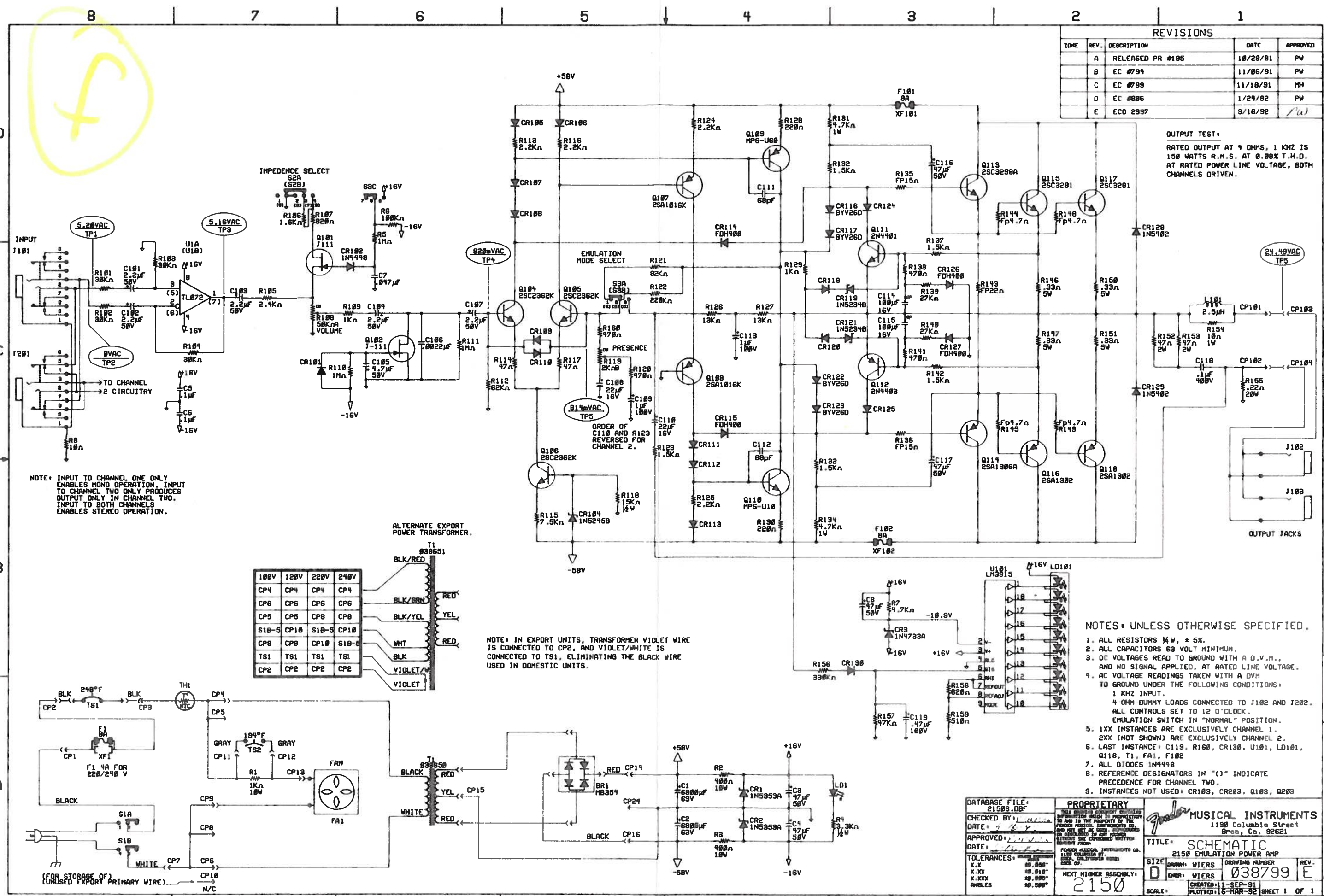


REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	RELEASED PR #195	10/20/91	PW
	B	EC #794	11/06/91	PW
	C	EC #799	11/18/91	MH
	D	EC #806	1/24/92	PW
	E	ECO 2397	3/16/92	PW

OUTPUT TEST:
 RATED OUTPUT AT 4 OHMS, 1 KHZ IS
 150 WATTS R.M.S. AT 0.88% T.H.D.
 AT RATED POWER LINE VOLTAGE, BOTH
 CHANNELS DRIVEN.



NOTE: INPUT TO CHANNEL ONE ONLY
 ENABLES MONO OPERATION. INPUT
 TO CHANNEL TWO ONLY PRODUCES
 OUTPUT ONLY IN CHANNEL TWO.
 INPUT TO BOTH CHANNELS
 ENABLES STEREO OPERATION.

NOTE: IN EXPORT UNITS, TRANSFORMER VIOLET WIRE
 IS CONNECTED TO CP2, AND VIOLET/WHITE IS
 CONNECTED TO TS1, ELIMINATING THE BLACK WIRE
 USED IN DOMESTIC UNITS.

NOTES: UNLESS OTHERWISE SPECIFIED.

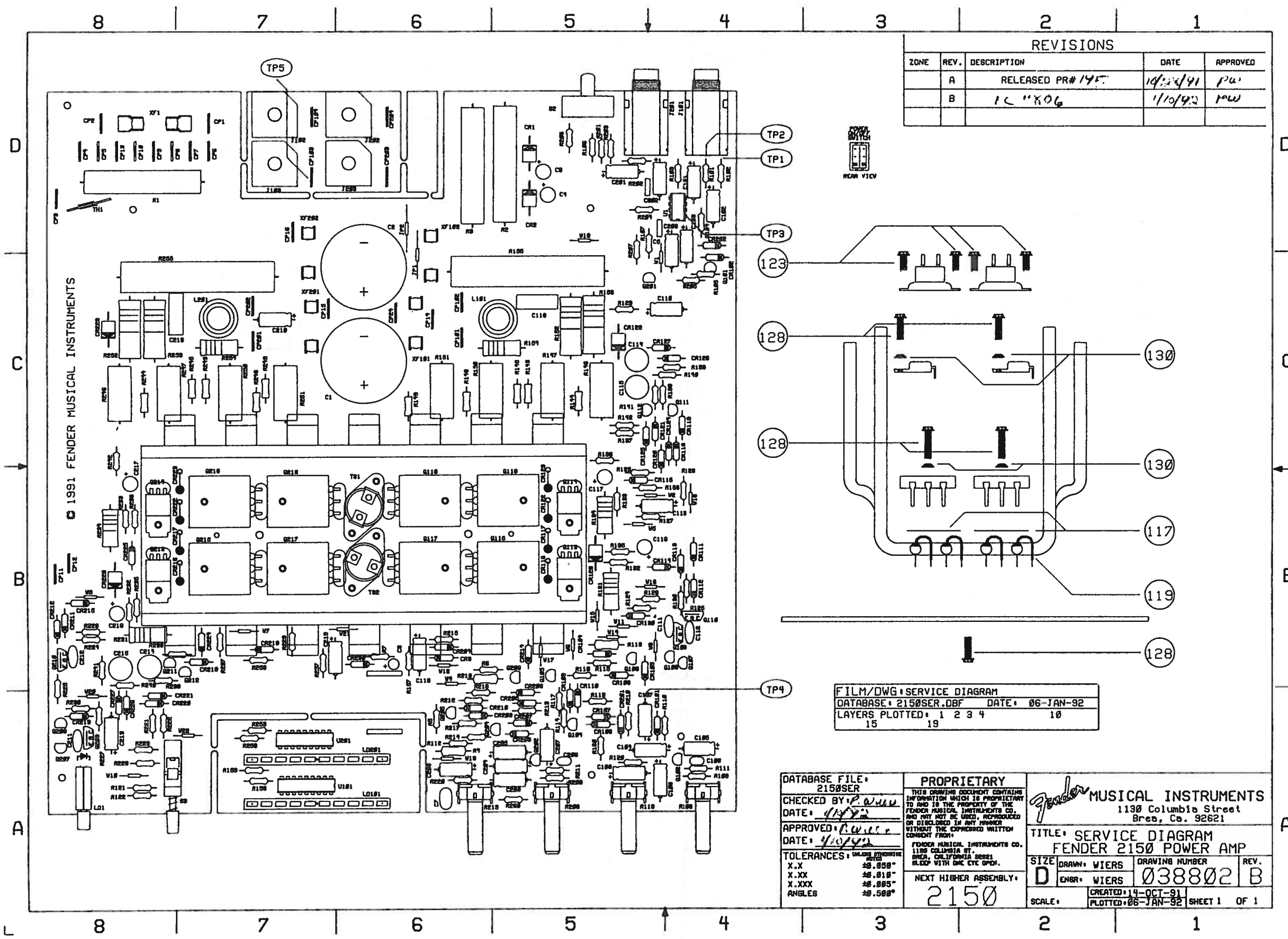
1. ALL RESISTORS 1/4W, ± 5%.
2. ALL CAPACITORS 63 VOLT MINIMUM.
3. DC VOLTAGES READ TO GROUND WITH A D.V.M., AND NO SIGNAL APPLIED, AT RATED LINE VOLTAGE.
4. AC VOLTAGE READINGS TAKEN WITH A DVM TO GROUND UNDER THE FOLLOWING CONDITIONS:
 1 KHZ INPUT.
 4 OHM DUMMY LOADS CONNECTED TO J102 AND J202.
 ALL CONTROLS SET TO 12 O'CLOCK.
 EMULATION SWITCH IN "NORMAL" POSITION.
5. 1XX INSTANCES ARE EXCLUSIVELY CHANNEL 1.
 2XX (NOT SHOWN) ARE EXCLUSIVELY CHANNEL 2.
6. LAST INSTANCE: C119, R160, CR130, U101, L0101, Q118, T1, FA1, F102.
7. ALL DIODES 1N4448
8. REFERENCE DESIGNATORS IN "()" INDICATE PRECEDENCE FOR CHANNEL TWO.
9. INSTANCES NOT USED: CR103, CR203, Q103, Q203

100V	120V	220V	240V	
CP4	CP4	CP4	CP4	RED
CP6	CP6	CP6	CP6	RED
CP5	CP5	CP8	CP8	YEL
S10-5	CP10	S10-5	CP10	RED
CP8	CP8	CP10	S10-5	RED
TS1	TS1	TS1	TS1	RED
CP2	CP2	CP2	CP2	RED

DATABASE FILE: 2150S.DBF CHECKED BY: DATE: APPROVED: DATE: TOLERANCES: X.X .050" X.XX .010" X.XXX .005" ANGLES .050"	PROPRIETARY THIS DRAWING CONTAINS INFORMATION WHICH IS PROPRIETARY TO AND IN THE POSSESSION OF THE FENDER MUSICAL INSTRUMENTS CO. AND NOT BE USED, REPRODUCED, OR DISCLOSED IN ANY MANNER WITHOUT THE WRITTEN CONSENT FROM: FENDER MUSICAL INSTRUMENTS CO. 1180 COLUMBIA ST. ANAHEIM, CALIFORNIA 92816	MUSICAL INSTRUMENTS 1180 Columbia Street Brea, Ca. 92621 TITLE: SCHEMATIC 2150 EMULATION POWER AMP SIZE: D DRAWING NUMBER: 038799 REV: E NEXT HIGHER ASSEMBLY: 2150 SCALE: 1:1 CREATED: 11-SEP-91 PLOTTED: 16-MAR-92 SHEET 1 OF 1
--	--	---

FENDER 2150

PART NO. 038800000 SHEET 1 OF 1



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	RELEASED PR# 195	10/24/91	pu
	B	IC "K06	1/10/92	pu

FILM/DWG: SERVICE DIAGRAM
 DATABASE: 2150SER.DBF DATE: 06-JAN-92
 LAYERS PLOTTED: 1 2 3 4 10 15 19

DATABASE FILE:
2150SER
 CHECKED BY: P. Wiers
 DATE: 1/17/92
 APPROVED: P. Wiers
 DATE: 1/10/92
 TOLERANCES: UNLESS OTHERWISE NOTED
 X.X .050"
 X.XX .010"
 X.XXX .005"
 ANGLES .0500"

PROPRIETARY
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 FENDER MUSICAL INSTRUMENTS CO.
 1130 COLUMBIA ST.
 BREA, CALIFORNIA 92621
 NEXT HIGHER ASSEMBLY:
 2150

Fender MUSICAL INSTRUMENTS
 1130 Columbia Street
 Brea, Ca. 92621
 TITLE: SERVICE DIAGRAM
 FENDER 2150 POWER AMP
 SIZE: DRAWN: WIERS DRAWING NUMBER: 038802 REV. B
 ENGR: WIERS
 CREATED: 14-OCT-91
 PLOTTED: 06-JAN-92 SHEET 1 OF 1

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FENDER 2235 PROFESSIONAL POWER AMPLIFIER (0702235000)

PARTS LIST

POWER AMPLIFIER P.C. BOARD ASSEMBLY, [025397]:

REFERENCE #	PART #	MFG. #	DESCRIPTION	QTY
Q33,34,41,42, 45,46,53,54	025744	MJ15022	Transistor NPN PWR TO-3	8
Q36,37,38,39, 48,49,50,51	025745	MJ15023	Transistor PNP PWR TO-3	8
Q47,52	026579	MJE15030	Transistor NPN PWR TO-220	2
Q35,40	026580	MJE15031	Transistor PNP PWR TO-220	2
Q43,44	025748	2SC1567	Transistor NPN PWR TO-126	2
Q22,24	025749	2SC2238B	Transistor NPN PWR TO-220	2
Q20,26	025750	2SA968B	Transistor PNP PWR TO-220	2
Q3-8,21,23, 56-59	025751	2SC2362K	Transistor NPN SIG TO-92	12
Q2,9,11-16, 19,25,29,30, 55,60	025752	2SA1016K	Transistor PNP SIG TO-92	14
Q31,32	025753	MPSA43	Transistor NPN SIG TO-92	2
Q1,10,17,28	016739	2N4401	Transistor NPN SIG TO-92	4
Q18,27	016742	2N4403	Transistor PNP SIG TO-92	2
U1	013528	RC4558	IC, Dual Op. Amp., 8-Pin	1
CB-1	025820	2455R	Thermal Sens. 60 Deg. C.	1
D1,2,5-9,12, 13,15,17-20, 22,24,25,28- 36,45,46,49, 50,53,54	006260	1N4448	Diode, Signal, Low Leak.	32
D14,16,21,23, 47,52	025821	FDH400	Diode, H.V. Switching	6
D41-44	064089	1N4003	Diode, Power, 1A, 200PIV	4
D48,51	025788	1N5235B	Diode, Zener, 6.8V	2
D3,4,10,11, 26,27	009165	1N4744	Diode, Zener, 15V	6
D55,58	025789	-----	Diode, Red LED	2
D56,57,59	025792	-----	Diode, Green LED	3
SBS 1,2	025793	MBS4992	Switch, Silicon Bi-lateral	2
TRIAC 1,2	025794	MAC15-4	Triac	2
TH 1,2	025801	-----	Posistor	2
R129-132,134 -137,156-159, 161-164	026574	-----	Resistor CF 2.2ohm 1/4W 5%	16
R173,174	025818	-----	Resistor CF 4.7ohm 1/4W 5%	2
R28,60,145,148	025069	-----	Resistor CF 1.0meg 1/4W 5%	4
R17,22,43-46	016896	-----	Resistor MF 10 ohm 1/4W 1%	6
R109,110,122, 123	026572	-----	Resistor CC 22ohm 1/4W 5%	4
R133,160	016934	-----	Resistor MF 100ohm 1/4W 1%	2
R79,88	016942	-----	Resistor MF 383ohm 1/4W 1%	2

POWER AMPLIFIER P.C. BOARD ASSEMBLY, [025397], (CONTINUED):

REFERENCE #	PART #	MFG. #	DESCRIPTION	QTY
R104,111,121, 128	025806	-----	Resistor MF 422ohm 1/4W 1%	4
R15,18,21,24, 35,53	025855	-----	Resistor MF 619ohm 1/4W 1%	6
R77,78,89,90, 167,168	016946	-----	Resistor MF 825ohm 1/4W 1%	6
R1,2,9,10,81, 86	015718	-----	Resistor MF 1.0K 1/4W 1%	6
R34,36,38,39, 49,50,52,54, 66,67,70,71, 92,93,102,103	025810	-----	Resistor MF 2.49K 1/4W 1%	16
R30,58	025811	-----	Resistor MF 5.11K 1/4W 1%	2
R33,55,140,153	016961	-----	Resistor MF 6.81K 1/4W 1%	4
R3,4,7,8,82,85, 138,139,142, 151,154,155	015582	-----	Resistor MF 10K 1/4W 1%	12
R5,6,11,12	025812	-----	Resistor MF 11K 1/4W 1%	4
R37,40,48,51	016967	-----	Resistor MF 17.8K 1/4W 1%	4
R13,14,25,26	025857	-----	Resistor MF 22.6ohm 1/4W 1%	4
R16,23	025816	-----	Resistor MF 20K 1/4W 1%	2
R63,64,73,74, 83,84,169-172	016968	-----	Resistor MF 21.5K 1/4W 1%	10
R27,29,32,56, 59,61,76,91, 146,147	017372	-----	Resistor MF 51.1K 1/4W 1%	10
R62,79,144,149	015585	-----	Resistor MF 100K 1/4W 1%	4
R65,68,69,72	025859	-----	Resistor MF 75ohm 1/4W 1%	4
R141,152	025755	-----	Resistor CF 30K 1/2W 5%	2
R41,42,47	025756	-----	Resistor MF 20K 1/2W 1%	3
R31,57	025760	-----	Resistor FPMF 4.3K 1W 5%	2
R143,150	025761	-----	Resistor FPMF 5.1K 1W 5%	2
R19,20	025762	-----	Resistor FPMF 3.9K 3.5W 5%	2
R116	025763	-----	Resistor FPMF 6.2K 3.5W 5%	1
R94,95,100,101	025769	-----	Resistor FPMF 12ohm 5W 5%	4
R105-108,112- 115,117-120, 124-127	020740	-----	Resistor WW 0.22ohm 5W 5%	16
R96-99	025768	-----	Resistor WW 4ohm 5W 5%	4
R80,87	025770	-----	Control, trim 500ohm	2
R165,166	025771	-----	Control, 10K aud. 41 detent	2
C23,30	025853	-----	Capacitor disc 150pf	2
C24,29	069724	-----	Capacitor disc 100pf	2
C3,6,10,12	025852	-----	Capacitor disc 82pf	4
C47-50	026058	-----	Capacitor mica 820pf	4
C1,2,7,8,14,21	025777	-----	Capacitor disc 470pf	6
C4,5,38,41	026801	-----	Capacitor disc 0.01uf	4
C43,46	010941	-----	Capacitor mylar 0.033uf 600V	2
C25-28,37,42, 51,54-56	019973	-----	Capacitor mylar 0.1uf 100V	10
C31,36,52,53	019985	-----	Capacitor mylar 0.47uf 100V	4

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POWER AMPLIFIER P.C. BOARD ASSEMBLY, [025397], (CONTINUED):

REFERENCE #	PART #	MFG. #	DESCRIPTION	QTY
C32,35	025779	-----	Capacitor elec. 2.2uf 50V	2
C9,11,15,20	015124	-----	Capacitor elec. 10uf 16V	4
C13,17,18,22	025784	-----	Capacitor elec. 47uf 35V	4
C16,19	025785	-----	Capacitor elec. 470uf 16V	2
C33,34,44,45	025786	-----	Capacitor elec. 6800uf 80V	4
C39,40	025787	-----	Capacitor elec. 100uf 16V NP	2
IS1-36	025805	-----	Sleeve insulating T0-3/220	36
S1	025800	-----	Switch 4PDT push/push	1
J1,3	025797	-----	Phone jack input	2
L1,2	025795	-----	Inductor output 2uH	2

A.C. INTERCONNECT P.C. BOARD ASSEMBLY, [025845]:

R301	016862	-----	Resistor WW 400ohm 10W	1
C301	025739	-----	Capacitor MF 0.01uf 250V	1
J301-317	025802	-----	Terminals faston .250	17

CHASSIS MOUNTED COMPONENTS:

T201 domestic	025728	-----	Power transformer	1
T201 export	025903	-----	Power transformer	1
D201	013594	-----	Rectifier bridge diode	1
CB201 domestic	025731	-----	Circuit breaker 15A on/off	1
CB201 export	025897	-----	Circuit breaker 8A on/off	1
BP1,2	015688	-----	Binding post dual 5-way	2
XLRM1,2 option	025862	-----	XLR connector male	2
XLRF1,2 option	025863	-----	XLR connector female	2
FAN	012473	-----	FAN	1

MISCELLANEOUS:

-----	025711	-----	Chassis ass'y	1
-----	025709	-----	Chassis front	1
-----	025710	-----	Inner front panel	1
-----	025712	-----	Chassis top	1
-----	025713	-----	Chassis bottom	1
-----	025715	-----	Plate baffle	1
-----	025714	-----	Handle 2235	2
-----	025725	-----	Guard fan	1
-----	026035	-----	Knob black	2
-----	025707	-----	Heatsink T0-3 multi	1
-----	025796	-----	Heatsink T0-220	4
-----	026606	-----	Power cord ass'y w/terms	1
-----	025907	-----	Bushing strain relief	1
-----	025719	-----	Foam filter	1