

FOOT SWITCH OPERATION

TEST POINT	CH 1	CH 2	FX LOOP ON	FX LOOP OFF
TP33	-0.258VDC	+0.650VDC		
TP34	+2.60VDC	+1.127VDC		
TP35	-16.1VDC	+15.1VDC		
TP36			-0.671VDC	+0.321VDC
TP37			-0.115VDC	-2.58VDC
TP38			-15.6VDC	+17.2VDC
TP39	-16.4VDC	+9.59VDC		
TP40	+16.4VDC	-9.72VDC		

REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR344	27-FEB-98	
	B	EC 2182	10-SEP-98	MC

- NOTES: UNLESS OTHERWISE SPECIFIED
1. SHEET 1 INSTANCES NOT USED: CR14 R88
 2. SHEET 1 LAST INSTANCES: C39, CR26, J6, K4, LD1, P16, Q3, R102, S2, U2, V5.
 3. P15-8 NOT CONNECTED
 4. ALL RESISTORS ARE 1/4W 5% CARBON FILM
 5. ALL VOLTAGES MEASURED WITH RESPECT TO GROUND USING A DVM OF AT LEAST 1MΩ AC INPUT IMPEDANCE AND 10MΩ DC INPUT IMPEDANCE. VOLTAGES MAY VARY ±20% TEST CONDITIONS: UNIT AT RATED LINE VOLTAGE.
- ALL CONTROLS SET TO "5 1/2" (50% ROTATION) EXCEPT CH 1 VOL AT "3", CH 2 GAIN AT "2", CH 2 VOL AT "9".
EFFECTS LOOP ENGAGED WITH GUITAR CORD FROM SEND TO RETURN, LOOP CONTROLS SET FOR UNITY GAIN (APPROX. "5 1/2").
BIAS SET FOR 30mV PER TUBE. SEE NOTE 8
ALL DC VOLTAGES MEASURED WITH NO INPUT SIGNAL.

- A. ALL AC VOLTAGES MEASURED WITH INPUT SIGNALS NORMALIZED TO PRODUCE 1.00V RMS AT TP18 WHICH PRODUCES 12.0V RMS INTO AN 8Ω RESISTIVE LOAD AT TP32 (SHEET 2).
- B. OUTPUT TEST WITH 1kHz SINE APPLIED AT EXT. AMP IN JACK. PRESENCE CONTROL FULL CCW ("1")
- C. BIAS ADJUSTMENTS - OUTPUT SWITCH SET TO ARENA, NO SIGNAL APPLIED (SHEET 2)
A. - SET BIAS CONTROL TO OBTAIN 60mV BETWEEN J10 AND J12 TEST JACKS
B. - SET BALANCE CONTROL TO OBTAIN 0mV BETWEEN J10 AND J11 TEST JACKS

DATABASE FILE: 734491.DBF
 CHECKED BY: MC
 DATE: 9-25-98
 APPROVED: [Signature]
 DATE: 9-25-98
 TOLERANCES: UNLESS OTHERWISE SPECIFIED
 X.X ±0.050"
 X.XX ±0.018"
 X.XXX ±0.005"
 ANGLES ±0.500°

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 REGIONAL HEADQUARTERS
 2621 RESEARCH DRIVE
 CORONA, CA 91728 USA

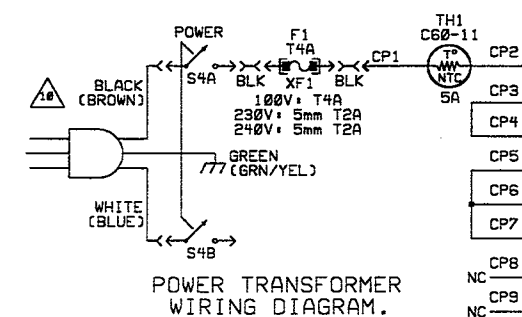
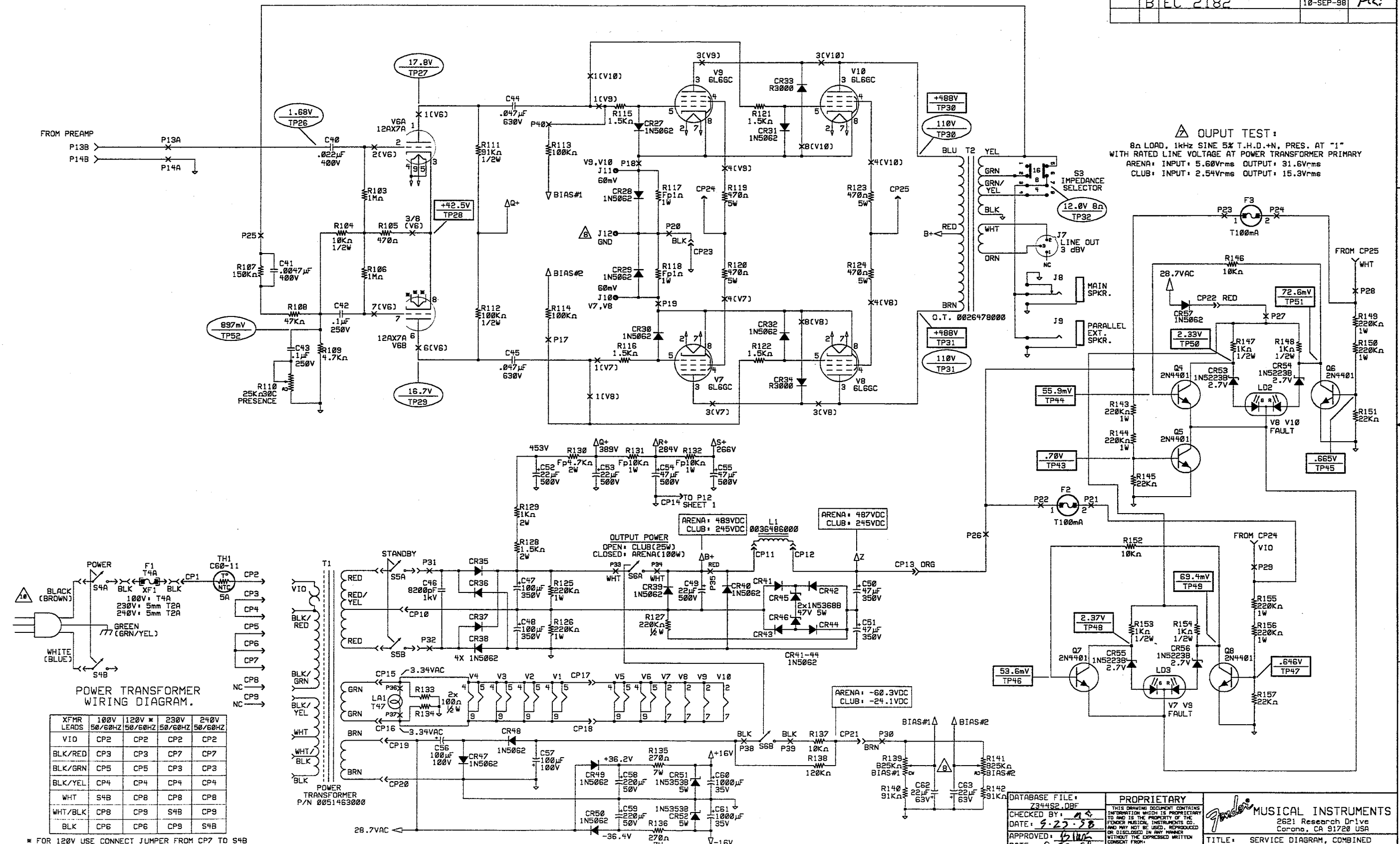
FENDER MUSICAL INSTRUMENTS
 2621 RESEARCH DRIVE
 CORONA, CA 91728 USA

MUSICAL INSTRUMENTS
 2621 Research Drive
 Corona, CA 91728 USA

TITLE: SERVICE DIAGRAM, COMBINED
 SUNN MODEL T (SCHEMATIC)
 SIZE: DRAWN: M.COZZA DRAWING NUMBER: 0051434000 REV: B
 ENGR: M.COZZA
 SCALE: N/A PLOTTED: 23-SEP-98 SHEET 1 OF 4

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR344	27-FEB-98	
	B	EC 2182	10-SEP-98	MC

OUTPUT TEST:
 8Ω LOAD, 1kHz SINE 5% T.H.D.+N, PRES. AT "1"
 WITH RATED LINE VOLTAGE AT POWER TRANSFORMER PRIMARY
 ARENA: INPUT: 5.60Vrms OUTPUT: 31.6Vrms
 CLUB: INPUT: 2.54Vrms OUTPUT: 15.3Vrms



XFMR LEADS	100V 50/60HZ	120V 50/60HZ	230V 50/60HZ	240V 50/60HZ
V10	CP2	CP2	CP2	CP2
BLK/RED	CP3	CP3	CP7	CP7
BLK/GRN	CP5	CP5	CP3	CP3
BLK/YEL	CP4	CP4	CP4	CP4
WHT	S4B	CP8	CP8	CP8
WHT/BLK	CP8	CP9	S4B	CP9
BLK	CP6	CP6	CP9	S4B

* FOR 120V USE CONNECT JUMPER FROM CP7 TO S4B

NOTES: SEE SHEET 1
 SHEET 2 LAST INSTANCES: C63, CR57, J12, LD3, P40, Q8, R157, S6, V10

DATABASE FILE: 734452.DBF CHECKED BY: <i>MC</i> DATE: 9-23-98 APPROVED: <i>MC</i> DATE: 9-22-98	PROPRIETARY THIS DRAWING DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AND IS THE PROPERTY OF THE FENDER MUSICAL INSTRUMENTS CO. AND MAY NOT BE USED, REPRODUCED OR DISCLOSED IN ANY MANNER WITHOUT THE EXPRESSED WRITTEN CONSENT FROM: FENDER MUSICAL INSTRUMENTS CO. REGIONAL HEADQUARTERS 2821 RESEARCH DRIVE CORONA, CA 91728 USA NEXT HIGHER ASSEMBLY:	FENDER MUSICAL INSTRUMENTS 2621 Research Drive Corona, CA 91728 USA TITLE: SERVICE DIAGRAM, COMBINED SUNN MODEL T (SCHEMATIC) SIZE: D DRAWN: M. COZZA DRAWING NUMBER: 0051434000 ENGR: M. COZZA REV: B CREATED: JULY 1997 PLOTTED: 23-SEP-98 SHEET 2 OF 4
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REVISIONS

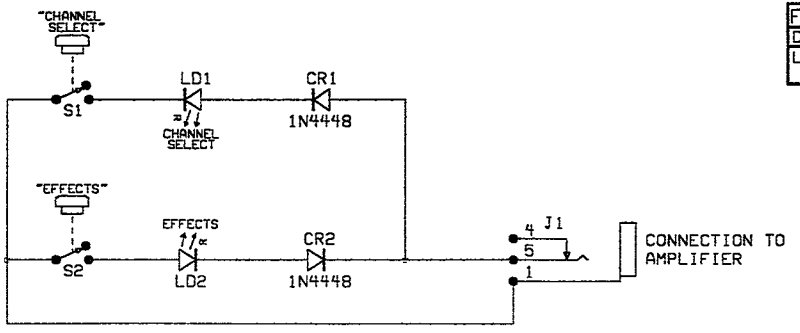
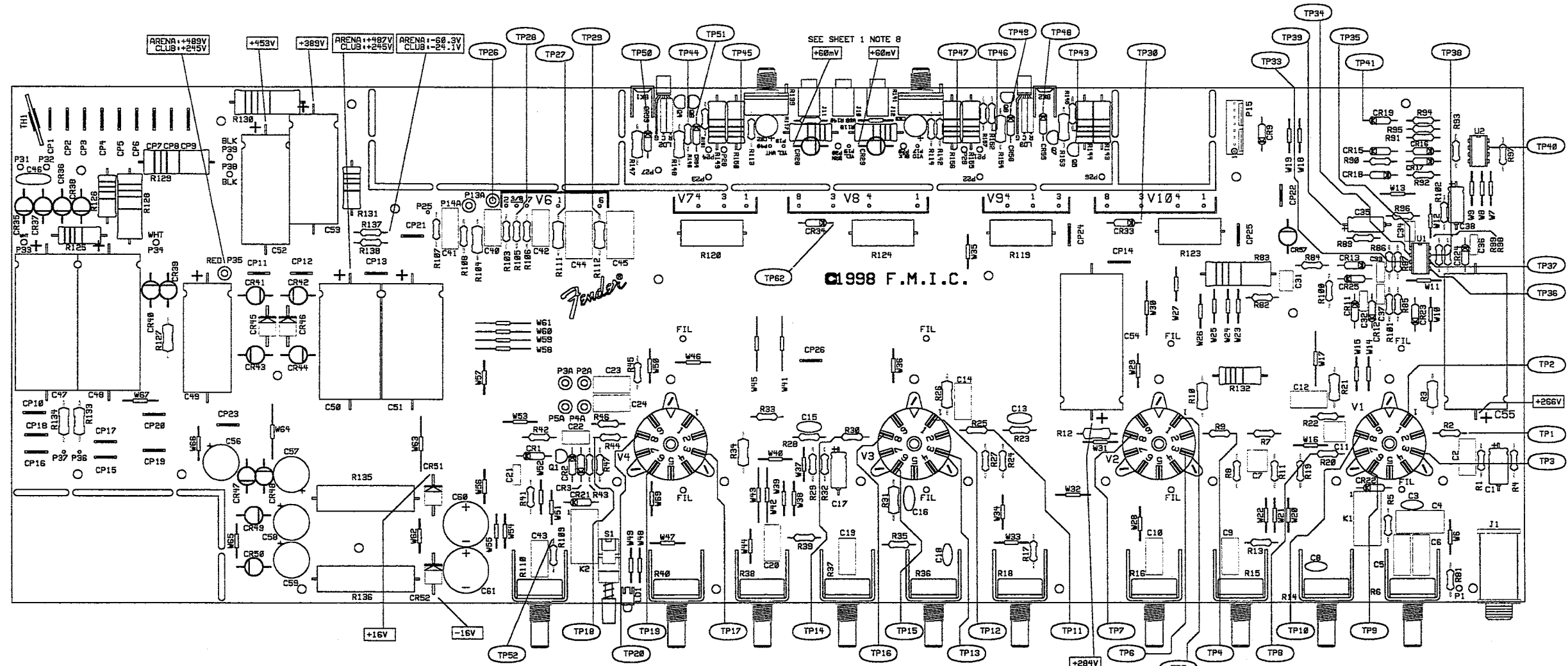
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR344	27-FEB-98	
	B	EC 2182	18-SEP-98	

NOTES:

- 1. PCB SHOWN AS FABRICATED BEFORE BREAKAWAY IS PLACED IN CHASSIS.
- 2. WIRES NOT SHOWN FOR CLARITY.

TP32 AT IMPEDANCE SELECTOR SWITCH (GREEN WIRE)

TP21 THROUGH TP25 AND TP42 SHOWN ON SHEET 4.



FOOTSWITCH ASSY # 0053584000

FILM/DWG: SERVICE DIAGRAM
 DATABASE: DATE: 10-SEP-98
 LAYERS PLOTTED: 1 2 3 4 10 18

DATABASE FILE: Z344P1.DBF
 CHECKED BY: [Signature]
 DATE: 2-22-98
 APPROVED: [Signature]
 DATE: 2-22-98
 TOLERANCES: UNLESS OTHERWISE SPECIFIED
 X.X .500"
 X.XX .010"
 X.XXX .005"
 ANGLES .500°

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 REGIONAL HEADQUARTERS
 2621 RESEARCH DRIVE
 CORONA, CA 91720 USA
 NEXT HIGHER ASSEMBLY:

Fender MUSICAL INSTRUMENTS
 2621 Research Drive
 Corona, CA 91720 USA
 TITLE: SERVICE DIAGRAM, COMBINED (PCB ASSY)
 SUNN MODEL T (MAIN PCB)
 SIZE: DRAWN: M.COZZA DRAWING NUMBER: 0051434000 REV. B
 ENGR: M.COZZA
 SCALE: CREATED: 23-FEB-98 PLOTTED: 10-SEP-98 SHEET 3 OF 4

8

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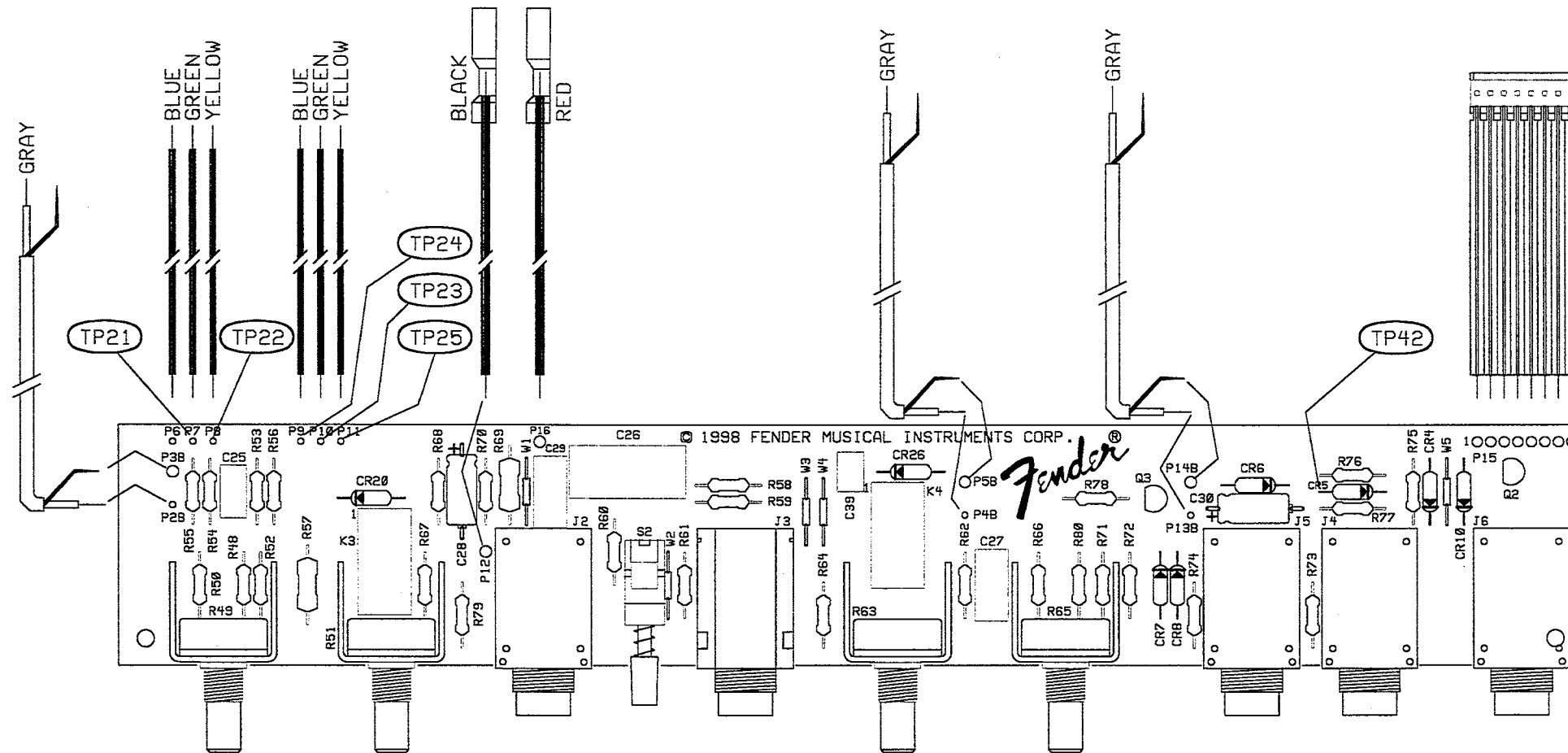
3

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REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	RELEASED PR344	27-FEB-98	
	B	EC 2182	10-SEP-98	



PINOUT, P15:
P15-1: TO K3 1, CR20 K
P15-2: TO J3 6, C39
P15-3: +16V TO K4 1, CR26 K
P15-4: -16V TO Q2 E, K3 16,
CR20 ANODE
P15-5: FOOTSWITCH GROUND
P15-6: TO CR10 K, J6 4
P15-7: TO J2, PIN 1
P15-8: NO CONNECTION

FILM/DWG: SERVICE DIAGRAM
DATABASE: Z344P2.DBF DATE: 10-SEP-98
LAYERS PLOTTED: 1 2 3 4 10
18

DATABASE FILE: Z344P2.DBF	
CHECKED BY: <i>B Des</i>	DATE: <i>9-22-98</i>
APPROVED: <i>MS</i>	DATE: <i>9-22-98</i>
TOLERANCES: UNLESS OTHERWISE NOTED	
X.X	±0.050"
X.XX	±0.010"
X.XXX	±0.005"
ANGLES	±0.500°

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NEXT HIGHER ASSEMBLY:
SUNN MODEL T AMP.

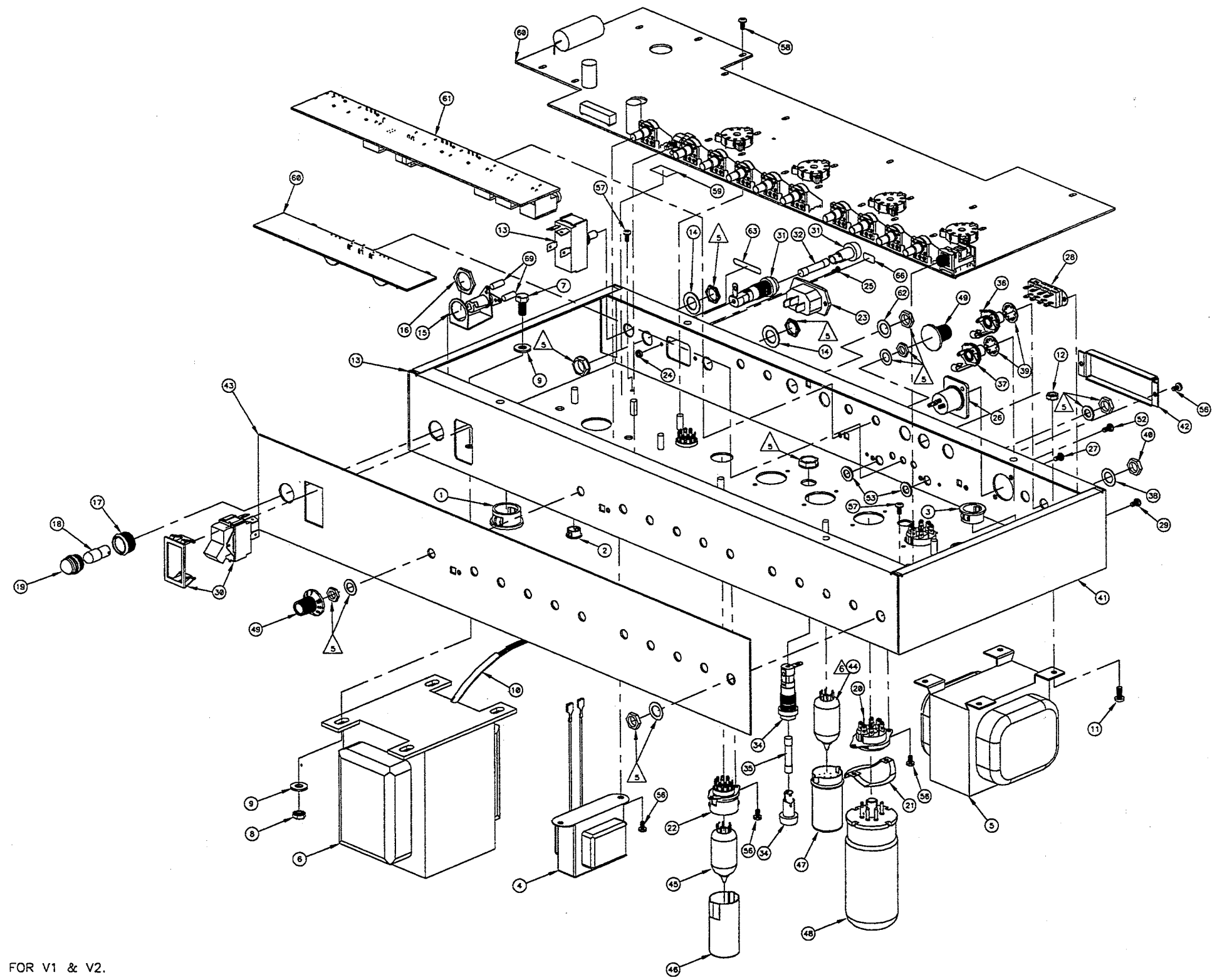
Fender MUSICAL INSTRUMENTS
2621 Research Drive
Corona, CA 91720 USA

TITLE: SERVICE DIAGRAM, COMBINED
SUNN MODEL T (effects loop PCB assy)

SIZE: B	DRAWN: WILKENS	DRAWING NUMBER: 0051434000	REV. B
	ENGR: COZZA		

SCALE: N/A CREATED: 23-FEB-98 SHEET 4 OF 4
PLOTTED: 10-SEP-98

REV	EC NUMBER	BY	DATE/ISSUE
A	PR 344	GHG	2/26/98
B	EC 2157	GHG	8/5/98
C	EC 2378 - ADD ITEM 70, UPDATE DWG.	BW	1/13/2000



(N.S.) = NOT SHOWN

ITEM	QTY.	PART NO.	DESCRIPTION
60	1	0051432000	PCB ASSY SUNN MODEL T MAIN PCB
59	1	0013020000	LABEL GROUNDING SEMKO
58	25	0031184000	SCRW M6-32x1/4 PHPS BLX ITLW
57	2	0038900000	SCRW TF 6-32x1/4 PHP ZI
56	16	0032806000	SCRW TF 6-32x1/4 PHP BLX
54	1	SEE MATRIX	CHASSIS WIRE SET (N.S. FOR CLARITY)
53	2	0026564000	WSHR FLAT .284x1/2 ZI
52	2	0014999000	SCRW M 6-32x1/4 PHP BLX
51	4	0026730001	DIODE 1N4006/1N5062 800PRV 1A LL (N.S. ON SOCKET)
50	4	0024969001	RES CF 1/4W 5% 1.5K LL (N.S. ON SOCKET)
49	14	0024604000	KNOB BLACK W/WHITE STAMP 1-10
48	4	0053980000	TUBE 6L6GC SVETLANA
47	4	0053893000	TUBE SHIELD
46	2	0023598000	TUBE SHIELD
45	4	0013341000	TUBE 7025/12AX7WA RUSSIAN MADE
44	2	0023572000	TUBE 7025/12AX7A CHINESE Δ
43	1	0051439000	FRONT PANEL SUNN MODEL T
42	1	0053892000	COVER BOX BIAS CONTROLS
41	1	0051425000	CHASSIS SUNN MODEL T
40	2	0016352000	NUT HEX 3/8-32x3/32 TK NI
39	2	0016436000	WSHR LCK INTL 3/8x.687x.035 NI
38	2	0031153000	WSHR FLAT 3/8x.614 NI
37	1	0021956000	JACK PHONE OPEN CIRCUIT 11
36	1	0021550000	JACK PHONE TIP SHUNT 12A
35	2	0013004000	FUSE 100mA TIME 5mm
34	2	0036703000	FUSE HOLDER 5MM FINGER GRIP
32	1	SEE MATRIX	FUSE
31	1	SEE MATRIX	FUSE HOLDER
30	1	0051855000	SWTCH ROCKER DPST W/BEZEL SUNN
29	2	0021568000	SCRW M 6-32x3/16 PHP NI
28	1	0026472000	SWTCH SLIDE DPST
27	2	0026521000	SCRW SMB 8x3/8 RH PHS BLK
26	1	0026471000	JACK XLR MALE PANEL MOUNT
25	2	0014172000	SCREW M 4-40x1/4 PHP BLX
24	2	0097360000	NUT HEX 4-40 EX LOCK
23	1	0047213000	CONNECTOR AC LINE MALE IEC
22	2	0023606000	TUBE SOCKET 9 PIN
21	4	0020424000	TUBE RING UNIVERSAL (277H-2)
20	4	0023580000	TUBE SOCKET 8 PIN
19	1	0025718000	JEWEL PILOT LITE RED #20
18	1	0021642000	PILOT LIGHT #T47
17	1	0032219000	COLLAR-PILOT LIGHT
16	1	0031625000	NUT HOLDER PILOT LIGHT 1/16-27
15	1	0021741000	HOLDER IDAL LITE ASSY PILOT
14	2	0022293000	WSHR FLAT .473x.750 NI
13	1	0036570000	SWTCH TOGGLE DPST W/NUTS
12	4	0022004000	NUT KEPS #8-32 ZINC
11	4	0026553000	SCRW M 8-32x3/8 PHP BLX
10	.25	0047163000	TUBING SHRINK 1" BLACK
9	8	0022319000	WSHR FLAT 1/4x9/16 NI
8	4	0028272000	NUT KEP 1/4x20 FOJ
7	4	0026501000	SCRW C 1/4-20x1/2 HH BLK
6	1	0051463000	XFMR POWER SUNN MODEL T
5	1	0026478000	XFMR OUTPUT 100W 4,8,16 OHMS
4	1	0036485000	CHOKE
3	2	0012560000	BUSHING SNAP 5/8x27/32 BLK
2	1	0018022000	BUSHING SNAP 5/16x17/32 BLK
1	2	0028069000	BUSHING SNAP 3/4x1-1/8 WHT

Δ USE 0023572000 FOR V1 & V2.

Δ HARDWARE INCLUDED WITH PART.

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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

70	LABEL	N/A	0033485000	0033485000	0033485000
66	FUSE LABEL	N/A	0048859000	0048859000	N/A
65	VOLTAGE LABEL	N/A	0050506000	0050505000	0050507000
54	WIRE SET	0054201000	0054203000	0054203000	0054203000
52	FUSE	0013737000	0013115000	0013115000	0013737000
31	FUSE HOLDER	0036702000	0036703000	0036703000	0036702000
CHASSIS ASSY.		SUNN MODEL T 120V DOM. 0051426000	SUNN MODEL T 240V AUST. 0051428000	SUNN MODEL T 230V 100V JPN. 0051427000	SUNN MODEL T 0051429000

(N.S.) = NOT SHOWN

70	1	SEE MATRIX	LABEL MADE IN USA 1-3/4 x 7/32 (N.S.)
69	.09	0012398000	TUBING, SHRINK 3/16" BLK
66	1	SEE MATRIX	LABEL FUSE
63	1	SEE MATRIX	LABEL VOLTAGE
62	5	0028501000	WSHR FLAT .477x.625 NI
61	1	0053964000	PCB ASSY EFFECTS SUNN MODEL T

ENGINEER
COZZA

DRAWN
GOOLER

DATE
2/24/98

DFT. ENG. ENG.
MUNGT MS

DATE DATE DATE
1/30/00 1/12/00 1/17/00

APPROVED
UG

DATE
1/13/2000

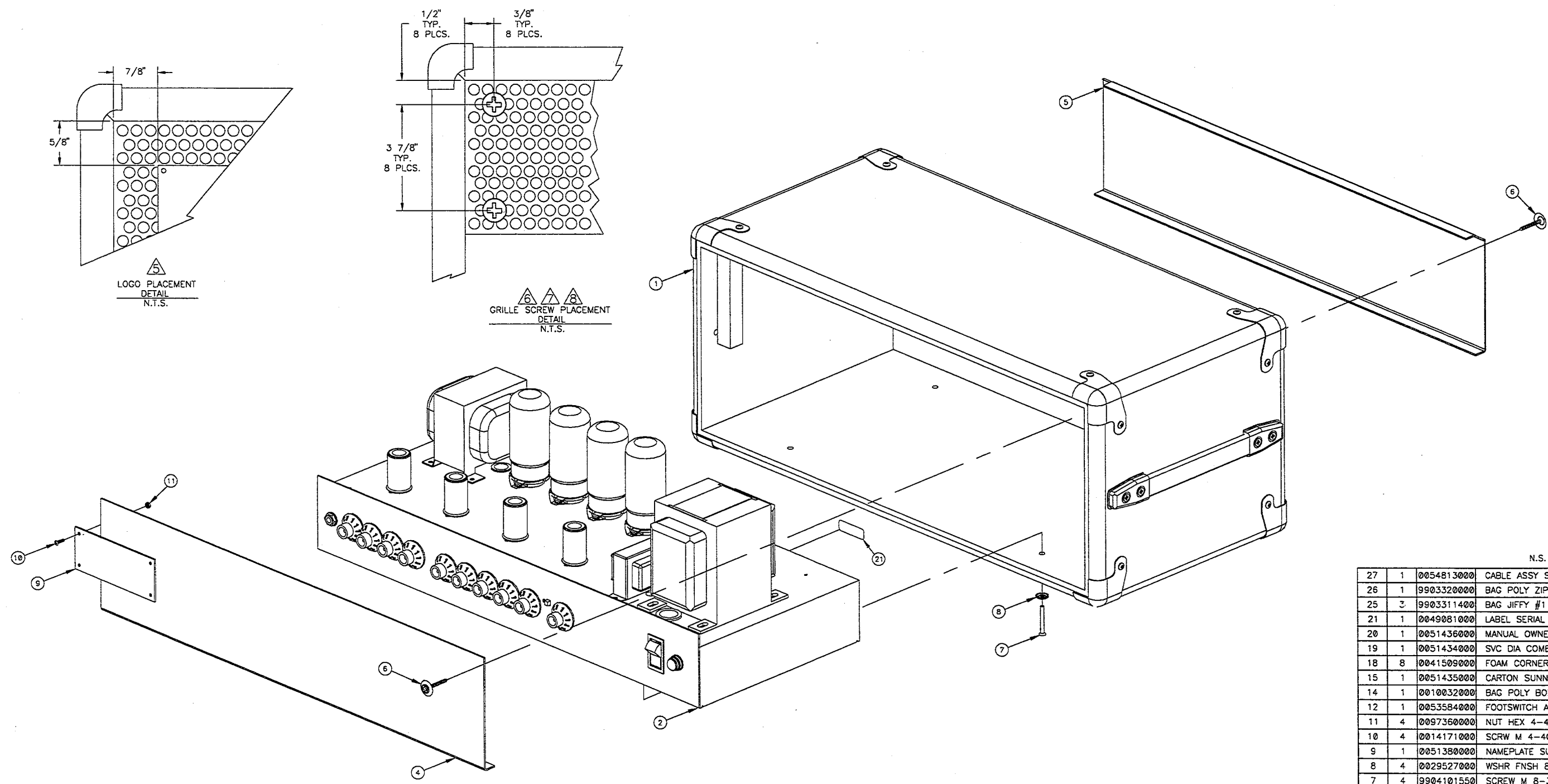
TITLE
CHASSIS ASSEMBLY
SUNN MODEL T

Fender
FENDER MUSICAL INSTRUMENTS CORP.
CORONA, CALIFORNIA 91720

SHEET	SIZE	DRAWING NUMBER	REV.
1/1	D	0051426000	C
SCALE	N/A	MASTER/ASSEMBLY	

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REV	EC NUMBER	BY	DATE/APPOR
A	PR 344	GHG	2/27/98
B	EC 2155	B.S.	8/19/98
C	CR 199 ADD SPKR CABLE TO BOM	JR	2/2/99



- △ DISTANCE BETWEEN CHASSIS TOP AND REAR GRILLE 1/16".
 - △ DISTANCE BETWEEN FRONT PANEL TOP EDGE AND FRONT GRILLE 1/16".
 - △ LOCATE SCREWS AS HOLES WILL PERMIT.
 - △ LOCATE LOGO AS HOLES WILL PERMIT.
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 3. - 3 - SAMPLES OF FIRST PARTS MUST BE APPROVED BY FENDER R&D BEFORE STARTING PRODUCTION.
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 1. DO NOT SCALE DRAWING.
- NOTES: UNLESS OTHERWISE NOTED

N.S. = NOT SHOWN

ITEM	QTY.	PART NO.	DESCRIPTION
27	1	0054813000	CABLE ASSY SPEAKER SUNN (N.S.)
26	1	9903320000	BAG POLY ZIP 10x13 2M (N.S.)
25	3	9903311400	BAG JIFFY #1 7-1/4x12 (N.S.)
21	1	0049081000	LABEL SERIAL (CORONA)
20	1	0051436000	MANUAL OWNERS SUNN MODEL T (N.S.)
19	1	0051434000	SVC DIA COMB SUNN MODEL T (N.S.)
18	8	0041509000	FOAM CORNER 5x5x5 2" (N.S.)
15	1	0051435000	CARTON SUNN MODEL T (N.S.)
14	1	0010032000	BAG POLY BOX BTM 23x17x40 .002 (N.S.)
12	1	0053584000	FOOTSWITCH ASSY. 2 BUTTON SUNN (N.S.)
11	4	0097360000	NUT HEX 4-40 EX LOCK
10	4	0014171000	SCRW M 4-40x3/8 PHP BLX
9	1	0051380000	NAMEPLATE SUNN
8	4	0029527000	WSHR FNISH 8-5/8 FLNGD BLX WX
7	4	9904101550	SCREW M 8-32x1-1/4 OHPS BLX WX
6	8	0036112000	SCRW SMAB 6x1-1/4 OHP BLX w/WS
5	1	0051438000	GRILLE REAR SUNN MODEL T
4	1	0051437000	GRILLE FRONT SUNN MODEL T
3	1	SEE MATRIX	CORD, PWR (N.S.)
2	1	SEE MATRIX	CHASSIS
1	1	0053861000	CABINET ASSY. SUNN MODEL T

MATRIX

	0047248000	0047250000	0047249000	0047251000	0053997000
③ CORD.PWR	0051426000	0051428000	0051427000	0051427000	0051429000
② CHASSIS	SUNN MODEL T DOM 120V 0213303000	SUNN MODEL T AUST. 240V 0213333000	SUNN MODEL T UK. 230V 0213343000	SUNN MODEL T EUR. 230V 0213363000	SUNN MODEL T JAP. 100V 0213373000

MATERIAL n/a	ENGINEER COZZA	 FENDER MUSICAL INSTRUMENTS CORP. CORONA, CALIFORNIA 91720
FINISH n/a	DRAWN GOOLER	
	DATE 2/25/98	TITLE END ITEM SUNN MODEL T
	DATE 2/2/99	SHEET 1/1
	DATE 2/8/99	SIZE D
		DRAWING NUMBER 0213303000
		REV. C

MASTER

TOL. UNLESS NOTED
 FRACT. ----- + 1/32
 .X ----- + 0.050
 .XX ----- + 0.010
 .XXX ----- + 0.005
 ANGLES ----- + 0.5 DEGREES
 HOLE DIA. ----- + 0.005 - 0.001
 UNMARKED ANGLES ARE 90 DEGREES.