI	@ XFMR
1	0016352000	NUT HWX 3/8-32X3/32 TK NI(049)	@FP JACK
1	0038900000	SCRW TF 6-32X1/4 PHP ZI	@ GND LUG
1	0039129000	**XFMR PWR STAGE 120V	
1	0039203000	HEATSINK BAR STAGE 112SE	
1	0039236000	**SWITCH ROCKER DPST PSEUDO-IEC	100-120V
2	0051155000	SCRW SMB #4X3/8 PHP BLX	@ XLR JACK
4	0051404000	STANDOFF NYLON BLK .375	@ uDSP ASSY
5	0055838000	NUT PLASTIC BLK REAN JACK	@ BP JACKS
1	0031153000	WASHER FLAT 3/8 x .164 NI (049)	@FP JACK
1	0053884000	FUSE QA 20mmX5mm 125V 4A UL/CSA	100-120V
11	0053986000	KNOB ROTARY SS W/CHR INSERT	@ ANALOGCONTROLS
REF		WIRE SET CHS STAGE 100/160 DOM	

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(This is the model name for warranty claims)

PARTS LIST: CHASSIS ASSEMBLY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0054642000	**CONNECTOR IEC SNAP IN	
5	0059645000	KNOB LARGE 400 PRO	@ DSP CONTROLS
5	0064767000	WASHER, FLAT .149 X.380 X .031 NEP	@BEZEL
1	0064644000	GASKET, BEZEL STAGE1000/1600	
2	0057359000	CABLE RIBBON 16 CKT W/2 CONN 7"	
1	0055367000	PCB ASSY TUNER/TIMBRE DISPLAY	
1	0057721000	KEYPAD STAGE TUNER/TIMBRE	
5	0055732000	PUSH NUT, 1/8" POST	
1	0057768000	BEZEL STAGE 1000/1600	
1	0063680000	PCB ASSY uDSP STAGE 1000/1600	
REF		CHASSIS STAGE 1600	
REF		CHASSIS STAGE 1000	
1	0062189000	PANEL FRONT STAGE 1000	
1	0062190000	PANEL REAR STAGE 1000	
REF		PCB ASSY STAGE 1000/1600	

PARTS LIST: CABINET ASSEMBLY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
	0063699000	CABINET ASSY STAGE 1600	
	0063698000	CABINET ASSY STAGE 1000	
4	0026566000	CORNER 2 HOLE w/TAB NI	
2	0026568000	CORNER 3 HOLE NI	
10	0026571000	SCRW SMAB 8X5/8 THP NI	@ CORNERS, STAGE 1000/1600
4	0019276000	GLIDE CAB 1.24x.335 NI	STAGE 1000/1600
4	0019275000	INSERT GLIDE CUSHION 1.27 DIA	@ GLIDE, STAGE 1000/1600
4	0026625000	SCRW WOOD 8x1 FH	@ GLIDE, STAGE 1000/1600
1	0027846000	HANDLE 9.25" NO LOGO	
2	0019279000	HANDLE CAP 2 HOLE NICKEL	@ HANDLE
1	0032524000	INSERT HANDLE	@ HANDLE
4	0022244000	SCRW M 10-32x1-1/8 OHP NI	@ HANDLE
4	0056482000	MOUNTING PLATE EL COM	@ CASTERS, STAGE 1600
16	0027199000	SCRW SMAB 10x3/4 PHP NI	@ MOUNTING PLATE, STAGE 1600
8	0021972000	NUT T 10-32x3/4 STR 3 PRNG BLX	@ HANDLE/SPEAKER, STAGE 1000
12	0021972000	NUT T 10-32x3/4 STR 3 PRNG BLX	@ HANDLE/SPEAKERS, STAGE 1600
REF		TAPE ALUM 6"x60YDS	
1.06	0026570000	TOLEX "BRAVURA BLACK"	STAGE 1000
1.18	0026570000	TOLEX "BRAVURA BLACK"	STAGE 1600
REF	0063698008	GRILLE ASSY STAGE 1000	
REF	0063699008	GRILLE ASSY STAGE 1600	

PARTS LIST: END ITEM ASSEMBLY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
	00267000040	END ITEM STAGE 1000	
	00268000030	END ITEM STAGE 1600	
REF		BAG POLY BOX BTM 23x17x40 .002	PKG
6	0037985000	SCRW SMA 2x3/8 PHP BLX	@BADGE
4	0026577000	SCRW M 10-32x1 PHP BLX	@ SPEAKER
REF		CARTON STAGE/PRCR/RP1000	PKG.
6	0029527000	WSHR FNH 8-5/8 FLNGD BLX WX	@ CHS SCREWS
1	0023192000	NAMEPLATE FENDER 65 TWIN	
6	0036199000	SCRW M 8-32x1-3/16 OHP BLX CP	CHS SCREWS

* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY above.

Unique Fender® part. Order directly from the Fender® dealer Customer Service Department.

** Safety Requirement part. Replacement must match *Safety Agency*...–*Value*, if specified –*Type*, if specified –*Approval Mark(s)* if on part.

** Both a unique Fender® part and a Safety Requirement part as defined above.



STAGE® 1000/1600

(This is the model name for warranty claims)

PARTS LIST: END ITEM ASSEMBLY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0038566000	CABLE ASSY SPKR RT ANG 13-1/2"	CONNECT SPKR
1	0063698000	CAB ASSY STAGE 1000	
1	0063699000	CAB ASSY STAGE 1600	
1	0047248000	CORD PWR W/IEC CONN DOM	
REF		FOAM STYRENE TOP	PKG.
REF		FOAM STYRENE BOTTOM	PKG.
REF		TAG WARRANTY 5 YR FENDER NEW	HANG ON KNOBS
REF		STICKER, BUMPER FEND 1946	HANG ON KNOBS
REF		REGISTRATION CARD	
1	0054420000	SPEAKER 12"8 OHM G12T-100 1887	STAGE1000/1600
REF		CORROSEAL 50# (12" X 250' ROLL)	@ PWR CORD
1	0062191000	FTSW ASSY 4 BTN STAGE 1000/1600	:
1	0062181000	CHS ASSY STAGE 1000 120V	
1	0062194000	MANUAL OWNERS STAGE 1000/1600	LIT. PACK
1	0063653000	BADGE STAGE 1000	
REF		POP Stage 1000/1600	
1	9903320000	BAG POLY ZIP 10X13 2M	@ LIT. PACK
REF		CHASSIS ASSY STAGE 1600 120V	
1	0063652000	BADGE STAGE 1600	

PARTS LIST: FOOTSWITCH ASSY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
	0062191000	FTSW ASSY 4BTN STAGE 1000/1600	
1	0028895000	CABLE ASSY FTSW RT ANG 12'	
1	*	HOUSING FTSW 4 BUTTON	
1	*	HSG END CUP LEFT FTSW	
1	*	HSG END CUP RIGHT FTSW	
1	*	PLATE FTSW 4 BTN STAGE 1000/1600	
8	*	SCRW SMB 6x3/8 PH PHS BLX	@ END CUPS
1	*	NUT HEX 12mmx1mm NI	@ JACK
4	*	WSHR NYL .485x.775x.150 TK	@ SWITCHES
1	*	PCB FAB FTSW 4 BTN STAGE DSP	
5	*	DIODE 1N4448 SIGNAL	D1, D2, D6, D10, D11
2	*	DIODE ZEN 1N5228B 3.9V 5%	D7, D12
1	*	DIODE ZEN 1N5223B 2.7V 5%	D4
1	*	JACK PCB MONO CA	J1
1	*	LED BI-COLOR 5mmx5mm	D9
3	*	LED RED 5mmx5mm SLB-55VR3	D3, D5, D8
1	*	RES CF 1/4W 5% 75 ohm	R1
3	*	SPACER RND NYL .147x.250x.780	@ D3, D5, D8
1	*	SPACER RND NYL .147x.250x.680	@ D9
4	*	SWITCH PUSH SPDT	S1-S4

PARTS LIST: TUNER/TIMBRE DISPLAY PCB ASSY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
	0055367000	PCB ASSY TUNER/TIMBRE DISPLAY	
4	*	CAP CR .1uF 50V 20% .1" LS	C1,2,4,5
8	*	DIODE 1N4448 SIGNAL LL	D28-35
1	*	CABLE, RIBBON 2CKT X 10" (KONEX)	P2
9	*	Jumper	W1-9

* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY above.

Unique Fender® part. Order directly from the Fender® dealer Customer Service Department.

** Safety Requirement part. Replacement must match *Safety Agency*...–*Value*, if specified –*Type*, if specified –*Approval Mark(s)* if on part.

** Both a unique Fender® part and a Safety Requirement part as defined above.

**STAGE® 1000/1600**

(This is the model name for warranty claims)

PARTS LIST: TUNER/TIMBRE DISPLAY PCB ASSY			
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	*	CAP AE RDL 22uF 50V 20%	C3
1	*	LED GREEN T-1 3mm DIFFUSED	D45
11	*	LED RED LONG LEAD LUMEX	D1-4, D6-8, D11, D44, D46 D49
3	*	CONTROL SNAPIN 50k B TAPER	R134-135 R138
4	*	RES CF 1/4W 5% 1Kohm LL	R20-23
2	*	CABLE JMPR 6 CKT .156 ROUND	PW1A PW1B
2	*	LED WHT T-1 3mm CLEAR	D5, D40
2	*	RES CF 1/6W 5% 10k LL	R17-18,13
4	*	RES CF 1/6W 5% 100k LL	R145-148
14	*	RES CF 1/6W 5% 240ohm LL	R1-7 R40-43 R48-49 R52
2	*	RES CF 1/6W 5% 6.8k	R8 R12
2	*	ENCODER 16-POS 4-BIT GREY CODE (Noble)	S4-5
2	*	IC 8-BIT SHIFT REG 74AHCT595 (TI)	U1-2
4	*	LED T-1 3mm DIFFUSED BLUE (SUN LED)	D15-18
1	*	PCB FAB TUNER/VOICE DISPLAY	.

* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY above.

Unique Fender® part. Order directly from the Fender® dealer Customer Service Department.

** Safety Requirement part. Replacement must match *Safety Agency...-Value*, if specified –*Type*, if specified –*Approval Mark(s)* if on part.

** Both a unique Fender® part and a Safety Requirement part as defined above.

**STAGE® 1000/1600**

(This is the model name for warranty claims)

Schematics and Drawings

Service Diagram (Schematic)Stage 1000/1600

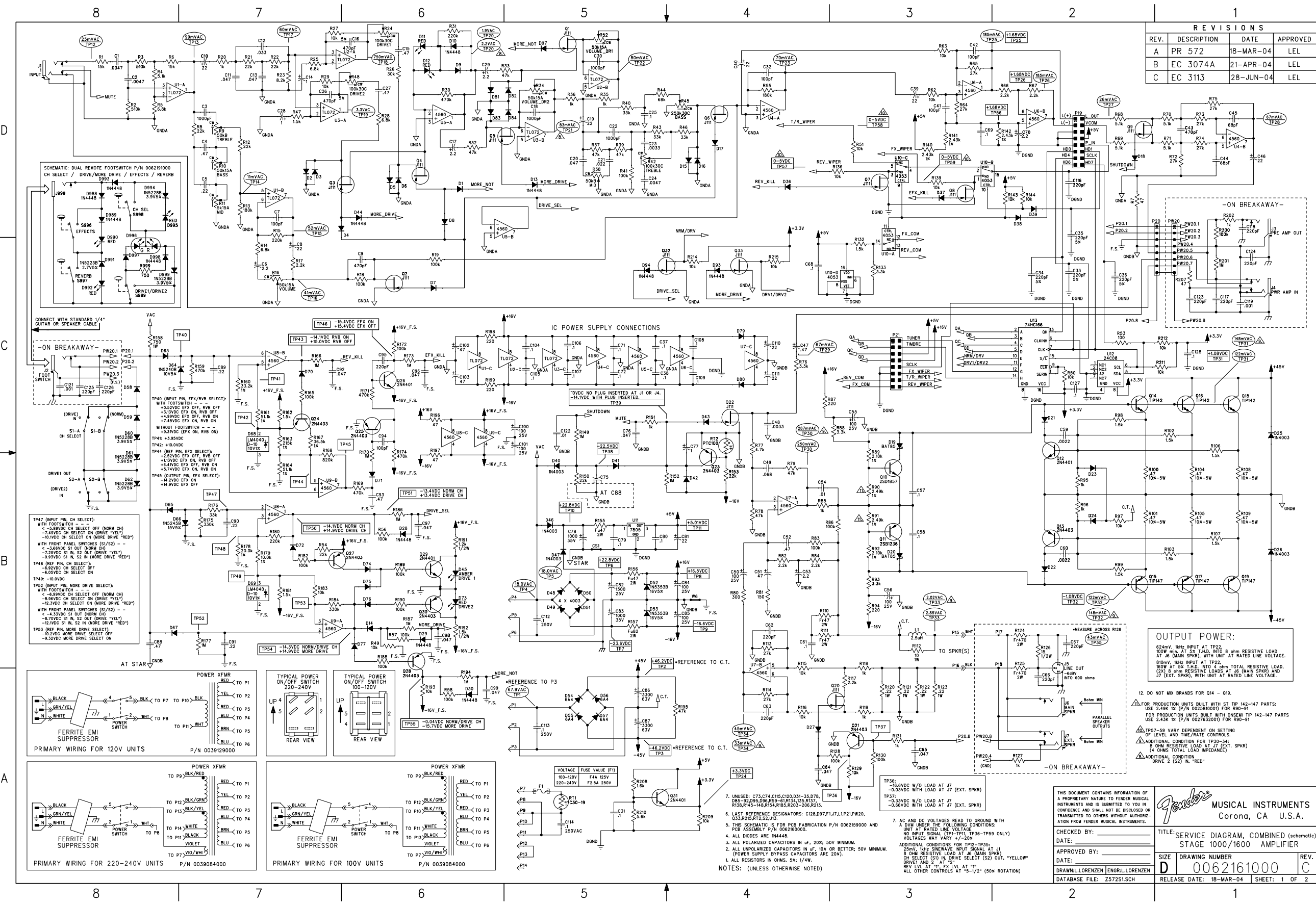
Service Diagram (PCB Assy)Stage 1000/1600

Chassis AssyStage 1000

Chassis AssyStage 1600

End Item AssyStage 1000

End Item AssyStage 1600



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 572	18-MAR-04	LEL
B	EC 3074A	21-APR-04	LEL
C	EC 3113	28-JUN-04	LEL

OUTPUT POWER:
624mV, 1kHz INPUT AT TP22,
100W min. AT 5% T.H.D. INTO 8 ohm RESISTIVE LOAD
AT J6 (MAIN SPKR), WITH UNIT AT RATED LINE VOLTAGE.
810mV, 1kHz INPUT AT TP22,
50W min. AT 5% T.H.D. INTO 4 ohm TOTAL RESISTIVE LOAD,
(2X) 8 ohm RESISTIVE LOADS AT J7 (EXT. SPKR) AND
J7 (EXT. SPKR), WITH UNIT AT RATED LINE VOLTAGE.

12. DO NOT MIX BRANDS FOR Q14 - Q19.
FOR PRODUCTION UNITS BUILT WITH ST TP 142-147 PARTS:
USE 2.4K 1% (P/N 00258000) FOR R90-91
FOR PRODUCTION UNITS BUILT WITH ONSEMI TP 142-147 PARTS:
USE 2.43K 1% (P/N 002763200) FOR R90-91

TP57-59 VARY DEPENDENT ON SETTING
OF LEVEL AND TIME/RATE CONTROLS.
ADDITIONAL CONDITION FOR TP30-34:
8 OHM RESISTIVE LOAD AT J6 (MAIN SPKR)
(4 OHMS TOTAL LOAD IMPEDANCE)
ADDITIONAL CONDITION
DRIVE 2 (S2) IN "RED"

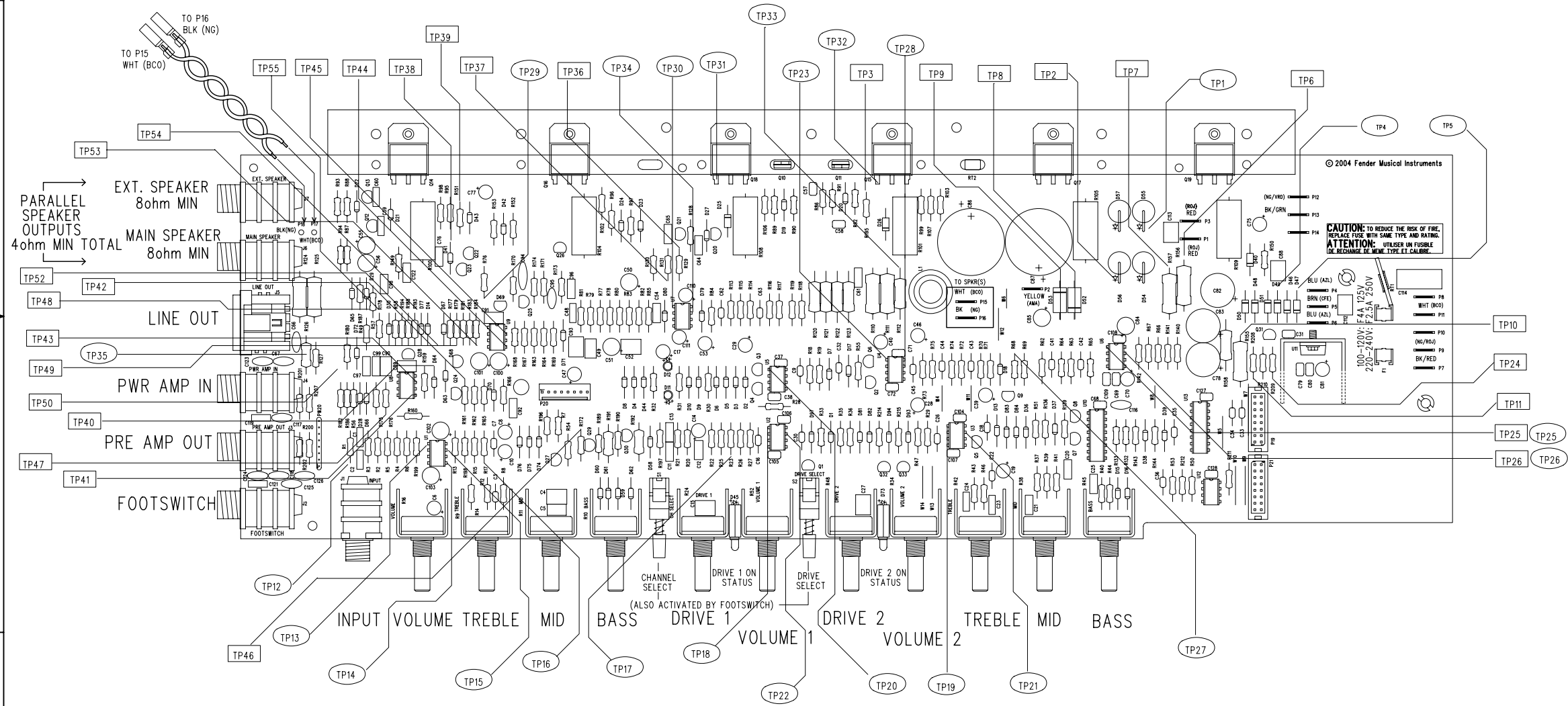
THIS DOCUMENT CONTAINS INFORMATION OF
A PROPRIETARY NATURE TO FENDER MUSICAL
INSTRUMENTS AND IS SUBMITTED TO YOU IN
CONFIDENCE AND SHALL NOT BE DISCLOSED OR
TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION
FROM FENDER MUSICAL INSTRUMENTS.

CHECKED BY: _____
DATE: _____
APPROVED BY: _____
DATE: _____
DRAWN: LORENZEN ENGR. LORENZEN
DATABASE FILE: Z57251.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
STAGE 100/1600 AMPLIFIER
REV. _____
SHEET: 1 OF 2

- NOTES: (UNLESS OTHERWISE NOTED)
1. ALL RESISTORS IN OHMS, 5% 1/4W.
 2. ALL UNPOLARIZED CAPACITORS IN μ F, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20K).
 3. ALL POLARIZED CAPACITORS IN μ F, 20% 50V MINIMUM.
 4. ALL DIODES ARE IN4448.
 5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 006219000 AND PCB ASSEMBLY P/N 006216000.
 6. LAST REFERENCE DESIGNATORS: C128,D97,F1,J1,P21,PW20, Q33,R215,RT2,RT3,RT4,RT5,RT6,RT7,RT8,RT9,RT10,RT11,RT12,RT13,RT14,RT15,RT16,RT17,RT18,RT19,RT20,RT21,RT22,RT23,RT24,RT25,RT26,RT27,RT28,RT29,RT30,RT31,RT32,RT33,RT34,RT35,RT36,RT37,RT38,RT39,RT40,RT41,RT42,RT43,RT44,RT45,RT46,RT47,RT48,RT49,RT50,RT51,RT52,RT53,RT54,RT55,RT56,RT57,RT58,RT59,RT60,RT61,RT62,RT63,RT64,RT65,RT66,RT67,RT68,RT69,RT70,RT71,RT72,RT73,RT74,RT75,RT76,RT77,RT78,RT79,RT80,RT81,RT82,RT83,RT84,RT85,RT86,RT87,RT88,RT89,RT90,RT91,RT92,RT93,RT94,RT95,RT96,RT97,RT98,RT99,RT100,RT101,RT102,RT103,RT104,RT105,RT106,RT107,RT108,RT109,RT110,RT111,RT112,RT113,RT114,RT115,RT116,RT117,RT118,RT119,RT120,RT121,RT122,RT123,RT124,RT125,RT126,RT127,RT128,RT129,RT130,RT131,RT132,RT133,RT134,RT135,RT136,RT137,RT138,RT139,RT140,RT141,RT142,RT143,RT144,RT145,RT146,RT147,RT148,RT149,RT150,RT151,RT152,RT153,RT154,RT155,RT156,RT157,RT158,RT159,RT160,RT161,RT162,RT163,RT164,RT165,RT166,RT167,RT168,RT169,RT170,RT171,RT172,RT173,RT174,RT175,RT176,RT177,RT178,RT179,RT180,RT181,RT182,RT183,RT184,RT185,RT186,RT187,RT188,RT189,RT190,RT191,RT192,RT193,RT194,RT195,RT196,RT197,RT198,RT199,RT200,RT201,RT202,RT203,RT204,RT205,RT206,RT207,RT208,RT209,RT210,RT211,RT212,RT213,RT214,RT215,RT216,RT217,RT218,RT219,RT220,RT221,RT222,RT223,RT224,RT225,RT226,RT227,RT228,RT229,RT230,RT231,RT232,RT233,RT234,RT235,RT236,RT237,RT238,RT239,RT240,RT241,RT242,RT243,RT244,RT245,RT246,RT247,RT248,RT249,RT250,RT251,RT252,RT253,RT254,RT255,RT256,RT257,RT258,RT259,RT260,RT261,RT262,RT263,RT264,RT265,RT266,RT267,RT268,RT269,RT270,RT271,RT272,RT273,RT274,RT275,RT276,RT277,RT278,RT279,RT280,RT281,RT282,RT283,RT284,RT285,RT286,RT287,RT288,RT289,RT290,RT291,RT292,RT293,RT294,RT295,RT296,RT297,RT298,RT299,RT300,RT301,RT302,RT303,RT304,RT305,RT306,RT307,RT308,RT309,RT310,RT311,RT312,RT313,RT314,RT315,RT316,RT317,RT318,RT319,RT320,RT321,RT322,RT323,RT324,RT325,RT326,RT327,RT328,RT329,RT330,RT331,RT332,RT333,RT334,RT335,RT336,RT337,RT338,RT339,RT340,RT341,RT342,RT343,RT344,RT345,RT346,RT347,RT348,RT349,RT350,RT351,RT352,RT353,RT354,RT355,RT356,RT357,RT358,RT359,RT360,RT361,RT362,RT363,RT364,RT365,RT366,RT367,RT368,RT369,RT370,RT371,RT372,RT373,RT374,RT375,RT376,RT377,RT378,RT379,RT380,RT381,RT382,RT383,RT384,RT385,RT386,RT387,RT388,RT389,RT390,RT391,RT392,RT393,RT394,RT395,RT396,RT397,RT398,RT399,RT400,RT401,RT402,RT403,RT404,RT405,RT406,RT407,RT408,RT409,RT410,RT411,RT412,RT413,RT414,RT415,RT416,RT417,RT418,RT419,RT420,RT421,RT422,RT423,RT424,RT425,RT426,RT427,RT428,RT429,RT430,RT431,RT432,RT433,RT434,RT435,RT436,RT437,RT438,RT439,RT440,RT441,RT442,RT443,RT444,RT445,RT446,RT447,RT448,RT449,RT450,RT451,RT452,RT453,RT454,RT455,RT456,RT457,RT458,RT459,RT460,RT461,RT462,RT463,RT464,RT465,RT466,RT467,RT468,RT469,RT470,RT471,RT472,RT473,RT474,RT475,RT476,RT477,RT478,RT479,RT480,RT481,RT482,RT483,RT484,RT485,RT486,RT487,RT488,RT489,RT490,RT491,RT492,RT493,RT494,RT495,RT496,RT497,RT498,RT499,RT500,RT501,RT502,RT503,RT504,RT505,RT506,RT507,RT508,RT509,RT510,RT511,RT512,RT513,RT514,RT515,RT516,RT517,RT518,RT519,RT520,RT521,RT522,RT523,RT524,RT525,RT526,RT527,RT528,RT529,RT530,RT531,RT532,RT533,RT534,RT535,RT536,RT537,RT538,RT539,RT540,RT541,RT542,RT543,RT544,RT545,RT546,RT547,RT548,RT549,RT550,RT551,RT552,RT553,RT554,RT555,RT556,RT557,RT558,RT559,RT560,RT561,RT562,RT563,RT564,RT565,RT566,RT567,RT568,RT569,RT570,RT571,RT572,RT573,RT574,RT575,RT576,RT577,RT578,RT579,RT580,RT581,RT582,RT583,RT584,RT585,RT586,RT587,RT588,RT589,RT590,RT591,RT592,RT593,RT594,RT595,RT596,RT597,RT598,RT599,RT600,RT601,RT602,RT603,RT604,RT605,RT606,RT607,RT608,RT609,RT610,RT611,RT612,RT613,RT614,RT615,RT616,RT617,RT618,RT619,RT620,RT621,RT622,RT623,RT624,RT625,RT626,RT627,RT628,RT629,RT630,RT631,RT632,RT633,RT634,RT635,RT636,RT637,RT638,RT639,RT640,RT641,RT642,RT643,RT644,RT645,RT646,RT647,RT648,RT649,RT650,RT651,RT652,RT653,RT654,RT655,RT656,RT657,RT658,RT659,RT660,RT661,RT662,RT663,RT664,RT665,RT666,RT667,RT668,RT669,RT670,RT671,RT672,RT673,RT674,RT675,RT676,RT677,RT678,RT679,RT680,RT681,RT682,RT683,RT684,RT685,RT686,RT687,RT688,RT689,RT690,RT691,RT692,RT693,RT694,RT695,RT696,RT697,RT698,RT699,RT700,RT701,RT702,RT703,RT704,RT705,RT706,RT707,RT708,RT709,RT710,RT711,RT712,RT713,RT714,RT715,RT716,RT717,RT718,RT719,RT720,RT721,RT722,RT723,RT724,RT725,RT726,RT727,RT728,RT729,RT730,RT731,RT732,RT733,RT734,RT735,RT736,RT737,RT738,RT739,RT740,RT741,RT742,RT743,RT744,RT745,RT746,RT747,RT748,RT749,RT750,RT751,RT752,RT753,RT754,RT755,RT756,RT757,RT758,RT759,RT760,RT761,RT762,RT763,RT764,RT765,RT766,RT767,RT768,RT769,RT770,RT771,RT772,RT773,RT774,RT775,RT776,RT777,RT778,RT779,RT780,RT781,RT782,RT783,RT784,RT785,RT786,RT787,RT788,RT789,RT790,RT791,RT792,RT793,RT794,RT795,RT796,RT797,RT798,RT799,RT800,RT801,RT802,RT803,RT804,RT805,RT806,RT807,RT808,RT809,RT810,RT811,RT812,RT813,RT814,RT815,RT816,RT817,RT818,RT819,RT820,RT821,RT822,RT823,RT824,RT825,RT826,RT827,RT828,RT829,RT830,RT831,RT832,RT833,RT834,RT835,RT836,RT837,RT838,RT839,RT840,RT841,RT842,RT843,RT844,RT845,RT846,RT847,RT848,RT849,RT850,RT8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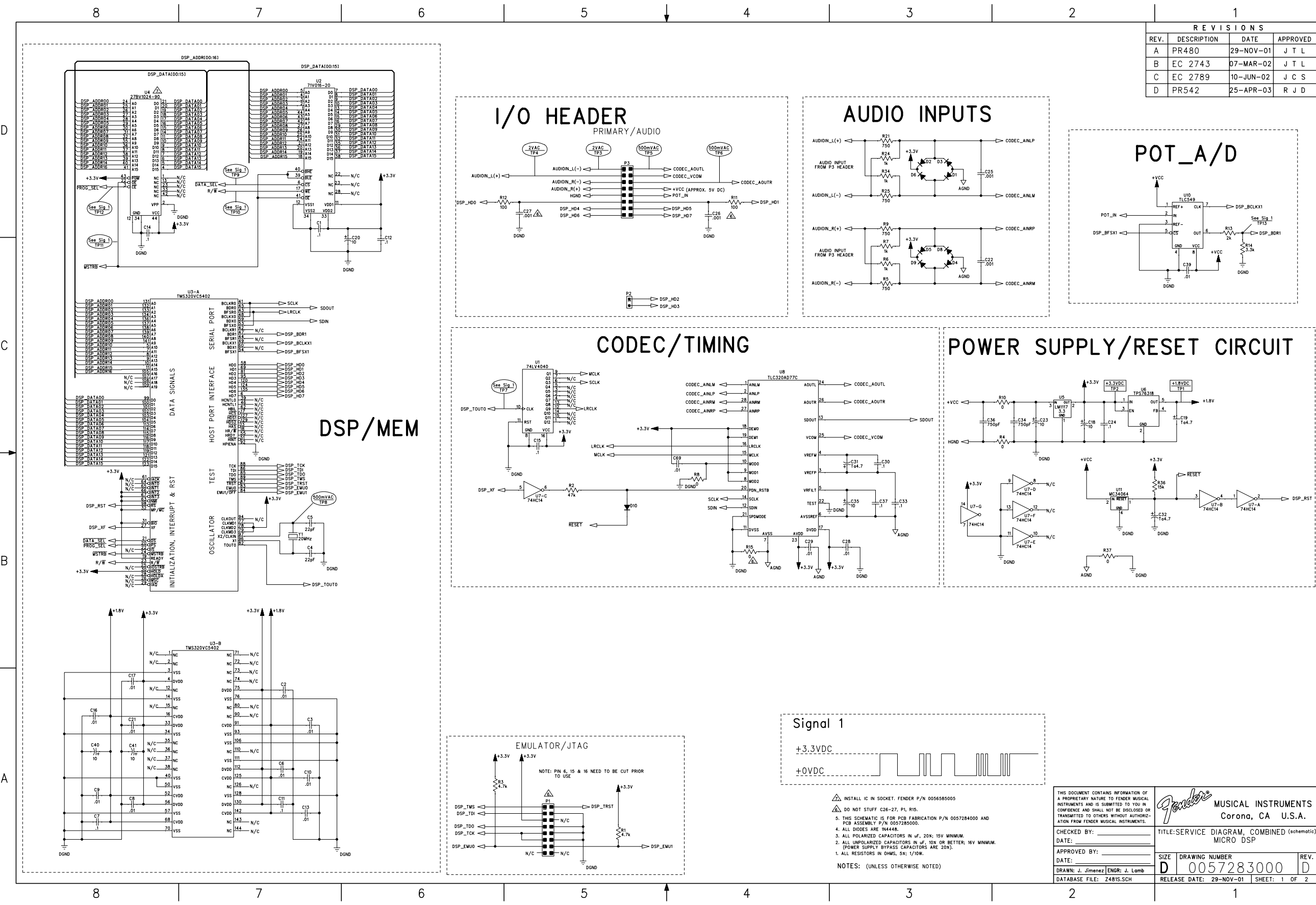
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 572	18-MAR-04	L E L
B	EC 3074A	20-MAY-04	L E L
C	EC 3113	28-JUN-04	L E L



FILM/DWG: SERVICE DIAGRAM
DATABASE: Z572P.PCB DATE: 28-JUN-04

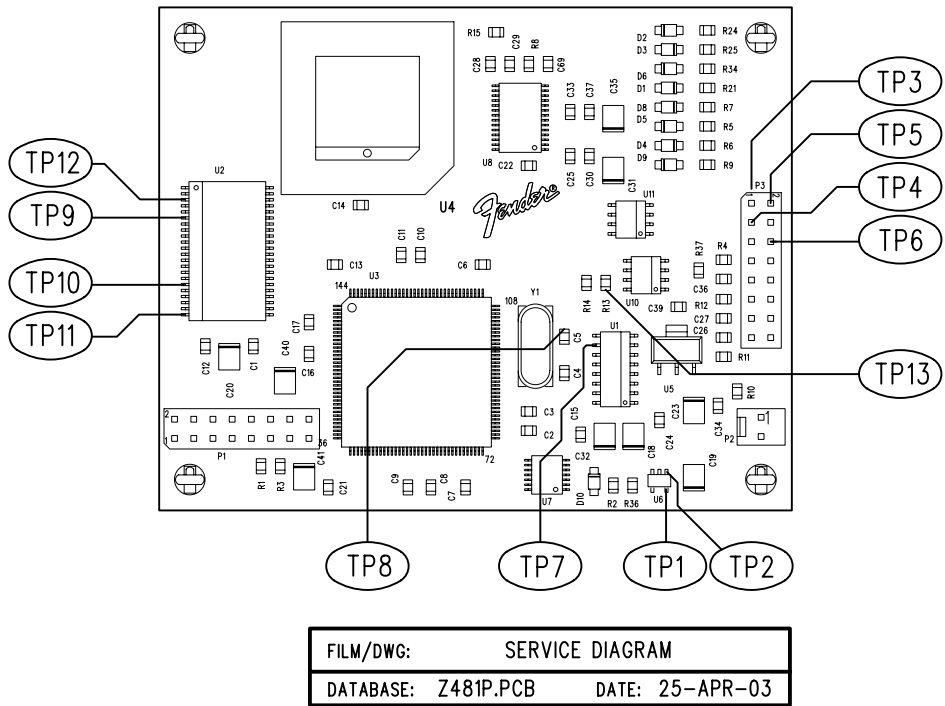
1. SEE SHEET 1 FOR PRIMARY WIRING, TEST CONDITIONS,
TEST POINT VALUES, AND STUFFING DIFFERENCES
BETWEEN MODELS.
NOTES: (UNLESS OTHERWISE NOTED)

THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFIDENCE AND SHALL NOT BE DISCLOSED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS.		 MUSICAL INSTRUMENTS Corona, CA U.S.A.	
CHECKED BY: _____ DATE: _____		TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) STAGE 1000/1600 AMPLIFIERS	
APPROVED BY: _____ DATE: _____		SIZE D	DRAWING NUMBER 0062161000
DRAWN: P. CORBIN ENGR: L. LORENZEN		REV. C	
DATABASE FILE: Z572PLPCB		RELEASE DATE: 18-MAR-04	SHEET 2 OF 2



THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFIDENCE AND SHALL NOT BE DISCLOSED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS.		Fender® MUSICAL INSTRUMENTS Corona, CA U.S.A.	
CHECKED BY:	DATE:	TITLE: SERVICE DIAGRAM, COMBINED (schematic) MICRO DSP	
APPROVED BY:	DATE:	SIZE	REV.
DRAWN: J. Jimenez	ENGR: J. Lamb	D 0057283000	D
DATABASE FILE: Z4815.SCH	RELEASE DATE: 29-NOV-01	SHEET: 1 OF 2	

R E V I S I O N S			
REV.	DESCRIPTION	DATE	APPROVED
A	PR480	30-NOV-01	J T L
B	EC 2743	07-MAR-02	J T L
C	EC 2789	10-JUN-02	J C S
D	PR542	25-APR-03	R J D

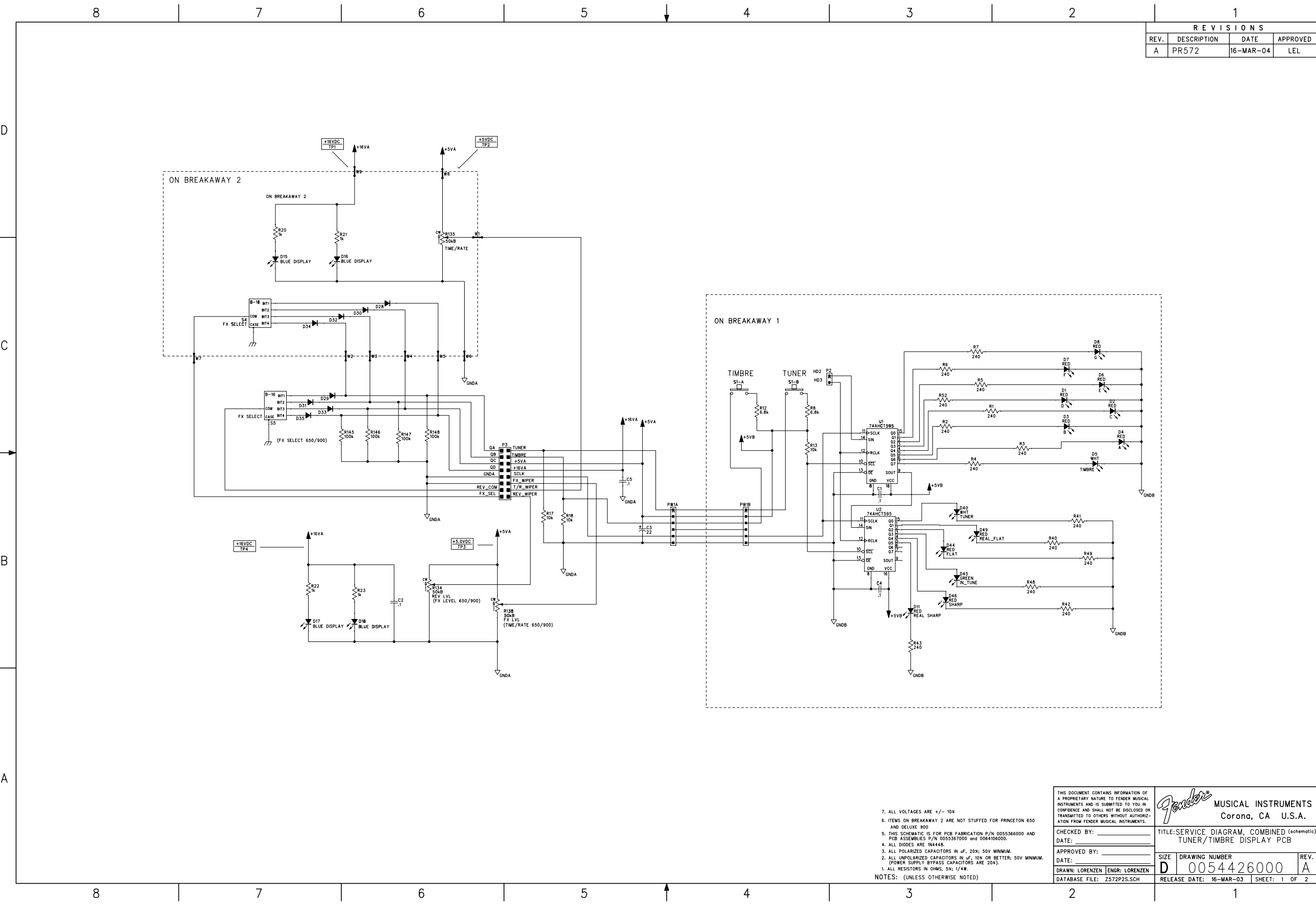


FILM/DWG: SERVICE DIAGRAM
DATABASE: Z481P.PCB DATE: 25-APR-03

1. SEE SHEET 1 FOR TEST CONDITIONS AND TEST POINT VALUES.

NOTES: (UNLESS OTHERWISE NOTED)

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CHECKED BY: _____ DATE: _____		TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) uDSP SERIES	
APPROVED BY: _____ DATE: _____		SIZE B	DRAWING NUMBER 0057283000
DRAWN: J. Jimenez ENGR: J. Lamb		REV. D	
DATABASE FILE: Z481P.PCB		RELEASE DATE: 30-NOV-01	SHEET 2 OF 2

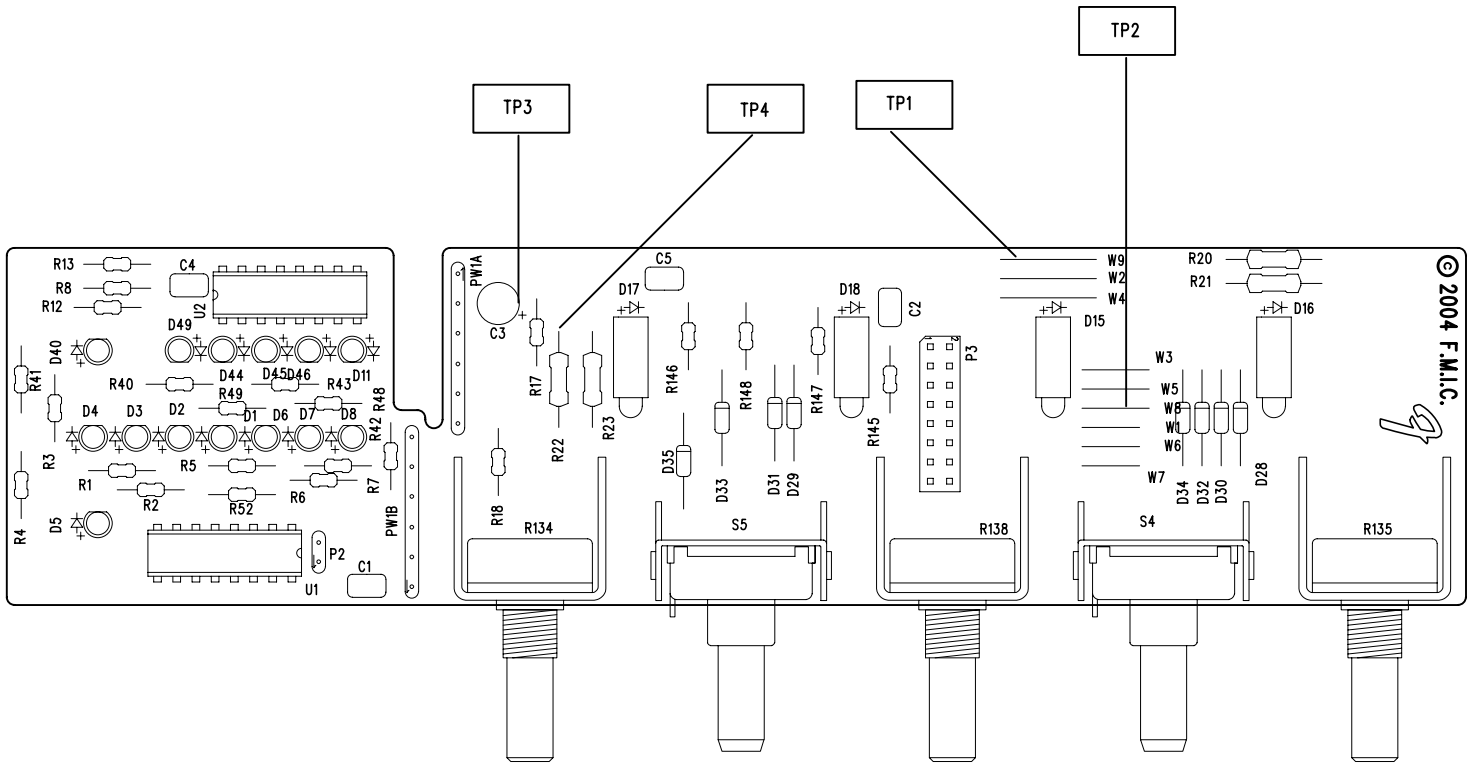


REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR572	16-MAR-04	LEL

7. ALL VOLTAGES ARE +/- 10%
6. ITEMS ON BREAKAWAY 2 ARE NOT STUFFED FOR PRINCETON 650 AND DELUXE 900
5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0055366000 AND PCB ASSEMBLIES P/N 0055367000 and 0064106000.
4. ALL DIODES ARE 1N4448.
3. ALL POLARIZED CAPACITORS IN uF, 20% 50V MINIMUM.
2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM.
1. ALL RESISTORS IN OHMS, 5%; 1/4W.
NOTES: (UNLESS OTHERWISE NOTED)

THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFERENCE AND SHALL NOT BE DISCLOSED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS.		Fender MUSICAL INSTRUMENTS Corona, CA U.S.A.	
CHECKED BY: _____ DATE: _____		TITLE: SERVICE DIAGRAM, COMBINED (schematic) TUNER/TIMBRE DISPLAY PCB	
APPROVED BY: _____ DATE: _____		SIZE D DRAWING NUMBER 0054426000	REV. A
DRAWN: LORENZEN ENGR: LORENZEN DATABASE FILE: Z572P2S.SCH		RELEASE DATE: 16-MAR-03 SHEET: 1 OF 2	

R E V I S I O N S			
REV.	DESCRIPTION	DATE	APPROVED
A	PR572	16-MAR-04	L.E.L.



FILM/DWG:	SERVICE DIAGRAM
DATABASE:	Z572P2.PCB DATE: 16-MAR-04

NOTES: (UNLESS OTHERWISE NOTED)

THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFIDENCE AND SHALL NOT BE DISCLOSED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS.		 MUSICAL INSTRUMENTS Corona, CA U.S.A.	
CHECKED BY: _____ DATE: _____		TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) TUNER/VOICE DISPLAY PCB	
APPROVED BY: _____ DATE: _____		SIZE B	REV. A
DRAWN: PCORBIN ENGR: LORENZEN		DRAWING NUMBER 0054426000	
DATABASE FILE: Z572P2.PCB		RELEASE DATE: 16-MAR-04	SHEET 2 OF 2

TABLE I		
ITEM NO.	FROM	TO
4	DISPLAY BOARD (ITEM 4) P2	PCB ASSY DSP (ITEM 8) P2
7	PCB INPUT (ITEM 7) PW20	MAIN PCB (ITEM 7) P20
29	MAIN PCB (ITEM 7) P21	DISPLAY BOARD (ITEM 4) P3
29	MAIN PCB (ITEM 7) P19	PCB ASSY DSP (ITEM 12) P3

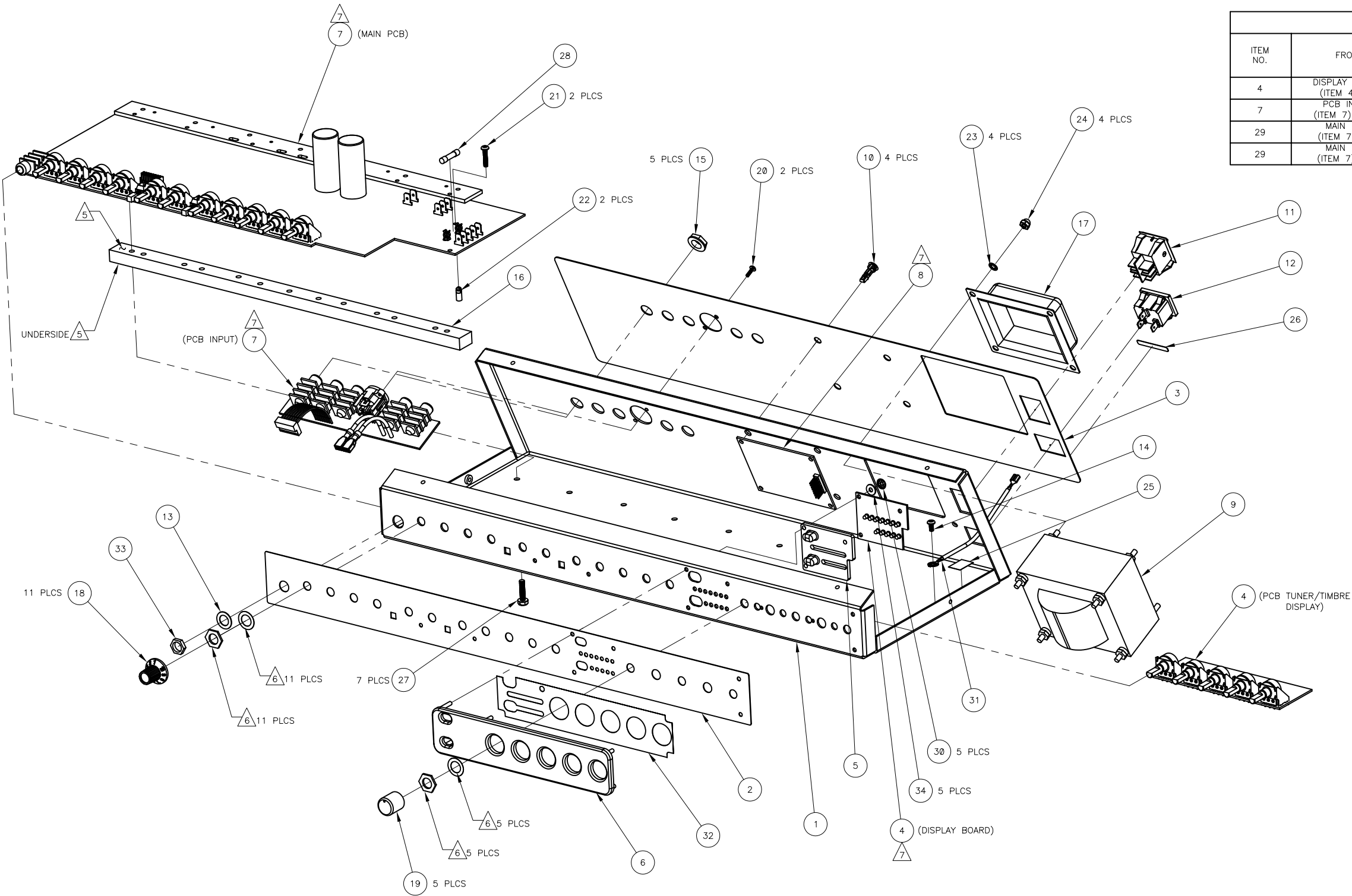
SERVICE MANUAL DOCUMENT

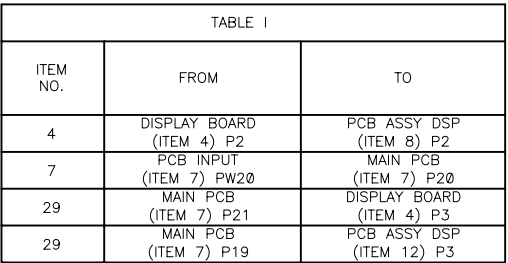
5/17/2004

34	5	WASHER FLAT 0.149 ID
33	1	NUT HEX 3/8-32x3/32 TK NI (049)
32	1	GASKET BEZEL STAGE 1000/1600
31	1	WIRE SET
30	5	PUSH NUT 1/8" POST
29		
28	1	FUSE
27	7	SCRW TF 8-32x3/4 HWH SLTD Z1
26	1	LABEL VOLTAGE
25	1	LABEL GROUNDING SEMKO
24	4	NUT ACORN 8-32
23	4	WSHR LCK INTL 8x.330x.02 Z1
22	2	STANDOFF NYL PCB SNAP 3/8" NAT
21	2	SCRW TF 6-32x5/8 PHP Z1 TAPTYT
20	2	SCRW SMB #4X3/8 PHP BLX
19	5	KNOB LARGE 400 PRO
18	11	KNOB ROTARY SS W/CHR INSERT
17	1	END BELL XFMR STAGE 112SE
16	1	HEATSINK BAR STAGE 112SE
15	5	NUT PLASTIC BLK REAN JACK
14	1	SCRW TF 6-32X1/4 PHP Z1
13	1	WSHR FLAT 3/8x.614 NI (049)
12	1	CONNECTOR IEC SNAP IN
11	1	SWITCH ROCKER
10	4	STANDOFF NYLON BLK .375
9	1	XFMR
8	1	PCB ASSY UDSP STAGE 1000/1600
7	1	PCB ASSEMBLY STAGE 1000/1600
6	1	BEZEL STAGE 1000/1600
5	1	KEYPAD TUNER/TIMBRE
4	1	PCB ASSEMBLY TUNER/TIMBRE DISPLAY
3	1	PANEL, REAR STAGE 1000
2	1	PANEL, FRONT STAGE 1000
1	1	CHASSIS STAGE 1000
ITEM	QTY	DESCRIPTION

△6△HARDWARE INCLUDED WITH PART.

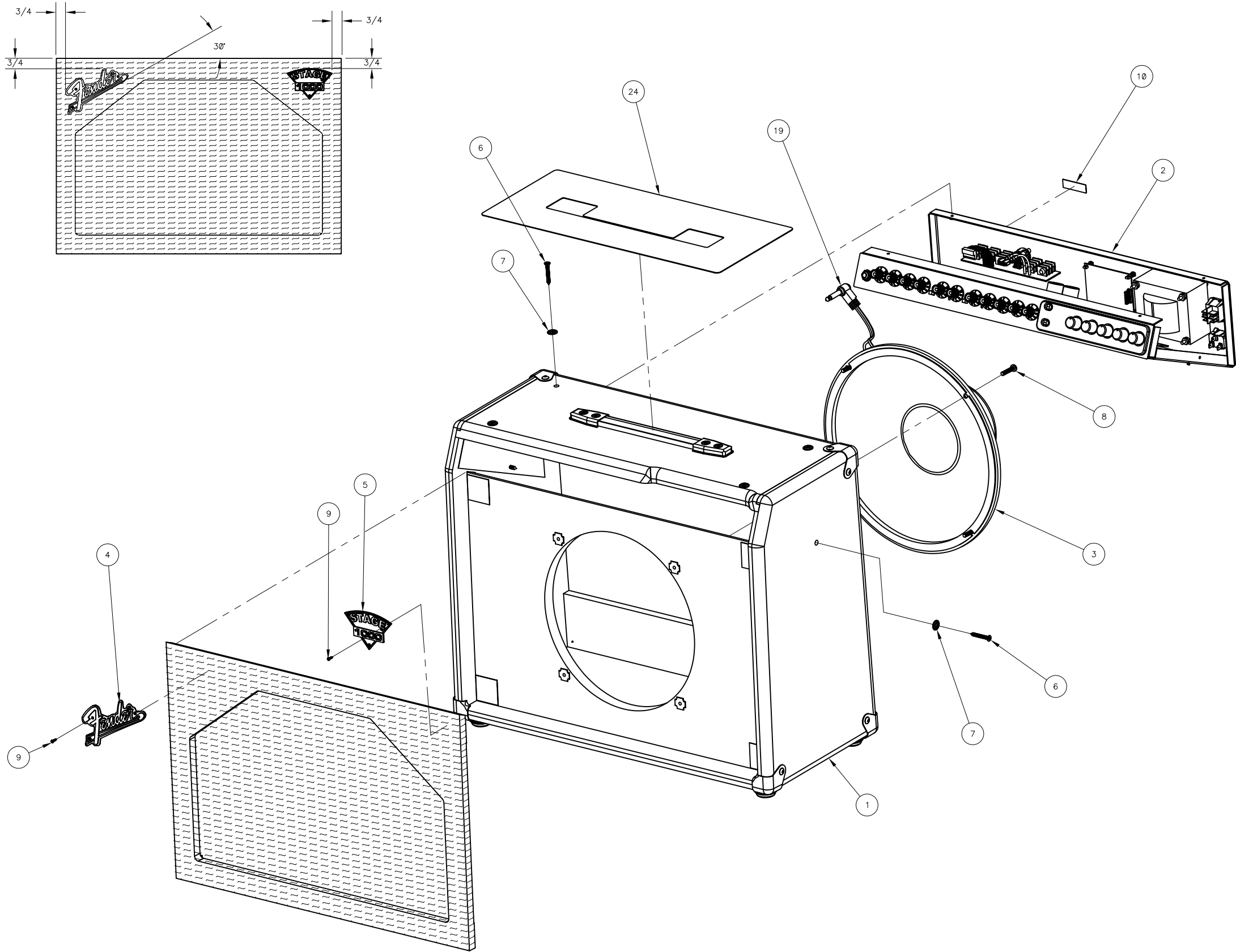
DATE 12/9/2003		Fender® FENDER MUSICAL INSTRUMENTS CORP. CORONA, CALIFORNIA U.S.A.	
DFT.	ENG.	ENG.	TITLE CHASSIS ASSEMBLY STAGE 1000
DATE	DATE	DATE	SHEET 1 of 1
APPROVED		SIZE D	DRAWING NUMBER 0062181000
DATE		SCALE NONE	REV. A
		MASTER/ASSEMBLY	





5/14/2004

			 FENDER MUSICAL INSTRUMENTS CORP. CORONA, CALIFORNIA U.S.A.			
DATE 12/9/2003						
DFT.	ENG.	ENG.	TITLE CHASSIS ASSEMBLY STAGE 1600			
DATE	DATE	DATE				
APPROVED			SHEET 1 of 1	SIZE D	DRAWING NUMBER 0062149000	REV. A
DATE			SCALE NONE	MASTER/ASSEMBLY		



SERVICE MANUAL DOCUMENT

5/14/2004

26		
25		
24	1	POP STAGE 1000/1600
23		
22		
21		
20		
19	1	CABLE ASSY SPKR RT ANG 13-1/2"
18		
17		
16		
15		
14		
13		
12		
11		
10	1	LABEL SERIAL MEXICO
9	6	SCRW SMA 2x3/8 PHP BLX
8	4	SCRW M 10-32x1 PHP BLX
7	6	WSHR FNSH 8-5/8 FLNGD BLX WX
6	6	SCRW M 8-32x1-3/16 OHP BLX CP
5	1	BADGE STAGE 1000
4	1	NAMEPLATE FNDR 65 TWIN
3	1	SPEAKER 12"8 OHM T5317/T5115
2	1	CHASSIS ASSEMBLY STAGE 1000
1	1	CABINET ASSEMBLY STAGE 1000
ITEM	QTY	DESCRIPTION

DATE 10/24/2003			Fender® FENDER MUSICAL INSTRUMENTS CORP. CORONA, CALIFORNIA U.S.A.			
DFT.	ENG.	ENG.				
DATE	DATE	DATE	TITLE END ITEM STAGE 1000			
APPROVED			SHEET 1 of 1	SIZE D	DRAWING NUMBER 2267000030	REV. A
DATE			SCALE NONE	MASTER/ASSEMBLY		

8

7

6

5

4

3

2

1



			 FENDER MUSICAL INSTRUMENTS CORP. CORONA, CALIFORNIA U.S.A.	
DATE 10/28/2003				
DFT.	ENG.	ENG.	TITLE END ITEM STAGE 1600	
DATE	DATE	DATE		
APPROVED				
DATE	SCALE NONE	SIZE D	DRAWING NUMBER 22680000030 ASSEMBLY	REV. A