

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR 2467	28-JUN-13	IDK/dBL

D

C

B

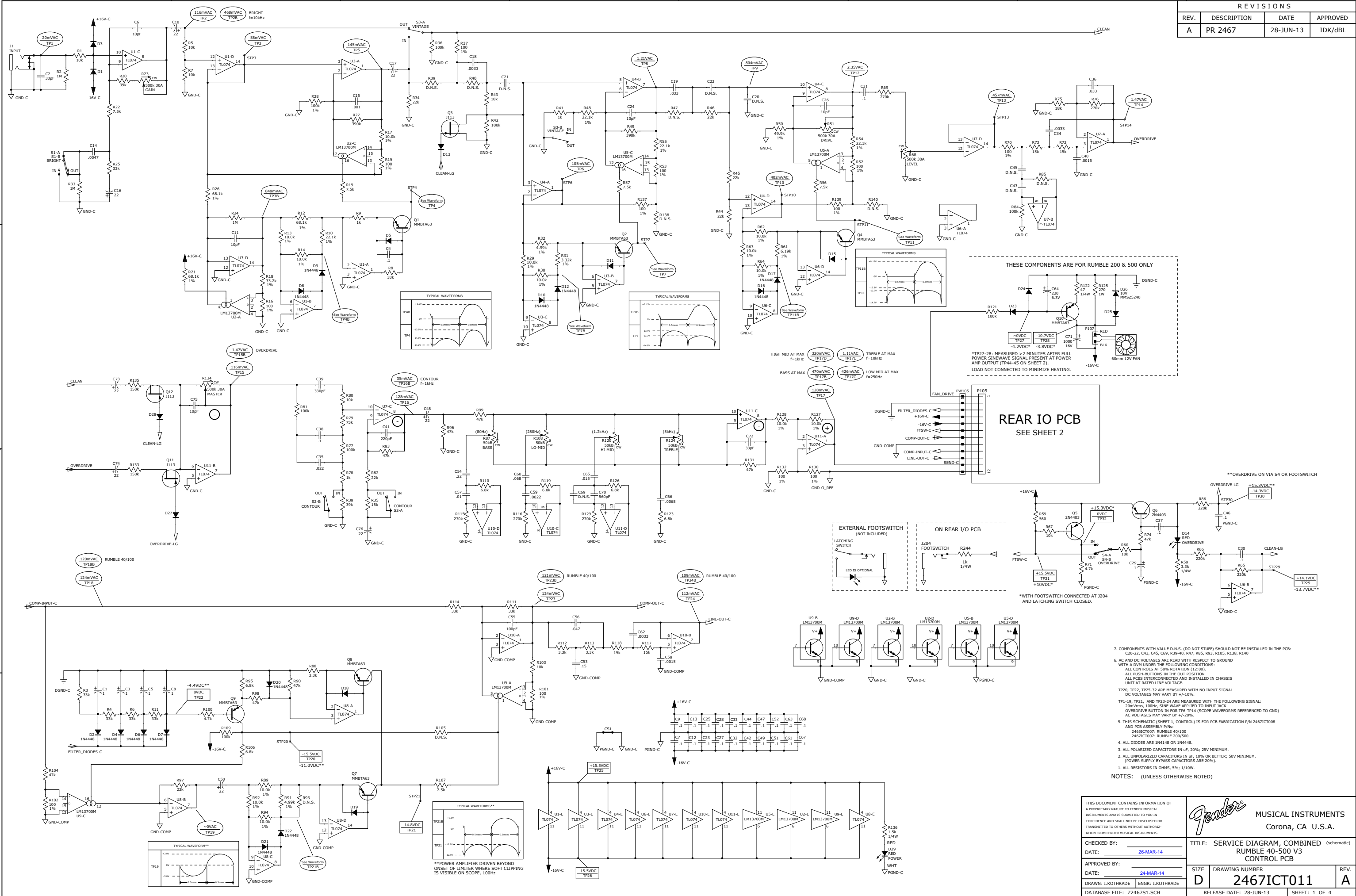
A

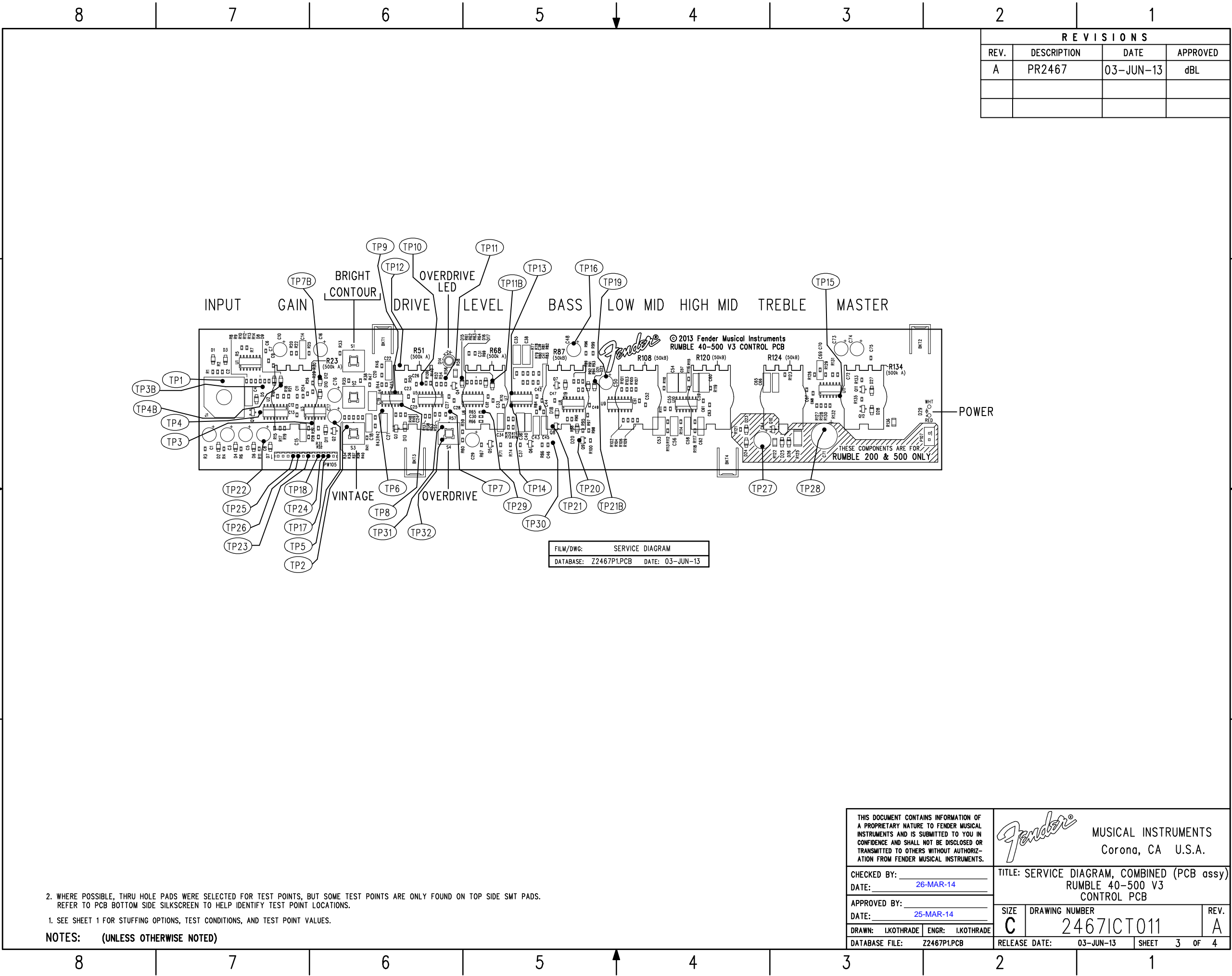
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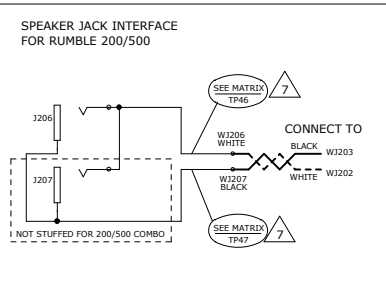
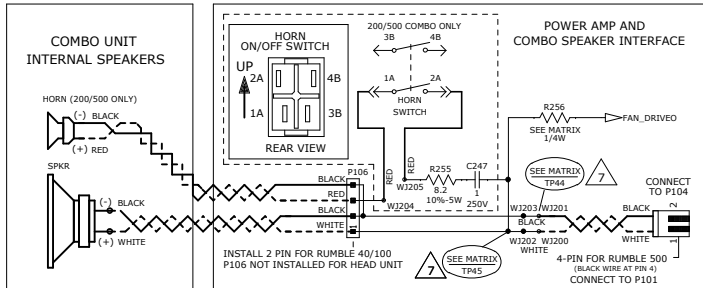
B

A





REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR2467	10-JUL-2013	dB�




	R500	R200	R100	R40
R256	18.2k 1%	9.09k 1%	9.76k 1%	11.0k 1%
TP44	1.86VAC	1.24VAC	1.27VAC	1.55VAC
TP45	1.86VAC	1.24VAC	1.27VAC	0V
TP46	1.86VAC	1.24VAC	-	-
TP47	1.86VAC	1.24VAC	-	-


CAUTION: MODELS RUMBLE 100,200,500 OUTPUT IS NOT GROUND REFERENCED! DO NOT GROUND EITHER TERMINAL (I.E. WITH OSCILLOSCOPE PROBE GROUND LEAD) OR UNIT WILL BE DAMAGED. VIEW OUTPUT WITH 'SCOPE IN DIFFERENTIAL MODE (RECOMMENDED) OR FLOAT 'SCOPE FROM EARTH GND.

TP44-45 AND TP46-47: AC VOLTAGES SHOWN ARE FOR MEASUREMENTS TAKEN BETWEEN TP AND CHASSIS GROUND. THE VALUES WILL BE TWICE AS LARGE IF MEASURED WITH THE VOLTMETER BETWEEN DIRECTLY ACROSS THE AMPLIFIER OUTPUT (BETWEEN TP 44-TP45 OR TP46-TP47).

NOTE: POWER MODULE USES SWITCHING TECHNOLOGY RESULTING IN HIGH FREQUENCY NOISE (>100kHz) AT THE OUTPUT. RECOMMEND USING A LOW-PASS FILTER (SUCH AS THE AP AUX-0025 SWITCHING AMPLIFIER MEASUREMENT FILTER) FOR OPTIMUM VIEWING AND MEASUREMENT OF OUTPUT SIGNALS.


OUTPUT POWER TEST: 
 RESISTIVE LOAD CONNECTED AT P106 (DISCONNECT COMBO SPEAKERS)
 RATED LINE VOLTAGE SUPPLIED TO P106
 SINEWAVE INPUT SIGNAL APPLIED TO AUX-IN JACK (J202)
 OUTPUT VOLTAGE MEASURED WITH A DVM ACROSS RESISTIVE LOAD
 OSCILLOSCOPE PROBE MAY BE CONNECTED EITHER SIDE OF LOAD, BUT
 UNDER THESE CONDITIONS, ADJUST INPUT TO VERIFY THE FOLLOWING:

LOAD	FREQ = 100Hz	FREQ = 1kHz
8 OHM	99.4W (28.2Vrms)	100W (28.3Vrms)
(ONSET OF LIMITER)	< 0.1% THD	< 0.1% THD

OUTPUT POWER TEST: 

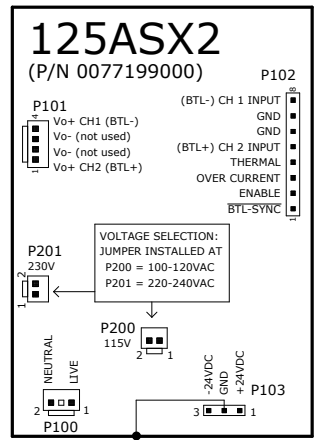
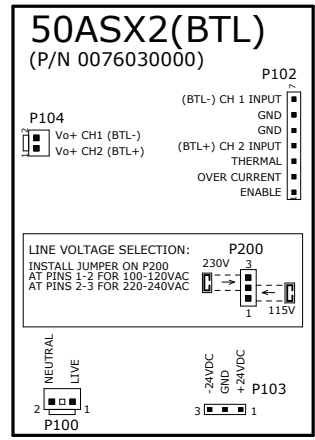
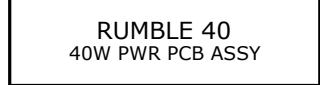
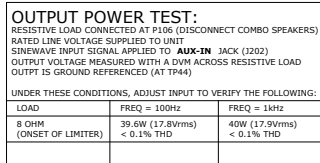
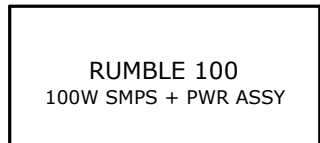
RESISTIVE LOAD CONNECTED AT J206 (DISCONNECT COMBO SPEAKER)
RATED LINE VOLTAGE SUPPLY 120VAC
SINEWAVE INPUT SIGNAL APPLIED TO **AUX-IN** JACK (J202)
OUTPUT VOLTAGE MEASURED WITH A DVM ACROSS RESISTIVE LOAD
OSCILSCOPE PROBE MAY BE CONNECTED EITHER SIDE OF LOAD, BUT
DO NOT GROUND EITHER (+ OR -) CONNECTIONS TO THE LOAD!
UNDER THESE CONDITIONS, ADJUST INPUT TO VERIFY THE FOLLOWING:

LOAD	FREQ = 150Hz	FREQ = 1kHz
8 OHM (ONSET OF LIMITER)	91.8W (27.1Vrms) < 0.1% THD	93.2W (27.3Vrms) < 0.1% THD
4 OHM (ONSET OF LIMITER)	155W (24.9Vrms) < 0.1% THD	160W (25.3Vrms) < 0.1% THD

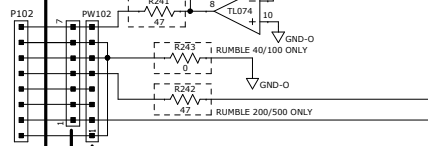
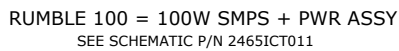
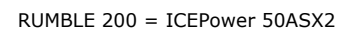
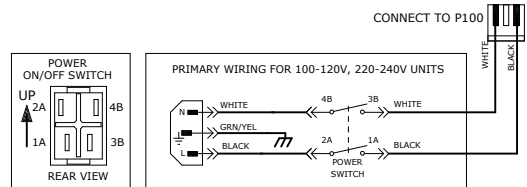
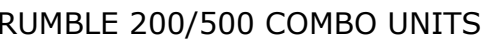
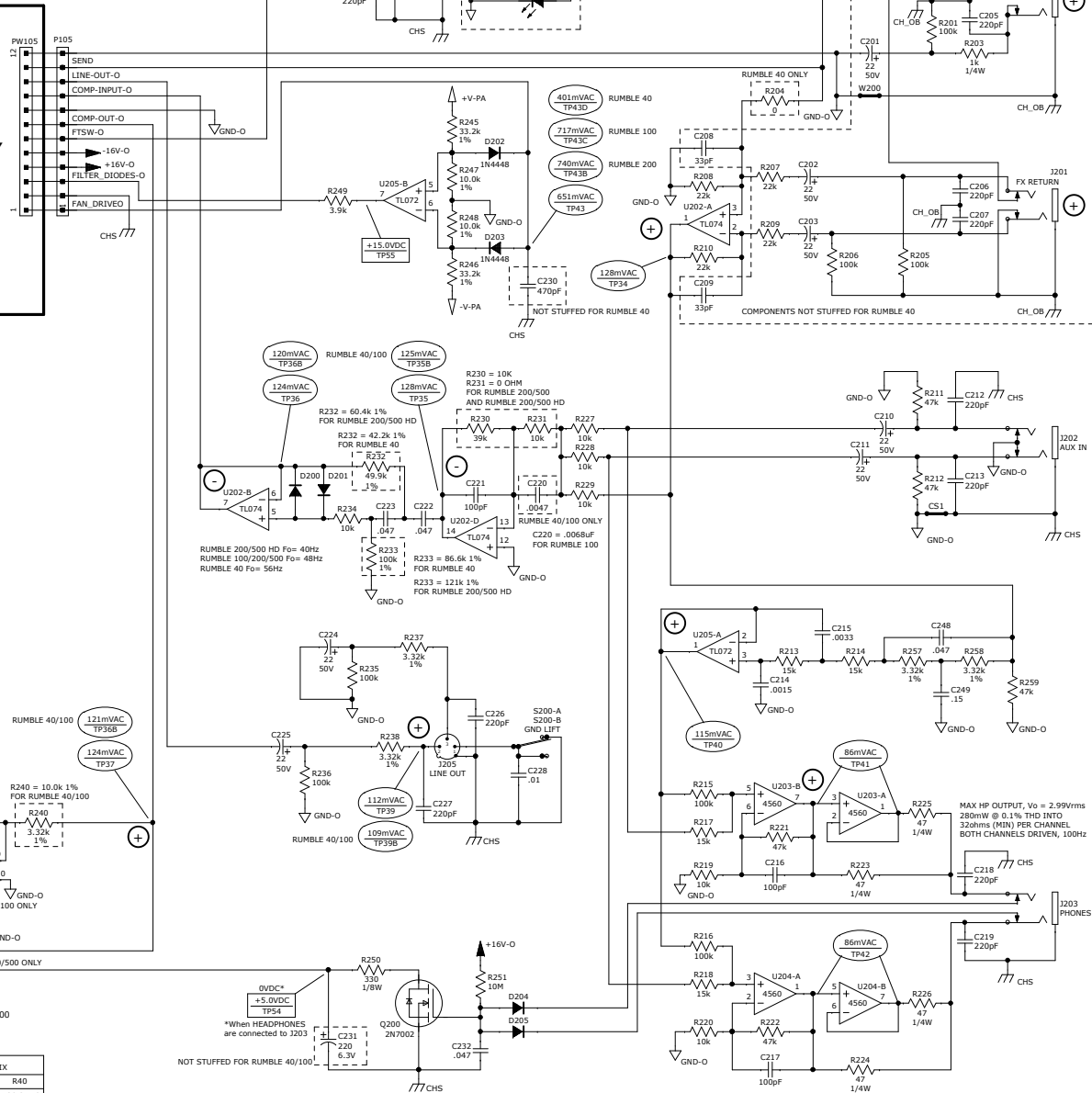
OUTPUT POWER TEST: 

RESISTIVE LOAD CONNECTED AT J206 (DISCONNECT COMMON SPEAKER)
 RATED LINE VOLTAGE SUPPLIED TO UNIT
 SINEWAVE INPUT SIGNAL APPLIED TO **AUX-IN** JACK (J202)
 OUTPUT VOLTAGE MEASURED WITH A DVM ACROSS RESISTIVE LOAD
 OSCILSCOPE PROBE MAY BE CONNECTED EITHER SIDE OF LOAD, BUT
DO NOT GROUND EITHER (+ OR -) CONNECTION TO THE LOAD!
 UNDER THESE CONDITIONS, ADJUST INPUT TO VERIFY THE FOLLOWING:

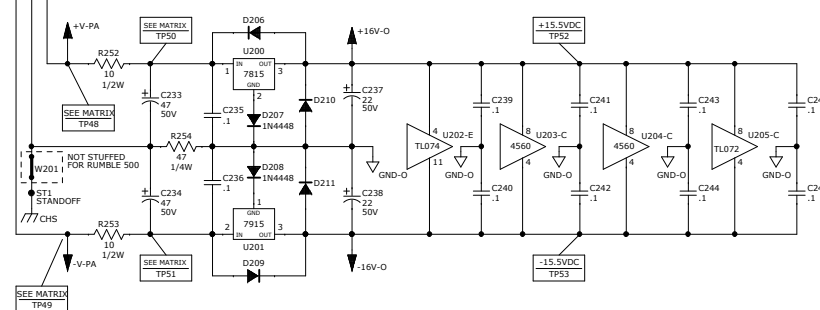
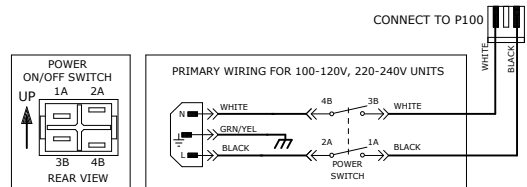
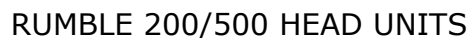
LOAD	FREQ = 100Hz	FREQ = 1kHz
8 OHM (ONSET OF LIMITER)	221W (42.0Vrms) < 0.1% THD	222W (42.2Vrms) < 0.1% THD
4 OHM (ONSET OF LIMITER)	400W (40.0Vrms) < 0.1% THD	400W (40.0Vrms) < 0.1% THD



CONTROL
PCB ASSY
SEE
SHEET 1



POWER SUPPLY DC VOLTAGE MATRIX				
	R500	R200	R100	R40
TP48	+23.6VDC	+26.3VDC	+22.9VDC	+28.3VDC
TP49	-23.6VDC	-26.3VDC	-22.9VDC	-28.3VDC
TP50	+22.6VDC	+25.3VDC	+21.9VDC	+27.3VDC
TP51	-22.2VDC	-24.9VDC	-21.9VDC	-27.3VDC



7. SEE OUTPUT POWER TEST

6. AC AND DC VOLTAGES ARE READ WITH RESPECT TO GROUND WITH A DVM UNDER THE FOLLOWING CONDITIONS:
ALL CONTROLS AT 50% ROTATION (12:00).
ALL PUSH-BUTTONS IN THE OUT POSITION
ALL PCBs INTERCONNECTED AND INSTALLED IN CHASSIS UNIT AT RATED LINE VOLTAGE.

TP48-55 ARE MEASURED WITH NO INPUT SIGNAL
DC VOLTAGES MAY VARY BY +/-10%.

TP33-47 ARE MEASURED WITH THE FOLLOWING SIGNAL:
20mVrms, 100Hz, SINE WAVE APPLIED TO INPUT JACK
AC VOLTAGES MAY VARY BY +/-20%.

5. THIS SCHEMATIC (SHEET 2, REAR IO) IS FOR PCB FABRIC
AND PCB ASSEMBLY P/Ns:
24671CT009 REAR IO RUMBLE 500 V3

26351CT004 REAR IO RUMBLE 500 V3 HD
24661CT008 REAR IO RUMBLE 200 V3
26341CT004 REAR IO RUMBLE 200 V3 HD
24651CT008 REAR IO RUMBLE 100 V3

2464ICT008 REAR IO RUMBLE 40 V3

4. ALL DIODES ARE 1N4148 OR 1N4448.
3. ALL POLARIZED CAPACITORS IN μ F. 20%; 25V MINIMUM.

2. ALL UNPOLARIZED CAPACITORS IN μF , 10% OR BETTER;
(POWER SUPPLY BYPASS CAPACITORS ARE 20%).
1. ALL RESISTORS IN OHMS, 5% $\cdot 1/10\text{W}$

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: _____
DATE: 26 MAR 14

DATE: 20-MAR-14

APPROVED BY: _____

DATE: 21-MAR-14	
DRAWN: D. LEWIS	ENGR: D. LEWIS

DATABASE FILE: Z2467S2.SCH

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

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
RUMBLE 40-500 V3

ROMBLE 40-500 V3 REAR IO PCB		
SIZE	DRAWING NUMBER	REV

SIZE	DRAWING NUMBER	REV.
D	2467ICT011	A

RELEASE DATE: 10-JUL-13	SHEET: 2 OF 4
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1

R E V I S I O N S			
REV.	DESCRIPTION	DATE	APPROVED
A	PR2464	11-JUL-13	dBL

FILM/DWG:	SERVICE DIAGRAM		
DATABASE:	Z2464P2.PCB	DATE:	11-JUL-13

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CHECKED BY: _____
DATE: 25-MAR-14

APPROVED BY: _____
DATE: 21-MAR-14

DRAWN: D. LEWIS ENGR: D. LEWIS

DATABASE FILE: Z2464P2.PCB

MUSICAL INSTRUMENTS
Corona, CA U.S.A.

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)
RUMBLE 40 V3
POWER AMPLIFIER

SIZE B	DRAWING NUMBER 2464ICT014	REV. A
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RELEASE DATE:	11-JUL-13	SHEET	3	OF	3
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1. SEE SHEET 1 FOR TEST CONDITIONS AND TEST POINT VALUES.

NOTES: (UNLESS OTHERWISE NOTED)