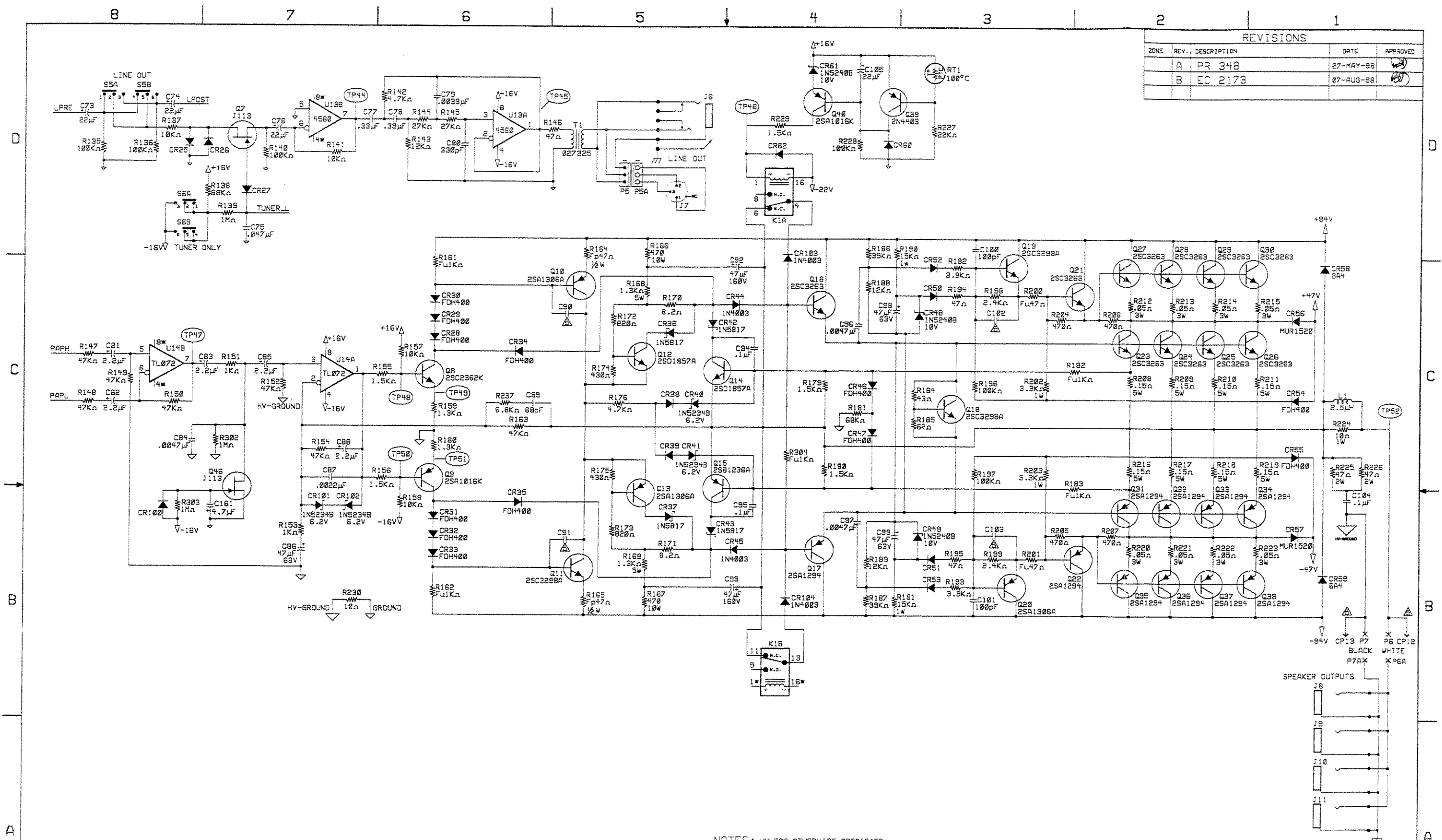


REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-88	(Signature)
	B	EC 2173	07-AUG-88	(Signature)

- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS IN OHMS, 1/4W, 5%. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 10% OR BETTER.
  2. ALL POLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 20%.
  3. ALL SIGNAL DIODES ARE 1N4448.

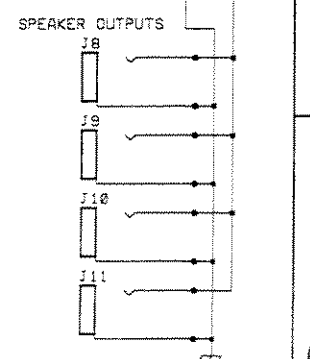
DATABASE FILE: 234851.DBF CHECKED BY: <i>[Signature]</i> DATE: 10 AUG 88 APPROVED: <i>[Signature]</i> DATE: 14 AUG 88 TOLERANCES: UNLESS OTHERWISE SPECIFIED: R: .1% .5% 1% C: .1% .5% 1% ANGLES:	<b>PROPRIETARY</b> THIS DRAWING CONTAINS INFORMATION WHICH IS PROPRIETARY TO SUNN AND IS THE PROPERTY OF THE FENDER MUSICAL INSTRUMENTS CO. AND MAY NOT BE USED, REPRODUCED OR DISCLOSED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT FROM: FENDER MUSICAL INSTRUMENTS CO. 2621 RESEARCH DRIVE CORONA, CA 91720 USA	<b>MUSICAL INSTRUMENTS</b> 2621 Research Drive Corona, CA 91720 USA TITLE: SERVICE DIAGRAM, COMB. (continued) SUNN 1200S BASS AMPLIFIER SIZE: DRAWING: 0053905000 B ENGR: F. MATRO CREATED: 11-FEB-87 PLOTTED: 18-AUG-88 SHEET 1 OF 4
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	
	B	EC 2173	07-AUG-98	



- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS IN OHMS,  $\frac{1}{4}$ W, 5%.
  2. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 10% OR BETTER.
  3. ALL POLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 20%.
  4. ALL SIGNAL DIODES ARE 1N4448.
- ⚠ C90-91, C102-103, CP12-13 NOT STUFFED.

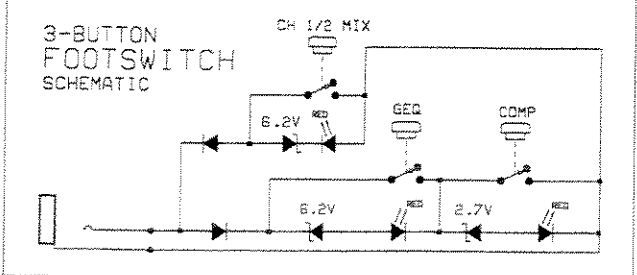
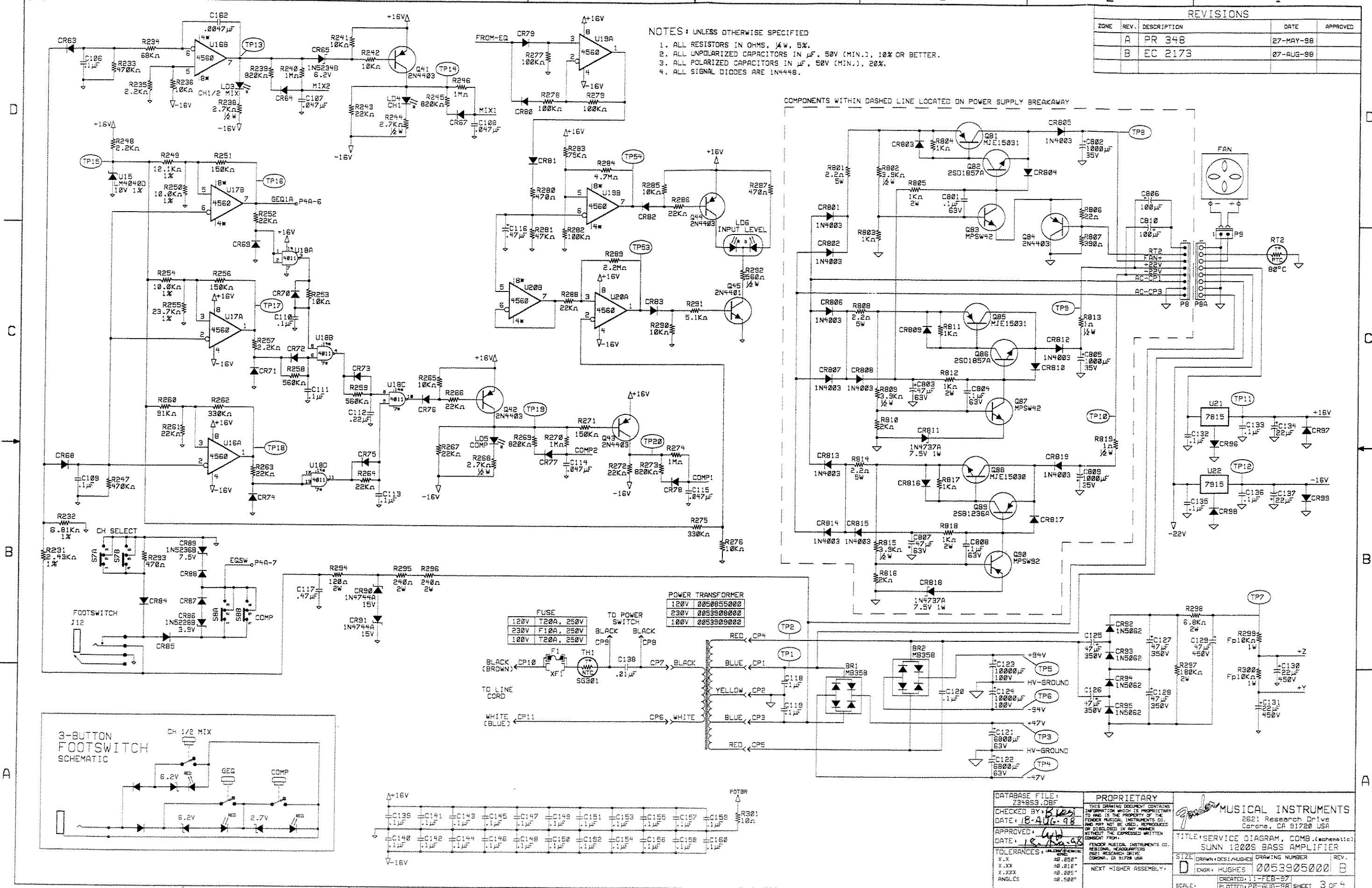
DATABASE FILE: 234852.DBF CHECKED BY: DATE: 18-AUG-98 APPROVED: DATE: 18-AUG-98 TOLERANCES: ±.05% X.X ±.05% X.XX ±.01% X.XXX ±.005% ANGLES ±.500°	<b>PROPRIETARY</b> THIS DRAWING DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AND IS THE PROPERTY OF THE FENDER MUSICAL INSTRUMENTS CO. AND MAY NOT BE USED, REPRODUCED OR DISCLOSED IN ANY MANNER WITHOUT THE EXPRESSED WRITTEN CONSENT FROM FENDER MUSICAL INSTRUMENTS CO., 2621 RESEARCH DRIVE, CORONA, CA 91720 USA NEXT HIGHER ASSEMBLY:	<b>FENDER MUSICAL INSTRUMENTS</b> 2621 Research Drive Corona, CA 91720 USA TITLE: SERVICE DIAGRAM, COMB (schematic) SUNN 1200S BASS AMPLIFIER SIZE: DRAWN: GESI/HUGHES DRAWING NUMBER: 0053905000 REV. B SCALE: CREATED: 11-FEB-97 PLOTTED: 18-AUG-98 SHEET 2 OF 4
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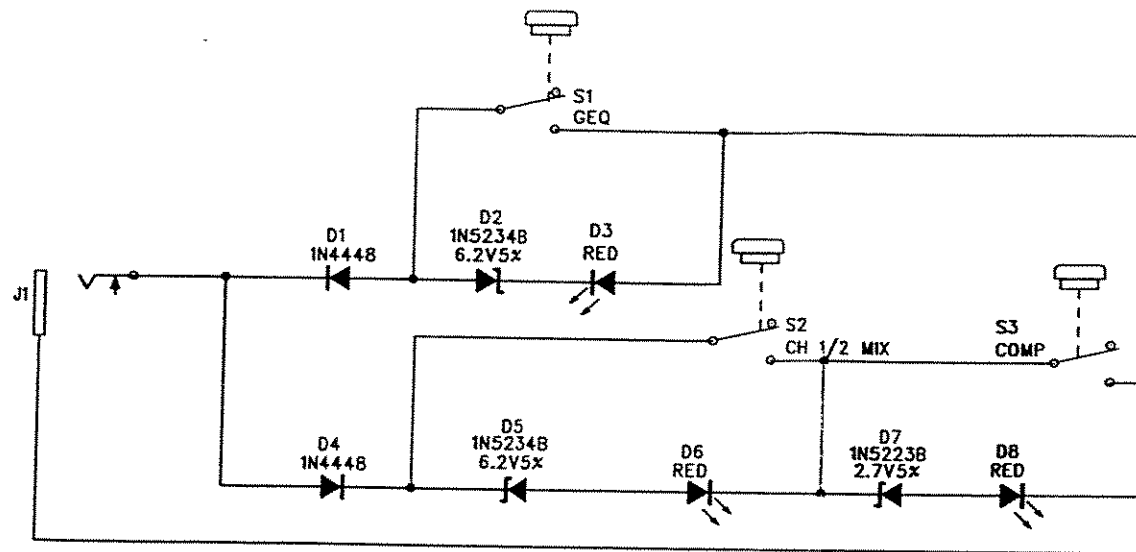
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	
	B	EC 2173	07-AUG-98	

- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS IN OHMS, 1/4W, 5%.
  2. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 10% OR BETTER.
  3. ALL POLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 20%.
  4. ALL SIGNAL DIODES ARE 1N4448.

COMPONENTS WITHIN DASHED LINE LOCATED ON POWER SUPPLY BREAKAWAY




REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 348	27-MAY-98	F M I



- 3. ALL POLARIZED CAPACITORS IN  $\mu$ F; 50V, 20%.
- 2. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F; 50V, 5%.
- 1. ALL RESISTORS IN OHMS; 1/4W, 5%.

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.		 <b>MUSICAL INSTRUMENTS</b> 2621 Research Drive Corona, CA 91720 USA	
CHECKED BY: <i>B. D. ...</i> DATE: <i>28-MAY-98</i>		TITLE: SERVICE DIAGRAM, COMBINED (schematic) SUNN BASS AMP FOOTSWITCH	
APPROVED BY: <i>[Signature]</i> DATE: <i>28MAY98</i>		SIZE <b>B</b>	DRAWING NUMBER <b>0054379000</b>
DRAWN: S. HOSNER   ENGR: F. MATRO DATABASE FILE: Z348FS.SCH		REV. <b>A</b>	RELEASE DATE: 27-MAY-98 SHEET: 1 OF 1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	30
	B	EC 2173	07-AUG-98	61

ALL AC AND DC VOLTAGES READ TO GROUND WITH A DVM UNDER THE FOLLOWING CONDITIONS: (UNLESS OTHERWISE NOTED)

1. UNIT AT RATED LINE VOLTAGE.
2. 8 OHM RESISTIVE LOAD CONNECTED AT SPEAKER OUTPUTS (TP52).
3. 12AX7A TUBES INSTALLED IN SOCKETS LABELED V1 AND V2.
4. ALL CONTROLS AT CENTER ROTATION (5 1/2).
5. ALL SWITCHES OUT.
6. 25.8 mV 420Hz SINWAVE APPLIED TO J1 (TP23).
7. NO FOOTSWITCH CONNECTED.

TP#	DC VOLTS	AC VOLTS	ADDITIONAL CONDITIONS/NOTES
1		33	
2		66	
3	+47		
4	-47		
5	+84		
6	-94		
7	+356		
8	+10		CAN VARY DEPENDENT UPON MAIN HEATSINK TEMPERATURE
9	+22		
10	-22		
11	+16		
12	-16		
13	-15		
13	+15		WITH S7 (CH SELECT) DEPRESSED
14	+15		
14	-15		WITH S7 (CH SELECT) DEPRESSED
15	+10		
16	+16		
16	-16		WITH S61 (GRAPHIC) DEPRESSED
17	+15		
17	-15		WITH S8 (COMP) AND S61 (GRAPHIC) DEPRESSED
18	+15		
18	-15		WITH S8 (COMP) DEPRESSED
19	-15		
19	-16		WITH S8 (COMP) DEPRESSED
20	-15		
20	-15		WITH S8 (COMP) DEPRESSED
21	-10		
22	-10		
23		25.8mV	
24	+166	382mV	
25		20mV	
26	+166	1V	
27		1V	
28	+166	70.5mV	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
29		546mV	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
30	+185	30.5V	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
31		1V	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
32		1V	
33		1V	
34		1V	
35		500mV	
36		500mV	
37		1V	MAXIMUM
38		1V	MAXIMUM
39		1V	MAXIMUM
40		500mV	
41		500mV	
42		500mV	
43		500mV	
44		25.8mV	
45		25.8mV	
46	+3		5 SECONDS AFTER POWER ON
47		500mV	
48	+2.0		NO INPUT SIGNAL
49	+1.5		NO INPUT SIGNAL
50	-2.0		NO INPUT SIGNAL
51	-1.5		NO INPUT SIGNAL
52		24V	
53	-15		NO INPUT SIGNAL
54	+15		
54	+16		
54	-15		WITH R20 (CH 1 VOL) AT 10 (CW), INPUT SIGNAL AT 100mV

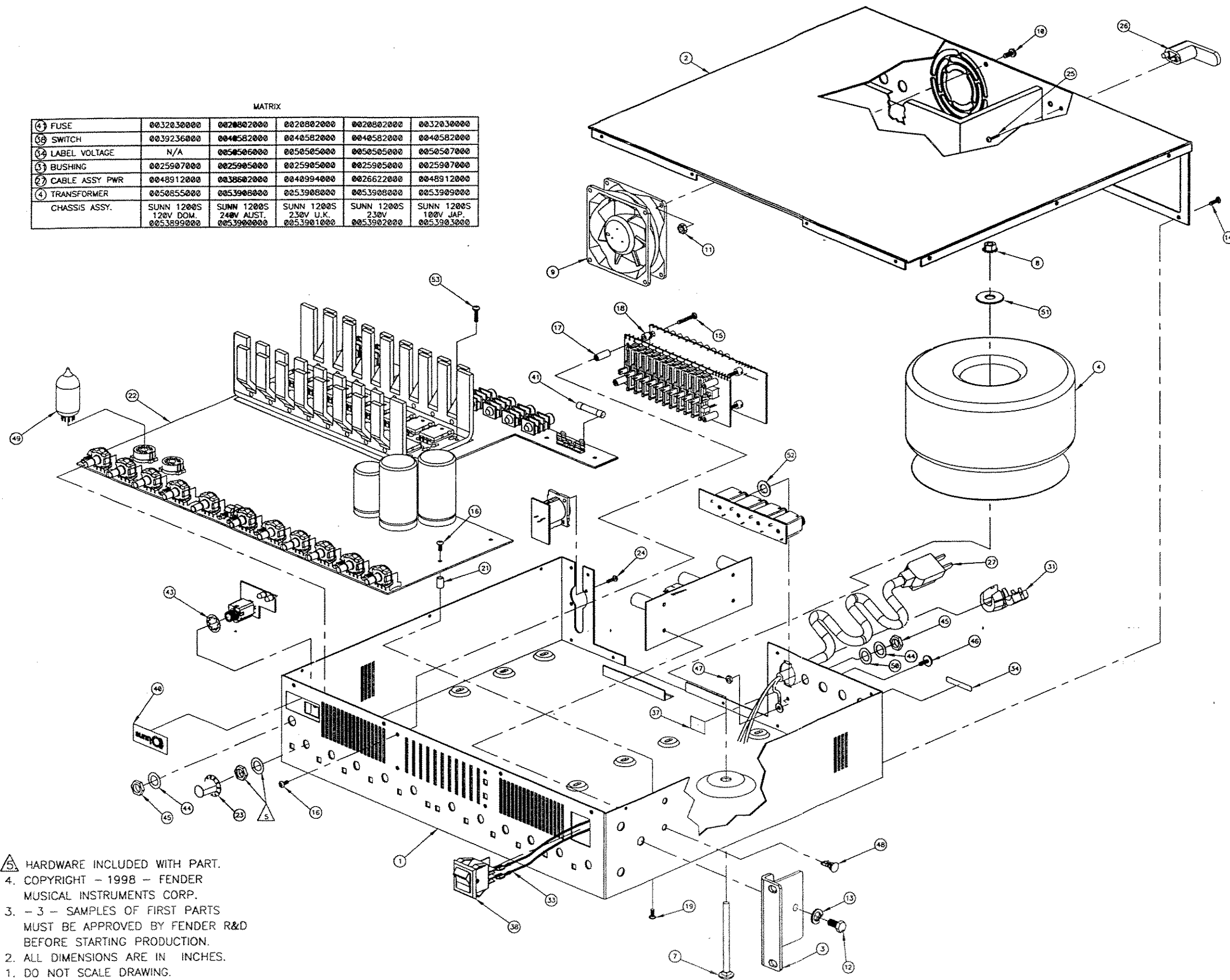
FILM/DWG: SERVICE DIAGRAM  
 DATABASE: Z34BP.DBF DATE: 18-AUG-98  
 LAYERS PLOTTED: 1 2 3 4 10

DATABASE FILE: Z34BP.DBF CHECKED BY: <i>[Signature]</i> DATE: 18-AUG-98 APPROVED: <i>[Signature]</i> DATE: 16-AUG-98 TOLERANCES: X.X .050" X.XX .010" X.XXX .005" ANGLES .050"	PROPRIETARY THIS DRAWING DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AND IS THE PROPERTY OF FENDER MUSICAL INSTRUMENTS CO. AND MAY NOT BE USED, REPRODUCED OR DISCLOSED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT FROM: FENDER MUSICAL INSTRUMENTS CO. REGIONAL HEADQUARTERS 2621 RESEARCH DRIVE CORONA, CA 91728 USA NEXT HIGHER ASSEMBLY:	Fender MUSICAL INSTRUMENTS 2621 Research Drive Corona, CA 91728 USA TITLE: SERVICE DIAGRAM, COMB. (PCB) SUNN 1200S BASS AMPLIFIER SIZE: DRAWN: B.DES: DRAWING NUMBER: 0053905000 REV. 8 CDR: HUGHES CREATED: 27-MAY-98 PLOTTED: 18-AUG-98 SHEET 4 OF 4
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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 CORP.

MATRIX


④ FUSE	0032030000	0020802000	0020802000	0020802000	0032030000
⑤ SWITCH	0039236000	0040582000	0040582000	0040582000	0040582000
⑥ LABEL VOLTAGE	N/A	0050506000	0050505000	0050505000	0050507000
③ BUSHING	0025907000	0025905000	0025905000	0025905000	0025907000
⑦ CABLE ASSY PWR	0048912000	0030602000	0040994000	0026622000	0048912000
④ TRANSFORMER	0050855000	0053908000	0053908000	0053908000	0053909000
CHASSIS ASSY.	SUNN 1200S 120V DOM. 0053899000	SUNN 1200S 240V AJST. 0053900000	SUNN 1200S 230V U.K. 0053901000	SUNN 1200S 230V 0053902000	SUNN 1200S 100V JAP. 0053903000



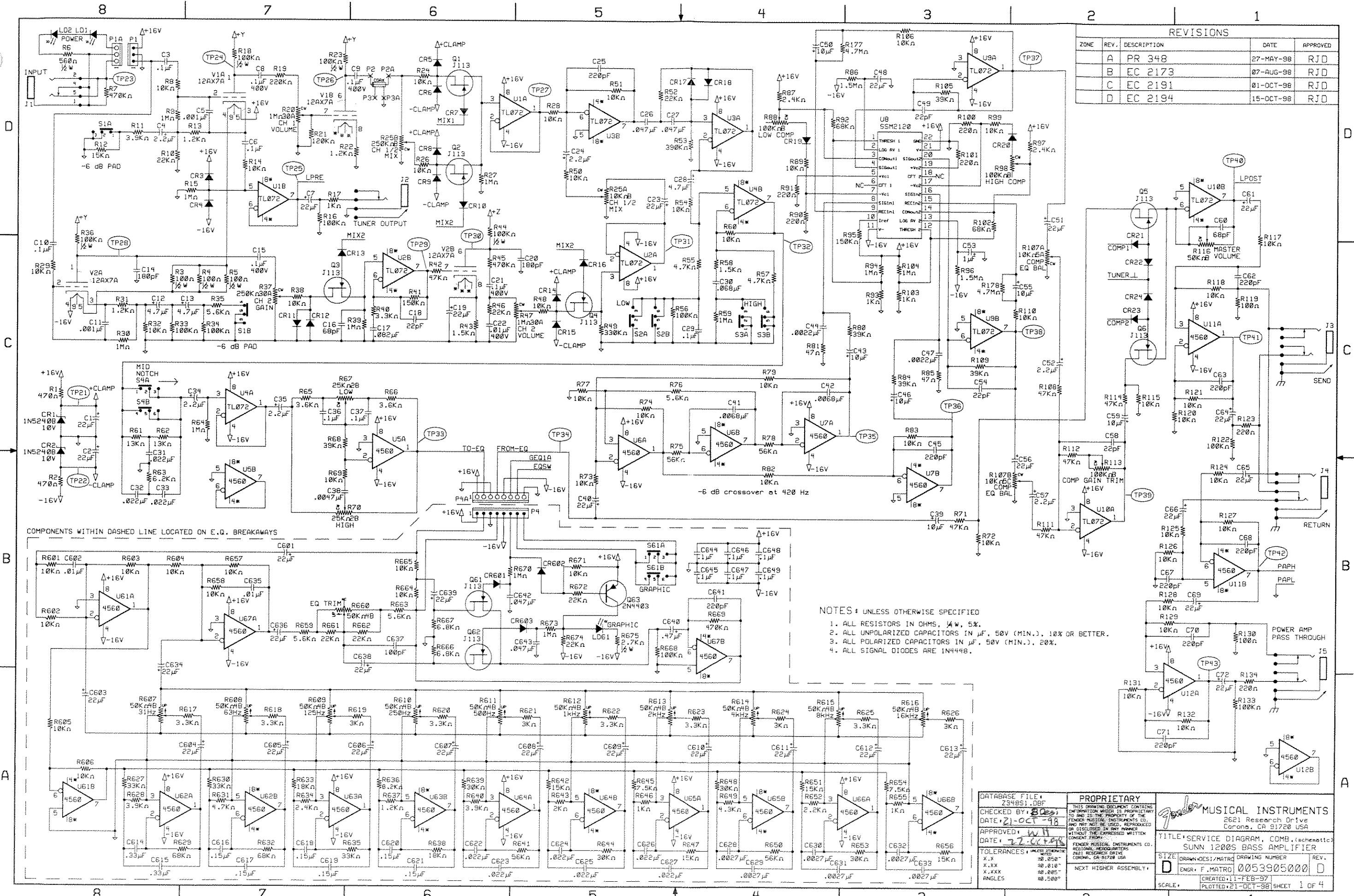
(N.S.) = NOT SHOWN

53	4	0033051000	SCRW M 6-32x1/2 PHP ZI LW
52	4	0026401000	WSHR SHLDR FIBER 3/8x5/8
51	1	9904300900	WSHR FLAT 1/4x1 STL BLK
50	4	0027520000	WSHR FLAT .380x.630 FIBER
49	2	0013341000	TUBE 7025/12AX7WA RUSSIAN MADE
48	4	0053952000	STANDOFF, NYLON BLACK .250
47	1	0069393000	NUT 6-32 HEX EXT LOCK
46	1	9904101500	SCRW M 6-32x3/8 PHPS BLX ITLW
45	5	0016352000	NUT HEX 3/8-32x3/32 TK NI
44	5	0031153000	WSHR FLAT 3/8x.614 NI
43	1	0016436000	WSHR LCK INTL 3/8x.687x.035 NI
41	1	SEE MATRIX	FUSE
40	1	0053439000	LEXAN, INSERT 1200S
38	1	SEE MATRIX	SWITCH
37	1	0013020000	LABEL GROUNDING SEMKO
34	1	SEE MATRIX	LABEL VOLTAGE
33	1	0053914000	WIRE SET SUNN 1200S CHASSIS ASSY
31	1	SEE MATRIX	BUSHING
27	1	SEE MATRIX	CABLE ASSY PWR
26	2	0049650000	CORD WRAP STYLE 2
25	2	0037623000	SCRW TC25 6x1/2 PHP ZI
24	2	0051155000	SCRW SMB #4X3/8 PHP BLX
23	11	0019798000	KNOB ROTARY SS
22	1	0053912000	PCB ASSY SUNN 1200S
21	10	0031073000	STANDOFF 6-32x3/8 RND AL
19	10	0031184000	SCRW M6-32x1/4 PHPS BLX ITLW
18	4	0037783000	STANDOFF NYL PCB SNAP 1/4" NAT
17	4	0053931000	STANDOFF 6-32x9/16 RND AL
16	14	0014999000	SCRW M 6-32x1/4 PHP BLX
15	4	0069385000	SCRW M 6-32 5/8 PHP ZI
14	19	0028684000	SCRW SMB 6x3/8 PH PHS BLX
13	6	0022285000	WSHR SP LOCK 1/4x.493 ZI
12	6	0026501000	SCRW C 1/4-20x1/2 HH BLK
11	4	0022004000	NUT KEPS #8-32 ZINC
10	4	0029656000	SCRW M 8-32x3/8 PHP BLX SEM/LW
9	1	0053911000	24VDC FAN ASSY.
8	1	0028272000	NUT KEP 1/4x20 FOJ
7	1	0053910000	SCREW M 1/4-20 x 3" CAR BLX.
4	1	SEE MATRIX	TRANSFORMER
3	2	0051652000	RACK EAR SUNN 1200S
2	1	0051651000	CHASSIS, TOP, SUNN 1200S
1	1	0051649000	CHASSIS, WRAP, SUNN 1200S

△ HARDWARE INCLUDED WITH PART.  
 4. COPYRIGHT - 1998 - 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

ENGINEER	HUGHES	 FENDER MUSICAL INSTRUMENTS CORP. CORONA, CALIFORNIA 91720			
DRAWN	GOOLER				
DATE	5/5/98				
DFT. ENG.	ENG.	TITLE			
DATE	DATE	CHASSIS ASSY SUNN 1200S			
APPROVED	DATE	SHEET	SIZE	DRAWING NUMBER	REV.
W. H. H.	5/26/98	1/1	D	0053899000	A

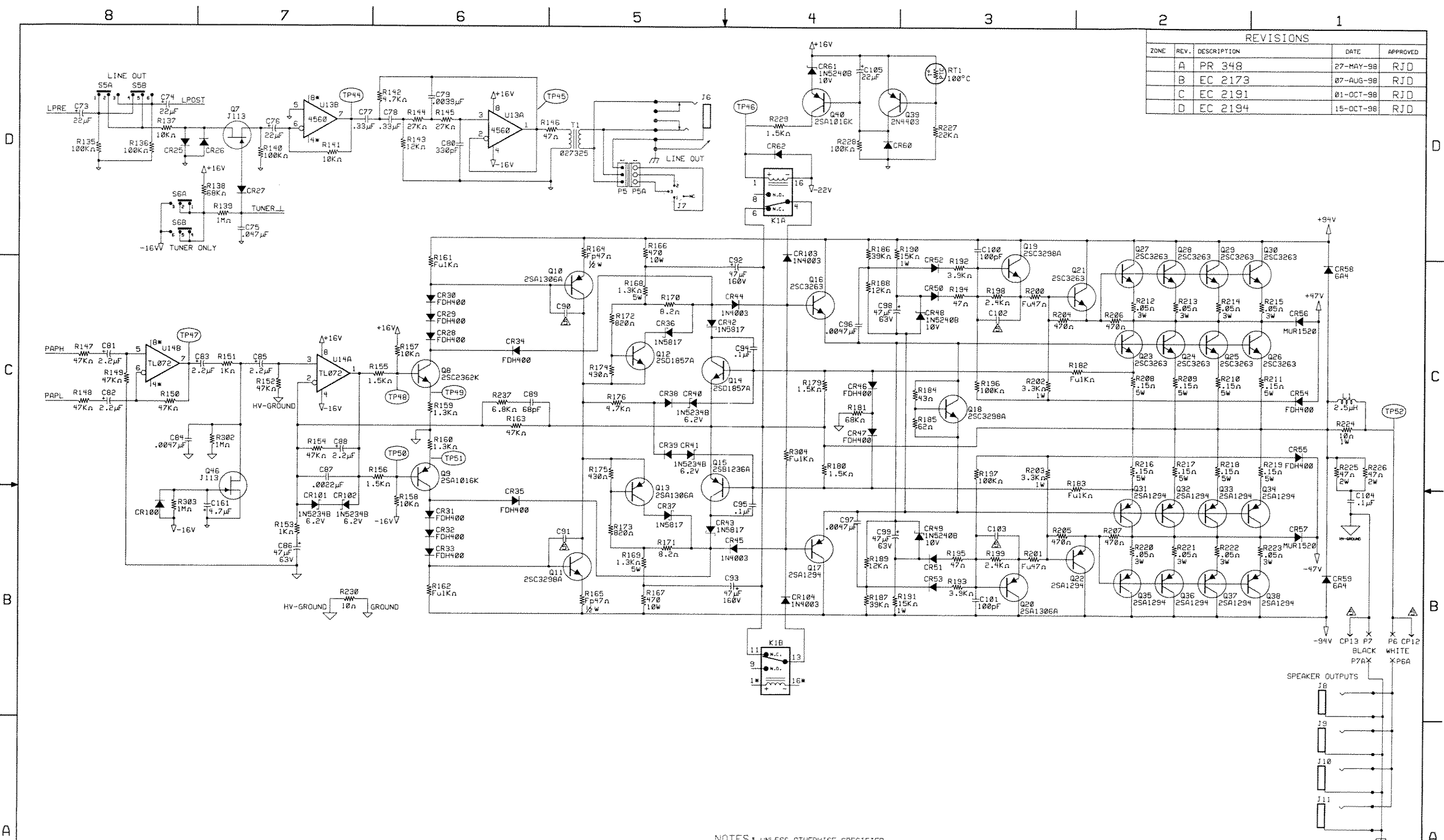
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	RJD
	B	EC 2173	07-AUG-98	RJD
	C	EC 2191	01-OCT-98	RJD
	D	EC 2194	15-OCT-98	RJD



- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS IN OHMS, 1/4W, 5%.
  2. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 10% OR BETTER.
  3. ALL POLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 20%.
  4. ALL SIGNAL DIODES ARE 1N4148.

DATABASE FILE: Z348S1.DBF CHECKED BY: [Signature] DATE: 21-OCT-98 APPROVED: [Signature] DATE: 22-OCT-98	<b>PROPRIETARY</b> THIS DRAWING DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AND IS THE PROPERTY OF 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 2621 RESEARCH DRIVE CORONA, CA 91728 USA NEXT HIGHER ASSEMBLY:	<b>Fender MUSICAL INSTRUMENTS</b> 2621 Research Drive Corona, CA 91728 USA TITLE: SERVICE DIAGRAM, COMB. (schematic) SUNN 1200S BASS AMPLIFIER SIZE: DRAWN/DESIGN/MATD DRAWING NUMBER: 0053905000 REV. D ENGR. F. MATRO CREATED: 11-FEB-97 PLOTTED: 21-OCT-98 SHEET 1 OF 4
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	RJD
	B	EC 2173	07-AUG-98	RJD
	C	EC 2191	01-OCT-98	RJD
	D	EC 2194	15-OCT-98	RJD



- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS IN OHMS,  $\frac{1}{4}$ W, 5%.
  2. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 10% OR BETTER.
  3. ALL POLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 20%.
  4. ALL SIGNAL DIODES ARE 1N4448.
- △ C90-91, C102-103, CP12-13 NOT STUFFED.

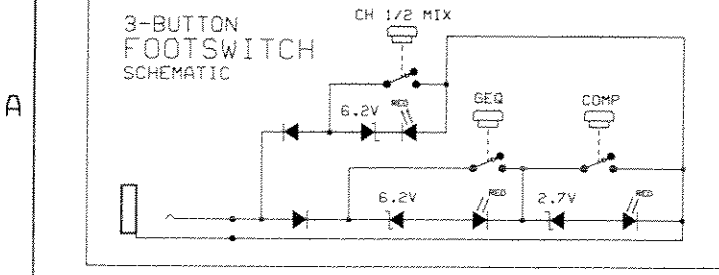
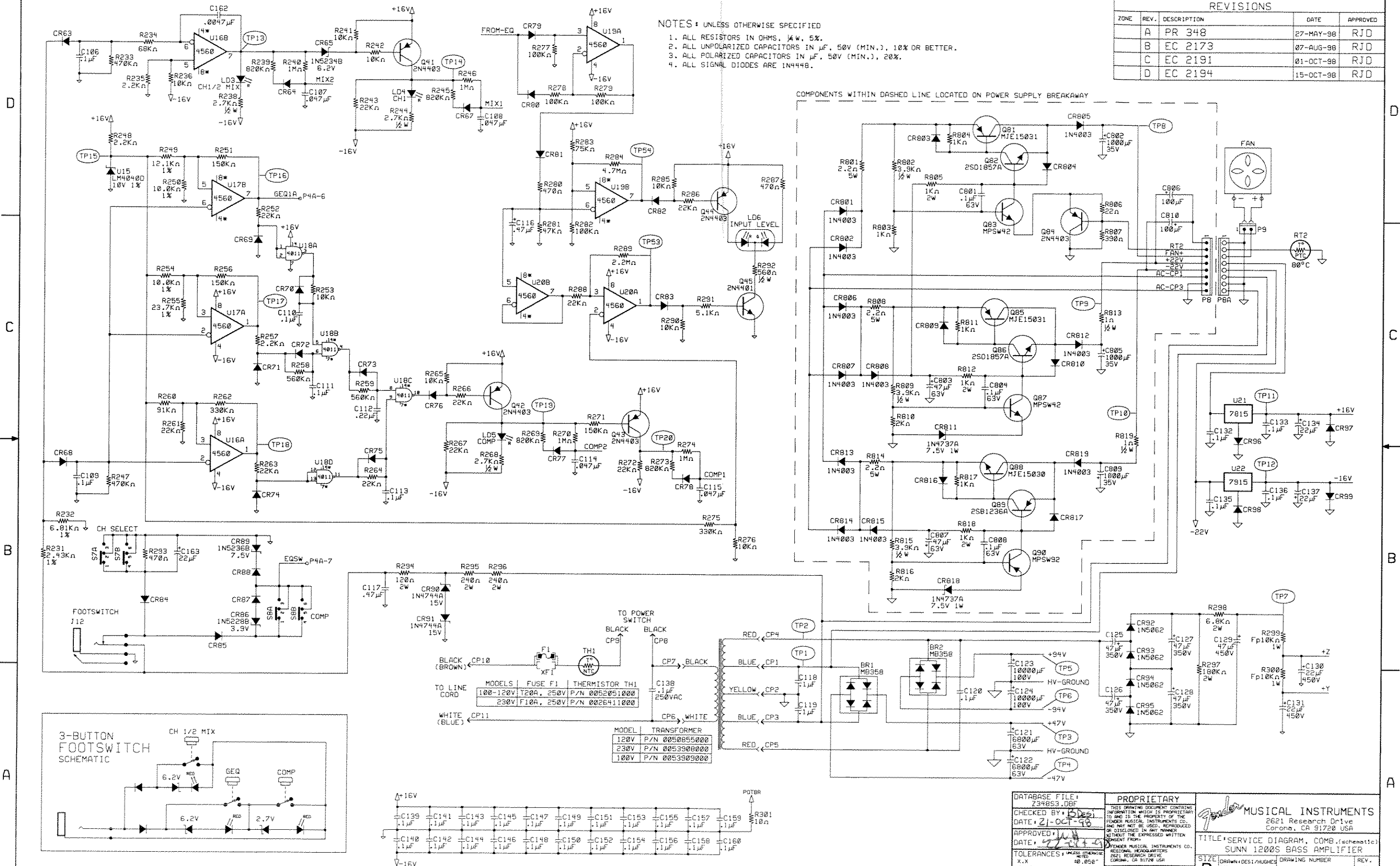
DATABASE FILE: 234852.DBF CHECKED BY: <i>[Signature]</i> DATE: 21-OCT-98 APPROVED: <i>[Signature]</i> DATE: 21-OCT-98 TOLERANCES: UNLESS OTHERWISE NOTED X.X 10.05% X.XX 10.01% X.XXX 10.005% ANGLES 10.500°	PROPRIETARY THIS DRAWING DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AND IS THE PROPERTY 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 2621 RESEARCH DRIVE CORONA, CA 91720 USA NEXT HIGHER ASSEMBLY:	FENDER MUSICAL INSTRUMENTS 2621 Research Drive Corona, CA 91720 USA TITLE: SERVICE DIAGRAM, COMB. (acoustic) SUNN 1200S BASS AMPLIFIER SIZE: DRAWN/DESIGN/HUGHES DRAWING NUMBER REV. D ENGR. HUGHES 0053905000 D SCALE: CREATED: 11-FEB-97 PLOTTED: 21-OCT-98 SHEET 2 OF 4
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	RJD
	B	EC 2173	07-AUG-98	RJD
	C	EC 2191	01-OCT-98	RJD
	D	EC 2194	15-OCT-98	RJD

NOTES: UNLESS OTHERWISE SPECIFIED  
 1. ALL RESISTORS IN OHMS, 1/4 W, 5%  
 2. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 10% OR BETTER.  
 3. ALL POLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 20%.  
 4. ALL SIGNAL DIODES ARE 1N4448.

COMPONENTS WITHIN DASHED LINE LOCATED ON POWER SUPPLY BREAKAWAY



MODELS	FUSE F1	THERMISTOR TH1
100-120V	T20A, 250V P/N 0052051000	
230V	F10A, 250V P/N 0026411000	

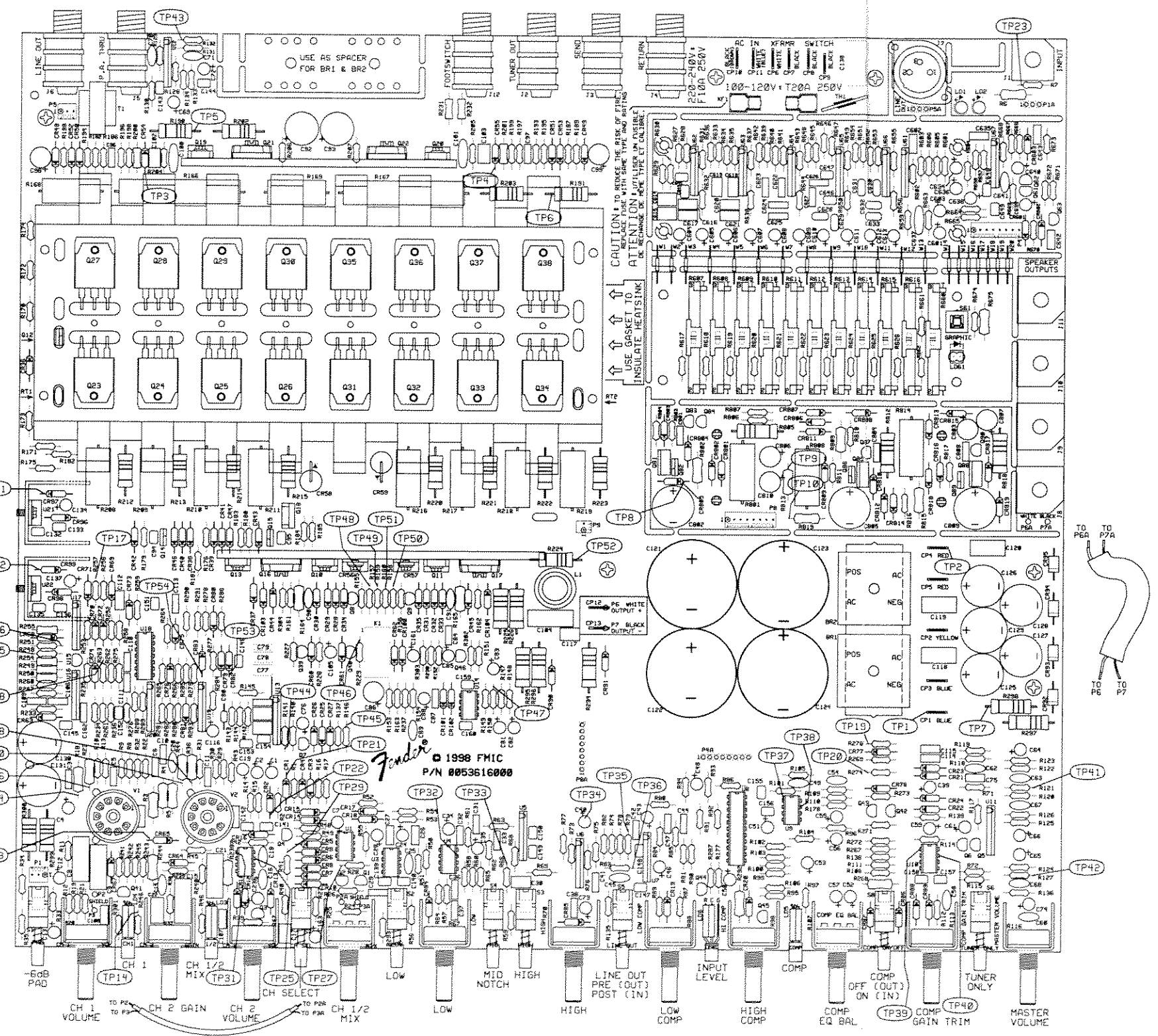
MODEL	TRANSFORMER
120V	P/N 0050855000
230V	P/N 0053908000
100V	P/N 0053309000

DATABASE FILE: Z348S3.DBF CHECKED BY: B. Desj DATE: 21-OCT-98 APPROVED: [Signature] DATE: 11-FEB-99 TOLERANCES: UNLESS OTHERWISE NOTED X.XX ±0.050" X.XXX ±0.010" X.XXX ±0.005" ANGLES ±0.500°	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 2621 RESEARCH DRIVE CORONA, CA 91728 USA NEXT HIGHER ASSEMBLY:	Fender <b>MUSICAL INSTRUMENTS</b> 2621 Research Drive Corona, CA 91728 USA TITLE: SERVICE DIAGRAM, COMB (schematic) SUNN 1200S BASS AMPLIFIER SIZE: DRAWN+DESIGN+HUGHES DRAWING NUMBER: D ENGR+ HUGHES 0053905000 REV. SCALE: CREATED: 11-FEB-97 PLOTTED: 21-OCT-98 SHEET 3 of 4
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	
	B	EC 2173	07-AUG-98	
	C	EC 2191	01-OCT-98	
	D	EC 2194	15-OCT-98	

- ALL AC AND DC VOLTAGES READ TO GROUND WITH A DVM UNDER THE FOLLOWING CONDITIONS: (UNLESS OTHERWISE NOTED)
1. UNIT AT RATED LINE VOLTAGE.
  2. 8 OHM RESISTIVE LOAD CONNECTED AT SPEAKER OUTPUTS (TP52).
  3. 12AX7A TUBES INSTALLED IN SOCKETS LABELED V1 AND V2.
  4. ALL CONTROLS AT CENTER ROTATION (5 1/2).
  5. ALL SWITCHES OUT.
  6. 25.8 mV 420Hz SINEWAVE APPLIED TO J1 (TP23).
  7. NO FOOTSWITCH CONNECTED.

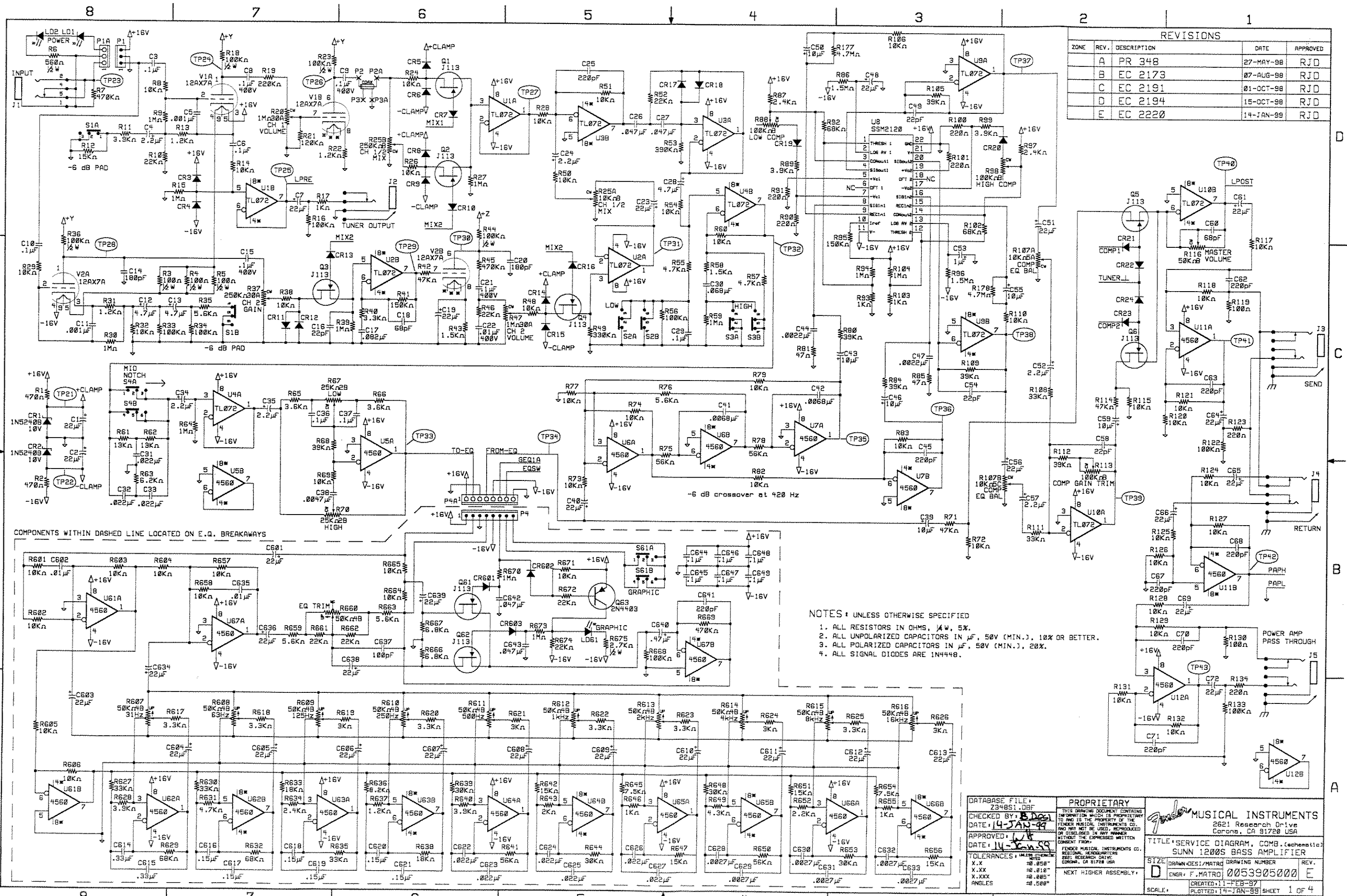
TP#	DC VOLTS	AC VOLTS	ADDITIONAL CONDITIONS/NOTES
1		33	
2		66	
3	+47		
4	-47		
5	+94		
6	-94		
7	+356		
8	+10		CAN VARY DEPENDENT UPON MAIN HEATSINK TEMPERATURE
9	+22		
10	-22		
11	+16		
12	-16		
13	-15		
13	+15		WITH S7 (CH SELECT) DEPRESSED
14	+15		
14	-15		WITH S7 (CH SELECT) DEPRESSED
15	+10		
16	+15		
16	-15		WITH S61 (GRAPHIC) DEPRESSED
17	+15		
17	-15		WITH S8 (COMP) AND S61 (GRAPHIC) DEPRESSED
18	+15		
18	-15		WITH S8 (COMP) DEPRESSED
19	-15		
19	+15		WITH S8 (COMP) DEPRESSED
20	+15		
20	-15		WITH S8 (COMP) DEPRESSED
21	+10		
22	-10		
23		25.8mV	
24	+166	382mV	
25		20mV	
26	+166	1V	
27		1V	
28	+166	70.5mV	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
29		540mV	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
30	+185	30.5V	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
31		1V	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
32		1V	
33		1V	
34		1V	
35		500mV	
36		500mV	
37		1V	MAXIMUM
38		1V	MAXIMUM
39		1V	MAXIMUM
40		500mV	
41		500mV	
42		500mV	
43		500mV	
44		25.8mV	
45		25.8mV	
46	+3		5 SECONDS AFTER POWER ON
47		500mV	
48	+2.0		NO INPUT SIGNAL
49	+1.5		NO INPUT SIGNAL
50	-2.0		NO INPUT SIGNAL
51	-1.5		NO INPUT SIGNAL
52		24V	
53	-15		
53	+15		
54	+15		
54	-15		WITH R20 (CH 1 VOL) AT 10 (CW), INPUT SIGNAL AT 100mV



FILM/DWG: SERVICE DIAGRAM  
 DATABASE: Z348P.DBF DATE: 21-OCT-98  
 LAYERS PLOTTED: 1 2 3 4 10  
 1819

DATABASE FILE: Z348P.DBF CHECKED BY: BDES DATE: 21-OCT-98 APPROVED: [Signature] DATE: 22-OCT-98 TOLERANCES: UNLESS OTHERWISE NOTED X.X .050" X.XX .010" X.XXX .005" ANGLES .500"	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. 2621 RESEARCH DRIVE CORONA, CA 91720 USA NEXT HIGHER ASSEMBLY:	Fender MUSICAL INSTRUMENTS 2621 Research Drive Corona, CA 91720 USA TITLE: SERVICE DIAGRAM, COMB. (PCB) SUNN 1200S BASS AMPLIFIER SIZE: DRAWN: B.DESI ENGR: HUGHES 0053905000 REV. D SCALE: 1:1 CREATED: 27-MAR-98 PLOTTED: 21-OCT-98 SHEET 4 of 4
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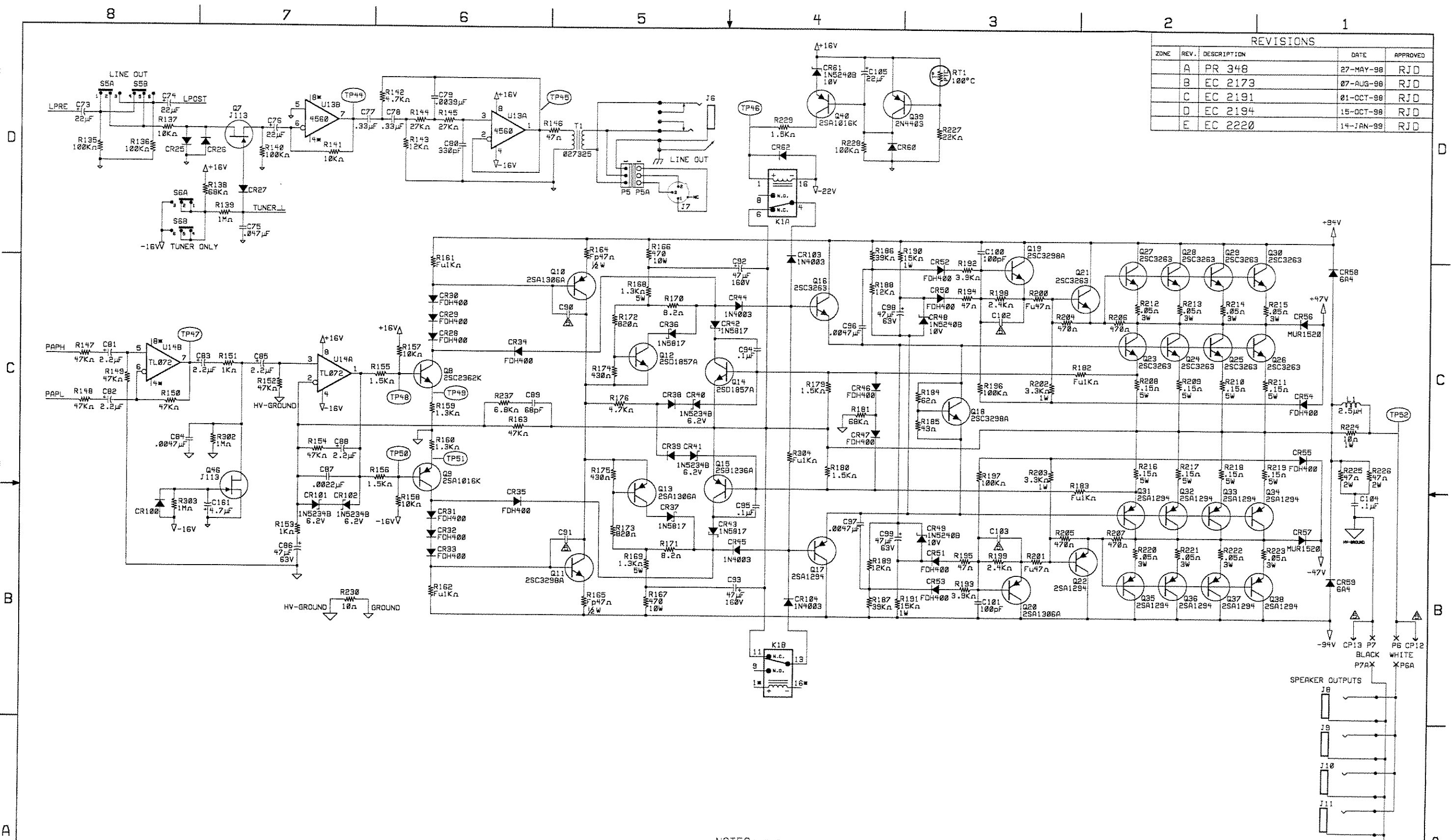
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	RJD
	B	EC 2173	07-AUG-98	RJD
	C	EC 2191	01-OCT-98	RJD
	D	EC 2194	15-OCT-98	RJD
	E	EC 2220	14-JAN-99	RJD



- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS IN OHMS, 1/4W, 5%.
  2. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 10% OR BETTER.
  3. ALL POLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 20%.
  4. ALL SIGNAL DIODES ARE 1N4448.

DATABASE FILE: Z348S1.DBF CHECKED BY: B. Dea DATE: 14-JAN-99 APPROVED: L. V. DATE: 14-JAN-99 TOLERANCES: UNLESS OTHERWISE SPECIFIED: X.X .50% X.XX .25% X.XXX .10% ANGLES	<b>PROPRIETARY</b> 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 EXPRESS WRITTEN CONSENT FROM: FENDER MUSICAL INSTRUMENTS CO. RESEARCH DRIVE CORONA, CA 91720 USA NEXT HIGHER ASSEMBLY:	<b>Fender</b> MUSICAL INSTRUMENTS 2621 Research Drive Corona, CA 91720 USA TITLE: SERVICE DIAGRAM, COMB. (Schematic) SUNN 1200S BASS AMPLIFIER SIZE: DRAWN: DESI: MATRO DRAWING NUMBER: REV.: D ENGR: F. MATRO 0053905000 E SCALE: CREATED: 11-FEB-97 PLOTTED: 14-JAN-99 SHEET 1 OF 4
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	RJD
	B	EC 2173	07-AUG-98	RJD
	C	EC 2191	01-OCT-98	RJD
	D	EC 2194	15-OCT-98	RJD
	E	EC 2220	14-JAN-99	RJD



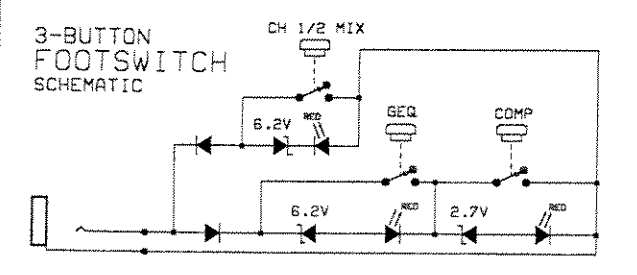
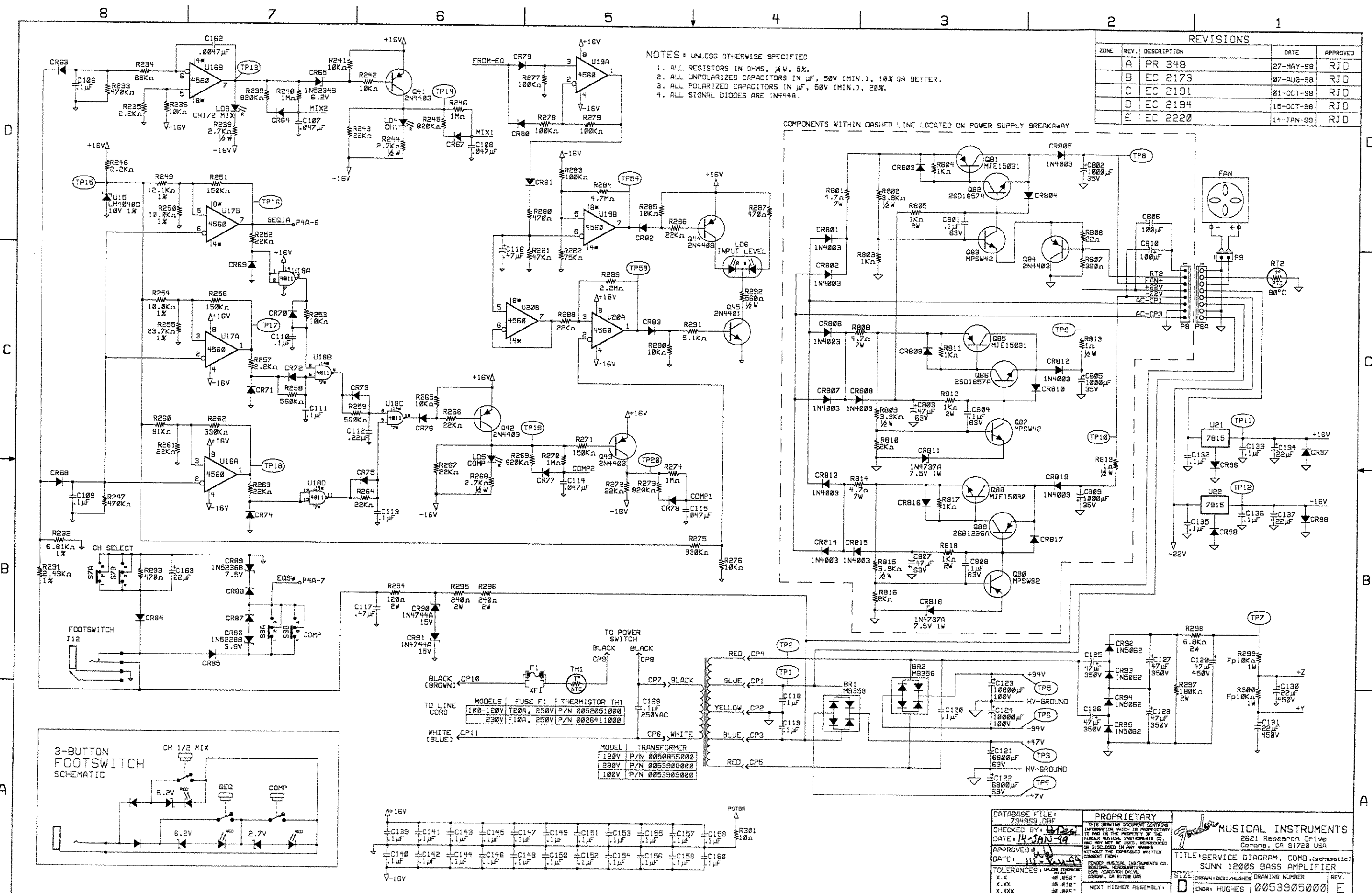
- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS IN OHMS,  $\frac{1}{4}$ W, 5%.
  2. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 10% OR BETTER.
  3. ALL POLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 20%.
  4. ALL SIGNAL DIODES ARE 1N4448.
- △ C90-91, C102-103, CP12-13 NOT STUFFED.

DATABASE FILE: 254852.DWG CHECKED BY: B. Dea DATE: 14-JAN-99 APPROVED: DATE: 14-JAN-99 TOLERANCES: UNLESS OTHERWISE SPECIFIED X.X .05" X.XX .01" X.XXX .005" ANGLES .500°	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 WRITTEN CONSENT FROM: FENDER MUSICAL INSTRUMENTS CO. HEADQUARTERS 2621 RESEARCH DRIVE CORONA, CA 91720 USA NEXT HIGHER ASSEMBLY:	TITLE: SERVICE DIAGRAM, COMB. (schematic) SUNN 1200S BASS AMPLIFIER SIZE: DRAWN: DESI/HUGHES ENGR: HUGHES DRAWING NUMBER: 0053905000 REV. E CREATED: 11-FEB-97 PLOTTED: 14-JAN-99 SHEET 2 OF 4
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	RJD
	B	EC 2173	07-AUG-98	RJD
	C	EC 2191	01-OCT-98	RJD
	D	EC 2194	15-OCT-98	RJD
	E	EC 2220	14-JAN-99	RJD

- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS IN OHMS,  $\frac{1}{4}$ W, 5%.
  2. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 10% OR BETTER.
  3. ALL POLARIZED CAPACITORS IN  $\mu$ F, 50V (MIN.), 20%.
  4. ALL SIGNAL DIODES ARE 1N4448.

COMPONENTS WITHIN DASHED LINE LOCATED ON POWER SUPPLY BREAKAWAY



MODELS	FUSE F1	THERMISTOR TH1
100-120V	T20A, 250V P/N 0052051000	230V P/N 0053900000
230V	F10A, 250V P/N 0053900000	100V P/N 0053900000

MODEL	TRANSFORMER
120V	P/N 0050855000
230V	P/N 0053900000
100V	P/N 0053900000

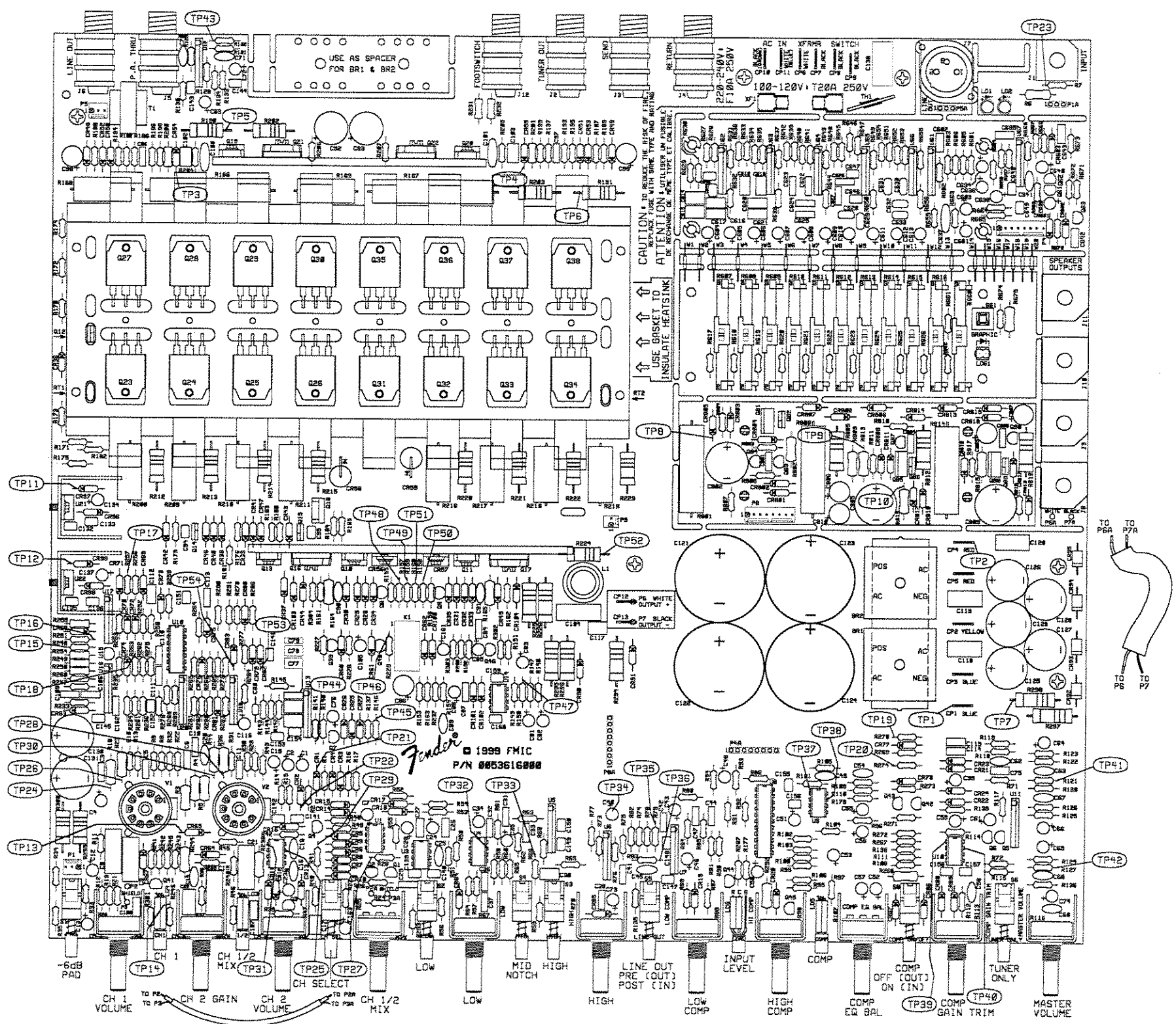
DATABASE FILE: Z34853.DBF CHECKED BY: <i>[Signature]</i> DATE: 14-JAN-99 APPROVED: <i>[Signature]</i> DATE: 11-FEB-99 TOLERANCES: X.X .050" X.XX .010" X.XXX .005" ANGLES .500"	<b>PROPRIETARY</b> THIS DRAWING DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AND IS THE PROPERTY OF THE FENDER MUSICAL 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 2621 RESEARCH DRIVE CORONA, CA 91720 USA NEXT HIGHER ASSEMBLY:	<b>Fender MUSICAL INSTRUMENTS</b> 2621 Research Drive Corona, CA 91720 USA TITLE: SERVICE DIAGRAM, COMB (schematic) SUNN 1200S BASS AMPLIFIER SIZE: DRAWN: DESIGNED: DRAWING NUMBER: REV. D ENGR: HUGHES 0053905000 E SCALE: CREATED: 11-FEB-97 PLOTTED: 14-JAN-99 SHEET 3 OF 4
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	PR 348	27-MAY-98	RJD
	B	EC 2173	07-AUG-98	RJD
	C	EC 2191	01-OCT-98	RJD
	D	EC 2194	15-OCT-98	RJD
	E	EC 2220	14-JAN-99	RJD

ALL AC AND DC VOLTAGES READ TO GROUND WITH A DVM UNDER THE FOLLOWING CONDITIONS: (UNLESS OTHERWISE NOTED)

1. UNIT AT RATED LINE VOLTAGE.
2. 8 OHM RESISTIVE LOAD CONNECTED AT SPEAKER OUTPUTS (TP52).
3. 12AX7A TUBES INSTALLED IN SOCKETS LABELED V1 AND V2.
4. ALL CONTROLS AT CENTER ROTATION (5 1/2).
5. ALL SWITCHES OUT.
6. 25.8 mV 420Hz SINWAVE APPLIED TO J1 (TP23).
7. NO FOOTSWITCH CONNECTED.

TP#	DC VOLTS	AC VOLTS	ADDITIONAL CONDITIONS/NOTES
1		33	
2		66	
3	+47		
4	-47		
5	+94		
6	-94		
7	+356		
8	+10		CAN VARY DEPENDENT UPON MAIN HEATSINK TEMPERATURE
9	+22		
10	-22		
11	+16		
12	-16		
13	-15		
13	+15		WITH S7 (CH SELECT) DEPRESSED
14	+15		
14	-15		WITH S7 (CH SELECT) DEPRESSED
15	+10		
16	+15		
16	-15		WITH S61 (GRAPHIC) DEPRESSED
17	+15		
17	-15		WITH S8 (COMP) AND S61 (GRAPHIC) DEPRESSED
18	+15		
18	-15		WITH S8 (COMP) DEPRESSED
19	-15		
19	+15		WITH S8 (COMP) DEPRESSED
20	+15		
20	-15		WITH S8 (COMP) DEPRESSED
21	+10		
22	-10		
23		25.8mV	
24	+166	382mV	
25		20mV	
26	+166	1V	
27		1V	
28	+166	70.5mV	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
29		548mV	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
30	+185	30.5V	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
31		1V	WITH S7 (CH SELECT) DEPRESSED AND 5.9mV INPUT AT J1
32		1V	
33		1V	
34		1V	
35		500mV	
36		500mV	
37		1V	MAXIMUM
38		1V	MAXIMUM
39		1V	MAXIMUM
40		500mV	
41		500mV	
42		500mV	
43		500mV	
44		25.8mV	
45		25.8mV	
46	+3		5 SECONDS AFTER POWER ON
47		500mV	
48	+2.0		NO INPUT SIGNAL
49	+1.5		NO INPUT SIGNAL
50	-2.0		NO INPUT SIGNAL
51	-1.5		NO INPUT SIGNAL
52		24V	
53	-15		NO INPUT SIGNAL
53	+15		
54	+15		
54	-15		WITH R20 (CH 1 VOL.) AT 10 (CW), INPUT SIGNAL AT 100mV



FILM/DWG SERVICE DIAGRAM  
 DATABASE: Z348P.DBT DATE: 14-JAN-99  
 LAYERS PLOTTED: 1 2 3 4 10

DATABASE FILE: Z348P.DBT CHECKED BY: B.DESI DATE: 14-JAN-99 APPROVED: [Signature] DATE: 14-JAN-99	<b>PROPRIETARY</b> 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 EXPRESS WRITTEN CONSENT FROM: FENDER MUSICAL INSTRUMENTS CO. 2621 RESEARCH DRIVE CORONA, CA 91728 USA NEXT HIGHER ASSEMBLY:	<b>Fender</b> MUSICAL INSTRUMENTS 2621 Research Drive Corona, CA 91728 USA TITLE: SERVICE DIAGRAM, COMB. (PCB) SUNN 1200S BASS AMPLIFIER SIZE: D DRAWN: B.DESI DRAWING NUMBER: 0053905000 REV. E ENGR: HUGHES CREATED: 27-MAR-98 PLOTTED: 14-JAN-99 SHEET 4 of 4
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