



CHAMPION™ 30 DSP

(This is the model name for warranty claims)

p/n 2267300020 (120V)

SERVICE MANUAL



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June, 2002

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

**CHAMPION™ 30 DSP**

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SPECIFICATIONS

Model Name: Champion 30 DSP

Release Number: PR 484
(Not a model number)

Part Numbers

(120V, 60Hz) US:	226-7300-020
(110V, 60Hz) TW:	226-7301-020
(240V, 50Hz) AUS:	226-7303-020
(230V, 50Hz) UK:	226-7304-020
(230V, 50Hz) ARG:	226-7305-020
(230V, 50Hz) EUR:	226-7306-020
(100V, 50/60Hz) JPN:	226-7307-020
(220V, 60Hz) ROK:	226-7309-020

Power Requirement: 38 W

Power Output: 30 W RMS into 8 ohms

Impedances Input (Pre-Amp): > 1M ohms

Speaker Complement: One (1) 10", 8 ohm,
Fender® Special Design
(P/N 0036502000)

Dimensions

Height:	15.5 in (39.4 cm)
Width:	17 in (43.2 cm)
Depth:	8.5 in (21.6 cm)

Weight: 25 lbs (11.4 kg)

Product specifications are subject to change without notice



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SERVICE NOTES

1. **CHASSIS REMOVAL** is accomplished by first removing four (4) screws from the top of the cabinet; detach the speaker wires from the speaker 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. **CHAMPION 30 DSP MAIN PCB REMOVAL** is accomplished by removing the following items: All Knobs and potentiometer bushings, four (4) nuts and washers at the Input, Footswitch and Headphone Jacks, two (2) screws at the Heat-sink which attach to the Chassis, five (5) screws at ST1 – ST5. Disconnect the Transformer Leads at P1, P3, P4, P5, and P11. Disconnect the White and Black speaker wires at P13 and P14. Disconnect the White and Black wires at the Power Switch connected to WJ1 and P9. Disconnect the Ribbon Cable at P2. Pull the Red Tulip LED Assembly out of the jeweled pilot light.

PCB EXCHANGE POLICY

Parts marked with a single asterisk (*) in the Part Lists (starting on page 9 are not field replaceable. If a failure due to one of these components is detected, please contact 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–B to U3–B) is active until FETs Q1 and Q2 are turned on activating the drive channel signal path (U2–A to U3–B). Differential amp U4–A and follower U4–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 U5–B recovers the signal from the uDSP card and sends it to the headphone jack and the power amplifier.

POWER AMPLIFIER

The LM3876 power amp chip (U8) is used. Load sense resistor (R69) provides negative current feedback. This circuit makes use of the on-chip mute function. During normal operation, transistor

Q4 is on drawing current out of U8 pin 3 through R85. Zener Diode D27 sets the voltage at which Q4 turns on. Plugging headphones into J4 removes ground from the cathode of D24 turning Q4 off which mutes the power amp.

POWER SUPPLY

Standard bridge rectifiers, with zener regulation (D17–18) for the +/-15V supplies. The 7805 regulator (U7) taps off the +27V supply to provide +5V for the uDSP card and digital user–interface.

DIGITAL USER INTERFACE

The uDSP effects card generates clock signal DSP_HD1 (~45Hz) which controls the 4053 CMOS switch to read pots R45 and R81. The DC level (0–5V) of the pots controls the FX LEVEL and FX SELECT.

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
1	0057312004	PCB ASSY CHAMPION 30 DSP	
1	*	** PCB FAB CHAMPION 30 DSP	
REF	0057314000	SERV. DIA. COMB. CHAMP 30 DSP	
2	0038689001	CAP AE AX .47uF 100V 20%	C8-9
2	0028463003	CAP AE RDL 10uF 50V 20%	C30 C64
2	0028458003	CAP AE RDL 1uF 50V 20%	C25 C41
2	0028459003	CAP AE RDL 2.2uF 50V 20%	C42-43
2	0033607000	CAP AE RDL 2200uF 35V 20%	C35-36
8	0028467003	CAP AE RDL 22uF 50V 20%	C3 C11 C26 C29 C39-40 C55 C63
1	0028460003	CAP AE RDL 4.7uF 50V 20%	C44
2	0028471003	CAP AE RDL 47uF 50V 20%	C37-38
2	0039255001	CAP CA 10pF 100V LL	C10 C16
2	0051457003	CAP CD 100pF 500V 5%	C24 C69
3	0051458003	CAP CD 470pF 500V 10%	C7 C47 C54
1	0051459003	CAP CD 560pF 500V 10%	C17
2	0051409003	CAP CD 68pF 500V 5%	C65-66
8	0034788003	CAP CR .1uF 50V 20% .2" LS	C31 C33 C46 C51 C59-62
2	0020867002	CAP CD 330pF 1000V 10%	C52 C68
1	0053860000	** CAP MPF .1uF 250VAC 20%	C58
7	0027278003	CAP MPF .1uF 63V 10%	C14 C28 C48-50 C56-57
2	0033579003	CAP PFF RDL .0015uF 100V 10%	C27 C53
2	0033580003	CAP PFF RDL .0022uF 100V 10%	C13 C32
1	0033581003	CAP PFF RDL .0033uF 100V 10%	C21
3	0033583003	CAP PFF RDL .0047uF 100V 10%	C1-2 C22
3	0033590003	CAP PFF RDL .022uF 100V 10%	C12 C19 C45
4	0027264003	CAP MPF .01uF 100V 10%	C67 C70-72
2	0033591003	CAP PFF RDL .033uF 100V 10%	C5-6
5	0033592003	CAP PFF RDL .047uF 100V 10%	C4 C18 C20 C23 C34
1	0033596003	CAP PFF RDL .068uF 100V 10%	C15
3	0037324000	CONTROL SNAPIN 100k 30C	R13 R25 R32
2	0038656000	CONTROL SNAPIN 10k B	R45 R81
1	0040552000	CONTROL SNAPIN 250k 30C	R35
1	0037323000	CONTROL SNAPIN 50k 15A	R22
1	0034719000	CONTROL SNAPIN 50k B	R31
7	0064089001	DIODE 1N4003 LL	D13-16 D22-23 D28
10	0006260001	DIODE 1N4448 SIGNAL LL	D1-2 D5-7 D20-21 D24-26
2	0009165001	DIODE ZEN 1N4744A 15V 1W 5%	D17-18
1	0031019001	DIODE ZEN 1N5245B 15V 5% LL	D27
10	0025802000	FSTN TAB MALE .250x.032 PCB MT	P3-5 P7-11 P13-14
3	0026000001	FSTN TAB MALE PCB MT .187x.032	P1 P6 P12
2	0051094003	** FUSE CLIP PCB 5mm	@ F1
1	0057350000	HDR .1 CTR 8x2 CKT SQ PIN	P2
1	0057804000	HEATSINK PLATE LM3876	@ U8
1	0050849000	HEATSINK PCB LEVEL 576012U	@ U7
1	0028120000	IC 4053B TPL 2 CHAN ANLG SW	U9
5	0031611000	IC OP-AMP DUAL PC4560	U2-5 U10
1	0016795000	IC OP-AMP DUAL TL072	U1
1	0057769000	IC POWER AMP 56W/MUTE LM3876T	U8
1	0041812000	IC REGULATOR +5V MC7805CT	U7
3	0051658000	JACK MONO R/A	J1-3
1	0055595000	JACK STEREO R/A w/SL SHUNT	J4
3	0049948000	LED RED LONG LEAD LUMEX	D3-4 D12
1	0055812000	LED TULIP ASSEMBLY	D19
1	0027869001	RES CF 1/2W 5% 470ohm LL	R61

**GAIN, (DR) VOLUME, TREBLE
FX SELECT, FX LEVEL
BASS
VOLUME
MID**

**INPUT1, INPUT 2, FOOTSWITCH
HEADPHONE
DISTORTION, DRIVE STATUS
POWER**

* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY on page 4.

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.



CHAMPION™ 30 DSP

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PARTS LIST:		MAIN – PCB ASSEMBLY (continued)	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0030737001	RES CF 1/2W 5% 5.6ohm LL	R70
1	0024969001	RES CF 1/4W 5% 1.5k LL	R48
1	0025084001	RES CF 1/4W 5% 10M LL	R49
5	0024981001	RES CF 1/4W 5% 10k LL	R39-40 R52-53 R91
1	0024937001	RES CF 1/4W 5% 10ohm LL	R77
2	0024985001	RES CF 1/4W 5% 15k LL	R7 R37
1	0025058001	RES CF 1/4W 5% 180k LL	R18
1	0024986001	RES CF 1/4W 5% 18k LL	R71
5	0024965001	RES CF 1/4W 5% 1k LL	R8 R41 R74 R79-80
2	0025069001	RES CF 1/4W 5% 1M LL	R56 R73
5	0024971001	RES CF 1/4W 5% 2.2k LL	R21 R82 R87 R89-90
2	0024972001	RES CF 1/4W 5% 2.7k LL	R75 R78
5	0025059001	RES CF 1/4W 5% 220k LL	R16 R19 R26-27 R38
4	0024987001	RES CF 1/4W 5% 22k LL	R9-10 R17 R34
8	0024988001	RES CF 1/4W 5% 27k LL	R62-65 R93-96
2	0024973001	RES CF 1/4W 5% 3.3k LL	R12 R14
2	0024975001	RES CF 1/4W 5% 3.9k LL	R67-68
1	0025065001	RES CF 1/4W 5% 470k LL	R15
3	0024961001	RES CF 1/4W 5% 470ohm LL	R28 R59-60
4	0024993001	RES CF 1/4W 5% 47k LL	R29-30 R33 R36
4	0024947001	RES CF 1/4W 5% 47ohm LL	R42-43 R83-84
5	0028034001	RES CF 1/4W 5% 5.1k LL	R5 R44 R46-47 R92
2	0028018001	RES CF 1/4W 5% 510k LL	R3-4
1	0024979001	RES CF 1/4W 5% 6.8k LL	R6
1	0025067001	RES CF 1/4W 5% 680k LL	R66
3	0024995001	RES CF 1/4W 5% 68k LL	R1-2 R88
1	0025942001	RES CF 1/4W 5% 7.5k LL	R20
1	0024980001	RES CF 1/4W 5% 8.2k LL	R11
2	0029613001	RES CF 1/4W 5% 91k LL	R23-24
2	0027355001	** RES MOX 2W 5% 220ohm LL	R57-58
1	0027628001	** RES MOX 2W 5% 47ohm LL	R86
1	0032958000	RES WW 5W 10% .33ohm	R69
1	0028091000	SWITCH PUSH SLFLK SHORT STROKE	S1
1	0048451000	BUTTON PUSH SWTCH OFF WHT	@ S1
3	0014689003	XSTR N-CH JFET J111 TO-92	Q1-2 Q5
1	0016739003	XSTR NPN 2N4401 TO-92	Q4
1	0016742003	XSTR PNP 2N4403 TO-92	Q6
1	0036178000	SPACER, .5 x .1 BROWN	@ D12
2	0032908000	SCREW TF 6-32 x 3/8 PHP ZI	@ HEATSINK PLATE
1	0027638000	SCRW TF 4-40x3/8 HWHS ZI .1"HD	@ U8
1	0039420000	SCRW M 4-40x3/8 PHP SS SEMS	@ U7
1	0097360000	NUT HEX 4-40 EX LOCK	@ U7
1	0057041000	INSULATOR MICA TDA 7294/7293	@ U8
1	0017746000	WSHR SHLDR NYL 1/8x1/4	@ U8
15	0020880010	JUMPER WIRE 22GA .4"	W3 W13 W15 W20-21 W23 W27 W29 W39 W40-42 W45 W49 W55
29	0020880010	JUMPER WIRE 22GA .5"	W1 W5-7 W9-12 W14 W16-19 W22 W25-26 W32-36 W38 W43-44 W46 W51-53 W56
9	0020880010	JUMPER WIRE 22GA .6"	W4 W8 W28 W30-31 W37 W47 W50 W54
3	0020880010	JUMPER WIRE 22GA .7"	W2 W24 W48
1	0057408000	WIRE SET, PCB CHAMP 30 DSP	@ WJ1

CH SELECT

* Non-serviceable part. Replace complete parent assembly. See PCB EXCHANGE POLICY on page 4.

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CHAMPION™ 30 DSP

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PARTS LIST: **uDSP – PCB ASSEMBLY**

QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0057797008	PCB ASSY uDSP CHAMPION 30 DSP	w/ EPROM
REF	0057283000	SVC DIAG COMB MICRO DSP	
1	*	IC OTP ROM CHAMP 30 DSP R1.01	
1	*	PCB Fab u-DSP	
2	*	CAP 0805 CER .001uF 25V 5%	
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: **CHASSIS ASSEMBLY**

QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
-	0020786000	** FUSE QA 20mmx5mm 250v .500A	230-240V ONLY
1	0013112000	** FUSE TD 20mmx5mm 250v 1A	100-120V ONLY
1	0021709000	BUSHING SR .437x.062x13/32 BLK	@ SPKR LEADS
1	0025935000	** SWITCH DPST .187 TAB (DOM)	100V, 120V ONLY
-	0039287000	** SWITCH DPST .187 TAB GLOBAL	230V, 240V ONLY
4	0025936000	STANDOFF NYL PCB SNAP 3/8" NAT	@ PCB
1	0057359000	CABLE RIBBON 2X8 CKT 6"	CONNECT uDSP ASSY TO MAIN PCB
2	0028500000	SCRW TF 8-32x3/4 HWH SLTD Z1	@ HEATSINK BAR
4	0028937000	SCRW TF 6-32x5/8 PHP ZI TAPTYT	@ STANDOFFS
1	0041595000	SCRW 6-32x3/16 PHP STL ZI SEMS	@ PEM STANDOFF
8	0033206000	BUSHING KNOB SPACER	@ CONTROLS
1	0033613000	** XFMR PWR 120v	120V ONLY
-	0055880000	** XFMR PWR EXPORT 25W	100V, 230-240V ONLY
1	0034885000	HEATSINK BAR RD/HT/JM/CHMP110	
1	0038900000	SCRW TF 6-32X1/4 PHP ZI	@ GND
4	0051404000	STANDOFF NYLON BLK .375	@ MICRO DSP CARD
4	0053479000	NUT HEX 7/16 20X1/8 NI	@ J1-4

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CHAMPION™ 30 DSP

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PARTS LIST:		CHASSIS ASSEMBLY	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
4	0053480000	WASHER, FLAT .442x.692 NI	@ J1-4
1	*	CHASSIS CHAMPION 30 DSP AMP	
1	0057957000	WIRE SET CHASSIS DOM. CHAMP 30 DSP	120V ONLY
-	0057956000	WIRE SET CHASSIS EXP. CHAMP 30 DSP	100, 230-240V ONLY
7	0054419000	KNOB ROTARY 180 SS W/CHR INS	@ CONTROLS
1	0057347000	KNOB ROTARY W/CHR INS PNTR 180	@ FX SELECT
1	0054642000	** CONNECTOR IEC SNAP IN	
1	0054798000	JEWEL ASSY LED	@ FRONT PANEL
1	0031625000	NUT HOLDER PILOT LIGHT 1/16-27	@ JEWEL ASSY LED
1	0057264000	PANEL FRONT CHAMPION 30 DSP	
1	*	PANEL REAR CHAMPION 30 DSP	
4	0069393000	NUT 6-32 HEX EXT LOCK	@ PWR XFMR

PARTS LIST:		CABINET ASSEMBLY	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
1	0027846000	HANDLE 9.25" NO LOGO	
2	0025395000	HANDLE CAP 1 HOLE NI (DWG17420)	@ HANDLE
1	0032524000	INSERT HANDLE	@ HANDLE
6	0021972000	NUT T 10-32x3/4 STR 3 PRNG BLX	@ HANDLE, GRILLE
4	0026566000	CORNER 2 HOLE w/TAB NI	
2	0026568000	CORNER 3 HOLE NI	
2	0022244000	SCRW M 10-32x1-1/8 OHP NI	@ HANDLE
14	0026571000	SCRW SMAB 8X5/8 THP NI	@ CORNERS, FEET
0.014	0027648000	TAPE ALUM 6"x60YDS	
0.194	0029085000	VELCRO STRIP LOOP 1.5"wd BLK	@ FTSW LOOPS
0.194	0029086000	VELCRO STRIP HOOK 1.5"wd BLK	@ FTSW LOOPS
4	0029323000	FOOT RUBBER 1.0 DIA SMALL	
0.91	0026570000	TOLEX "BRAVURA BLACK"	

PARTS LIST:		END ITEM ASSEMBLY	
QTY.	PART #	DESCRIPTION	REFERENCE DESIGNATION
2	0018113000	SCRW SMA 4x1/2 OHP BLX	@ FENDER NAMEPLATE
4	0026577000	SCRW M 10-32x1 PHP BLX	@ SPEAKERS
2	0026800000	SCRW SMAB 8x1-3/4 OHP BLX	@ GRILLE
6	0029527000	WSHR FNSH 8-5/8 FLNGD BLX WX	@ GRILLE AND CHASSIS SCREWS
1	0029906000	NAMEPLATE FENDER GENERIC SMALL	@ GRILLLE
4	0036199000	SCRW M 8-32x1-3/16 OHP BLX CP	@ CHASSIS
1	0036502000	SPKR 10" 8 OHM (099-4810-003)	
1	0057764000	CAB ASSY CHAMPION 30 DSP	
1	0057315000	MANUAL OWNERS CHAMPION 30 DSP	
1	0047248000	** CORD PWR W/IEC CONN DOM	120V DOMESTIC
-	0053997000	** CORD PWR W/IEC CONN 100V JPN	100V JPN
-	0047250000	** CORD PWR W/IEC CONN 240V AUST	240V AUST
-	0047249000	** CORD PWR W/IEC CONN 230V UK	230V UK
-	0047251000	** CORD PWR W/IEC CONN 230V EUR	EUR & ROK
-	0057674000	** CORD PWR W/IEC CONN 230V ARG	230V ARG

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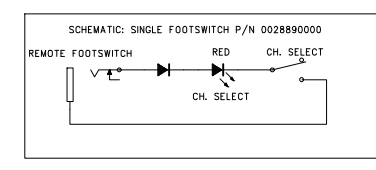
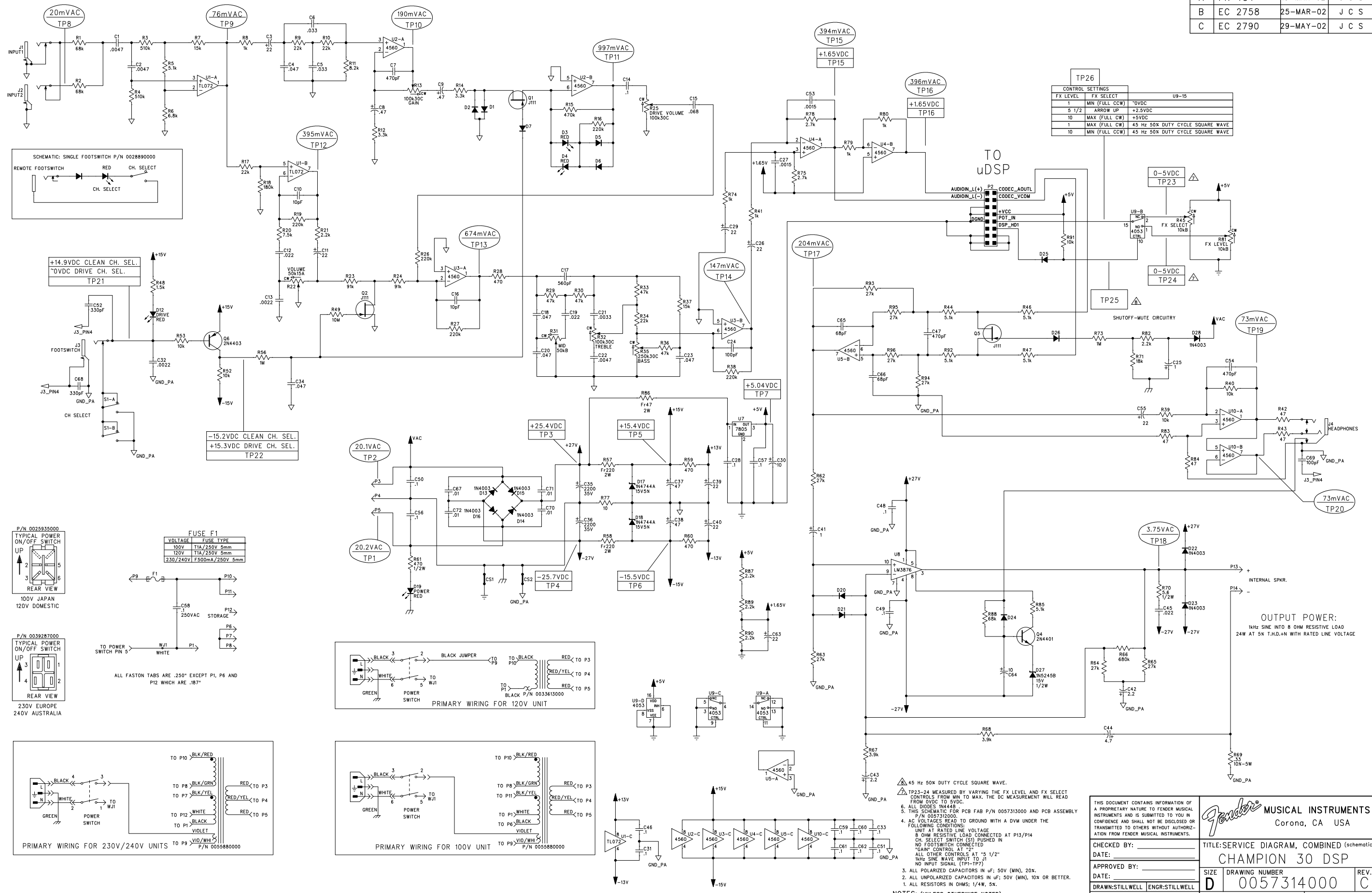
CHAMPION™ 30 DSP

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Schematics and Drawings

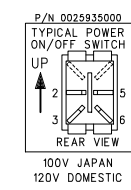
Service Diagram (Schematic)	Champion 30 DSP
Service Diagram (PCB Assy)	Champion 30 DSP
Service Diagram (Schematic)	Micro DSP
Service Diagram (PCB Assy)	Micro DSP
Chassis Assy	Champion 30 DSP
End Item Assy	Champion 30 DSP

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 484	15-MAR-02	J C S
B	EC 2758	25-MAR-02	J C S
C	EC 2790	29-MAY-02	J C S

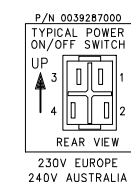


+14.9VDC CLEAN CH. SEL.
+0VDC DRIVE CH. SEL.
 TP21

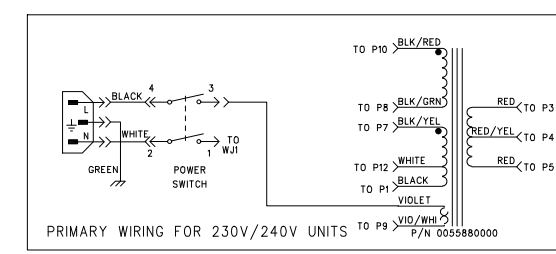
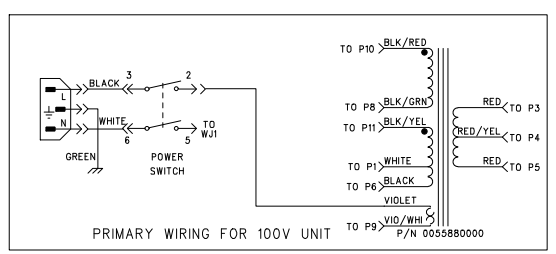
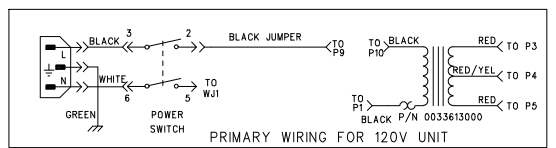
-15.2VDC CLEAN CH. SEL.
+15.3VDC DRIVE CH. SEL.
 TP22



FUSE F1	
VOLTAGE	FUSE TYPE
100V	T1A/250V 5mm
120V	T1A/250V 5mm
230/240V	F500mA/250V 5mm



ALL FASTON TABS ARE .250" EXCEPT P1, P6 AND P12 WHICH ARE .187"



- 45 Hz 50% DUTY CYCLE SQUARE WAVE.
- TP23-24 MEASURED BY VARYING THE FX LEVEL AND FX SELECT CONTROLS FROM MIN TO MAX. THE DC MEASUREMENT WILL READ FROM 0VDC TO 5VDC.
- ALL DIODES 1N4448
 - THIS SCHEMATIC FOR PCB FAB P/N 0057313000 AND PCB ASSEMBLY P/N 0057312000
 - FOLLOWING CONDITIONS:
 UNIT AT RATED LINE VOLTAGE
 8 OHM RESISTIVE LOAD CONNECTED AT P13/P14
 CH. SELECT SWITCH (S1) PUSHED IN
 NO FOOTSWITCH CONNECTED
 "GAIN" CONTROL AT "5 1/2"
 ALL OTHER CONTROLS AT "1"
 1kHz SINE WAVE INPUT TO J1
 NO INPUT SIGNAL (TP1-TP7)
 - ALL POLARIZED CAPACITORS IN uF; 50V (MIN), 20%.
 2. ALL UNPOLARIZED CAPACITORS IN uF; 50V (MIN), 10% OR BETTER.
 - ALL RESISTORS IN OHMS; 1/4W, 5%.

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Fender MUSICAL INSTRUMENTS
 Corona, CA USA

CHECKED BY: _____
 DATE: _____

APPROVED BY: _____
 DATE: _____

DRAWN: STILLWELL ENGR: STILLWELL
 DATABASE FILE: Z484S.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
CHAMPION 30 DSP

SIZE: _____
 DRAWING NUMBER: **0057314000**

REV. **C**

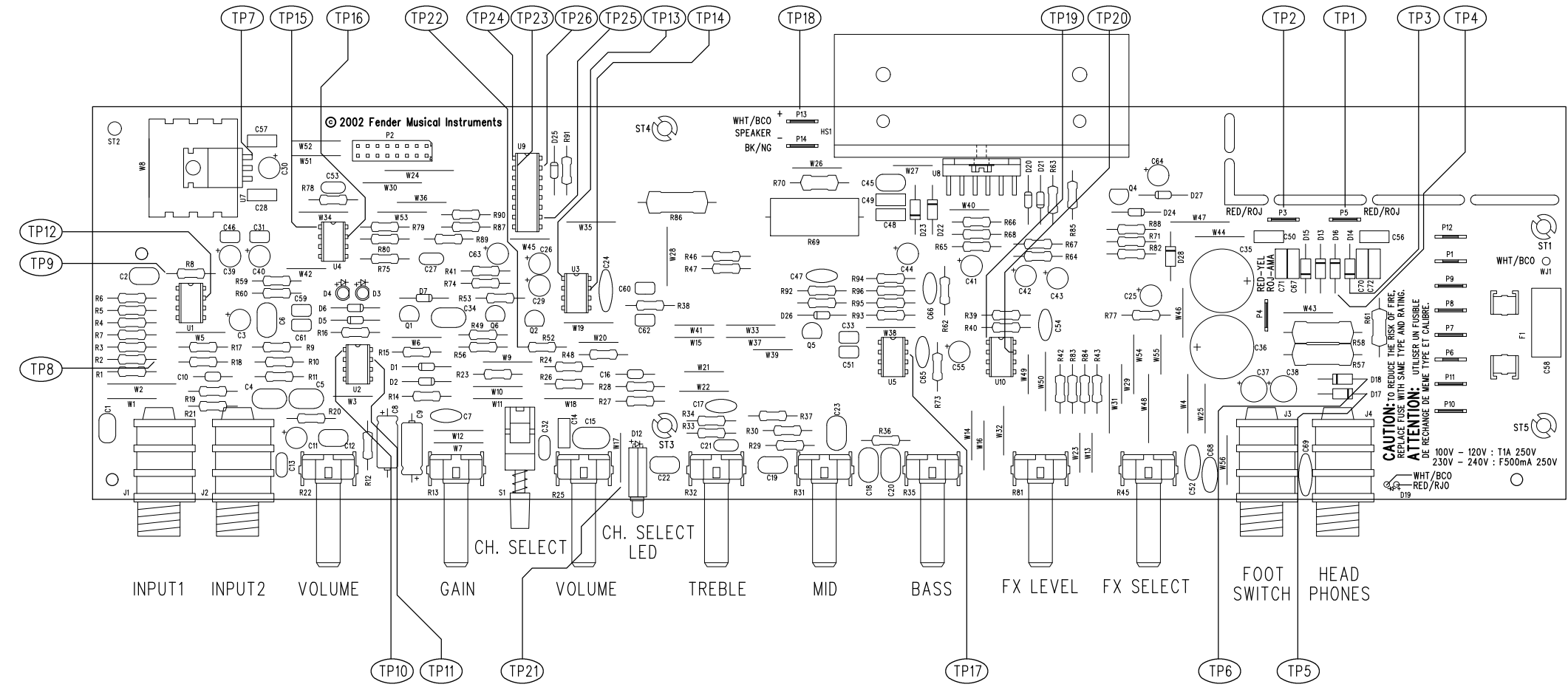
RELEASE DATE: 15-MAR-02 SHEET: 1 OF 2

8 7 6 5 4 3 2 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 484	15-MAR-02	J C S
B	EC 2758	25-MAR-02	J C S
C	EC 2790	29-MAY-02	J C S

D
C
B
A

D
C
B
A



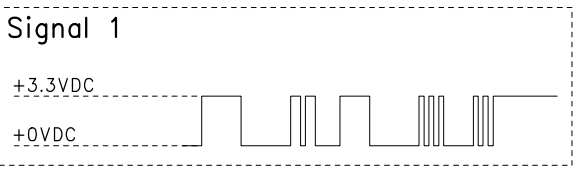
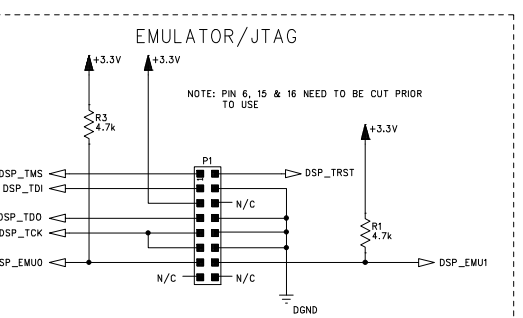
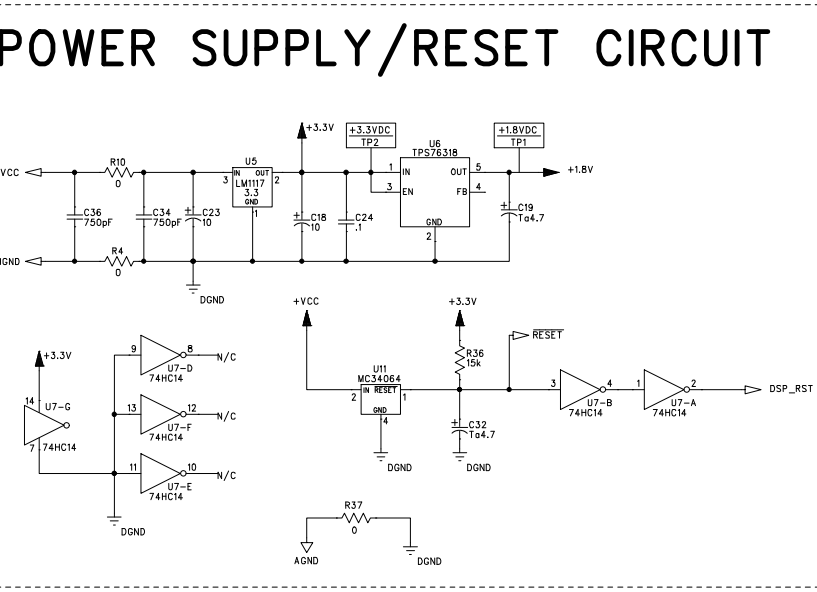
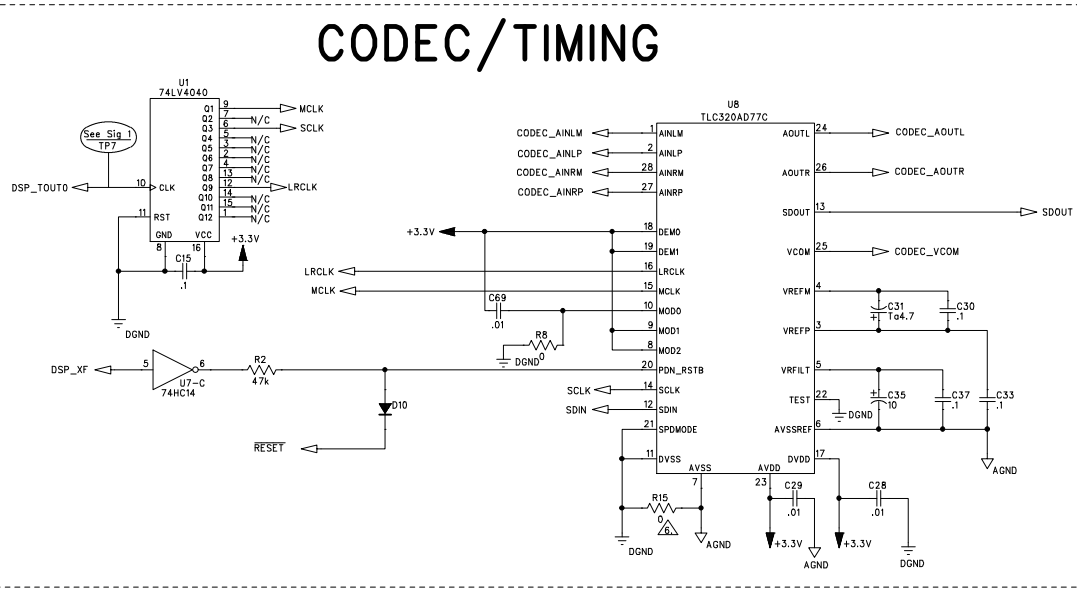
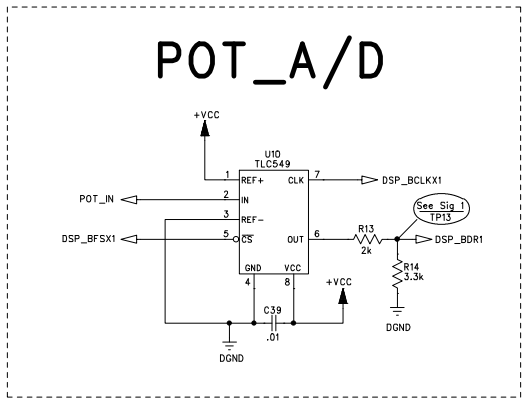
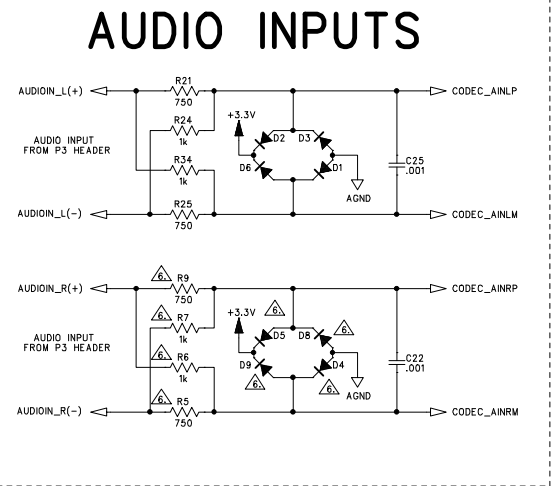
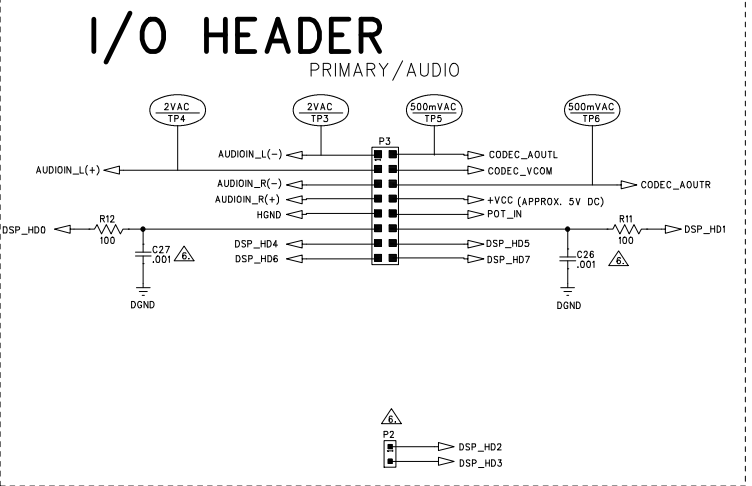
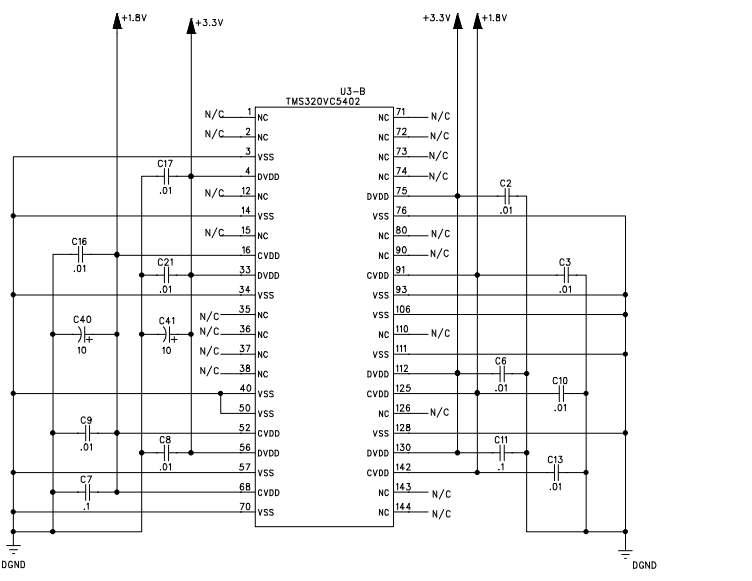
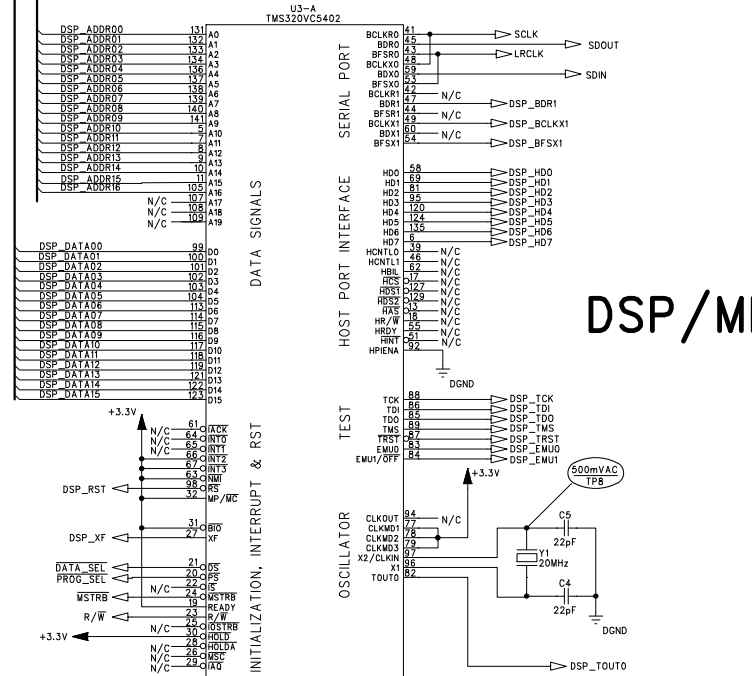
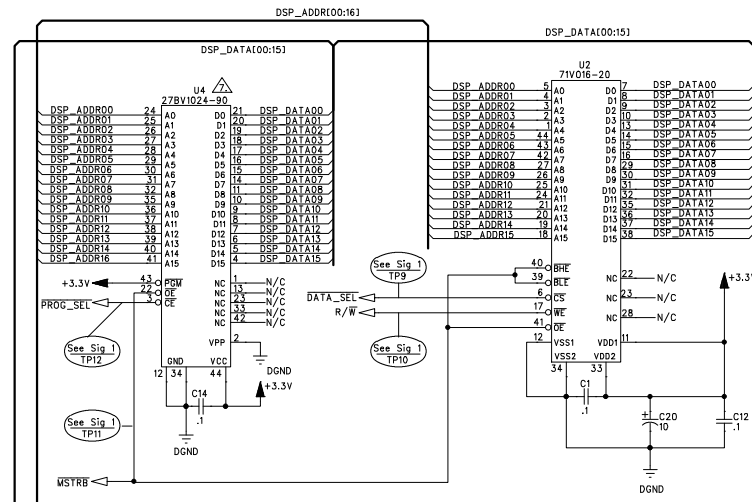
FILM/DWG: SERVICE DIAGRAM
 DATABASE: Z484P.PCB DATE: 29-MAY-02

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

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CHECKED BY: _____ DATE: _____		TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) CHAMPION 30 DSP	
APPROVED BY: _____ DATE: _____		SIZE C	DRAWING NUMBER 0057314000
DRAWN: DON FOX ENGR: STILLWELL		REV. C	
DATABASE FILE: Z484P.PCB		RELEASE DATE: 15-MAR-02	SHEET 2 OF 2

8 7 6 5 4 3 2 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR480	29-NOV-01	J T L
B	EC 2743	07-MAR-02	J T L



NOTES: (UNLESS OTHERWISE NOTED)

- INSTALL IC IN SOCKET. FENDER P/N 0056585005
- DO NOT STUFF C26-27, D4-5, D8-9, P2, R5-7, R9, R15.
- THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0057284000 AND PCB ASSEMBLY P/N 0057285000.
- ALL DIODES ARE 1N4448.
- ALL POLARIZED CAPACITORS IN μ F, 20X; 15V MINIMUM.
- ALL UNPOLARIZED CAPACITORS IN μ F, 10X OR BETTER; 16V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20X).
- ALL RESISTORS IN OHMS, 5%; 1/10W.

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Fender MUSICAL INSTRUMENTS
Corona, CA U.S.A.

CHECKED BY: _____ TITLE: SERVICE DIAGRAM, COMBINED (schematic) MICRO DSP

DATE: _____

APPROVED BY: _____

DATE: _____

DRAWN: J. Jimenez ENGR: J. Lamb

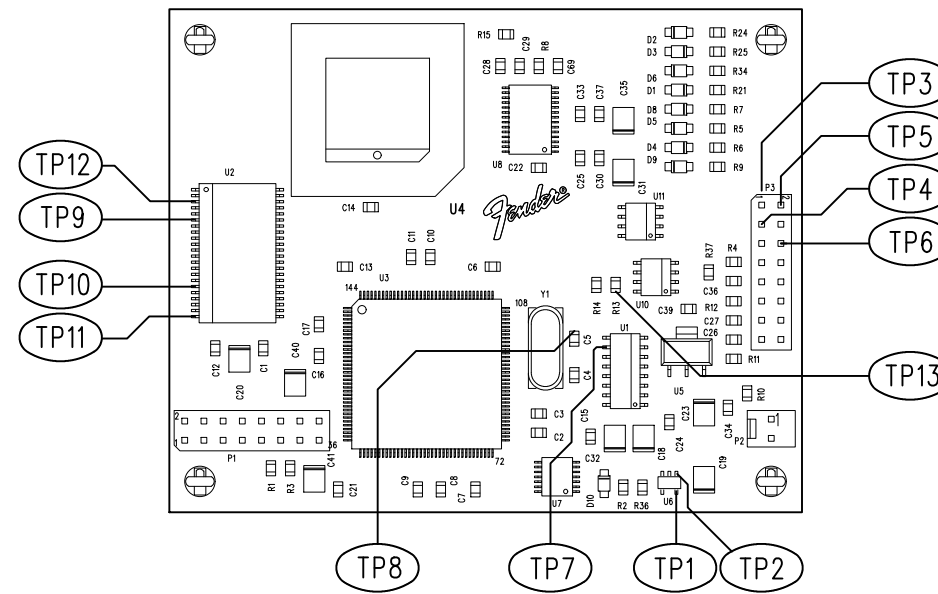
DATABASE FILE: Z481S.SCH

SIZE: D DRAWING NUMBER: 0057283000

RELEASE DATE: 29-NOV-01 SHEET: 1 OF 2


REVISIONS

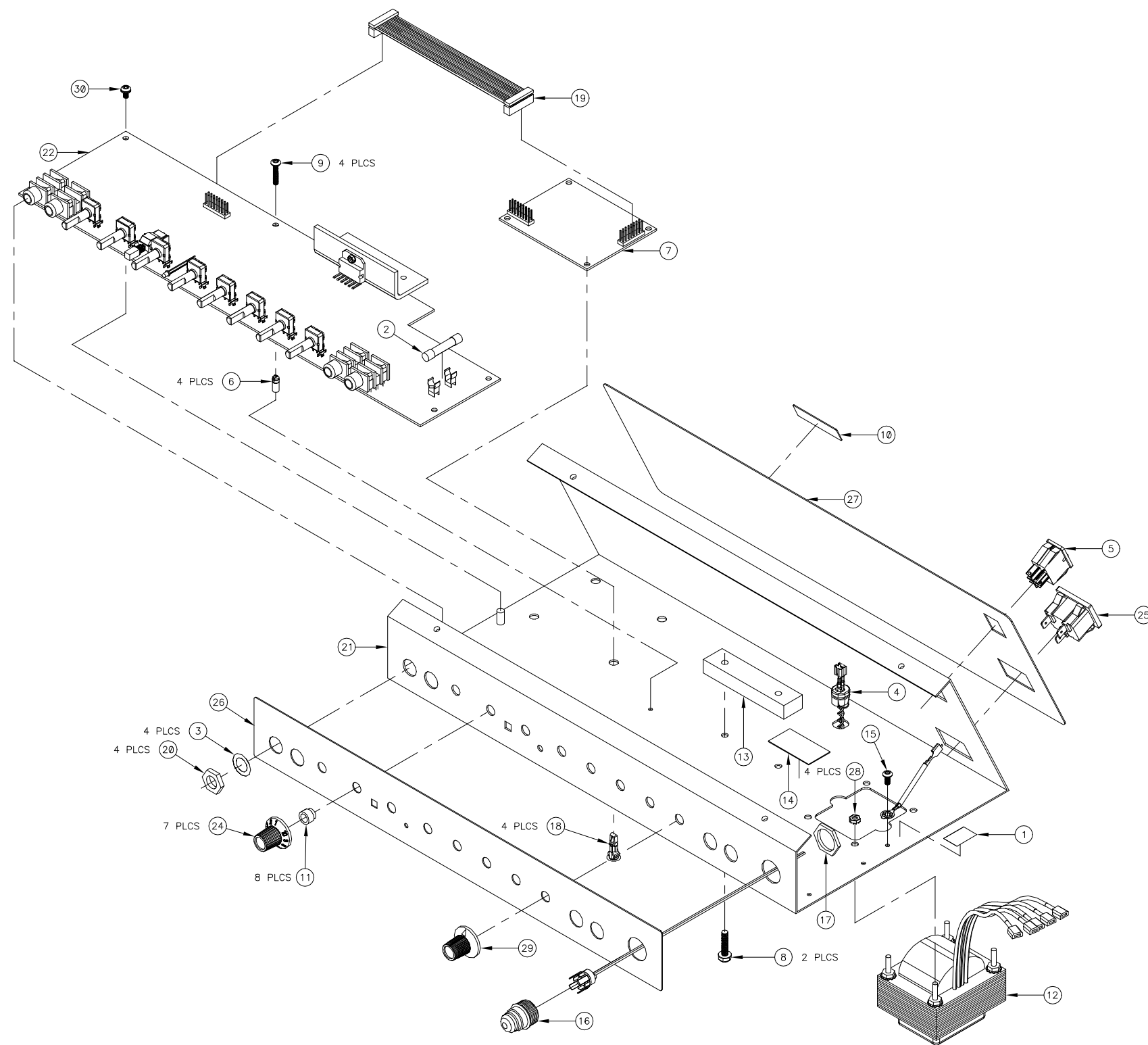
REV.	DESCRIPTION	DATE	APPROVED
A	PR480	30-NOV-01	J T L
B	EC 2743	07-MAR-02	J T L



FILM/DWG: SERVICE DIAGRAM
 DATABASE: Z481P.PCB DATE: 07-MAR-02


1. SEE SHEET 1 FOR TEST CONDITIONS AND TEST POINT VALUES.
 NOTES: (UNLESS OTHERWISE NOTED)

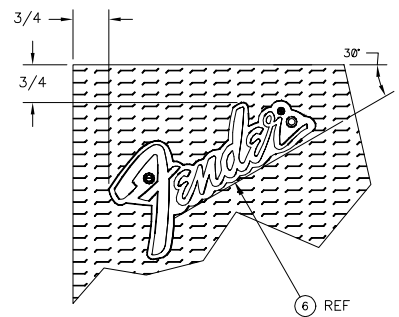
THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFIDENCE AND SHALL NOT BE DISCLOSED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS.		 MUSICAL INSTRUMENTS Corona, CA U.S.A.	
CHECKED BY: _____ DATE: _____		TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) uDSP SERIES	
APPROVED BY: _____ DATE: _____		SIZE B	DRAWING NUMBER 0057283000
DRAWN: J. Jimenez	ENGR: J. Lamb	RELEASE DATE: 30-NOV-01	REV. B
DATABASE FILE: Z481P.PCB		SHEET 2 OF 2	2



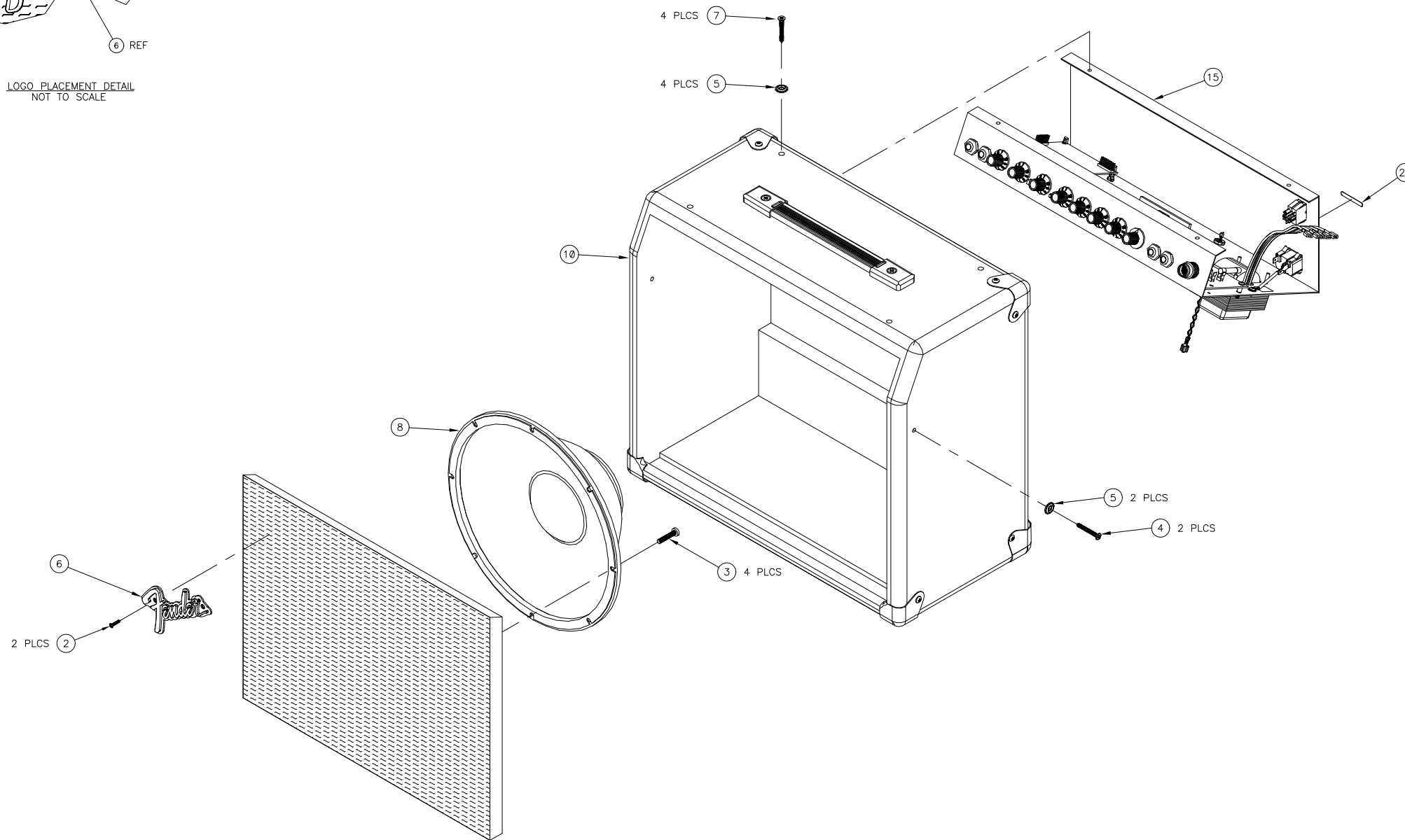
(N.S.) = NOT SHOWN

ITEM	QTY.	DESCRIPTION
30	1	SCRW 6-32x3/16 PHP STL ZI SEMS
29	1	KNOB ROTARY W/CHR INS PNTR 180
28	4	NUT 6-32 HEX EXT LOCK
27	1	PANEL REAR CHAMPION 30 DSP
26	1	PANEL FRONT CHAMPION 30 DSP
25	1	CONNECTOR IEC SNAP IN
24	7	KNOB ROTARY 180DEG SS W/ CHROME INSERT
23	1	WIRE SET CHASSIS CHAMPION 30 (N.S.)
22	1	PCB ASSY CHAMPION 30 DSP
21	1	CHASSIS CHAMPION 30 DSP
20	4	NUT HEX 7/16 20X1/8 NI
19	1	CABLE RIBBON 2x8 CKT 6"
18	4	STANDOFF NYLON BLK .375
17	1	NUT HOLDER PILOT LIGHT 1/16-27
16	1	JEWEL ASSY LED
15	1	SCRW TF 6-32X1/4 PHP ZI
14	1	LABEL FUSE REPLACEMENT
13	1	HEATSINK BAR RD/HT/JM/CHMP110
12	1	XFMR PWR
11	8	BUSHING KNOB SPACER
10	1	LABEL SERIAL MEXICO
9	4	SCRW TF 6-32x5/8 PHP ZI TAPTYT
8	2	SCRW TF 8-32x3/4 HWH SLTD Z1
7	1	PCB ASSY uDSP SERIES W/EPROM
6	4	STANDOFF NYL PCB SNAP 3/8" NAT
5	1	SWITCH DPST .187 TAB
4	1	BUSHING SR .437x.062x13/32 BLK
3	4	WASHER FLAT .442 X.692 NI
2	1	FUSE 20mmx5mm 250V
1	1	LABEL GROUNDING SEMKO
ITEM	QTY.	DESCRIPTION

			
DATE		FENDER MUSICAL INSTRUMENTS CORP. CORONA, CALIFORNIA U.S.A.	
5/21/2001			
DFT.	ENG.	ENG.	TITLE
			CHASSIS ASSEMBLY CHAMPION 30 DSP
DATE	DATE	DATE	
APPROVED	SHEET	SIZE	DRAWING NUMBER
	1/1	D	0057342000
DATE	SCALE		REV.
	N/A		A
		MASTER/ASSEMBLY	




LOGO PLACEMENT DETAIL
NOT TO SCALE



(N.S.) = NOT SHOWN

ITEM	QTY.	DESCRIPTION
20	1	LABEL VOLTAGE
19	1	BAG POLY ZIP 10x13 2M (N.S.)
18	AR	CORROSEAL 50# (12" X 250") (N.S.)
17	1	MANUAL OWNERS CHAMPION 30 DSP (N.S.)
16	1	SVC DIAG COMB CHAMPION 30 DSP (N.S.)
15	1	CHASSIS ASSY CHAMPION 30 DSP
14	1	CARTON ARTBOX CHAMPION 30 DSP (N.S.)
13	1	STICKER BUMPER FEND SINCE 1946 (N.S.)
12	1	TAG WARRANTY 5 YR FENDER-NEW (N.S.)
11	1	CORD PWR W/IEC CONN (N.S.)
10	1	CAB ASSY CHAMPION 30 DSP
9	1	REGISTRATION CARD (N.S.)
8	1	SPEAKER 10" 8 ohm (099-4810-003)
7	4	SCRW M 8-32x1-3/16 OHP BLX CP
6	1	NAMEPLATE FENDER GENERIC SMALL
5	6	WSHR FNH 8-5/8 FLNGD BLX WX
4	2	SCRW SMAB 8x1-3/4 OHP BLX
3	4	SCRW M 10-32x1 PHP BLX
2	2	SCRW SMA 4x1/2 OHP BLX
1	1	BAG POLY BOX BTM 23x17x40 .002 (N.S.)

DATE		6/4/2001		 FENDER MUSICAL INSTRUMENTS CORP. CORONA, CALIFORNIA U.S.A.	
DFT.	ENG.	ENG.			
DATE	DATE	DATE		TITLE	
APPROVED			END ITEM ASSY CHAMPION 30 DSP		
DATE	SHEET	SIZE	DRAWING NUMBER	REV.	
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	SCALE		MASTER/ASSEMBLY		
	N/A				