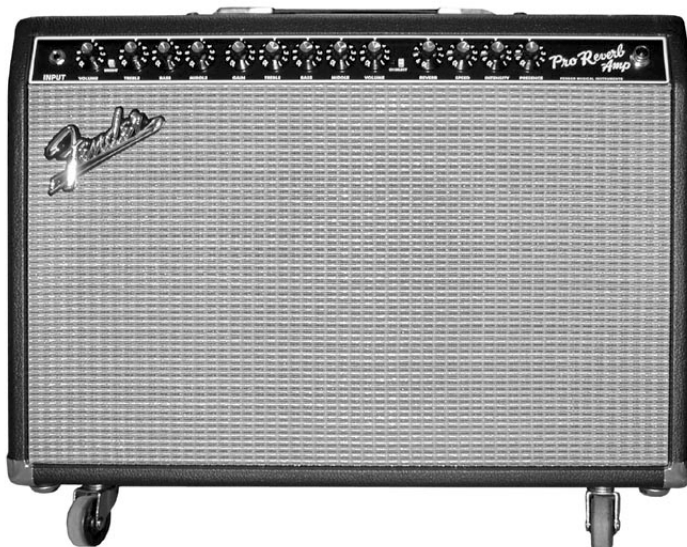


# PRO-REVERB AMP

p/n 021-5500-000 (120V)

# SERVICE MANUAL

NZO



## CONTENTS:

- Notices
- Specifications
- Service notes
- Parts lists:
  - PCB assy-main
  - PCB assy rear panel
  - Chassis assy
  - Cabinet assy
  - End item
- Drawings

PRO-REVERB AMP  
(This is the model name for warranty claims)

# SERVICE MANUAL

JUNE 2001

## IMPORTANT NOTICE:

The information contained herein is CONFIDENTIAL and PROPRIETARY to Fender Musical Instruments Corp. It is disclosed solely for use by qualified technicians for purposes of equipment maintenance and service. It is not to be disclosed to others without the expressed permission of Fender Musical Instruments Co. All specifications subject to change without notice.

For warranty repair service, only Fender specified part numbers are to be used. It is recommended they also be used for post-warranty maintenance and repair.

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

A coded naming convention is used in the description of certain parts. The codes and what they mean are as follows:

### 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

PRO-REVERB AMP

# SPECIFICATIONS

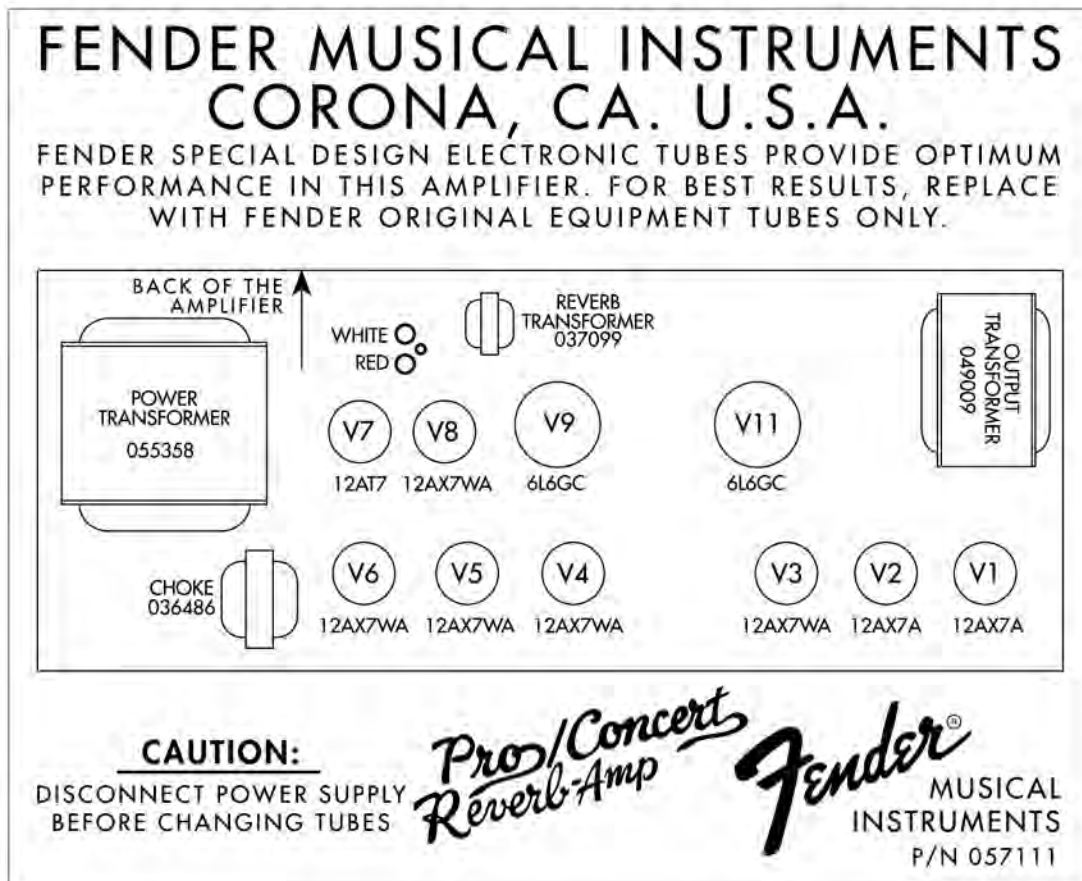
<b>Product Release No.:</b>	PR 448 <i>(This is not a model number)</i>
<b>Part Number:</b>	120V Version : 21-5500 240V Aus : 21-5530 230V UK : 21-5540 230V Eur : 21-5560 100V : 21-5570
<b>Power Requirements:</b>	325W
<b>Power Amp Section:</b> <b>Power Output:</b>	50 Watts RMS (High Output) 12.5 W RMS (Low Output) 1kHz sine wave into 8Ω @ <5% THD (Presence @ "1")
<b>Input impedance:</b>	1MΩ
<b>Tubes:</b>	Two 6L6GC (P/N 053980) Two 12AX7A (P/N 023572) Five 12AX7WA (P/N 013341) One 12AT7 (P/N 023531)
<b>Fuses:</b>	<b>F200:</b> F3A 250V (100V, 120V units) T2A 250V (230V, 240V units) <b>F201:</b> T5A 250V (Internal filament fuse on 230V, 240V units) <b>F1 &amp; F2:</b> T100mA 250V (all units)
<b>Speaker Complement:</b>	One 8 Ω Jensen C12N 12" (P/N 057065)
<b>Footswitch:</b>	Four-Button: Channel, Effects, Reverb, Tremolo (P/N 057025)
<b>Dimensions:</b>	Height: 17 3/8" (44.3 cm) Width: 25 3/8" (64.7 cm) Depth: 12 27/32" (32.8 cm)
<b>Weight:</b>	75 lbs. (34 kg)

*Product specifications are subject to change without notice*

# PRO-REVERB AMP

## SERVICE NOTES

1. **CHASSIS REMOVAL** is accomplished by first removing eight (8) screws from the top, and one (1) screw from each side of the cabinet; disconnect reverb and speaker wires, then slide the chassis toward the rear.
2. **TUBE CHART:**



3. **OUTPUT TUBE BIAS & BALANCE ADJUSTMENTS**
  - A. Warm up the amp for 2 minutes with STAND BY OFF and the OUTPUT POWER set to FULL. Set SPEED and INTENSITY TO "1" and make sure TREMOLO is OFF. Flip the STAND BY switch to the UP position.
  - B. Remove the bias controls cover box.
  - C. Set BIAS: with a DC voltmeter measure VDC between GND and V9 test points. Adjust BIAS for .03 VDC (30mVDC).
  - D. Set BALANCE: measure the VDC between V9 and V11 test points. Adjust BALANCE for zero (0) VDC.
  - E. Replace the bias controls cover box.

# PRO-REVERB AMP

## PARTS LIST

NOTE: SHADED ITEMS ARE FOR REFERENCE ONLY

### PRINTED CIRCUIT BOARD ASSEMBLY – MAIN

QTY	PART #	DESCRIPTION	REFERENCE DESIGNATION
REF	0057014000	SVC. DIA., COMB. PRO-TUBE AMPS	
1	0057015000	PCB FAB MAIN, PRO-TUBE AMPS	
2	0038690001	CAP AE AX 1.0uF 100V 20%	C17 C37
4	0025960001	CAP AE AX 22uF 16V 20%	C8 C29 C34 C111
3	0024819000	CAP AE AX 22uF 500V +50%-10%	C203 C206-207
1	0038693001	CAP AE AX 47uF 16V 20%	C1
4	0024820000	CAP AE AX 47uF 350V 20%	C201-202 C204-205
2	0028494000	CAP AE RDL 1000uF 35V 20%	C212-213
2	0031040000	CAP AE RDL 100uF 100V 20%	C208-209
2	0028482003	CAP AE RDL 220uF 50V 20%	C210-211
2	0036954003	CAP AE RDL 22uF 63V 20%	C33 C216
1	0020883002	CAP CD 10pF 1000V 10%	C31
2	0051408003	CAP CD 47pF 500V 5%	C7 C101
1	0069724002	CAP CD 100pF 1000V 10%	C105
1	0051405003	CAP CD 120pF 500V 5%	C19
2	0020917002	CAP CD 250pF 1000V 10%	C4 C22
1	0051458003	CAP CD 470pF 500V 10%	C32
3	0025951002	CAP CD 750pF 1000V 10%	C14 C16 C18
1	0025995002	CAP CD 8200pF 1000V 20%	C200
2	0034788003	CAP CD .1uF 50V 20% .15" cut	C224-225
3	0027272003	CAP MPF .047uF 63V 10%	C218 C220 C223
1	0027280003	CAP MPF .15uF 63V 10%	C217
2	0027281003	CAP MPF .22uF 63V 10%	C215 C221
2	0027286003	CAP MPF .47uF 63V 10%	C219 C222
1	0033477003	CAP MPF .68uF 63V 10%	C11
3	0024823000	CAP MPF RDL .01uF 400V 10%	C23 C103 C110
6	0024833000	CAP MPF RDL .022uF 400V 10%	C3 C9 C12 C21 C108-109
10	0024845000	CAP MPF RDL .047uF 400V 10%	C2 C6 C10 C13 C15 C24-25 C30 C116-117
3	0024853000	CAP MPF RDL .1uF 250V 10%	C100 C102 C104
7	0024854000	CAP MPF RDL .1uF 400V 10%	C5 C20 C36 C112-115
2	0024855000	CAP MPF RDL .1uF 630V 10%	C106-107
1	0024876000	CAP MPF RDL .68uF 250V 10%	C27
1	0037040002	CAP PFF .0033uF 400V 10%	C35
1	0037600000	CONTROL SNAPIN 100k B TAPER	R73 <b>Reverb</b>
2	0041507000	CONTROL SNAPIN 1M 10A TAPER	R12 R37 <b>Ch1volume Ch2volume</b>
3	0047540000	CONTROL SNAPIN 250k 15A TAPER	R10 R17 R35 <b>Ch1bass Gain Ch2bass</b>
2	0037597000	CONTROL SNAPIN 250k 30A TAPER	R9 R34 <b>Ch1treble Ch2treble</b>
1	0041511000	CONTROL SNAPIN 250k B DUAL	R148 <b>Intensity</b>
1	0047031000	CONTROL SNAPIN 25k 30C TAPER	R109 <b>Presence</b>
2	0041510000	CONTROL SNAPIN 25k B TAPER	R11 R36 <b>Ch1mid Ch2mid</b>
1	0037601000	CONTROL SNAPIN 3M 10C TAPER	R141 <b>Speed</b>
16	0026730001	DIODE 1N4006 800V 1A	D100-101 D200-207 D210-215

**PRO-REVERB AMP  
PRINTED CIRCUIT BOARD ASSEMBLY – MAIN (cont)**

<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>REFERENCE DESIGNATION</b>
18	0006260001	DIODE 1N4448 SIGNAL	D1 D4 D6-7 D114 D223 D226 D228-229 D231-237 D239-240
2	0029690001	DIODE HV 3kV 200mA	D102-103
1	0031017001	DIODE ZEN 1N5223B 2.7V 5% LL	D224
3	0031635001	DIODE ZEN 1N5240B 10V 5% LL	D5 D227 D238
6	0031019001	DIODE ZEN 1N5245B 15V 5% LL	D2-3 D8-9 D112-113
2	0028119060	DIODE ZEN 1N5353B 16V 5W 5%	D216-217
2	0041811060	DIODE ZEN 1N5368B 47V 5W 5%	D208-209
6	0026000001	FSTN TAB MALE PCB MT .187X.032	P2-5 P216-217
20	0025802000	FSTN TAB MALE .250x.032 PCB MT	P100-101 P200-215 P218-219
4	0031611000	IC OP-AMP DUAL PC4560	U1-4
2	0041261000	IC VOLT REF LM4040DIZ-10.0	U5-6
1	0037117000	JACK PCB MONO CLOSED CKT	<b>J1 Input</b>
1	0025933000	JACK PHONO DUAL PC MTG	<b>J2 Reverb</b>
1	0028039000	LED RED 5x5mm SLB-55VR3	D225
1	0030754000	LED RED T-1 3mm DIFFUSED	D230
1	0036178000	SPACER LED .5x.1 BRN	@D230
3	0036613000	RELAY DPDT DIP 24 VOLT 8.3mA	K1-3
9	0025116001	RES CF 1/2W 5% 100k LL	R3 R13 R20 R31 R52 R61 R71 R77 R111
2	0026368001	RES CF 1/2W 5% 100ohm LL	R211-212
1	0025117001	RES CF 1/2W 5% 220k LL	R202
1	0025113001	RES CF 1/2W 5% 10k LL	R104
1	0025834001	RES CF 1/2W 5% 150k LL	R146
2	0036957001	RES CF 1/2W 5% 470k LL	R26 R144
1	0025115001	RES CF 1/2W 5% 82k LL	R110
12	0024969001	RES CF 1/4W 5% 1.5k LL	R4 R14 R21 R43 R51 R62 R68-69 R114-115 R215 R238
8	0024997001	RES CF 1/4W 5% 100k LL	R8 R147 R208 R220 R226 R230 R243 R249
11	0024981001	RES CF 1/4W 5% 10k LL	R19 R25 R30 R41 R50 R60 R143 R207 R231-233
1	0024937001	RES CF 1/4W 5% 10ohm LL	R250
1	0024999001	RES CF 1/4W 5% 150k LL	R100
5	0024985001	RES CF 1/4W 5% 15k LL	R101 R155 R224 R229 R248
1	0024955001	RES CF 1/4W 5% 180ohm LL	R227
1	0024986001	RES CF 1/4W 5% 18k LL	R27
1	0024965001	RES CF 1/4W 5% 1k LL	R81
15	0025069001	RES CF 1/4W 5% 1M LL	R1 R6 R15 R18 R38 R40 R46 R49 R63 R78 R82 R103 R106 R142 R153
8	0025059001	RES CF 1/4W 5% 220k LL	R5 R16 R24 R53 R67 R75 R112-113
2	0024987001	RES CF 1/4W 5% 22k LL	R39 R79
1	0025077001	RES CF 1/4W 5% 3.3M LL	R76
4	0024989001	RES CF 1/4W 5% 33k LL	R2 R33 R45 R102
2	0024977001	RES CF 1/4W 5% 4.7k LL	R107 R145
1	0025079001	RES CF 1/4W 5% 4.7M LL	R70
12	0025065001	RES CF 1/4W 5% 470k LL	R7 R23 R28-29 R64-65 R74 R214 R223 R234 R236 R246
1	0024961001	RES CF 1/4W 5% 470ohm LL	R105
3	0024993001	RES CF 1/4W 5% 47k LL	R22 R42 R44
1	0024962001	RES CF 1/4W 5% 560ohm LL	R237
2	0028948001	RES CF 1/4W 5% 6.2k LL	R80 R235
4	0024979001	RES CF 1/4W 5% 6.8k LL	R154 R225 R228 R247
2	0025068001	RES CF 1/4W 5% 820k LL	R222 R245
2	0024964001	RES CF 1/4W 5% 820ohm LL	R32 R72
2	0029613001	RES CF 1/4W 5% 91k LL	R108 R140

**PRO-REVERB AMP  
PRINTED CIRCUIT BOARD ASSEMBLY – MAIN (cont)**

<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>REFERENCE DESIGNATION</b>
4	0027354001	RES FILM 1W 5% 220k LL	R200-201 R203-204
2	0016979001	RES MF 1/4W 1% 215k LL	R217 R240
2	0016971001	RES MF 1/4W 1% 33.2k LL	R219 R242
2	0017191001	RES MF 1/4W 1% 36.5k LL	R221 R244
4	0017372001	RES MF 1/4W 1% 51.1k LL	R216 R218 R239 R241
1	0057221000	RES MOX FP 1W 5% 2.2k	R66
1	0057222000	RES MOX FP 2W 5% 10k	R205
1	0041268001	RES MOX 2W 5% 10k LL	R206
2	0041256000	RES WW 5W 10% 470ohm	R118-119
2	0029047000	RES WW BT 7W 10% 270ohm	R209-210
2	0028091000	SWITCH PUSH SLFLK	S1-2 <b>Bright ChSelect</b>
2	0048451000	BUTTON PUSH OFF WHITE	@S1-2
1	0028503000	THERMISTOR 10 ohm 5A C60-11	RT1
2	0014689003	XSTR N-CH JFET J111 TO-92	Q2-3
3	0041465003	XSTR N-CH JFET J113 TO-92	Q1 Q5 Q102
2	0016739003	XSTR NPN 2N4401 TO-92	Q4 Q200
1	0016742003	XSTR PNP 2N4403 TO-92	Q201
8	0051442000	SOCKET TUBE 9 PIN PCB MOUNT	@V1-8
2	0057238000	TUBE SOCKET 8 PIN PCB MOUNT	@V9 V11
1	0049976000	SWITCH TOGGLE DPST DC W/NUTS	S203 <b>OutputPower</b>
6	0016440000	STNDOFF RND AL 6-32x1x1/4	@V9 V11 V12 (V12 hardware for PCB mtg)
6	0039367000	SCRW M6-32X3/8 PHP SS INTLWSHR	@V9 V11 V12 (V12 hardware for PCB mtg)
4	9904101500	SCRW M 6-32x3/8 PHPS BLX ITLW	@V9 V11
2	0026459000	WASHER FLAT 6x3/8 ZI	@ V12 (V12 hardware for PCB mtg)
1	0037805000	CABLE RIBBON 6 CKT 2-1/4"	PW1

**PRINTED CIRCUIT BOARD ASSEMBLY – REAR PANEL**

<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>REFERENCE DESIGNATION</b>
REF	0057014000	SVC. DIA., COMB. PRO-TUBE AMPS	
1	0057017000	PCB FAB REAR PANEL, PRO-TUBE AMPS	
2	0036954003	CAP AE RDL 22uF 63V 20%	C118-119
1	0027286003	CAP MPF .47uF 63V 10%	C214
1	0024823000	CAP MPF RDL .01uF 400V 10%	C26
1	0024853000	CAP MPF RDL .1uF 250V 10%	C28
2	0047540000	CONTROL SNAPIN 250k 15A TAPER	R47 R58 <b>Send Return</b>
2	0026133000	CONTROL TRIM 25k LIN	R149-150 <b>Balance Bias</b>
3	0026730001	DIODE 1N4006 800V 1A	D104-106
2	0006260001	DIODE 1N4448 SIGNAL	D218-219
1	0031017001	DIODE ZEN 1N5223B 2.7V 5% LL	D221
1	0026000001	FSTN TAB MALE PCB MT .187X.032	P109

**PRO-REVERB AMP  
PRINTED CIRCUIT BOARD ASSEMBLY – REAR PANEL (cont)**

<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>REFERENCE DESIGNATION</b>
11	0025802000	FSTN TAB MALE .250x.032 PCB MT	P102-107 P110-111 P220-222
1	0022546000	FUSE HOLDER PCB MTG UNIVERSAL	F1
1	0022548000	FUSE CARRIER 5mm	@F1
1	0013004000	FUSE TD 20mm X 5mm 250V 100mA	@F1
1	0027413000	HDR .1 CTR 6 CKT SQ PIN	P1
5	0051658000	JACK MONO R/A	J3-6 J10 <b>Send Return Preamp out Pwr amp in Footswitch</b>
3	0026481000	JACK TIP	J7-9 <b>V11 Gnd V9</b>
2	0028039000	LED RED 5x5mm SLB-55VR3	D220 D222
1	0033177000	LED RED/GREEN 5x5mm BI-COLOR	D107
1	0036178000	SPACER LED .5x.1 BRN	@ D107
1	0025941001	RES CF 1/2W 5% 560ohm LL	R123
1	0024997001	RES CF 1/4W 5% 100k LL	R57
4	0024937001	RES CF 1/4W 5% 10ohm LL	R56 R83 R251-252
1	0024965001	RES CF 1/4W 5% 1k LL	R55
1	0025059001	RES CF 1/4W 5% 220k LL	R54
2	0024987001	RES CF 1/4W 5% 22k LL	R122 R127
1	0024961001	RES CF 1/4W 5% 470ohm LL	R124
2	0028153001	RES CF 1/4W 5% 75k LL	R151-152
2	0024980001	RES CF 1/4W 5% 8.2k LL	R48 R59
1	0028029001	RES FILM 1W 5% 1.5k LL	R213
4	0027354001	RES FILM 1W 5% 220k LL	R120-121 R125-126
2	0033095001	RES MOX FP 1W 5% 1ohm LL	R116-117
1	0028091000	SWITCH PUSH SLFLK	S3 <b>FX Loop</b>
1	0048451000	BUTTON PUSH OFF WHITE	@S3
2	0016739003	XSTR NPN 2N4401 TO-92	Q100-101

**CHASSIS ASSEMBLY**

<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>REFERENCE DESIGNATION</b>
2	0028069000	BUSHING SNAP 3/4x1-1/8 WHT	@ PWR XFMR
2	0018022000	BUSHING SNAP 5/16x17/32 BLK	@ CHOKE & REV. XFMR
2	0012560000	BUSHING SNAP 5/8x27/32 BLK	@ OUTPUT XFMR
1	0036486000	CHOKE	
1	0049009000	XFMR OUTPUT PROSONIC	
1	0055358000	XFMR POWER SUNN T50C	
1	0037099000	XFMR REVERB VIBROVERB/65 DLX	REVERB XFMR
2	0036570000	SWITCH TOGGLE DPST W/NUTS	PWR SW, STNDBY
1	0021741000	HOLDER DIAL LITE ASSY PILOT	@ PILOT LIGHT
1	0031625000	NUT HOLDER PILOT LIGHT 1/16-27	@ PILOT LIGHT
1	0032219000	COLLAR-PILOT LIGHT	@ PILOT LIGHT
1	0021642000	PILOT LIGHT #T47	@ PILOT LIGHT
1	0025718000	JEWEL PILOT LITE RED #20	@ PILOT LIGHT
1			
1	0047213000	CONNECTOR AC LINE MALE IEC	IEC PWR JACK
2	0097360000	NUT HEX 4-40 EX LOCK	@ IEC PWR JACK



**PRO-REVERB AMP  
CHASSIS ASSEMBLY (cont)**

<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>REFERENCE DESIGNATION</b>
2	0014172000	SCREW M 4-40 x 1/4 PHP BLX	@ IEC PWR JACK
1	0036702000	FUSE HOLDER 3AG FINGER GRIP	@ LINE FUSE F1 (120V/100V UNITS)
1	0077982000	FUSE QA 1-1/4x1/4" 250V 3A	LINE FUSE F1 (120V/100V UNITS)
REF	0036703000	FUSE HOLDER 5MM FINGER GRIP	@ LINE FUSE F1 (230V/240V UNITS)
REF	0013115000	FUSE TD 20mmx5mm 250v T2A	LINE FUSE F1 (230V/240V UNITS)
REF	0057185000	20mm x 5mm INLINE FUSEHOLDER ASSY	230V & 240V UNITS
1	0021550000	JACK PHONE TIP SHUNT 12A	MAIN SPKR JACK J11
1	0041701000	JACK PHONE TRANSFER 13A	EXT. SPKR JACK J12
15	0024604000	KNOB BLACK W/WHITE STAMP 1-10	@ ALL CONTROLS
1	0057045000	CHASSIS PRO/CONCERT REVERB	
1	0057032000	COVER BOX BIAS CONTROLS PRO-TUBE AMPS	
1	0057046000	PANEL, FRONT PRO REVERB	
1	0057047000	PANEL, REAR PRO/CONCERT REVERB	
2	0023572000	TUBE 7025/12AX7A CHINESE	V1-2
5	0013341000	TUBE 7025/12AX7WA RUSSIAN MADE	V3-6 V8
1	0023531000	TUBE 12AT7 HIGH MU TWIN TRIODE	V7
8	0053893000	TUBE SHIELD SUNN MODEL T	V1-8
2	0053980000	TUBE VACUUM 6L6GC/5881 SVTLNA	V9 V11
2	0020424000	TUBE RING UNIVERSAL (277H-2)	@V9 V11
REF	0057106000	TUBE CAGE PRO-TUBE AMPS	230V ONLY
2	0032806000	SCRW TF 6-32x1/4 PHP BLX	@ COVER BOX
1	0051155000	SCRW SMB #4 x 3/8 PHP BLX	@ REVERB RCA JACKS J2
3	0022293000	WSHR FLAT .473x.750 NI	@ PWR SW, HIGH/LOW SW, STNDBY
2	0031153000	WSHR FLAT 3/8 x .614" NI	@ SPKR JACKS J11 J12
2	0016436000	WSHR LCK INTL 3/8 x .687 x .035 NI	@ SPKR JACKS J11 J12
2	0016352000	NUT HEX 3/8-32 x 3/32 TK NI	@ SPKR JACKS J11 J12
2	9904101500	SCRW M 6-32x3/8 PHPS BLX ITLW	@V12
5	0053480000	WASHER FLAT .442 X.692 NI	@ FX BOARD JACKS
5	0053479000	NUT HEX 7/16 20X1/8 NI	@ FX BOARD JACKS
4	0026501000	SCRW C 1/4-20x1/2" HH BLX	@ PWR XFMR
4	0028272000	NUT KEP 1/4x20 FOJ	@ PWR XFMR
8	0022319000	WSHR FLT 1/4x9/16 NI	@ PWR XFMR
4	0026553000	SCRW M 8-32 x 3/8" PHP BLX	@ OUTPUT XFMR
4	0022004000	NUT KEPS #8-32 ZINC	@ OUTPUT XFMR
6	0038900000	SCRW TF 6-32x1/4 PHP ZI	@ CHASSIS GNDS, CHOKE, REV. XFMR, TUBE CAGE (QTY 10 ON 230V UNITS)
26	0031184000	SCRW M6-32x1/4 PHPS BLX ITLW	@ STANDOFFS
1	0057052000	PCB ASSY PRO/CONCERT REVERB MAIN	MAIN PCB ASSY
1	0057108000	PCB ASSY PRO/CONCERT REVERB REAR PANEL	FX PCB ASSY'S
REF	0047163000	TUBING SHRINK 1" BLACK	@ PWR XFMR PRI. LEADS & V1 V2
REF	0012398000	TUBING, SHRINK 3/16 BLK	@ PILOT LIGHT WIRES

**CABINET ASSEMBLY**

<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>REFERENCE DESIGNATION</b>
4	0026566000	CORNER 2 HOLE w/ TAB NI	
4	0019276000	GLIDE CAB 1.24 X .335 NI	
4	0019275000	INSERT GLIDE CUSHION 1.27 DIA	
4	0056482000	MOUNTING PLATE EL COM	

**PRO-REVERB AMP  
CABINET ASSEMBLY (cont)**

<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>REFERENCE DESIGNATION</b>
1	0027846000	HANDLE 9.25" NO LOGO	
1	0032524000	INSERT HANDLE	
2	0019279000	HANDLE CAP 2 HOLE NICKEL	
16	0027199000	SCRW SMAB 10 X 3/4 PHP NI	
4	0026571000	SCRW SMAB 8x5/8 THP NI	
8	0021972000	NUT T 10-32x3/4 STR 3 PRNG BLX	
4	0022244000	SCRW M10-32 x 1 1/8 OHP NI	
4	0026625000	SCRW WOOD 8x1 FH	
REF	0029086000	VELCRO STRIP HOOK 1.5" wd BLK	
REF	0029085000	VELCRO STRIP LOOP 1.5" wd BLK	
REF	0026570000	TOLEX "BRAVURA BLACK"	
REF	0037788000	CLOTH GRILLE BLACK/SILVER	
REF	0037350000	TAPE ALUM 8"X60YDS	

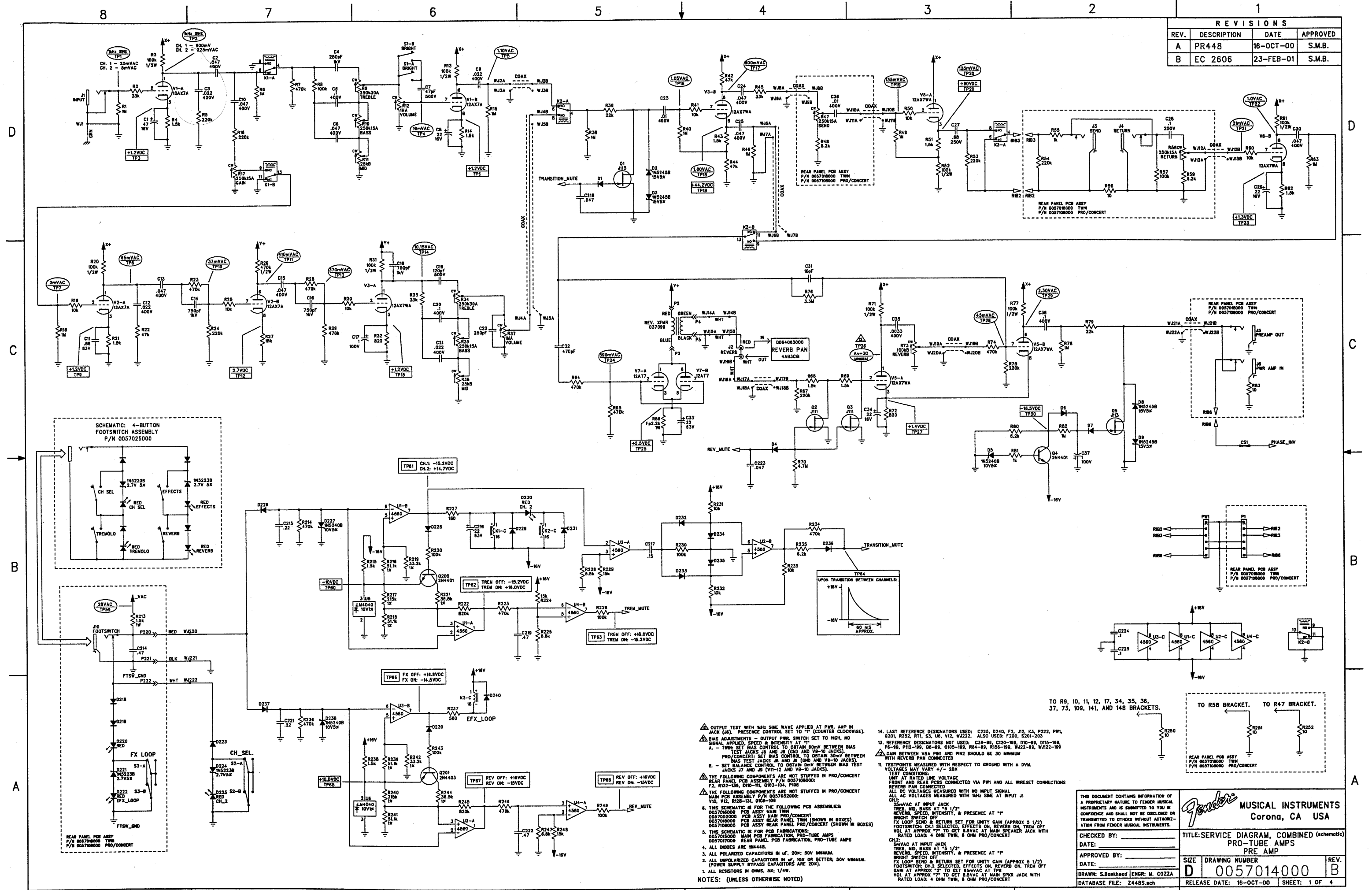
**END ITEM ASSEMBLY**

<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>REFERENCE DESIGNATION</b>
1	0056523000	CABINET ASSY PRO REVERB	
1	0057056000	CHASSIS ASSY. PRO REVERB 120V DOM	
REF	0057223000	CHASSIS ASSY. PRO REVERB 230V UK	
REF	0057058000	CHASSIS ASSY. PRO REVERB 240V AUS	
REF	0057059000	CHASSIS ASSY. PRO REVERB 100V JPN	
1	0047248000	CORD PWR W/IEC CONN DOM	
REF	0047251000	CORD PWR W/IEC CONN 230V EUR	
REF	0047249000	CORD PWR W/IEC CONN 230V UK	
REF	0047250000	CORD PWR W/IEC CONN 240V AUS	
REF	0053997000	CORD PWR W/IEC CONN 100V JPN	
2	0051478000	LEG AMP TILTBACK 14"	@ CAB SIDES
2	0021998000	NUT FLEX LOCK 10-32 W/NYLON IN	@ TILTBACK LEGS
2	0022277000	SCRW M 10-32x1-1/2 OHP NI	@ TILTBACK LEGS
2	0022285000	WSHR SP LOCK 1/4x.493 ZI	@ TILTBACK LEGS
6	0022319000	WSHR FLAT 1/4x9/16 NI	@ TILTBACK LEGS
2	0031344000	SCRW SMA 10x3/4 OHP NI	@ TILTBACK LEG STOPS
2	0024646000	WASHER LEG STOP TN	@ CAB SIDES
1	0057025000	FOOTSWITCH ASSY 4 BUTTON	
1	0064063000	REVERB UNIT 4 SPRING 4AB3C1B	INSIDE REV. BAG
1	0031849000	REVERB BAG	@ CAB BOTTOM
1	0028453000	PAD CARDBOARD REVERB	INSIDE REV. BAG
1	0057065000	SPEAKER 12" 8OHM JENSEN C12N	@ BAFFLE
4	0029828000	SCRW PB 8x3/4 PHP ZI	@ REV. BAG & CABLE CLAMPS
2	0022327000	WSHR FLAT 8x7/16 NI	@ REV. BAG SCREWS
1	9906900590	CLAMP CABLE NYL ADHESIVE	@ REV. UNIT
1	0012582000	CLAMP CABLE NYL SCRW MNT 1/4	@ REV. CABLE
1	0025722000	CABLE REVERB 1100mm	CHASSIS TO REV. UNIT
1	0028044000	CABLE ASSY SPKR RT ANG 33"	@ SPKR TO MAIN SPKR JCK
1	0022491000	CLAMP CABLE NYL SCRW MNT 5/16	@ SPKR CABLE
4	0026577000	SCRW M 10-32x1 PHP BLX	@ SPEAKER
2	0024752000	STRAP CHASSIS 4-1/2" NICKEL	CHASSIS TO CAB

**PRO-REVERB AMP  
END ITEM ASSEMBLY (cont)**

<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>REFERENCE DESIGNATION</b>
4	0057105000	SCRW M 8-32x1-3/16 OHP NI CP	
6	0029527000	WSHR FNSH 8-5/8 FLNGD BLX WX	CHASSIS TO CAB
6	0036199000	SCRW M 8-32x1-3/16 OHP BLX CP	CHASSIS TO CAB
1	0023192000	NAMEPLATE FNDR 65 TWIN (994093)	@ GRILLE FRAME
3	0037985000	SCRW SMA 2x3/8 PHP BLX	@ LOGO
4	0056483000	CASTER SWIVEL EL COM 2-12 CABS	
8	0037215000	WSHR C'SNK #6 NI	@ CAB REAR PANELS
8	0037952000	SCRW SMA #6x1 OHP Ni	@ CAB REAR PANELS
1	0057014000	SVC DIA COMB PRO-TUBE AMPS	
1	0057049000	MANUAL OWNERS PRO/CONCERT REVERB	

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.



- OUTPUT TEST WITH MHz SINE WAVE APPLIED AT PWR. AMP IN JACK (J6). PRESENCE CONTROL SET TO "T" (COUNTER CLOCKWISE). SIGNAL APPLIED: SPEED & INTENSITY AT "H".
- BIAS ADJUSTMENTS - OUTPUT PWR. SWITCH SET TO HIGH, NO SIGNAL APPLIED: SPEED & INTENSITY AT "H".
- A. - TUNE SET BIAS CONTROL TO OBTAIN 80mV BETWEEN BIAS TEST JACKS J8 AND J9 (GND AND V8-10 JACKS). PRO/CONCERT: SET BIAS CONTROL TO OBTAIN 30mV BETWEEN BIAS TEST JACKS J8 AND J9 (GND AND V8-10 JACKS).
- B. - SET BALANCE CONTROL TO OBTAIN 0mV BETWEEN BIAS TEST JACKS J7 AND J8 (V11-12 AND V8-10 JACKS).
- THE FOLLOWING COMPONENTS ARE NOT STUFFED IN PRO/CONCERT REAR PANEL PCB ASSEMBLY P/N 005708000: F2, R133-134, D10-10L, G103-104, P108
- THE FOLLOWING COMPONENTS ARE NOT STUFFED IN PRO/CONCERT MAIN PCB ASSEMBLY P/N 0057052000: V12, V12, R128-131, D108-109
6. THIS SCHEMATIC IS FOR THE FOLLOWING PCB ASSEMBLIES: 005708000 PCB ASSY MAIN TWIN 0057052000 PCB ASSY MAIN PRO/CONCERT 005708000 PCB ASSY REAR PANEL TWIN (SHOWN IN BOXES) 005708000 PCB ASSY REAR PANEL PRO/CONCERT (SHOWN IN BOXES)
5. THIS SCHEMATIC IS FOR PCB FABRICATIONS: 005705000 MAIN PCB FABRICATION, PRO-TUBE AMPS 0057017000 REAR PANEL PCB FABRICATION, PRO-TUBE AMPS
4. ALL DIODES ARE 1N4448.
3. ALL POLARIZED CAPACITORS IN U<sub>1</sub>, 20X; 50V MINIMUM.
2. ALL UNPOLARIZED CAPACITORS IN U<sub>1</sub>, 10X OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20X).
1. ALL RESISTORS IN OHMS, S<sub>X</sub>; 1/4W.
- NOTES: (UNLESS OTHERWISE NOTED)
14. LAST REFERENCE DESIGNATORS USED: C225, D240, F2, J12, K3, P222, PW1, Q201, R152, R11, S3, U6, V12, R222. ALSO USED: Z20, S201-203
13. REFERENCE DESIGNATORS NOT USED: C38-89, C120-109, D10-99, D116-109, P8-99, P112-109, D8-99, O105-109, R84-99, R150-109, WJ22-89, WJ22-109
12. GAIN BETWEEN V5A PWR IN AND PH2 SHOULD BE 30 MINIMUM WITH REVERB PAN CONNECTED.
11. TESTPOINTS MEASURED WITH RESPECT TO GROUND WITH A DVM. VOLTAGES MAY VARY +/- 20X
- TEST CONDITIONS: UNIT AT RATED LINE VOLTAGE FRONT AND REAR PCBs CONNECTED VIA PW1 AND ALL WRESET CONNECTIONS REVERB PAN CONNECTED ALL DC VOLTAGES MEASURED WITH NO INPUT SIGNAL ALL AC VOLTAGES MEASURED WITH MHz SINE AT INPUT J1 CH1: 25mVAC AT INPUT JACK TREE MD, BASS AT "S 1/2" REVERB, SPEED, INTENSITY, & PRESENCE AT "T" BRIGHT SWITCH OFF FX LOOP SEND & RETURN SET FOR UNITY GAIN (APPROX 5 1/2) FOOTSWITCH: CH1 SELECTED, EFFECTS ON, REVERB ON, TREM OFF VOL AT APPROX "7" TO GET 8.0VAC AT MAIN SPEAKER JACK WITH RATED LOAD: 4 OHM TWIN, 8 OHM PRO/CONCERT
- CH1: 25mVAC AT INPUT JACK TREE MD, BASS AT "S 1/2" REVERB, SPEED, INTENSITY, & PRESENCE AT "T" BRIGHT SWITCH OFF FX LOOP SEND & RETURN SET FOR UNITY GAIN (APPROX 5 1/2) FOOTSWITCH: CH1 SELECTED, EFFECTS ON, REVERB ON, TREM OFF VOL AT APPROX "7" TO GET 8.0VAC AT MAIN SPEAKER JACK WITH RATED LOAD: 4 OHM TWIN, 8 OHM PRO/CONCERT

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

CHECKED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

DRAWN: S.Banhead ENGR: M. COZZA

DATABASE FILE: Z4485.sch

**Fender** MUSICAL INSTRUMENTS  
Corona, CA USA

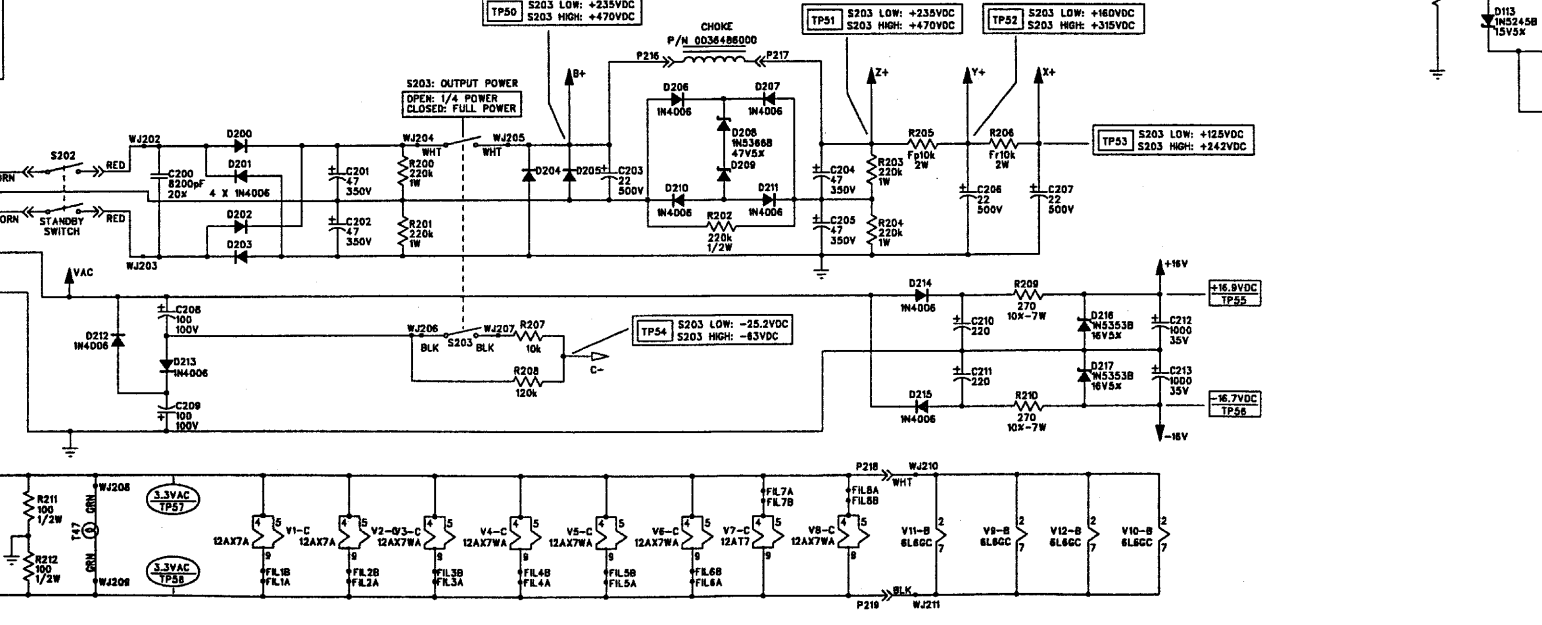
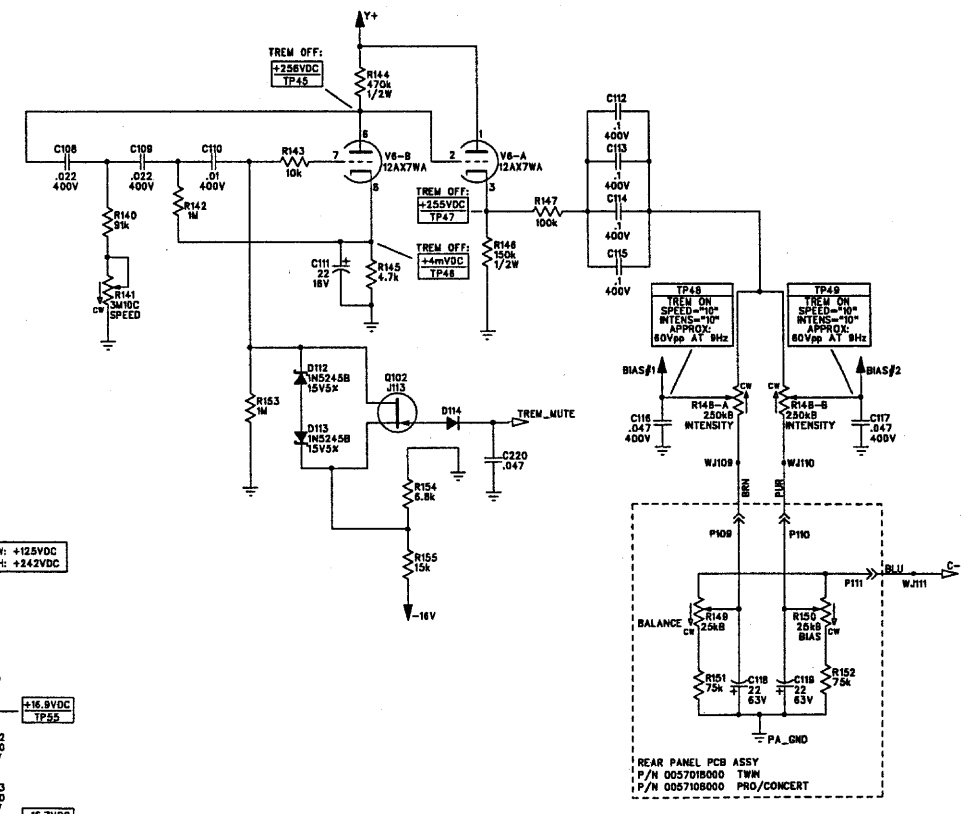
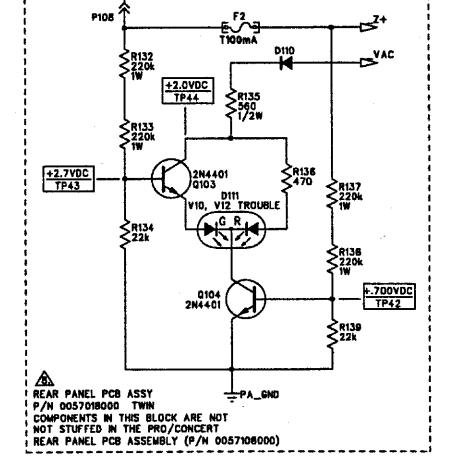
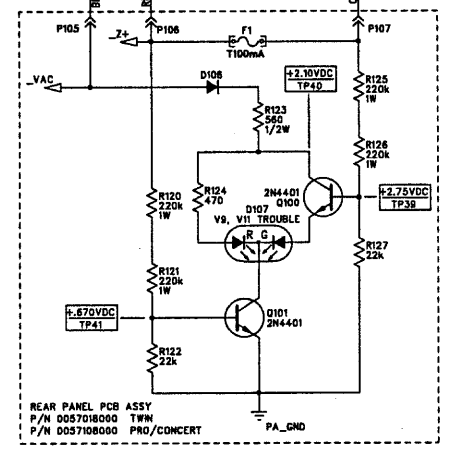
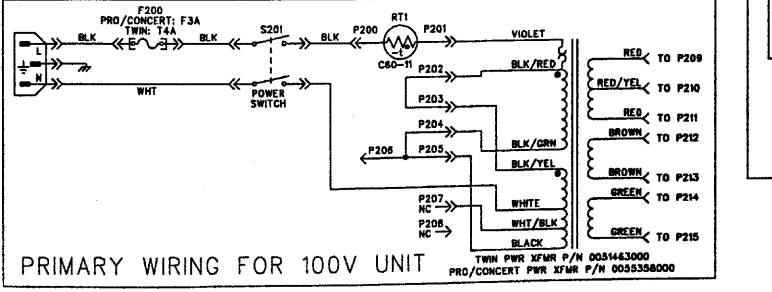
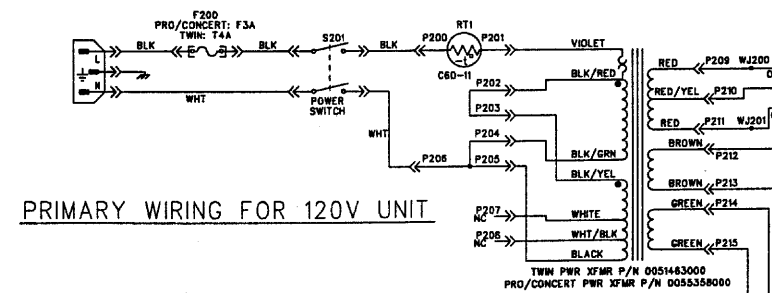
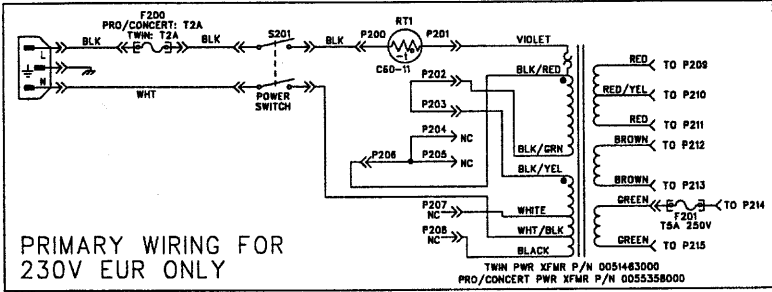
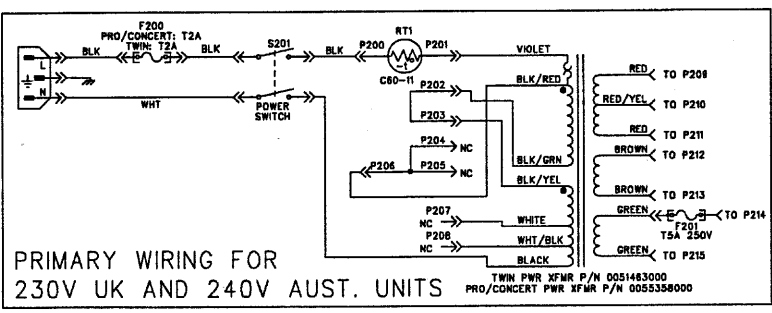
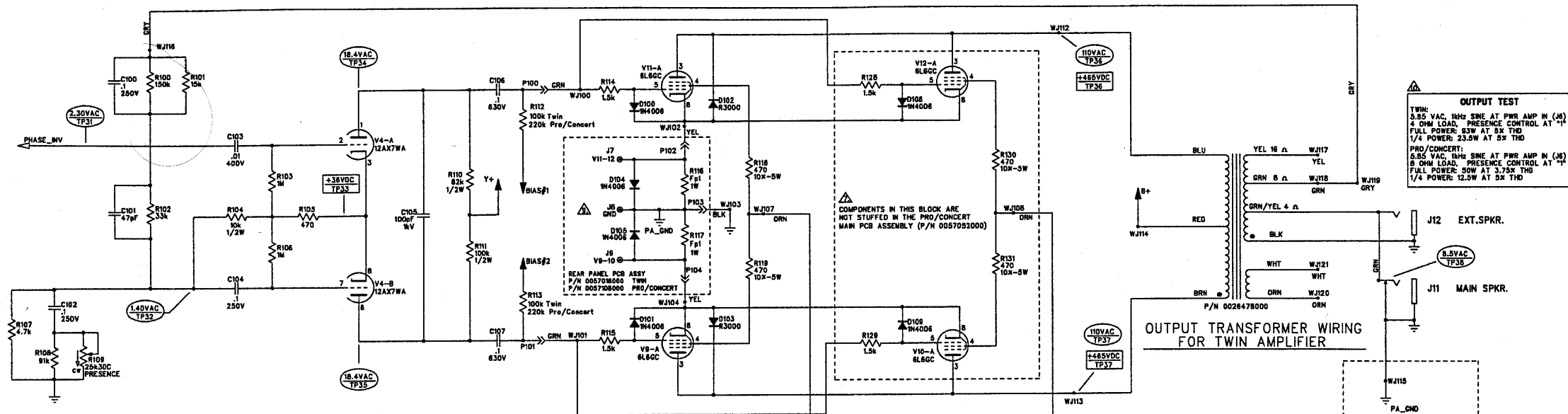
TITLE: SERVICE DIAGRAM, COMBINED (schematic)  
PRO-TUBE AMPS  
REAR AMP

SIZE: DRAWING NUMBER  
**D** 0057014000

REV. **B**

RELEASE DATE: 16-OCT-00 SHEET: 1 OF 4

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.



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 USA

CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

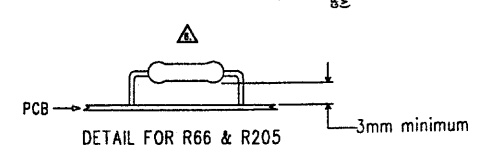
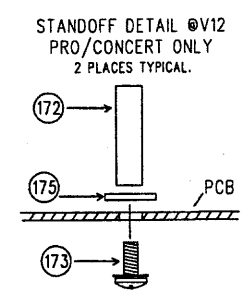
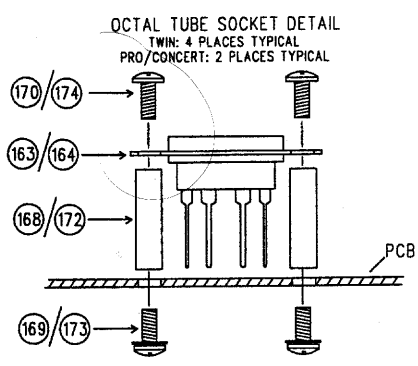
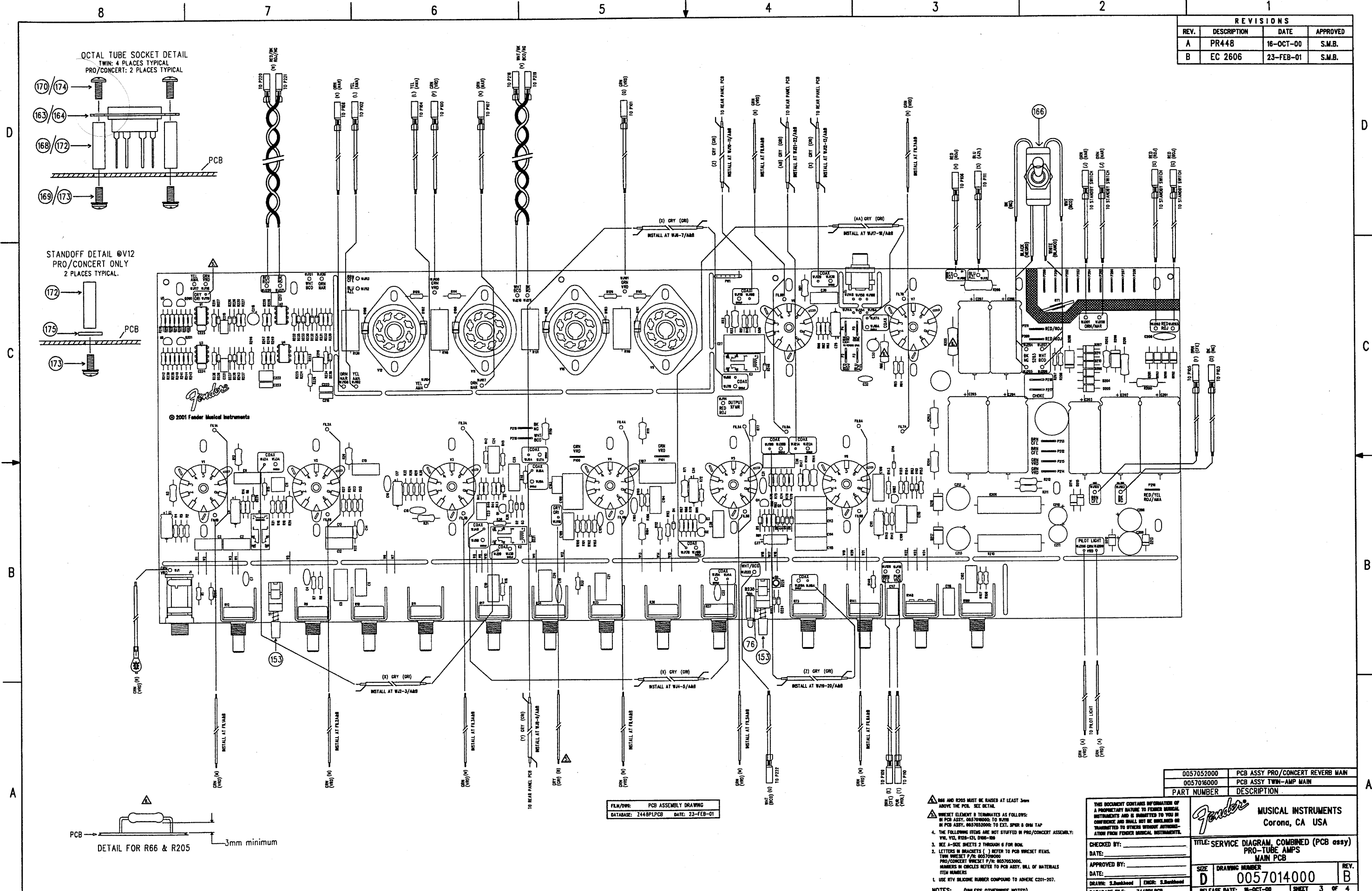
DRAWN: S.Bankhead ENGR: M. COZZA DATABASE FILE: 24485.sch

TITLE: SERVICE DIAGRAM, COMBINED (schematic) PRO-TUBE AMPS POWER AMP

SIZE: D DRAWING NUMBER: 0057014000 REV: B

RELEASE DATE: 16-OCT-00 SHEET: 2 OF 4

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.



FILM/PPR: PCB ASSEMBLY DRAWING  
 DATABASE: Z448PLPCB DATE: 23-FEB-01

- RES AND R205 MUST BE BASED AT LEAST 3mm ABOVE THE PCB. SEE DETAIL.
- WIRESET ELEMENT 8 TERMINATES AS FOLLOWS:  
 IN PCB ASSY, 0057016000; TO EXT. SPIR 8 OHM TAP  
 IN PCB ASSY, 0057052000; TO EXT. SPIR 8 OHM TAP
- THE FOLLOWING ITEMS ARE NOT STUFFED IN PRO/CONCERT ASSEMBLY:  
 V12, V12B, V12C, V12D, V12E
  - SEE A-SIZE SHEETS 2 THROUGH 6 FOR ROL.
  - LETTERS IN BRACKETS ( ) REFER TO PCB WIRESET ITEMS.  
 TWIN WIRESET P/N: 0057050000  
 PRO/CONCERT WIRESET P/N: 0057053000.  
 NUMBERS IN CIRCLES REFER TO PCB ASSY. BILL OF MATERIALS ITEM NUMBERS
  - USE RTV SILICONE RUBBER COMPOUND TO ADHERE C201-207.
- NOTES: (UNLESS OTHERWISE NOTED)

0057052000	PCB ASSY PRO/CONCERT REVERB MAIN
0057016000	PCB ASSY TWIN-AMP MAIN
PART NUMBER	DESCRIPTION

**Fender** MUSICAL INSTRUMENTS  
 Corona, CA USA

CHECKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

APPROVED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

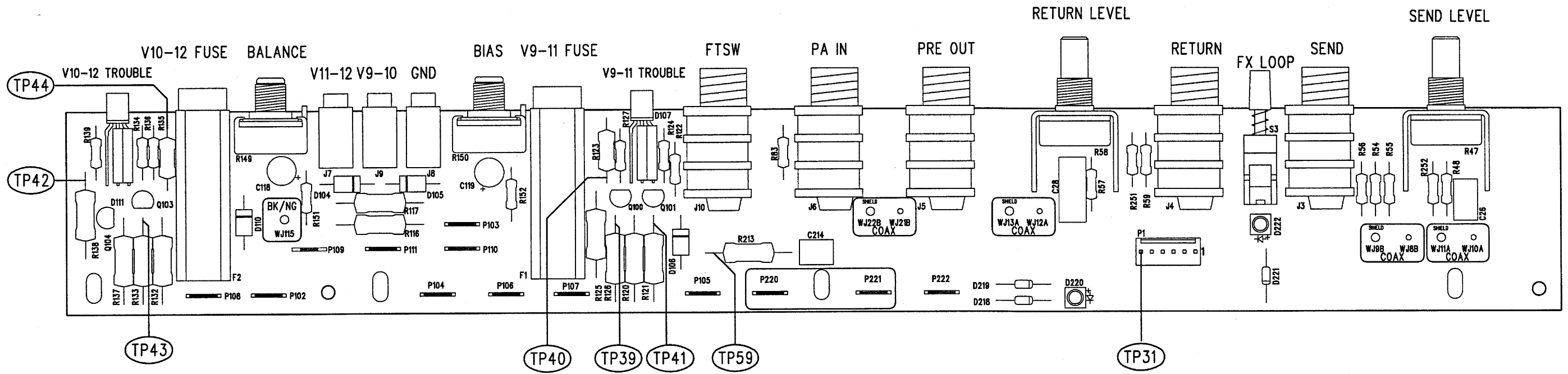
DRAWN: S.Barthelme ENGR: S.Barthelme  
 DATABASE FILE: Z448PLPCB

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)  
 PRO-TUBE AMPS  
 MAIN PCB

SIZE: **D** DRAWING NUMBER: **0057014000** REV: **B**


RELEASE DATE: 16-OCT-00 SHEET 3 OF 4

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.

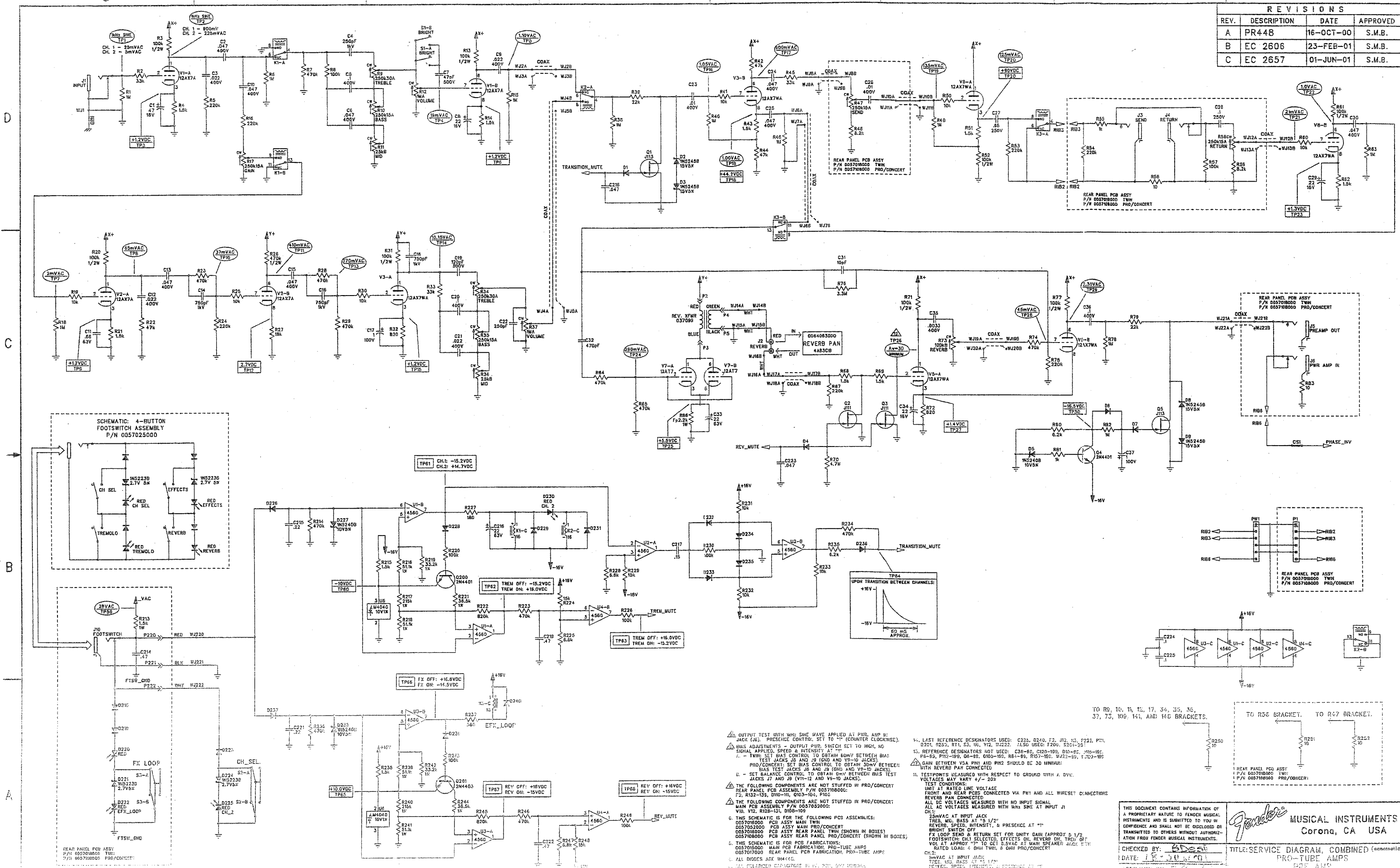


FILM/DWG: SERVICE DIAGRAM  
 DATABASE: Z448P2.PCB DATE: 16-OCT-00

2. SEE PAGE 1 FOR NOTES AND TEST CONDITIONS  
 1. WIRES NOT SHOWN FOR CLARITY  
 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) PRO-TUBE AMPS REAR PANEL PCB	
APPROVED BY: _____ DATE: _____		SIZE <b>B</b>	DRAWING NUMBER 0057014000
DRAWN: S.Bankhead ENGR: S.Bankhead	DATABASE FILE: Z448P2.PCB	RELEASE DATE: 16-OCT-00	REV. <b>B</b> SHEET 4 OF 4

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.



OUTPUT TEST WITH WDS SINE WAVE APPLIED AT PH1 AND PH2 JACK (46). PRESERVE CONTROL SET TO "1" (COUNTER CLOCKWISE).  
 BIAS ADJUSTMENTS - OUTPUT PWR. SWITCH SET TO HIGH, NO SIGNAL APPLIED. SPEED & INTENSITY AT "1".  
 TWIN: SET BIAS CONTROL TO OBTAIN 80mV BETWEEN BIAS TEST JACKS J8 AND J9 (GND AND V8-10 JACKS).  
 PRO/CONCERT: SET BIAS CONTROL TO OBTAIN 30mV BETWEEN BIAS TEST JACKS J8 AND J9 (GND AND V8-10 JACKS).  
 SET BALANCE CONTROL TO OBTAIN 0mV BETWEEN BIAS TEST JACKS J7 AND J8 (V11-12 AND V8-10 JACKS).  
 THE FOLLOWING COMPONENTS ARE NOT STUFFED IN PRO/CONCERT REAR PANEL PCB ASSEMBLY P/N 005708000:  
 F2, R132-135, D10-11, D103-104, PH10  
 THE FOLLOWING COMPONENTS ARE NOT STUFFED IN PRO/CONCERT MAIN PCB ASSEMBLY P/N 005705000:  
 V10, V12, R12B-131, D10B-109  
 THIS SCHEMATIC IS FOR THE FOLLOWING PCB ASSEMBLIES:  
 005708000 PCB ASSY MAIN TWIN  
 005705000 PCB ASSY MAIN PRO/CONCERT  
 005708000 PCB ASSY REAR PANEL TWIN (SHOWN IN BOXES)  
 005708000 PCB ASSY REAR PANEL PRO/CONCERT (SHOWN IN BOXES)  
 THIS SCHEMATIC IS FOR PCB FABRICATIONS:  
 005708000 MAIN PCB FABRICATION PRO-TUBE AMP  
 005705000 REAR PANEL PCB FABRICATION PRO-TUBE AMP  
 ALL DIODES ARE 1N4148.  
 ALL POLARIZED CAPACITORS IN RED, UNLESS SPECIFIED OTHERWISE.  
 UNLESS SPECIFIED OTHERWISE, ALL RESISTORS ARE 1% TOLERANCE.  
 UNLESS SPECIFIED OTHERWISE, ALL CAPACITORS ARE 5% TOLERANCE.  
 UNLESS SPECIFIED OTHERWISE, ALL TUBES ARE 90% EFFICIENCY.  
 UNLESS SPECIFIED OTHERWISE, ALL TRANSISTORS ARE 100% EFFICIENCY.  
 UNLESS SPECIFIED OTHERWISE, ALL VOLTAGES ARE MEASURED WITH NO INPUT SIGNAL.  
 UNLESS SPECIFIED OTHERWISE, ALL AC VOLTAGES MEASURED WITH WDS SINE AT INPUT J1.  
 RATED LOAD: 4 OHM TWIN, 8 OHM PRO/CONCERT.  
 CH2: 25mVAC AT INPUT JACK TREB, MID, BASS AT "5 1/2". REVERSE, SPEED, INTENSITY, & PRESENCE AT "1". FOOTSWITCH: CH1 SELECTED, EFFECTS ON, REVERB ON, TWIN ON. VOLT AT APPROX "7" TO GET 8.5VAC AT MAIN SPEAKER JACK. 25mVAC AT INPUT JACK TREB, MID, BASS AT "5 1/2". REVERSE, SPEED, INTENSITY AT "1". FOOTSWITCH: CH1 SELECTED, EFFECTS ON, REVERB ON, TWIN ON. VOLTAGES MAY VARY +/- 20%.

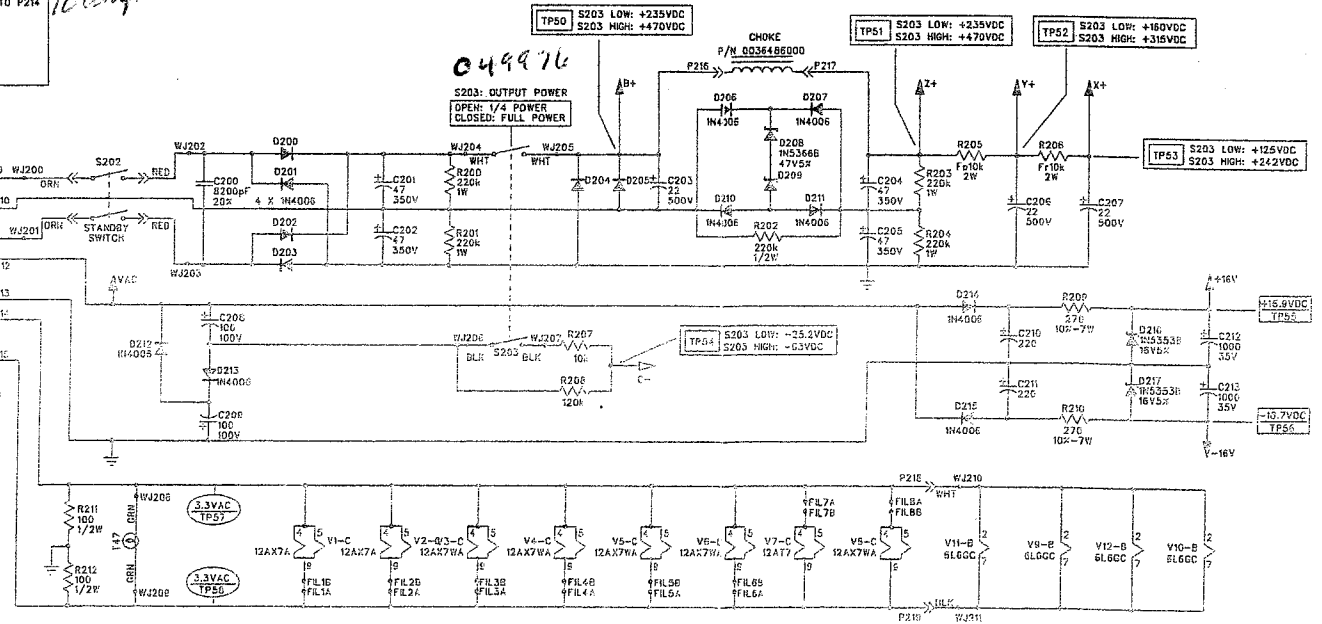
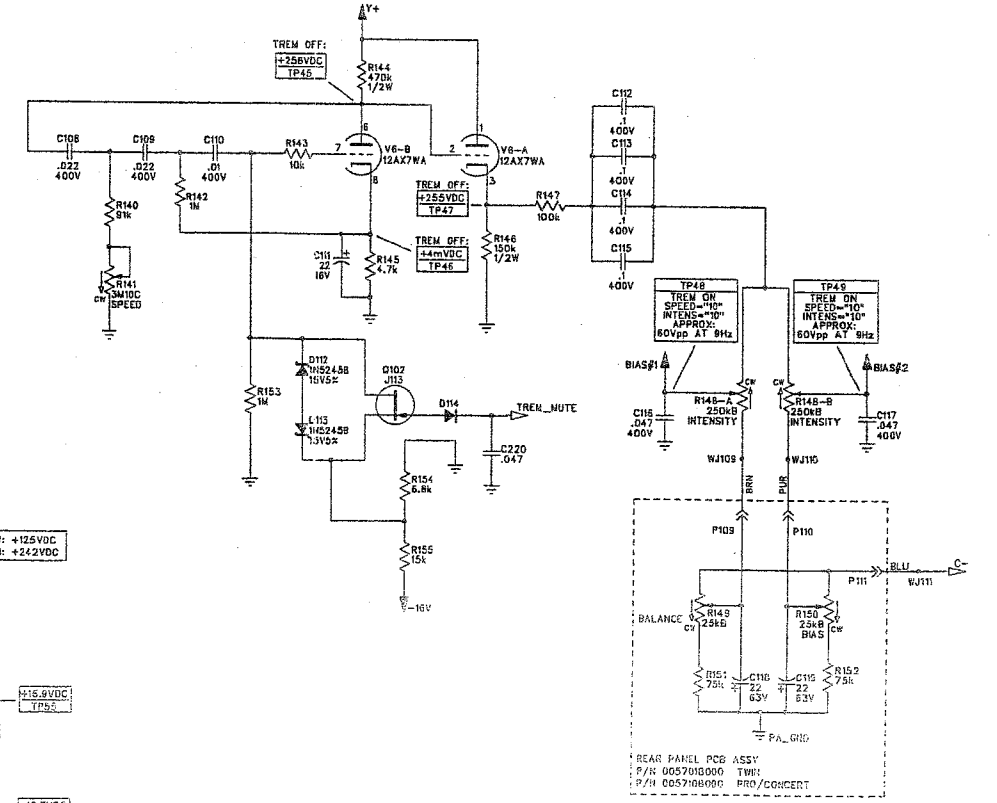
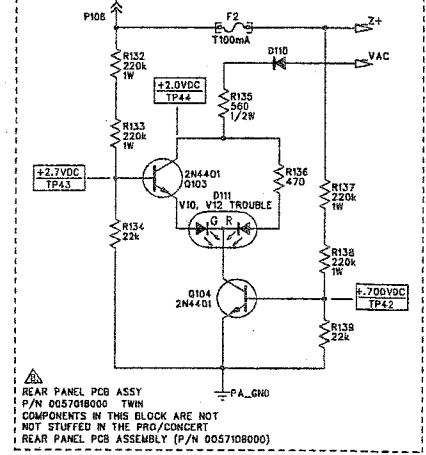
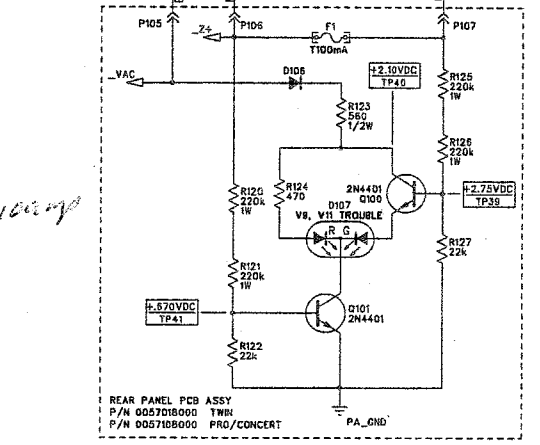
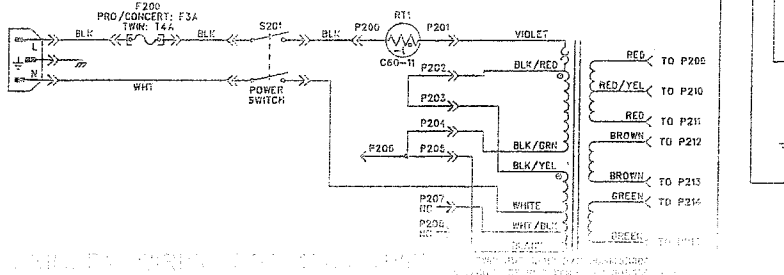
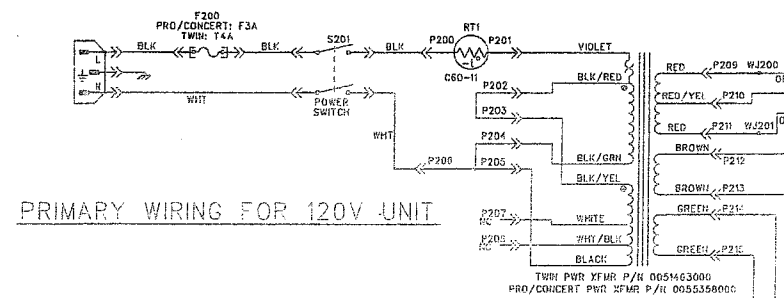
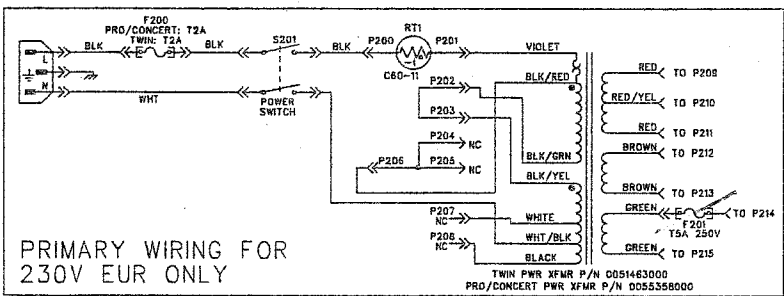
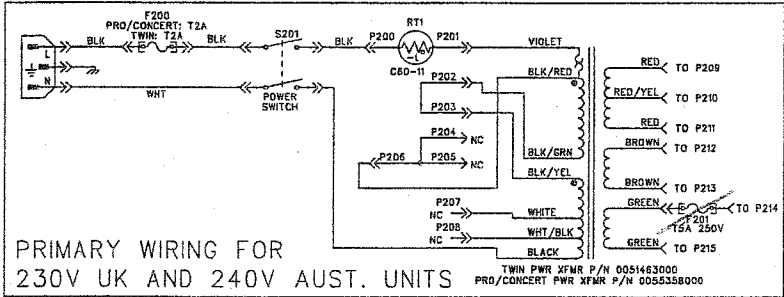
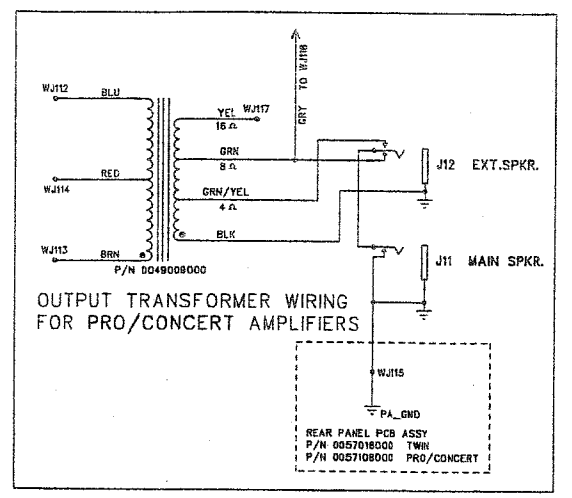
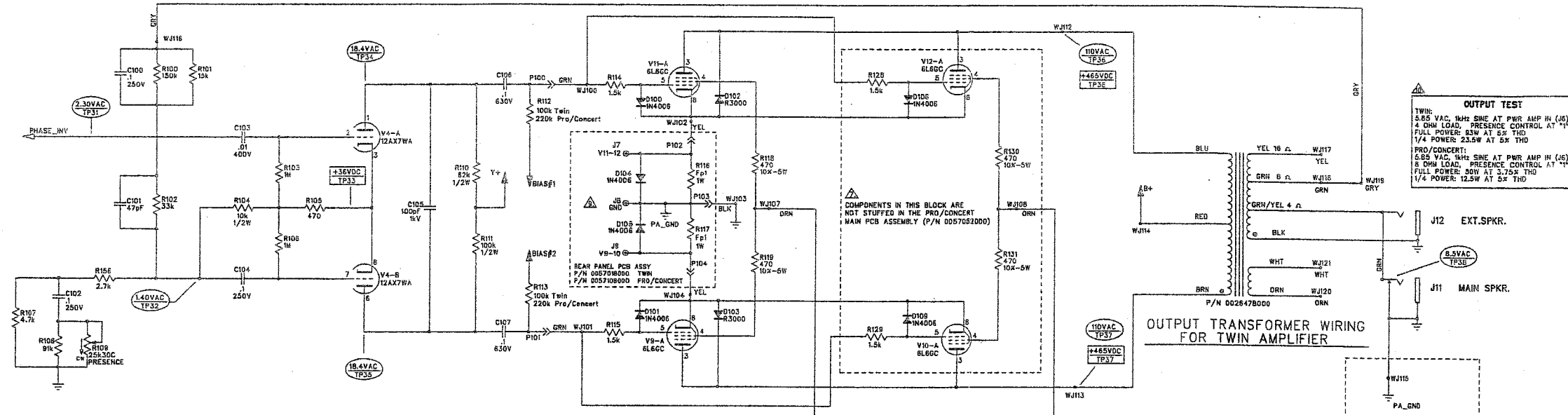
THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFIDENCE AND SHALL NOT BE DISCLOSED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS.

**Fender** MUSICAL INSTRUMENTS  
 Corona, CA USA

CHECKED BY: *[Signature]*  
 DATE: 12-30-01  
 TITLE: SERVICE DIAGRAM, COMBINED (continued)  
 PRO-TUBE AMPS  
 PRE AMP



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.



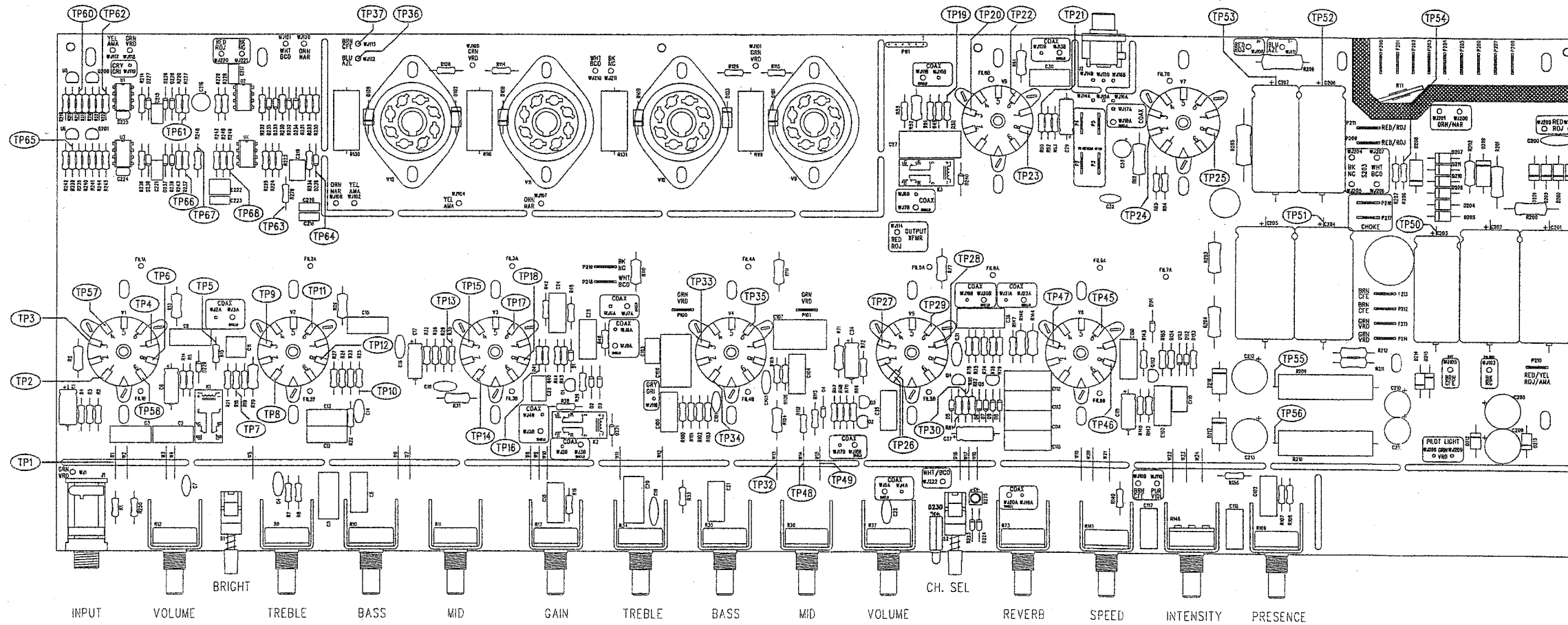
THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS SUBMITTED TO YOU IN CONFIDENCE AND SHALL NOT BE DISCLOSED OR TRANSMITTED TO OTHERS WITHOUT AUTHORIZATION FROM FENDER MUSICAL INSTRUMENTS.

**Fender** MUSICAL INSTRUMENTS  
Corona, CA USA

CHECKED BY: [Signature]  
DATE: 10/16/00

TITLE: SERVICE DIAGRAM, COMBINED (Schematic)  
PRO-TUBE AMPS  
POWER AMP

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.



FILE/DWG: SERVICE DIAGRAM  
 DATABASE: 2448P1PCB DATE: 01-JUN-01

- 5. TP31, TP33-44, TP50 SHOWN ON SHEET 4
- 4. TP38 NOT SHOWN. TP38 AT MAIN OUTPUT JACK J1
- 3. SEE PAGE 1 FOR NOTES AND TEST CONDITIONS
- 2. WIRES NOT SHOWN FOR CLARITY
- 1. PCB SHOWN BEFORE POWER AND BREAKDOWN IN NOTES. UIC'S TO CHANGE

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

**Fender** MUSICAL INSTRUMENTS  
 Corona, CA USA

CHECKED BY: *[Signature]*  
 DATE: 10-20-01

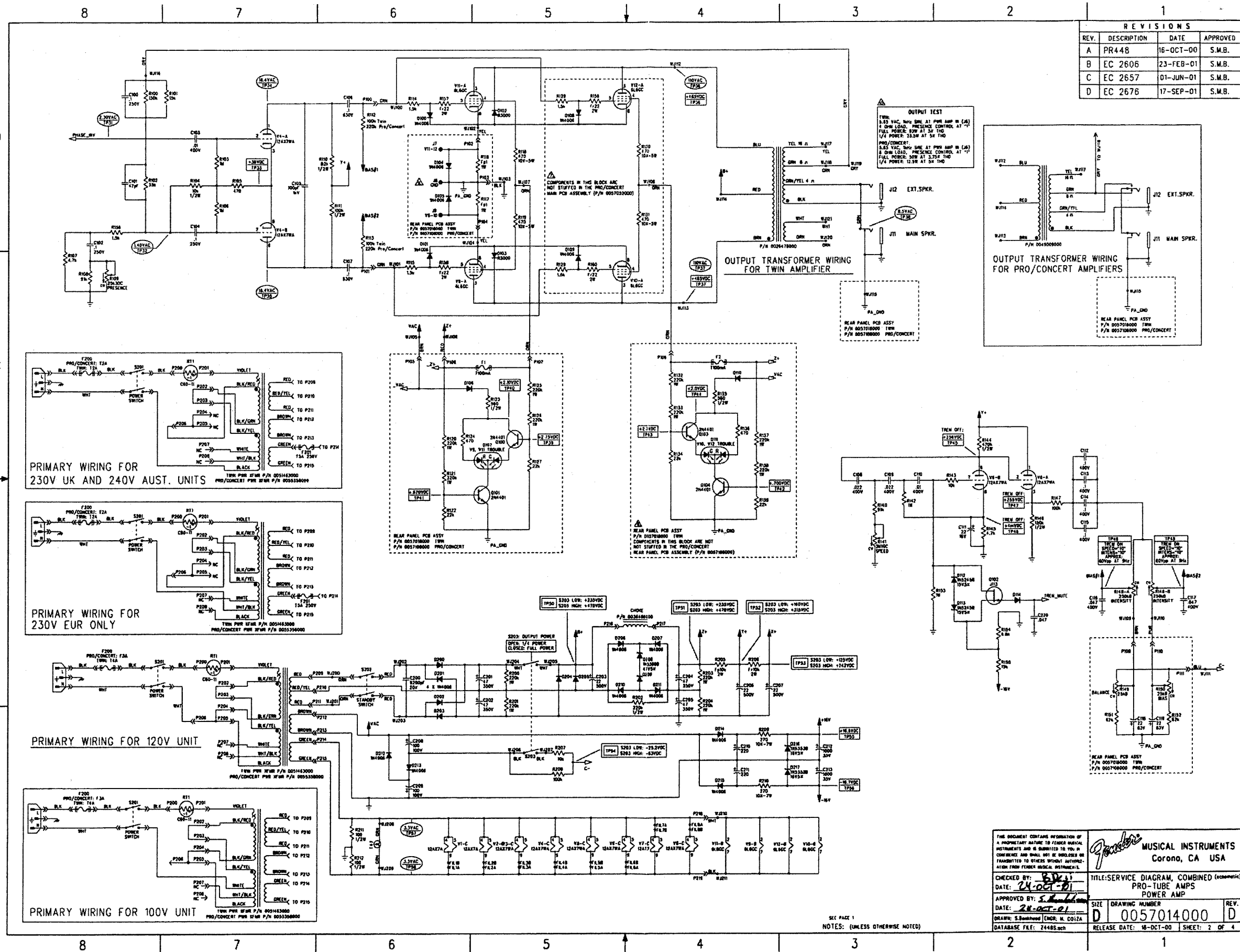
APPROVED BY: *[Signature]*

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)  
 PRO-TUBE AMPS  
 MAIN PCB

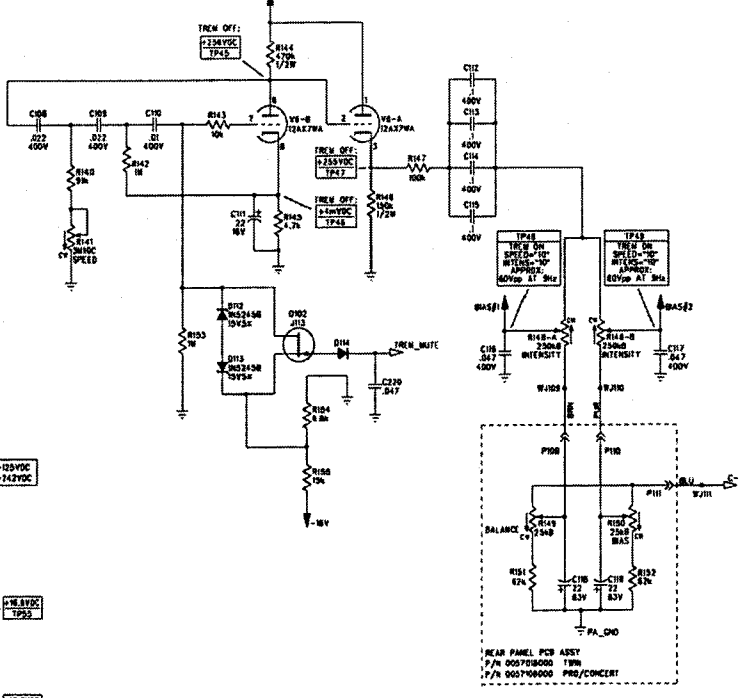
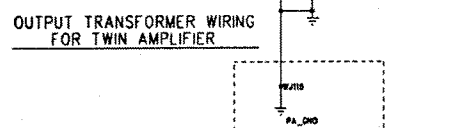
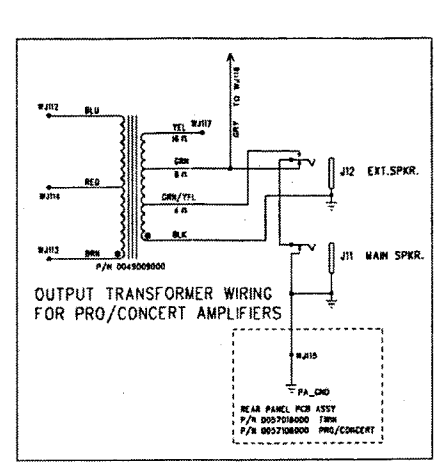
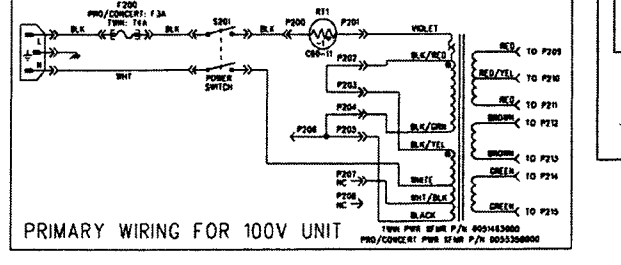
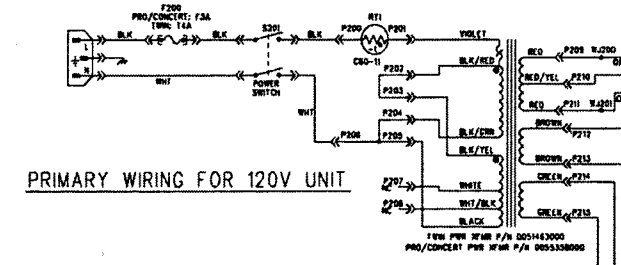
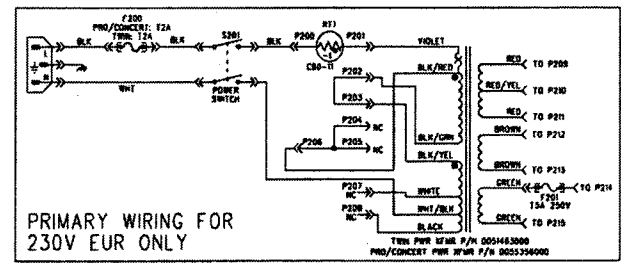
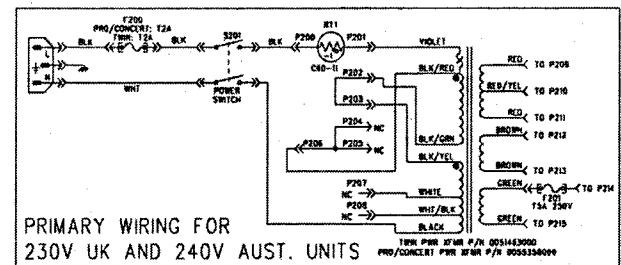
SIZE: GRAPHIC NUMBER: 0057044000  
 REV: 10







REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.
D	EC 2676	17-SEP-01	S.M.B.



**MUSICAL INSTRUMENTS**  
 Corona, CA USA

CHECKED BY: *[Signature]*  
 DATE: 24-OCT-01  
 APPROVED BY: *[Signature]*  
 DATE: 28-OCT-01  
 DRAWN: S.Boothman (ENR. M. COLE)  
 DATABASE FILE: 24485.dwg

TITLE: SERVICE DIAGRAM, COMBINED (recombinant)  
 PRO-TUBE AMPS  
 POWER AMP  
 SIZE: DRAWING NUMBER: **D 0057014000**  
 REV. **D**  
 RELEASE DATE: 16-OCT-00 SHEET: 2 OF 4

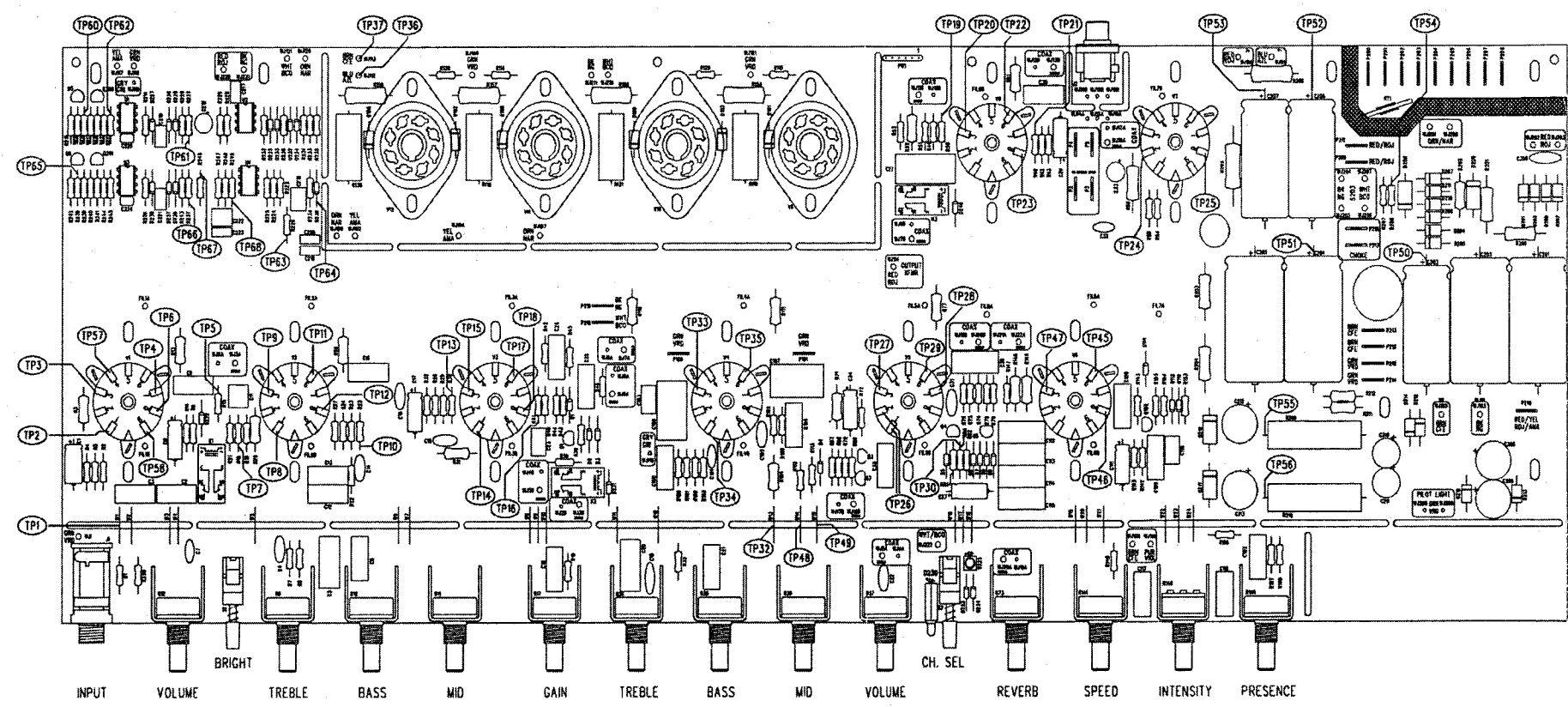
SEC PAGE 1  
 NOTES: (UNLESS OTHERWISE NOTED)

8 7 6 5 4 3 2 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.
D	EC 2676	17-SEP-01	S.M.B.

D  
C  
B  
A

D  
C  
B  
A



FILE/PCB: SERVICE DIAGRAM  
 DATABASE: 244MPLPCB DATE: 17-SEP-01

- 1. TP31, TP38-44, TP58 SHOWN ON SHEET 4
- 2. TP38 NOT SHOWN, TP38 AT MAIN OUTPUT JACK J1
- 3. SEE PAGE 1 FOR NOTES AND TEST CONDITIONS
- 4. WIRES NOT SHOWN FOR CLARITY
- 5. PCB SHOWN BEFORE POWER AMP BREAKAWAY IS INSTALLED IN CHASSIS

NOTES: (UNLESS OTHERWISE NOTED)

THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE TO FENDER MUSICAL INSTRUMENTS AND IS LOANED TO YOU BY COMPANY AND SHALL NOT BE RELEASED OR TRANSMITTED TO OTHERS WITHOUT APPROVAL FROM FENDER MUSICAL INSTRUMENTS.

CHECKED BY: *[Signature]*  
 DATE: 24-OCT-01

APPROVED BY: *[Signature]*  
 DATE: 24-OCT-01

BRAND: S.M.B. | DATE: 17-SEP-01  
 DATABASE FILE: 244MPLPCB

**Fender** MUSICAL INSTRUMENTS  
 Corona, CA USA

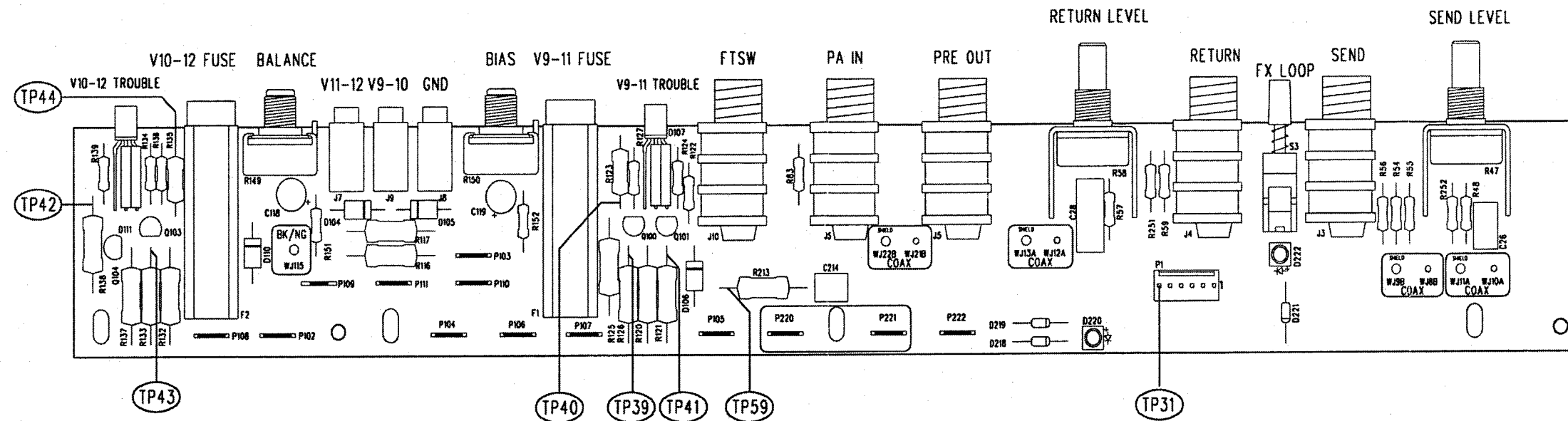
TITLE: SERVICE DIAGRAM, COMBINED (PCBassy)  
 PRO-TUBE AMPS  
 MAIN PCB

SIZE: D DRAWING NUMBER: 0057014000 REV: D

RELEASE DATE: 16-OCT-00 SHEET 3 OF 4


8 7 6 5 4 3 2 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.
D	EC 2676	17-SEP-01	S.M.B.

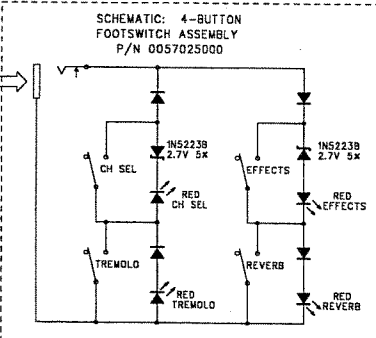
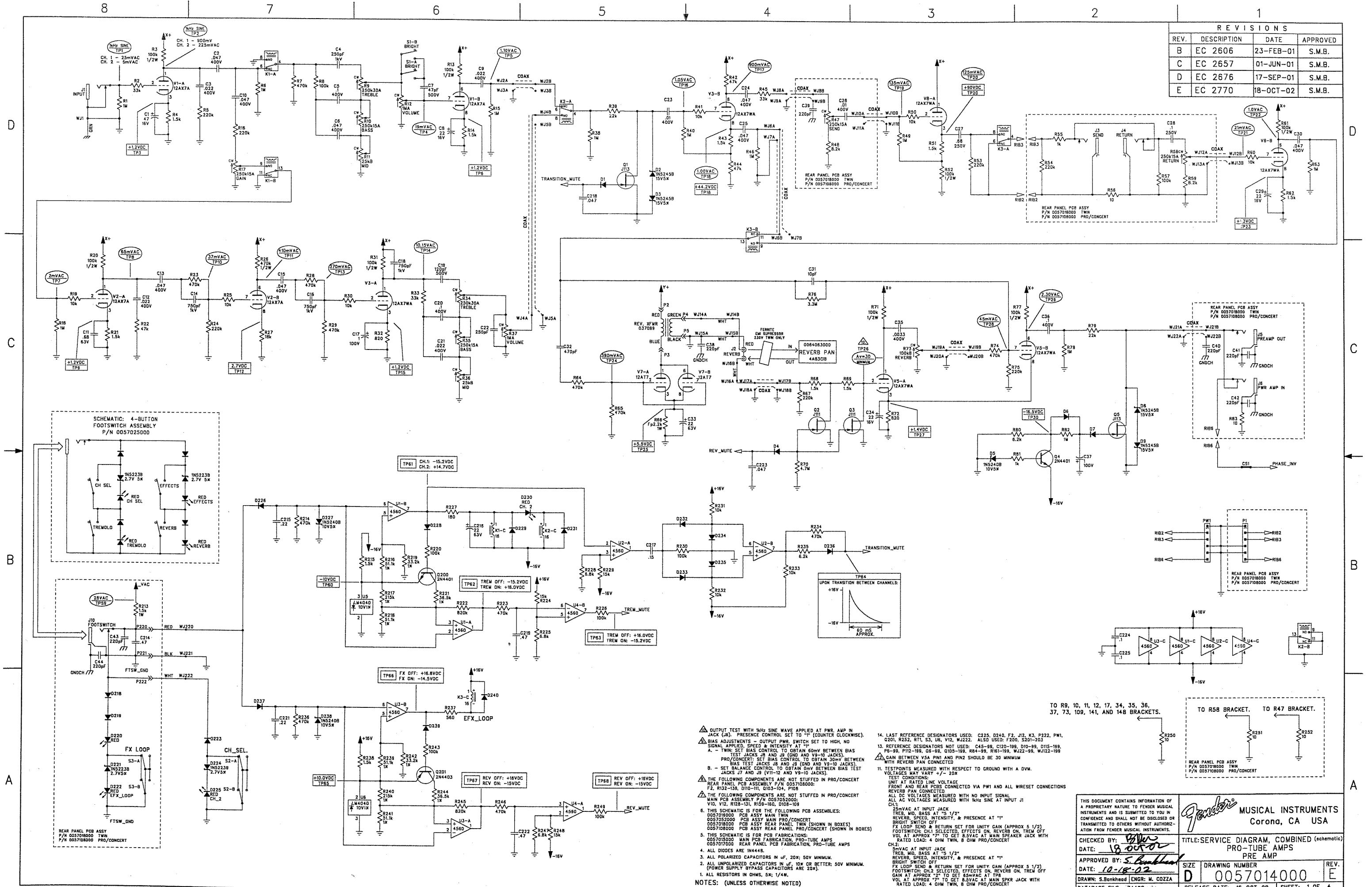


FILM/DWG: SERVICE DIAGRAM  
 DATABASE: Z448P2.PCB DATE: 16-OCT-00

2. SEE PAGE 1 FOR NOTES AND TEST CONDITIONS  
 1. WIRES NOT SHOWN FOR CLARITY  
 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> Corona, CA U.S.A.	
CHECKED BY: <u>blm</u> DATE: <u>24 OCT 01</u>		TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) PRO-TUBE AMPS REAR PANEL PCB	
APPROVED BY: <u>S. Bankhead</u> DATE: <u>24-OCT-01</u>		SIZE <b>B</b>	DRAWING NUMBER <b>0057014000</b>
DRAWN: S.Bankhead ENGR: S.Bankhead DATABASE FILE: Z448P2.PCB		RELEASE DATE: 16-OCT-00	REV. <b>D</b> SHEET 4 OF 4

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.
D	EC 2676	17-SEP-01	S.M.B.
E	EC 2770	18-OCT-02	S.M.B.



**NOTES: (UNLESS OTHERWISE NOTED)**

1. ALL RESISTORS IN OHMS, 5%; 1/4W.
2. ALL UNPOLARIZED CAPACITORS IN  $\mu$ F, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
3. ALL DIODES ARE 1N4448.
4. ALL POLARIZED CAPACITORS IN  $\mu$ F, 20%; 50V MINIMUM.
5. THIS SCHEMATIC IS FOR PCB FABRICATIONS: 005705000 MAIN PCB FABRICATION, PRO-TUBE AMPS 005707000 REAR PANEL PCB FABRICATION, PRO-1 TUBE AMPS
6. THIS SCHEMATIC IS FOR THE FOLLOWING PCB ASSEMBLIES: 005705000 PCB ASSY MAIN TWIN 0057052000 PCB ASSY MAIN PRO/CONCERT 005708000 PCB ASSY REAR PANEL TWIN (SHOWN IN BOXES) 005708000 PCB ASSY REAR PANEL PRO/CONCERT (SHOWN IN BOXES)
7. THIS SCHEMATIC IS FOR PCB FABRICATIONS: 005705000 MAIN PCB FABRICATION, PRO-TUBE AMPS 005707000 REAR PANEL PCB FABRICATION, PRO-1 TUBE AMPS
8. THE FOLLOWING COMPONENTS ARE NOT STUFFED IN PRO/CONCERT REAR PANEL PCB ASSEMBLY P/N 005708000: F2, R132-139, D110-111, Q103-104, P108
9. THE FOLLOWING COMPONENTS ARE NOT STUFFED IN PRO/CONCERT MAIN PCB ASSEMBLY P/N 005705000: V10, V12, R128-131, R159-160, D108-109
10. OUTPUT TEST WITH 1kHz SINE WAVE APPLIED AT PWR AMP IN JACK (J6). PRESENCE CONTROL SET TO "1" (COUNTER CLOCKWISE). SIGNAL APPLIED, SPEED & INTENSITY AT "1".
11. TWIN SET BIAS CONTROL TO OBTAIN 60mV BETWEEN BIAS TEST JACKS J8 AND J9 (GND AND V8-10 JACKS). PRO/CONCERT: SET BIAS CONTROL TO OBTAIN 30mV BETWEEN BIAS TEST JACKS J8 AND J9 (GND AND V8-10 JACKS).
12. SET BALANCE CONTROL TO OBTAIN 0mV BETWEEN BIAS TEST JACKS J7 AND J9 (V11-12 AND V8-10 JACKS).
13. REFERENCE DESIGNATORS NOT USED: C45-99, C120-199, D10-99, D115-199, P6-99, P112-199, Q5-99, Q105-199, R84-99, R161-199, WJ22-99, WJ222-199.
14. LAST REFERENCE DESIGNATORS USED: C225, D240, F2, J2, K3, P222, PW1, Q201, R252, R11, S3, U6, V12, WJ222. ALSO USED: F200, S201-203.
15. GAIN BETWEEN V5A PIN1 AND PIN2 SHOULD BE 30 MINIMUM WITH REVERB PAN CONNECTED.
16. TEST CONDITIONS: UNIT AT RATED LINE VOLTAGE. FRONT AND REAR PCB'S CONNECTED VIA PW1 AND ALL WIRESET CONNECTIONS REVERB PAN CONNECTED. ALL DC VOLTAGES MEASURED WITH NO INPUT SIGNAL. ALL AC VOLTAGES MEASURED WITH 1kHz SINE AT INPUT J1 CH1: 25mVAC AT INPUT JACK. TRES, MID, BASS AT "5 1/2". REVERB, SPEED, INTENSITY, & PRESENCE AT "1". BRIGHT SWITCH OFF. FX LOOP SEND & RETURN SET FOR UNITY GAIN (APPROX 5 1/2). FOOTSWITCH: CH1 SELECTED, EFFECTS ON, REVERB ON, TREM OFF. VOL AT APPROX "7" TO GET 8.5VAC AT MAIN SPEAKER JACK WITH RATED LOAD: 4 OHM TWIN, 8 OHM PRO/CONCERT. CH2: 5mVAC AT INPUT JACK. TRES, MID, BASS AT "5 1/2". REVERB, SPEED, INTENSITY, & PRESENCE AT "1". BRIGHT SWITCH OFF. FX LOOP SEND & RETURN SET FOR UNITY GAIN (APPROX 5 1/2). FOOTSWITCH: CH2 SELECTED, EFFECTS ON, REVERB ON, TREM OFF. VOL AT APPROX "7" TO GET 8.5VAC AT MAIN SPEAKER JACK WITH RATED LOAD: 4 OHM TWIN, 8 OHM PRO/CONCERT.

**TO R9, 10, 11, 12, 17, 34, 35, 36, 37, 73, 109, 141, AND 148 BRACKETS.**

**TO R58 BRACKET. TO R47 BRACKET.**

REAR PANEL PCB ASSY P/N 005708000 TWIN P/N 005708000 PRO/CONCERT

REAR PANEL PCB ASSY P/N 005708000 TWIN P/N 005708000 PRO/CONCERT

REAR PANEL PCB ASSY P/N 005708000 TWIN P/N 005708000 PRO/CONCERT

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 USA

CHECKED BY: *[Signature]*  
DATE: 10-18-02

APPROVED BY: *[Signature]*  
DATE: 10-18-02

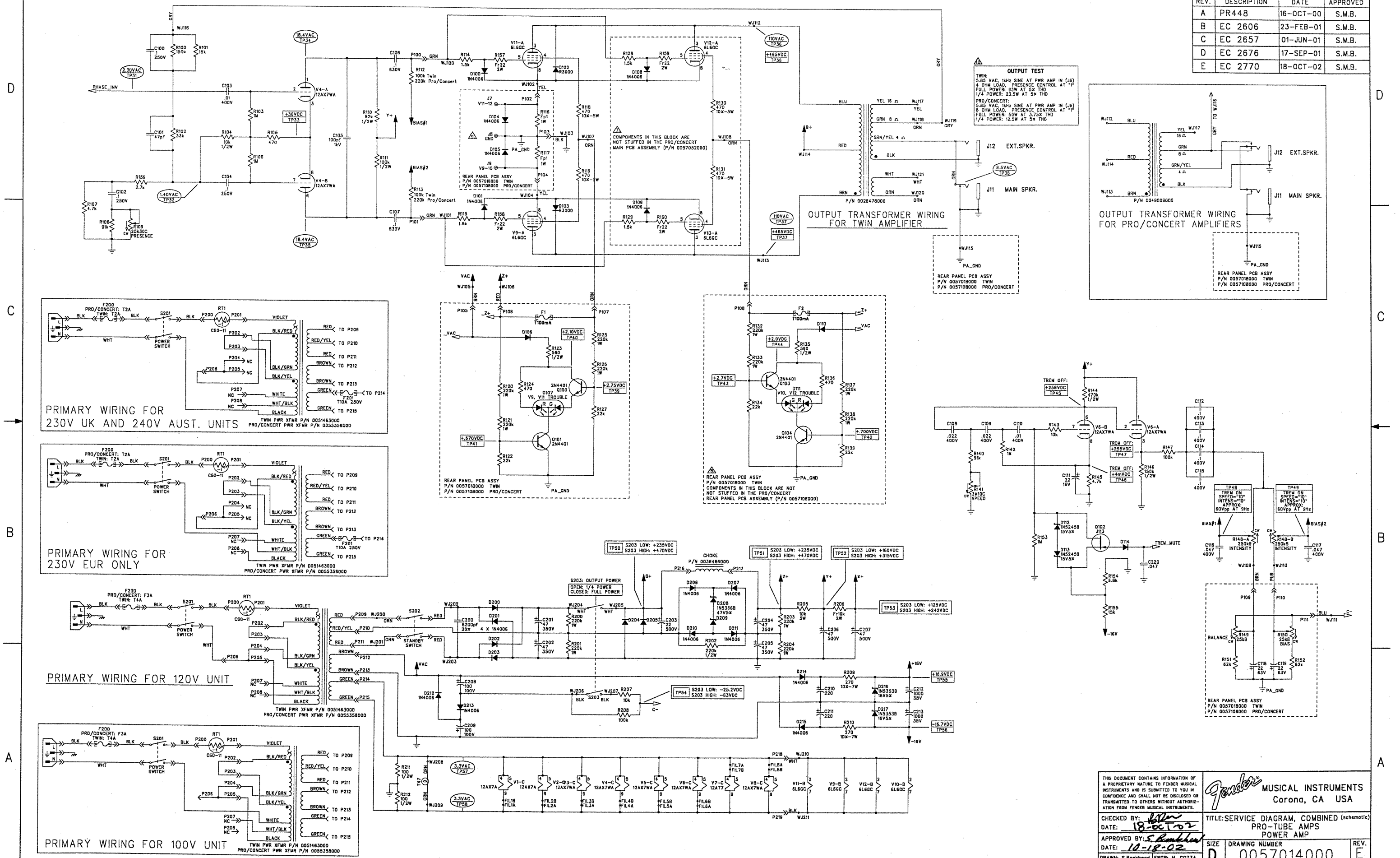
DRAWN: S.Bankhead ENGR: M. COZZA  
DATABASE FILE: 24485.sch

TITLE: SERVICE DIAGRAM, COMBINED (schematic)  
PRO-TUBE AMPS  
PRE AMP

SIZE: D  
DRAWING NUMBER: 0057014000  
RELEASE DATE: 16-OCT-00  
SHEET: 1 OF 4



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.
D	EC 2676	17-SEP-01	S.M.B.
E	EC 2770	18-OCT-02	S.M.B.



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.

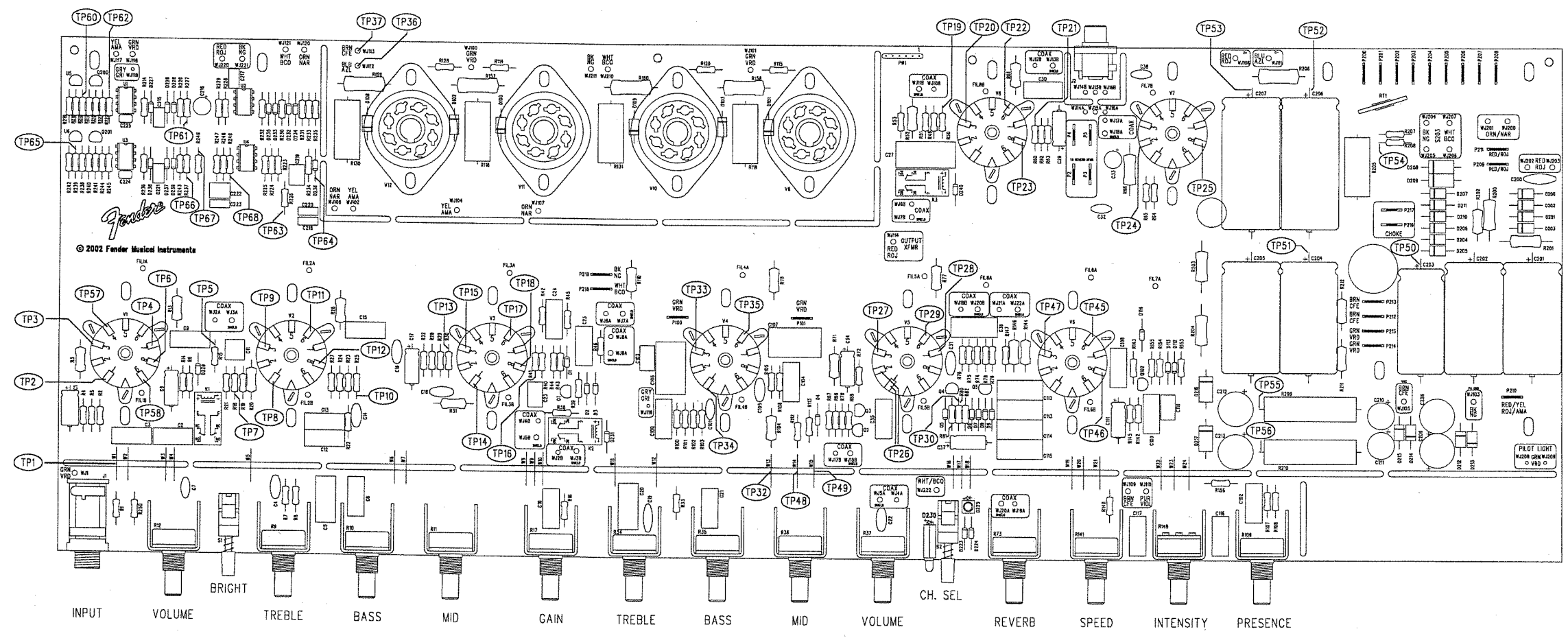
**Fender** MUSICAL INSTRUMENTS  
Corona, CA USA

CHECKED BY: *[Signature]* DATE: 18-Oct-02  
APPROVED BY: *[Signature]* DATE: 10-18-02  
DRAWN: S.Bankhead ENGR: M. COZZA DATABASE FILE: Z4485.sch

TITLE: SERVICE DIAGRAM, COMBINED (schematic) PRO-TUBE AMPS POWER AMP  
SIZE: DRAWING NUMBER: D 0057014000  
RELEASE DATE: 16-OCT-00 SHEET: 2 OF 4

NOTES: SEE PAGE 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.
D	EC 2676	17-SEP-01	S.M.B.
E	EC 2770	18-OCT-02	S.M.B.



© 2002 Fender Musical Instruments

FLM/JWC: SERVICE DIAGRAM  
 DATABASE: Z448PLPCB DATE: 18-OCT-02

- 5. TP31, TP39-44, TP59 SHOWN ON SHEET 4
- 4. TP38 NOT SHOWN. TP38 AT MAIN OUTPUT JACK J11
- 3. SEE PAGE 1 FOR NOTES AND TEST CONDITIONS
- 2. WIRES NOT SHOWN FOR CLARITY
- 1. PCB SHOWN BEFORE POWER AMP BREAKAWAY IS INSTALLED IN CHASSIS

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.

CHECKED BY: *dbl for PLS*  
 DATE: 10/18/02

APPROVED BY: *S. Bankhead*  
 DATE: 10-18-02

DRAWN: S.Bankhead EMGR: S.Bankhead  
 DATABASE FILE: Z448PLPCB

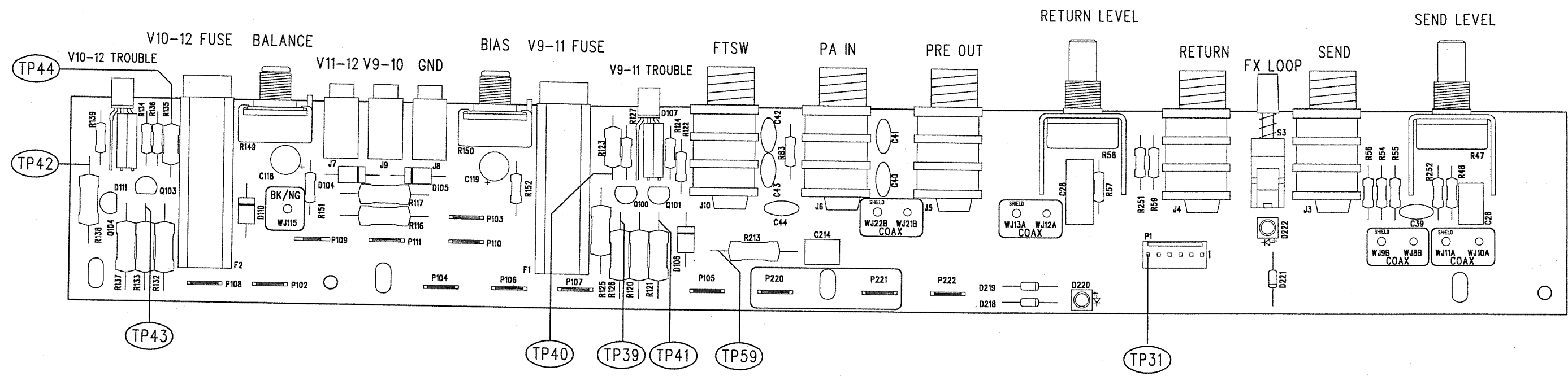
**Fender** MUSICAL INSTRUMENTS  
 Corona, CA USA

TITLE: SERVICE DIAGRAM, COMBINED (PCB Assy)  
 PRO-TUBE AMPS  
 MAIN PCB

SIZE	DRAWING NUMBER	REV.
D	0057014000	E


RELEASE DATE: 16-OCT-00 SHEET 3 OF 4

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.
D	EC 2676	17-SEP-01	S.M.B.
E	EC 2770	18-OCT-02	S.M.B.



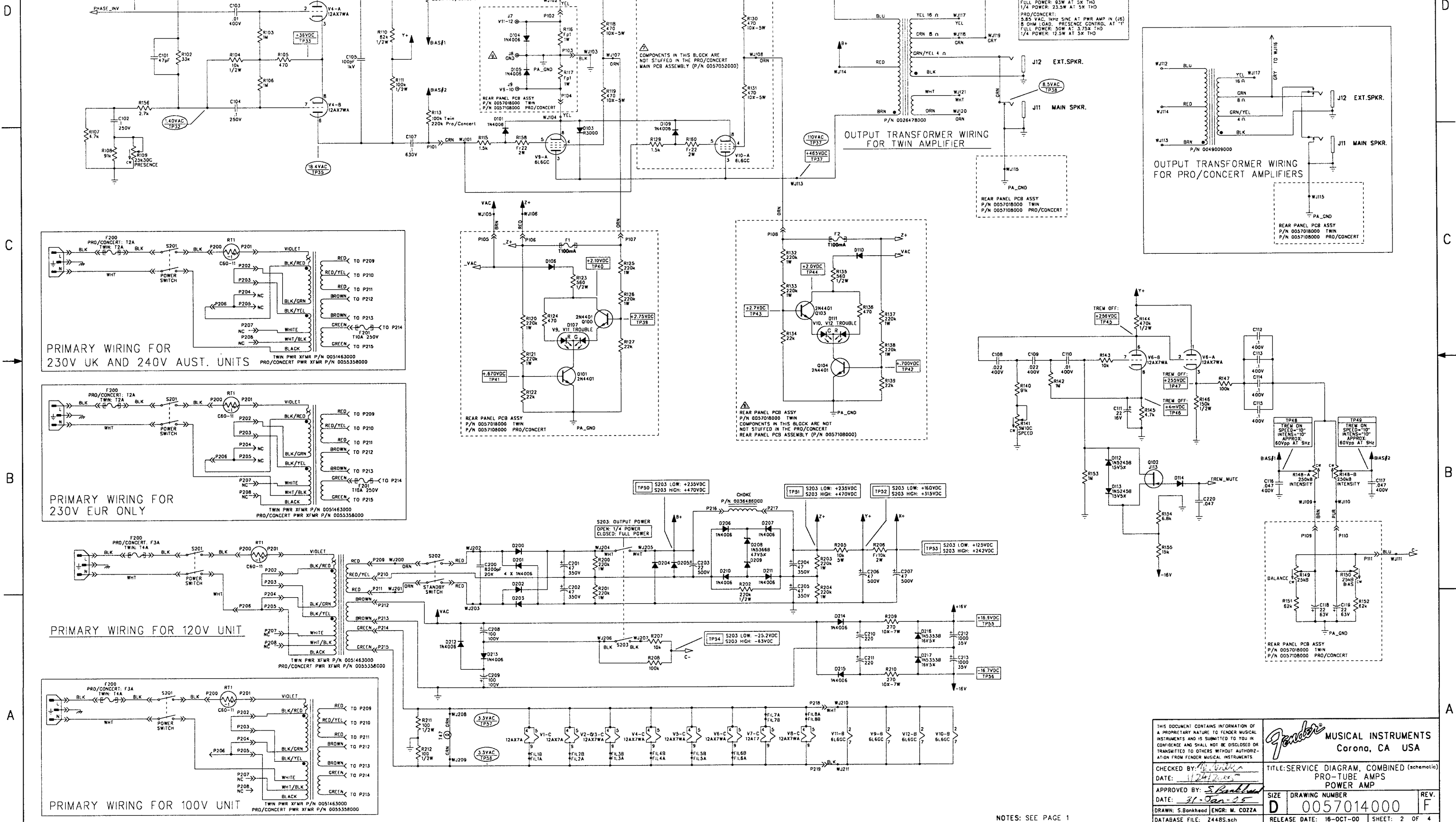
FILM/DWG: SERVICE DIAGRAM  
 DATABASE: Z448P2.PCB DATE: 18-OCT-02

2. SEE PAGE 1 FOR NOTES AND TEST CONDITIONS  
 1. WIRES NOT SHOWN FOR CLARITY  
 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: <u>B. Van</u> DATE: <u>12 OCT 02</u>		TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) PRO-TUBE AMPS REAR PANEL PCB	
APPROVED BY: <u>S. Bankhead</u> DATE: <u>10-18-02</u>		SIZE <b>B</b>	DRAWING NUMBER <b>0057014000</b>
DRAWN: S.Bankhead ENGR: S.Bankhead DATABASE FILE: Z448P2.PCB		RELEASE DATE: 16-OCT-00	REV. <b>E</b> SHEET 4 OF 4



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.
D	EC 2676	17-SEP-01	S.M.B.
E	EC 2770	18-OCT-02	S.M.B.
F	EC 3193	24-JAN-05	I.D.K.



**Fender Musical Instruments**  
 Corona, CA USA

CHECKED BY: *[Signature]*  
 DATE: *1/24/05*

APPROVED BY: *[Signature]*  
 DATE: *31-Jan-05*

DRAWN: S.Bankhead ENGR: M. COZZA

TITLE: SERVICE DIAGRAM, COMBINED (schematic)  
 PRO-TUBE AMPS  
 POWER AMP

SIZE: DRAWING NUMBER: **D 0057014000**

RELEASE DATE: 16-OCT-00 SHEET: 2 OF 4

NOTES: SEE PAGE 1

8

7

6

5

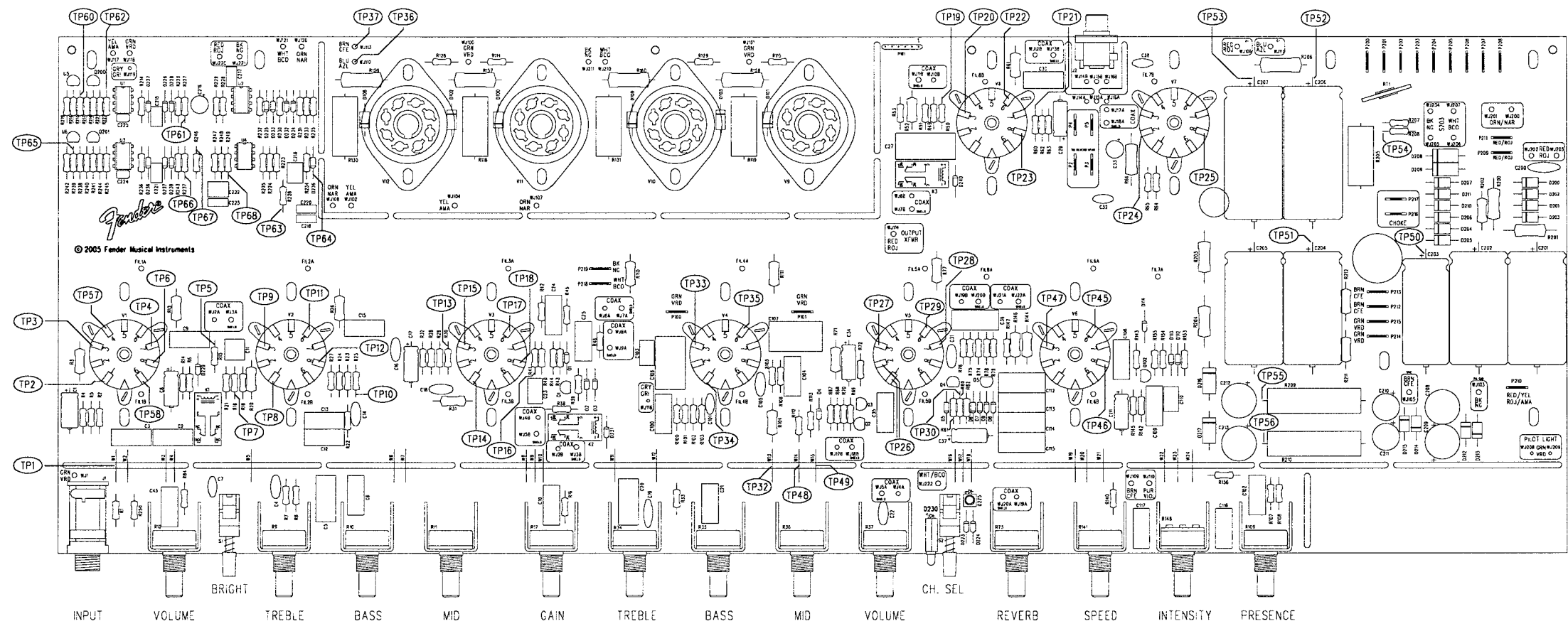
4

3

2

1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.
D	EC 2676	17-SEP-01	S.M.B.
E	EC 2770	18-OCT-02	S.M.B.
F	EC 3193	24-JAN-05	I.D.K.



© 2005 Fender Musical Instruments

FEM/DWC SERVICE DIAGRAM  
 DATABASE: Z448P1PCB DATE: 24-JAN-05

- 5. TP31, TP39-44, TP59 SHOWN ON SHEET 4
  - 4. TP38 NOT SHOWN. TP38 AT MAIN OUTPUT JACK J11
  - 3. SEE PAGE 1 FOR NOTES AND TEST CONDITIONS
  - 2. WRES NOT SHOWN FOR CLARITY
  - 1. PCB SHOWN BEFORE POWER AMP BREAKAWAY IS INSTALLED IN CHASSIS
- NOTES: (UNLESS OTHERWISE NOTED)

<p>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.</p>		<p><b>Fender</b> MUSICAL INSTRUMENTS Corona, CA USA</p>	
<p>CHECKED BY: <i>[Signature]</i> DATE: <i>[Date]</i></p>		<p>TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) PRO-TUBE AMPS MAIN PCB</p>	
<p>APPROVED BY: <i>S. Bankhead</i> DATE: <i>31-Jan-05</i></p>		<p>SIZE: <b>D</b></p>	<p>DRAWING NUMBER: 0057014000</p>
<p>DRAWN: S.Bankhead ENGR: S.Bankhead DATABASE FILE: Z448P1PCB</p>		<p>RELEASE DATE: 16-OCT-00</p>	<p>REV. F SHEET 3 OF 4</p>

8

7

6

5

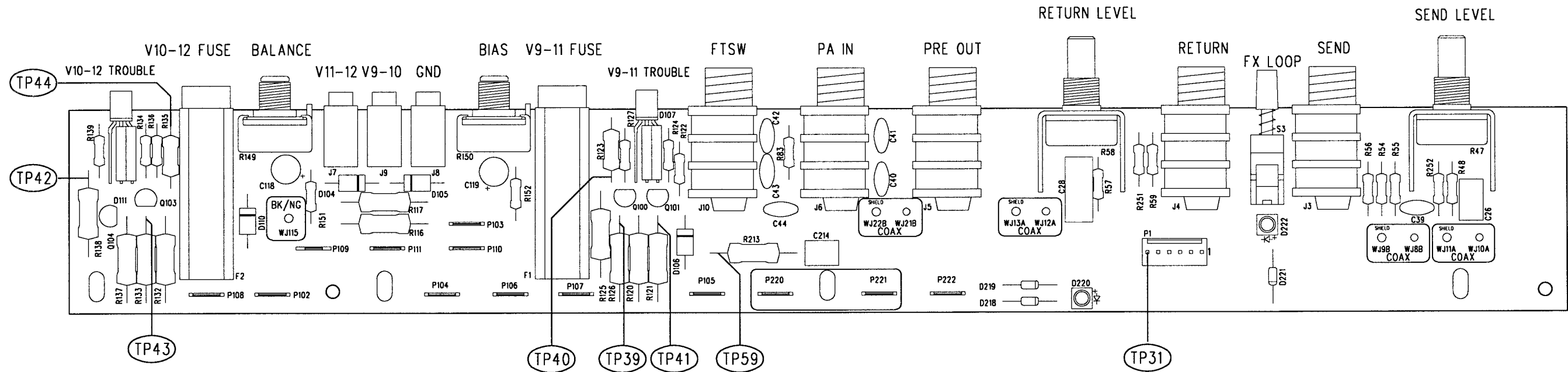
4

3

2

1


REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 448	16-OCT-00	S.M.B.
B	EC 2606	23-FEB-01	S.M.B.
C	EC 2657	01-JUN-01	S.M.B.
D	EC 2676	17-SEP-01	S.M.B.
E	EC 2770	18-OCT-02	S.M.B.
F	EC 3193	24-JAN-05	I.D.K.



FILM/DWG: SERVICE DIAGRAM  
 DATABASE: Z448P2.PCB DATE: 18-OCT-02

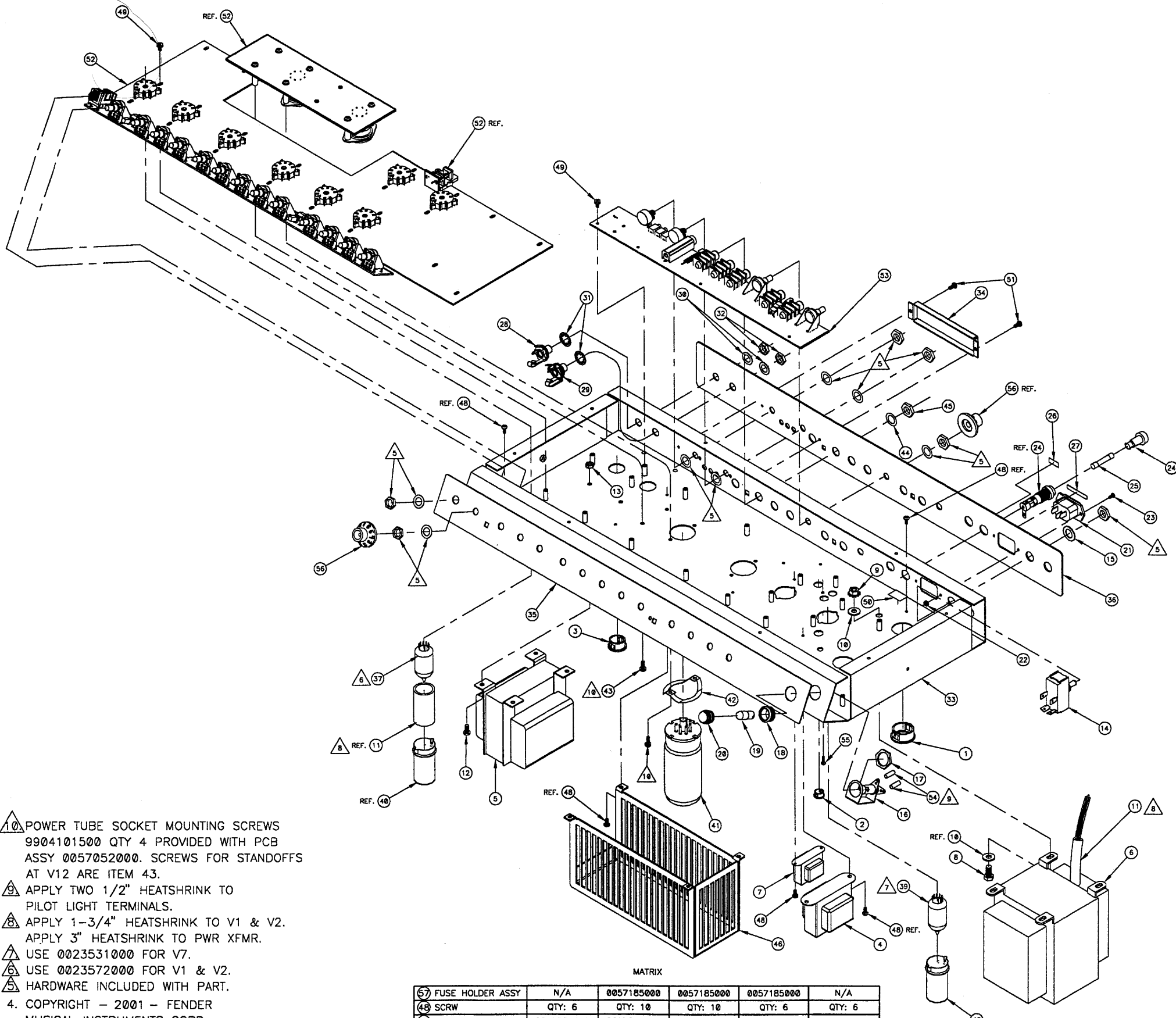
2. SEE PAGE 1 FOR NOTES AND TEST CONDITIONS  
 1. WIRES NOT SHOWN FOR CLARITY

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> Corona, CA U.S.A.	
CHECKED BY: <i>M. Wilson</i> DATE: <i>1/24/2005</i>		TITLE: SERVICE DIAGRAM, COMBINED (PCB assy) PRO-TUBE AMPS REAR PANEL PCB	
APPROVED BY: <i>S. Bankhead</i> DATE: <i>21-Jan-05</i>		SIZE <b>B</b>	DRAWING NUMBER <b>0057014000</b>
DRAWN: S.Bankhead ENGR: S.Bankhead	DATABASE FILE: Z448P2.PCB	RELEASE DATE: 16-OCT-00	REV. <b>F</b> SHEET 4 OF 4

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.

REV	REV NUMBER	BY	DATE
A	PR 448	JR	10/12/2000
B	EC 2686 - CHG. ITEMS 25 & 26 ADD ITEM 57	JR	2/22/2001



(N.S.) = (NOT SHOWN)  
S.M. = SEE MATRIX

52	1	0057052000	PCB ASSY MAIN PRO/CONCERT REVERB
51	2	0032806000	SCRW TF 6-32x1/4 PHP BLX
50	1	0013020000	LABEL GROUNDING SEMKO
49	26	0031184000	SCRW M6-32x1/4 PHPS BLX ITLW
48	S.M.	0038900000	SCRW TF 6-32X1/4 PHP ZI
47	1	SEE MATRIX	WIRE SET CHASS. ASSY PRO-TUBE AMPS (N.S.)
46	1	SEE MATRIX	TUBE CAGE PRO-TUBE AMPS
45	5	0053479000	NUT HEX 7/16 20X1/8 NI
44	5	0053480000	WASHER FLAT .442 X.692 NI
43	2	9904101500	SCRW M 6-32x3/8 PHPS BLX ITLW
42	2	0020424000	TUBE RING UNIVERSAL (277H-2)
41	2	0053980000	TUBE VACUUM 6L6GC/5881 SVTLNA
40	8	0053893000	TUBE SHIELD SUNN MODEL T
39	1	0023531000	TUBE 12AT7 HIGH MU TWIN TRIODE
38	5	0013341000	TUBE 7025/12AX7WA RUSSIAN MADE (N.S.)
37	2	0023572000	TUBE 7025/12AX7A CHINESE
36	1	0057047000	PANEL, REAR PRO/CONCERT REVERB
35	1	0057046000	PANEL, FRONT PRO REVERB
34	1	0057032000	COVER BOX BIAS CONTROLS PRO-TUBE AMPS
33	1	0057045000	CHASSIS PRO/CONCERT REVERB
32	2	0016352000	NUT HEX 3/8-32x3/32 TK NI
31	2	0016436000	WSHR LCK INTL 3/8x.687x.035 NI
30	2	0031153000	WSHR FLAT 3/8x.614 NI
29	1	0041701000	JACK PHONE TRANSFER 13A
28	1	0021550000	JACK PHONE TIP SHUNT 12A
27	1	SEE MATRIX	LABEL VOLTAGE
26	1	SEE MATRIX	LABEL FUSE
25	1	SEE MATRIX	FUSE
24	1	SEE MATRIX	FUSE HOLDER FINGER GRIP
23	2	0014172000	SCREW M 4-40x1/4 PHP BLX
22	2	0097360000	NUT HEX 4-40 EX LOCK
21	1	0047213000	CONNECTOR AC LINE MALE IEC
20	1	0025718000	JEWEL PILOT LITE RED #20
19	1	0021642000	PILOT LIGHT #T47
18	1	0032219000	COLLAR-PILOT LIGHT
17	1	0031625000	NUT HOLDER PILOT LIGHT 1/16-27
16	1	0021741000	HOLDER IDAL LITE ASSY PILOT
15	3	0022293000	WSHR FLAT .473x.750 NI
14	2	0036570000	SWITCH TOGGLE DPST W/NUTS
13	4	0022004000	NUT KEPS #8-32 ZINC
12	4	0026553000	SCRW M 8-32x3/8 PHP BLX
11	0.5417	0047163000	TUBING SHRINK 1" BLACK
10	8	0022319000	WSHR FLAT 1/4x9/16 NI
9	4	0028272000	NUT KEP 1/4x20 FOJ
8	4	0026501000	SCRW C 1/4-20x1/2 HH BLK
7	1	0037099000	XFMR REVERB VIBROVERB/65 DLX
6	1	0055358000	XFMR POWER SUNN T50C
5	1	0049009000	XFMR OUTPUT PROSONIC
4	1	0036486000	CHOKE
3	2	0012560000	BUSHING SNAP 5/8x27/32 BLK
2	2	0018022000	BUSHING SNAP 5/16x17/32 BLK
1	2	0028069000	BUSHING SNAP 3/4x1-1/8 WHT

- 10 POWER TUBE SOCKET MOUNTING SCREWS 9904101500 QTY 4 PROVIDED WITH PCB ASSY 0057052000. SCREWS FOR STANDOFFS AT V12 ARE ITEM 43.
  - 11 APPLY TWO 1/2" HEATSHRINK TO PILOT LIGHT TERMINALS.
  - 12 APPLY 1-3/4" HEATSHRINK TO V1 & V2. APPLY 3" HEATSHRINK TO PWR XFMR.
  - 13 USE 0023531000 FOR V7.
  - 14 USE 0023572000 FOR V1 & V2.
  - 15 HARDWARE INCLUDED WITH PART.
4. COPYRIGHT - 2001 - 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

MATRIX

57	FUSE HOLDER ASSY	N/A	0057185000	0057185000	0057185000	N/A
48	SCRW	QTY: 6	QTY: 10	QTY: 10	QTY: 6	QTY: 6
47	WIRE SET	0057021000	0057051000	0057051000	0057051000	0057051000
46	TUBE CAGE	N/A	0057106000	0057106000	N/A	N/A
27	VOLTAGE LABEL	N/A	0050505000	0050505000	0050506000	0050507000
26	LABEL FUSE	N/A	0048859000	0048859000	0048859000	N/A
25	FUSE	0077982000	0013115000	0013115000	0013115000	0077982000
24	FUSE HOLDER	0036702000	0036703000	0036703000	0036703000	0036702000
	CHASSIS ASSY.	PRO REVERB 120V DOM. 0057056000	PRO REVERB 230V EUR. 0057057000	PRO REVERB 230V U.K. 0057223000	PRO REVERB 240V AUS. 0057058000	PRO REVERB 100V JPN. 0057059000

57	1	SEE MATRIX	20mmX5mm INLINE FUSE HLDR ASSY (N.S.)
56	15	0024604000	KNOB BLACK W/WHITE STAMP 1-10
55	1	0051155000	SCRW SMB #4X3/8 PHP BLX
54	0.09"	0012398000	TUBING SHRINK 3/16 BLACK
53	1	0057108000	PCB ASSY REAR PANEL FX PRO/CONCERT REVERB
ITEM	QTY	PART #	DESCRIPTION

ENGINEER COZZA  
DRAWN RICHARDS  
DATE 09/25/2000

*Fender*  
FENDER MUSICAL INSTRUMENTS CORP.  
CORONA, CALIFORNIA U.S.A.

TITLE CHASSIS ASSEMBLY PRO REVERB

APPROVED: *S. B...*  
DATE 2-27-01

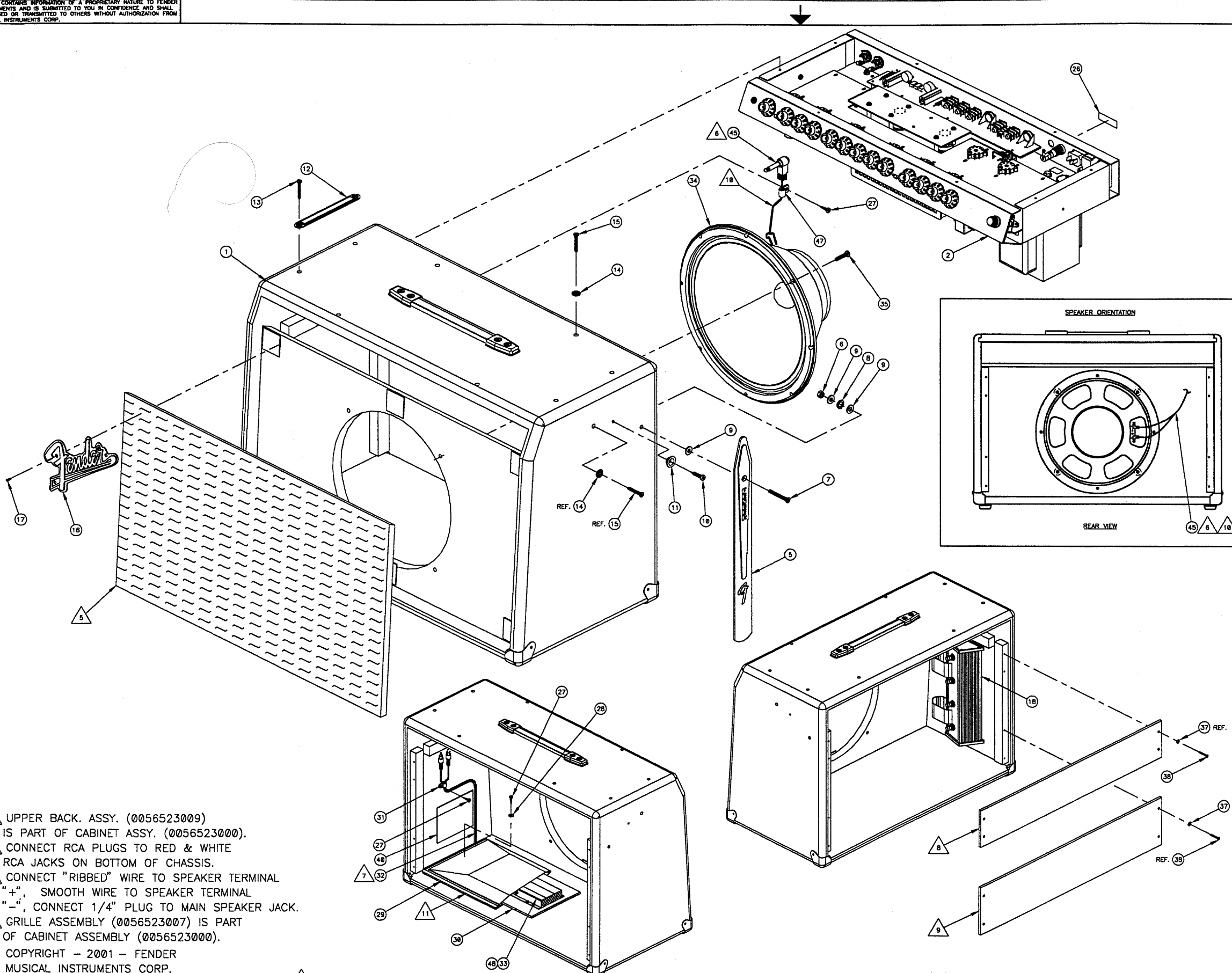
SHEET	SIZE	DRAWING NUMBER	REV.
1/1	D	0057056000	B
SCALE	N/A	MASTER/ASSEMBLY	





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.

REV	EC NUMBER	BY	DATE
A	PR 44B	JR	10/12/2000
B	EC 2806 - CHG. CHST ASSY P/N FOR 230V U.K.	JR	2/22/2001



(N.S.) = NOT SHOWN

48	1	9906900590	CLAMP CABLE NYL ADHESIVE
47	1	0022491000	CLAMP CABLE NYL SCR WNT 5/16
46	1	0010526000	TAG CASTER REMOVAL NOTICE (N.S.)
45	1	0028044000	CABLE ASSY SPKR RT ANG 33°
44	2	9903311400	BAG JIFFY #1 7-1/4x12 (N.S.)
43	1	0053863000	HANG TAG GROOVE TUBE (N.S.)
42	1	0053454000	STICKER BUMPER FEND SINCE 1946 (N.S.)
41	1	SEE MATRIX	TAG WARRANTY 5 YR FENDER-NEW (N.S.)
40	1	0057111000	LABEL TUBE PRO/CONCERT REVERB
39	1	0033071000	TAG HANG 100% TUBE CIRCUITRY (N.S.)
38	8	0037952000	SCRW SMA #6x1 OHP NI
37	8	0037215000	WSHR C'SNK #6 NI
36	4	0056483000	CASTER SWIVEL EL COM 2-12 CABS (N.S.)
35	4	0026577000	SCRW M 10-32x1 PHP BLX
34	1	0057065000	SPEAKER 12" 8 OHM JENSEN C12N
33	1	0064063000	REVERB UNIT 4 SPRING 4AB3C1B
32	1	0025722000	CABLE REVERB 1100mm
31	1	0012582000	CLAMP CABLE NYL SCR WNT 1/4
30	1	0028453000	PAD CARDBOARD REVERB
29	1	0031849000	REVERB BAG
28	2	0022327000	WSHR FLAT 8x7/16 NI
27	4	0029828000	SCRW PB 8x3/4 PHP ZI
26	1	0049081000	LABEL SERIAL (CORONA)
25	1	9903320000	BAG POLY ZIP 10x13 2M (N.S.)
24	1	0057049000	MANUAL OWNERS PRO/CONCERT REVERB (N.S.)
23	1	0057014000	SVC DIA COMB PRO-TUBE AMPS (N.S.)
22	6	0057170000	CORNER SET 1 FOAM PRO-TUBE AMPS (N.S.)
21	2	0057171000	CORNER SET 2 FOAM PRO-TUBE AMPS (N.S.)
20	1	0029757000	BAG POLY 35x22x52 .0015 (N.S.)
19	1	0057050000	CARTON PRO REVERB (N.S.)
18	1	0057025000	FOOTSWITCH ASSY 4 BUTTON
17	3	0037985000	SCRW SMA 2x3/8 PHP BLX
16	1	0023192000	NAMEPLATE FNDR 65 TWIN(994093)
15	6	0036199000	SCRW M 8-32x1-3/16 OHP BLX CP
14	6	0029527000	WSHR FNH 8-5/8 FLNGD BLX WX
13	4	0057105000	SCRW M 8-32x1-3/16 OHP NI CP
12	2	0024752000	STRAP CHASSIS 4-1/2" NICKEL
11	2	0024646000	WASHER LEG STOP TN
10	2	0031344000	SCRW SMA 10x3/4 OHP NI
9	6	0022319000	WSHR FLAT 1/4x9/16 NI
8	2	0022285000	WSHR SP LOCK 1/4x.493 ZI
7	2	0022277000	SCRW M 10-32x1-1/2 OHP NI
6	2	0021998000	NUT FLEX LOCK 10-32 W/NYLON IN
5	2	0051478000	LEG AMP TILTBACK 14"
4	1	SEE MATRIX	REGISTRATION CARD (N.S.)
3	1	SEE MATRIX	CORD PWR W/IEC CONN (N.S.)
2	1	SEE MATRIX	CHASSIS ASSY PRO REVERB
1	1	0056523000	CABINET ASSY PRO REVERB

- 8. UPPER BACK ASSY. (0056523009) IS PART OF CABINET ASSY. (0056523000).
- 7. CONNECT RCA PLUGS TO RED & WHITE RCA JACKS ON BOTTOM OF CHASSIS.
- 6. CONNECT "RIBBED" WIRE TO SPEAKER TERMINAL "+", SMOOTH WIRE TO SPEAKER TERMINAL "-", CONNECT 1/4" PLUG TO MAIN SPEAKER JACK.
- 5. GRILLE ASSEMBLY (0056523007) IS PART OF CABINET ASSEMBLY (0056523000).

- 11. ORIENT REVERB PAN SO THE RCA JACKS POINT TOWARDS REAR OF CABINET.
- 10. SECURE SPEAKER CABLE TO INSIDE OF CABINET OPPOSITE REVERB CABLE.
- 9. LOWER BACK ASSY. (0056523011) IS PART OF CABINET ASSY. (0056523000).

4. COPYRIGHT - 2001 - 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

41	TAG WARRANTY	0053412000	-	-	-	-
4	REGISTRATION CARD	0054387000	-	-	-	-
3	CORD PWR	0047248000	0047251000	0047249000	0047250000	0053997000
2	CHASSIS ASSEMBLY	0057056000	0057057000	0057223000	0057058000	0057059000
ITEM	COMPONENT	PRO REVERB 120V DOM. 0215500000	PRO REVERB 230V EUR. 0215560000	PRO REVERB 230V U.K. 0215540000	PRO REVERB 240V AUS. 0215530000	PRO REVERB 100V JPN. 0215570000

ENGINEER: COZZA  
 DRAWN: RICHARDS  
 DATE: 09-27-2000  
 TITLE: END ITEM PRO REVERB  
 SHEET: 1/1  
 SCALE: N/A  
 SIZE: D  
 DRAWING NUMBER: 0215500000  
 REV: B  
 MASTER/ASSEMBLY